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International Accounting

Standards, Regulations, and Financial Reporting

EDITED BY Greg N. Gregoriou and Mohamed Gaber

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1

Lobbying Towards a Global Standard Setter – Do National Characteristics Matter? An Analysis of the Comment Letters Written to the IASB

Ann Jorissen, Nadine Lybaert,
and Katrien Van de Poel

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1.1 Introduction

Accounting standards, which determine the accounting numbers published by companies, play a major role in the wealth distribution process in market economies. Accounting standards are believed to intend to enhance the quality of accounting information and to reduce the information asymmetry among market participants. In these market economies accounting standards are set either by private standard-setting bodies or by public standard-setting bodies.

The examination of private sector standard-setting processes has been the subject of a considerable number of studies. In almost all studies, private standard setting is always considered as a political activity, in which interested parties are given the opportunity to lobby the standard setter and thus influence the process. Parties affected by the rules will seek to persuade the standard setter to write the rules to their advantage. As a result, lobbying activities take place in order to promote, influence, or obstruct proposed accounting standards. The role of the standard setter is to resolve conflicts amongst interested groups by building consensus. Private standard setters develop their standards according to a due process, which allows all interested parties the opportunity to provide input on proposed accounting standards.

The standard-setting process of a private standard setter can be examined from two major theoretical frameworks. One major framework considers standard setting as a political process where interested parties choose to lobby on the basis of lobbying costs and benefits accrued from successful lobbying (Jensen and Meckling, 1976; Sutton, 1984; Watts and Zimmerman, 1986). The majority of studies investigating the lobby process adopt this framework. The second major framework assumes a nonpluralistic process, dominated by a few powerful groups to the detriment of the interests of other groups, which are effectively excluded from the process (Sikka, 2001). Both research frameworks assume that self-interest drives participants towards lobbying. However, lobbying is not always negative; according to Tandy and Wilburn (1992), participation in the standard-setting process is necessary to ensure the 'legitimacy' of a standard setter and its standards. Lobbying indicates the extent of interest in an issue on the part of constituents. Further lobbying reveals information on the potential implementation problems and costs of future standards.

Lobbying research in relation to private standard-setting bodies was characterized in the past decades by the following elements. First, the majority of the studies focused on the lobbying process of constituents towards the private standard setter in one single national jurisdiction. Second, most analyses concentrated

almost exclusively on financial reporting regimes in English-speaking countries, most notably the USA and to a lesser extent the UK, Australia, and New Zealand (McLeay et al., 2000). A very limited number of studies investigated the lobbying process in other countries. One was the study of McLeay et al. (2000), which focused on the German private standard setter, which was newly established at the end of the 20th century.

National private standard setters have been established since the beginning of the 20th century. Towards the end of the 20th century a global standard setter started to emerge. The predecessor of that global standard setter, namely the IASC, was established in 1973. Its creation was related to that of the International Federation of Accountants (IFAC), which is the worldwide umbrella organization of accountancy bodies. The IASC's description of itself as an 'independent private sector body' is accurate and revealing. In the beginning it was in essence a private club, with no formal authority (Alexander et al., 2003). This is in contrast to national regulatory or standard-setting bodies, which operate within a national jurisdiction and some form of legal and governmental framework that delineates, defines, and provides a level of authority. All this changed gradually; the organizational structure of the IASC was changed in 2001 and the IASB was established as a standard-setting private body. The IASB has now acquired the status of global private standard setter, since the adoption of the IAS regulation by the EU and the convergence agreement between the IASB and the USA private standard setter, the FASB.

The IASB incorporates formal public consultation in its process of setting accounting standards. A number of distinct opportunities are given to interested parties to contribute their views on the issues under consideration, before any proposals are adopted as standards. The constitution of the IASB lists these opportunities. Sending comment letters to the IASB is one way to influence the standard-setting process. A few papers have analyzed the lobbying process towards the IASC in the 1990s. Empirical research analyzing lobbying activities and behavior towards the IASB since its reform in 2001 is still rather scarce. This chapter presents the results of the analysis of 2045 comment letters written to the IASB since its reform. The hypotheses developed in the Anglo-Saxon literature will guide the analysis of the comment letters written towards the IASB between 2002 and the summer of 2005.

The remainder of the chapter is structured as follows. In the second part, a literature review will be presented and the research hypotheses will be derived from the extant literature. The third part will include information about the due process of the IASB and the opportunities for the different constituents to take

part in the standard-setting process. In the fourth part, the data collection method will be described, together with the measurement of the research variables. The research results will be discussed in the last part of the chapter.

1.2 Literature review and hypotheses development

1.2.1 *Literature review*

The majority of studies investigating lobbying processes were inspired by either the cost/benefit model developed by Sutton (1984) or the economic model of the self-interested party developed by positivists such as Watts and Zimmerman (1986), or by both models.

Using the Downsian voting model, Sutton (1984) developed a cost/benefit model in order to explain when parties take part in the lobby process. According to his model, a party will lobby only if the benefits of lobbying, adjusted by the probability that such lobbying will change the outcome of the standard-setting process, exceed the costs of lobbying. Resulting from this proposition, Sutton (1984) states that for the preparer of financial statements, the potential economic benefits of securing his favored proposal are likely to be greater in absolute terms than the benefits to the user of the financial statements of obtaining this. There are two reasons for this. First, the producer of financial statements is likely to be wealthier than the consumer of the product. Second, even where the user is large (e.g. a pension fund or a mutual fund), there exists a fundamental difference in the degree of portfolio diversification between the preparer and the user. This leads to the following hypothesis: producers of financial statements are more likely to lobby than consumers of such statements. Sutton (1984) further shows that because the economic interests of the preparers are more homogeneous, it is easier for them to create a contemporary organization for lobbying purposes by means of which cost-sharing can be enforced.

With regard to the group of preparers, Sutton argues that larger companies have economic incentives to lobby because they are wealthier than smaller companies and therefore their expected total benefits from lobbying are generally large enough to outweigh the costs. This leads to a second hypothesis: large producers are more likely to lobby than small producers.

Further, Sutton develops the following two other hypotheses: undiversified producers are more likely to lobby than diversified producers and raising (lowering) the cost of noncompliance will increase (reduce) the level of producer lobbying. The first two hypotheses (producer vs user and large firms vs small firms)

have been tested in different settings since 1984. The latter two hypotheses have not received that much research attention. The cost/benefit model of Sutton was formulated in a general way and could be used to study the behavior of all constituent parties in the lobbying process.

A second model to study lobby behavior started from an economic point of view. Watts and Zimmerman (1986) stated with the use of their positive theory on accounting that the benefits of lobbying, from the perspective of the management of the company, depended upon the potential impact of the proposals on the expected future cash flow. According to positivists a proposed standard may affect these cash flows for a number of reasons: (1) it alters political costs (e.g. higher taxes, stricter regulatory environment); (2) it has an impact on the accounting numbers embedded in the internal and external contracts of the firm (debt covenants, management incentive systems); or (3) it affects information production costs and bookkeeping costs. These positive studies on corporate lobbying generally assume a causal relation between lobbying and the economic impact on a firm. Lobbying can influence the setting of accounting standards, which in turn affect the company and the well-being of management through accounting numbers. Watts and Zimmerman (1986) argue that because large companies are more politically visible, company size proxies for political costs. New regulation can also lead to the disclosure of elements, which managers would prefer to remain private information for various reasons.

Based on the research frameworks described above, many studies investigated the lobby characteristics and motives almost exclusively in relation to corporate lobbying. A few research articles focused on auditors while the characteristics of the lobbying process of the remaining constituents received almost no research attention.

1.2.1.1 Research on corporate lobbying

Research into corporate lobbying focused mainly on the characteristics of the different preparer groups that participated in the process. A few studies focused on the methods used during the lobby process, their effectiveness, and the costs involved.

With regard to the analysis of motives and characteristics of corporate lobbyers, a number of studies investigated the lobby behavior by comparing the behavior and characteristics of companies who lobbied in favor of a change in the standards and the behavior and characteristics of companies who lobbied against a proposed standard. Not many consistent conclusions emerged from this type of

study (Georgiou, 2002). This research stream revealed that larger companies, which were assumed to be facing greater political costs, were less likely to lobby in favor of income-increasing methods. The results with regard to the debt assumption and the management compensation schemes were mixed. An explanation for the lack of consistent conclusions could probably be found in Feroz (1987), Francis (1987), and Buckmaster et al. (1994). Feroz (1987) states that 'Firm submissions can rarely be classified into broad support (or oppose) classifications since most of these letters are far from unambiguous.' Francis (1987) adds that 'Lobbyists may support parts of a proposal and oppose other parts, thus making it difficult to determine an overall lobbying position.' According to Buckmaster et al. (1994), 'Many respondents will only oppose one or two elements of an ED while expressing strong support for the remainder of the exposure draft. To require a "support/oppose" classification for an entire letter would result in nonsense classifications for a substantial portion of the responses.'

Another group of studies on corporate lobbying compares the characteristics of lobbying firms with the characteristics of nonlobbying firms. The hypothesis of Sutton that large producers of financial information are more likely to lobby than small producers was confirmed by many research articles (Francis, 1987; Gavens et al., 1989; Schalow, 1995; Dechow et al., 1996; Seamann, 1997; Ang et al., 2000). According to some of these authors, the size variable can be interpreted in an alternative way in lobbying studies. If management is reluctant to lobby because such action may reveal certain information to the market, then a larger firm would more likely be willing to lobby because the market may already have access to that information and the potential informational effect is smaller.

The research analyzing corporate lobbying from the positive perspective found less support for the importance of debt. Dhaliwal (1982) and Deakin (1989) found it important, while Sutton (1988), Schalow (1995), Ang et al. (2000), and Georgiou and Roberts (2004) did not. Tests of management compensation schemes have reached conflicting results as well. Deakin (1989), Dechow et al. (1996), and Hill et al. (2002) found support, whilst Dhaliwal (1982) and MacArthur and Groves (1993) did not. These studies, however, do find that overall a negative impact on firms' cash flow is a significant predictor of management participation in lobbying activities for proposed accounting standards.

All the articles mentioned above analyze the participation in the lobbying process through the examination of comment letter submissions. A few studies have gathered evidence on why companies did or did not take part in the lobbying process based on survey evidence (Gavens et al., 1989; Schalow, 1995). The

results of these studies are in line with the results obtained from the research based on the comment letters.

The results of the research described above, in which the characteristics of lobbying firms are compared with the characteristics of nonlobbying firms, are of interest to standard setters as they indicate that lobbying companies are not representative of nonlobbying companies (Francis, 1987) – they are different both in size and in terms of income variability.

Besides investigating the motives and characteristics of the corporate lobbying and corporate non-lobbying parties, a number of articles investigated the costs of the lobbying processes (Sutton, 1984; McKee et al., 1991), the level of success of the different lobby methods (Sutton, 1984; Walker and Robinson, 1993), and the successfulness of different lobbying parties (Watts and Zimmerman, 1978; Francis, 1987; Georgiou, 2002). The main results of these articles are that submission letters are found to be rather inexpensive and that larger companies are likely to be more influential in the standard-setting process than smaller companies.

A difficulty for the researcher is the unobservability of much of the lobbying activity. Most of the prior studies have investigated lobbying through the analysis of the submitted formal comment letters. A few studies have defined lobbying in a more all-inclusive manner to include comment letters, formal and informal meetings, and conversations with members and the staff of the private standard setter. Georgiou (2004) has, however, shown that there is a strong link between the use of comment letters and the use of other lobbying mechanisms.

1.2.1.2 The lobbying process of the auditor

A second lobbying party that has attracted research interest is the accountants' profession. Several studies concentrated on examining the lobbying positions taken by auditors and their clients in their written submissions (e.g. Puro, 1984; MacArthur, 1988; McKee et al., 1991; Meier et al., 1993; Georgiou, 2002). Several hypotheses govern this area of research. First, a hypothesis is derived from the economics of regulation, which predict that regulated firms succeed in influencing the regulation process in such a way that they can sell more of their products than otherwise, they can sell it at a higher price, or both. The economics of regulation hypothesis leads to an emphasis on the audit firms' private incentives and does not directly address clients' needs. This hypothesis is also called 'the monitoring effect hypothesis'. Second, according to agency theory (Jensen and Meckling, 1976), the auditor can be regarded as an agent and the stockholders of a firm are the principal. In this respect, auditors are expected to lobby for rules that benefit

their principal and as a result will benefit the audit firms. According to Watts and Zimmerman (1981), the wealth of the audit firm is a function of their clients' wealth. This second hypothesis is called the 'client preference hypothesis'. Third, there is 'the audit risk hypothesis', which assumes that auditors may support restrictions of available accounting procedures in order to reduce risk, although the extant audit research provides evidence that audit risk is a significant explanatory variable for audit fees. Standards that increase audit risk significantly may not be viewed as worth the revenue generated from the audit work. Meier et al. (1993, 1996) find that the auditor's lobbying position on a proposed accounting standard is a function of both the client's position on the standard and the effect of the proposed standard on audit risk and auditor wealth. A shortcoming of all the auditor studies is that they only evaluate the auditor–client relationship of those clients who made submissions and not of all clients (Georgiou, 2002).

All the research on lobbying described so far has concentrated on the lobbying process within one single jurisdiction. These single jurisdictions were mostly limited to private standard setters in the Anglo-Saxon world (USA, UK, and Australia). In a single-country study, Ang et al. (2000) investigated the incentives of Australian public companies lobbying against proposed superannuation accounting standards. Their findings differed from comparable US studies. The authors concluded that institutional differences are the most obvious reason for these observed differences. This underscores the need to control for institutional differences and to exercise caution in generalizing results across countries.

During the last decades of the 20th century a 'worldwide' standard setter was emerging. Only a few articles have investigated lobbying practices towards the former IASC. A number of them analyzed the content of the responses without focusing on the characteristics of the corporate lobbyers (Kenny and Larson, 1993; Guenther and Hussein, 1995). Larson (1997) focused on corporate characteristics when he investigated corporate lobbying towards the IASC and tested empirically the applicability of US-based lobbying theories in an international context. He analyzed comment letters sent to the IASC between 1989 and 1994 for this purpose. His results indicated that, overall, corporations lobbying the IASC tend to be very large both globally and in terms of their country of domicile; they are listed in at least one foreign exchange, which most of the time was the USA[1]. MacArthur (1996) used content analysis of the comment letters on ED 32 sent by companies to the IASC (comparability of financial statements) to find whether cultural influences shaped the corporate responses. Later, MacArthur (1999) focused on the impact of cultural factors on the lobbying behavior of Accounting Member bodies on the IASC's ED 32.

These research results on the lobbying process towards the IASC date from the time period when the adoption of IAS standards was voluntary and the IASC was not yet considered as a global standard setter. This changed gradually in the last decade of the 20th century and the first years of the 21st century. This chapter will therefore concentrate on the lobbying behavior towards the IASB since its reform in 2001. From 2001 it became clear that the IASB would acquire the status of a global standard setter, especially after the adoption of the IAS regulation by the European Parliament in 2002 and the decision taken, also in 2002, by the IASB and the FASB to work together to develop high-quality, fully compatible financial reporting standards that could be used for domestic and cross-border reporting.

1.3 The development of hypotheses

In this chapter we will use the hypotheses developed in the Anglo-Saxon literature to investigate the lobbying behavior of the constituent parties towards the IASB since its reform in 2001. In relation to corporate lobbying the cost/benefit model of Sutton (1984) and the economic perspective based on the self-interested parties (Watts and Zimmerman, 1986) will provide the framework for the hypotheses we put forward. In relation to the audit profession we use the three hypotheses developed in the literature, which concentrate on auditor lobbying (monitoring effect, client's preferences, and audit risk).

The first two hypotheses are based on Sutton's framework:

Hypothesis 1: *Preparers lobby more often towards the IASB than users*

Hypothesis 2: *Large firms are more likely to lobby towards the IASB than small firms*

The economic benefit approach has often been used to investigate corporate lobbying behavior. This approach is based on Watts and Zimmerman's positive theory of accounting and recognizes that negative cash flows are the drivers for lobbying, independent of firm size. This leads to the following hypothesis to be tested in a multinational context.

Hypothesis 3: *Firms lobby more towards the IASB when the proposed standard has a negative impact on their cash flow*

Several models have been developed in order to explain the lobbying behavior of audit firms. The incentives of the audit firm may co-align with the incentives of its clients or the incentives might be a function of the utility of the auditor in terms of the audit risk or drive to monitor. According to the framework chosen, different hypotheses will result:

Hypothesis 4A: *Auditors will defend their clients' position in the lobby process*

Hypothesis 4B: *Auditors will engage in lobbying in order to increase their audit services and reduce the audit risk*

Hypothesis 4C: *Auditors will engage in lobbying in order to reduce the audit risk*

The four hypotheses listed above will be tested with unit-level data of the constituent parties taking part in the standard-setting process.

In this research setting, which is really multinational, we are able to test the fourth hypothesis that Sutton has formulated in his article. Sutton states in his seminal article that 'raising the cost of noncompliance will increase the level of producer lobbying'. The extant literature on earnings management (e.g. Hope, 2003a,b; Leuz et al., 2003) and quality of earnings (e.g. Ball et al., 2000) provides ample evidence that the cost of noncompliance differs among countries (see, e.g., La Porta et al., 1998). This enables us to test the fourth hypothesis of Sutton (1984) by reformulating his hypothesis as:

Hypothesis 5A: *Companies in countries with low costs of noncompliance will engage less in lobbying than companies located in countries with high costs of noncompliance*

The extant literature on accounting choices, earnings management, and earnings quality provides evidence that, due to institutional and environmental characteristics, the cost of noncompliance differs among countries. Research results indicate that the level of compliance with accounting standards is dependent on the degree of enforcement of standards in each jurisdiction (La Porta et al., 1998; Hope, 2003a,b). Hope (2003a,b) found that the degree of enforcement in a country was a function of the following variables: the level of audit spending, the existence and enforcement of insider trading laws, the rule of law, the judicial

efficiency, and the degree of shareholder protection. La Porta et al. (1998) created another enforcement score, which depended on three variables – namely, the efficiency of the judicial system, an assessment of the rule of law, and the corruption index. When enforcement is high, the cost of noncompliance with accounting standards is high as well. This creates a strong incentive to comply with standards. Therefore, if a proposed standard has a negative impact on companies, those firms gain more benefits when they engage in lobbying than firms in countries with weak enforcement. In countries with weak enforcement the cost of noncompliance with a standard is much lower, therefore companies will avoid the proper application of a standard instead of engaging in lobbying with the purpose of altering the standard. This hypothesis 5A will be tested with country-level data. The same holds for the hypotheses below, which will be derived from the extant financial accounting literature.

A variable often analyzed in multinational research settings is culture. In the research on lobbying, MacArthur has investigated the influence of culture on the lobbying behavior towards the IASC of companies located in different countries. As MacArthur analyzed only comment letters written on a single issue, he used the cultural values of Hofstede to relate the cultural characteristics to the arguments put forward in the letters. In this analysis we will investigate whether or not cultural characteristics influence the lobbying behavior of constituent parties.

In order to study cultural influences we use the cultural classification of Hofstede (1980, 1983, 1991). Hofstede describes culture with the use of the following four constructs: power distance, individualism vs collectivism, femininity vs masculinity, and uncertainty avoidance. We will hypothesize that these cultural values influence lobby behavior in the following directions:

Hypothesis 5B1: *Companies in societies characterized by large power distance will engage less in lobbying*

When large power distance is present, companies will accept that power is distributed unequally and the standard setter has the authority to issue standards.

Hypothesis 5B2: *Companies in societies characterized by individualism will engage more in lobbying*

Individualism implies that ties between individuals are loose and that all people are expected to look after themselves (Hofstede, 1983):

Hypothesis 5B3: *Companies from countries characterized by a large degree of femininity will engage more in lobbying*

Hofstede (1991) defines masculinity and femininity in the following ways. Masculinity pertains to societies in which social gender roles are clearly distinct (i.e. men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life); femininity pertains to societies in which social gender roles overlap (i.e. both men and women are supposed to be modest, tender, and concerned with the quality of life).

Hypothesis 5B4: *Companies from countries characterized by strong uncertainty avoidance will engage more in lobbying*

According to Hofstede (1991), strong uncertainty avoidance is expressed through a need for written and unwritten rules. As rules seem to be important in those societies, we assume that they will devote more attention to the standard-setting process.

Somewhat related to culture might be the attitude of people towards compliance with rules. An area in which this attitude towards compliance with rules has been extensively investigated is the issue of tax compliance in the economics and finance literature. Prior research in economics and finance has revealed that the attitude towards tax compliance differs among countries (see Dyck and Zingales, 2004). Using the tax compliance variable as a proxy for the attitude towards compliance of regulation in general, we hypothesize that:

Hypothesis 5C: *Companies engage less in lobbying when they are situated in jurisdictions with low tax compliance*

In the financial accounting literature a substantial number of articles have investigated the different levels of earnings management between countries. In order to analyze differences in lobbying attitudes between countries, we will use available results from the extant literature on earnings management and earnings quality. The extant literature on earnings management and accounting quality indicates that financial reporting practices differ among countries. With regard to earnings management, we are aware that practices differ worldwide. Leuz et al. (2003) investigated the different attitudes towards earnings management and found substantial differences worldwide. These differences correlated, amongst other things, with the importance of the domestic stock market, the legal origin of the countries, the disclosure levels of firms, the ownership concentration, a corruption index,

and shareholders' protection rights. We will hypothesize that in countries where earnings management is more prevalent, lobbying will be less because earnings management can be seen as a way to avoid compliance with accounting standards.

Hypothesis 5D: *Companies engage less in lobbying when earnings management is larger in the domestic market*

It is not only the institutional environment and the cultural environment (including the attitude towards tax compliance and earnings management) that may influence the attitude towards lobbying. The information environment might also play a significant role in the decision whether or not to lobby. In the literature review we saw that managers of large firms will be more likely to lobby because the market may already have access to the information, which might be revealed through the comment letters. Building on this observation, we include in our analyses the differences in the domestic information environment of the firm. Research reveals (Lang and Lundholm, 1996) that when the number of analysts following is high, companies have higher disclosure levels and the accounting choices made to influence the reported income are not as effective as in environments characterized by low analyst following. Based on the knowledge that the information environment of the firm is different across countries, we hypothesize that:

Hypothesis 5E: *Companies will engage more in lobbying activities in jurisdictions with a rich information environment, characterized by the number of analysts following*

In the above research hypotheses, we assume that domestic variables and the domestic attitudes towards financial reporting and taxation influence the lobby behavior of the listed companies. However, when firms are multi-listed the institutional characteristics of a foreign stock market might drive the behavior of the firm as well. This is an element we have to take into account when we analyze the results.

Before we describe the research method and the research results obtained on these hypotheses, we will first describe the standard-setting process of the IASB and the opportunities for constituent parties to intervene in this process.

1.4 The IASB and the standard-setting process

The former IASC evolved in the last decade of the 20th century into a global standard setter.

1.4.1 The transformation into a global standard setter

The IASC was created in 1973. In 1995, as the next stage of its development, the IASC entered into an agreement with the International Organization of Securities Commission (IOSCO) to complete a 'core set' of IASs by 1999. With regard to the agreement, the IOSCO's Technical Committee stated that the completion of 'comprehensive core standards acceptable to the Technical Committee' would allow it to 'recommend endorsement of those standards for cross-border capital raising in all global markets'. In December 1998, the IASC completed its core standards. Following the publication of the report of the IASC's Strategic Working Party Recommendations on Shaping the IASC for the Future in November 1999, the board of the IASC approved proposals in December 1999 to make significant changes to the IASC's structure, in order to prepare it for an enhanced role as a global accounting standard setter. In May 2000 the proposed structural changes were approved by the IASC's membership. Also in May 2000, the IOSCO formally accepted the IASC's 'core standards' as a basis for cross-border securities listing purposes worldwide (although for certain countries, notably the USA, reconciliations of items such as earnings and stockholders' equity to national GAAP would still be required). In June 2000, the European Commission issued a communication proposing that all listed companies in the European Union would be required to prepare their consolidated financial statements using IASs, a proposal that has since been adopted when the European Parliament voted, in 2002, for the IAS regulation no. 1606/2002. This resulted in the mandated adoption of the IFRS by listed companies in the European Union as of 1 January 2005.

1.4.2 The mission of the IASB and its due process

After its reform in 2001, the IASB issued the following mission statement (paragraph 6 – preface to IFRS):

a) to develop, in the public interest, a single set of high-quality, understandable, and enforceable global accounting standards that require high-quality, transparent and comparable information in financial statements and other financial reporting to help participants in the various capital markets of the world and other users of the information to make economic decisions;
b) to promote the use and rigorous application of those standards; and
c) to work actively with national standard setters.

When we analyze the objectives of the IASB we notice a number of differences with a 'traditional' national standard setter. The IASB will issue standards that have to be applied in a variety of different legal and cultural contexts. This will require the use of IFRS by companies that vary considerably in size, ownership structure, capital structure, political jurisdiction, and financial reporting sophistication (Schipper, 2005).

Financial reports must be comprehensible across countries, across jurisdictions, and across cultures.

Next, the IASB has no authority with regard to the application of its standards in the different national jurisdictions. The enforcement of the IAS or IFRS is still a national matter. Further, we notice that the IASB will cooperate with national standard setters in its standard-setting process. The IASB will meet the chairmen of its partner and other accounting standard setters regularly. In addition, staff members of the IASB and partner standard setters cooperate on a daily basis on projects, sharing resources whenever necessary and appropriate. Close coordination between the IASB's due process and the due process of national standard setters is important to the success of the IASB (introduction – IFRS guide 2005).

IFRSs are designed to apply to the general purpose financial statements and other financial reporting of all profit-oriented entities. Although IFRSs are not designed to apply to not-for-profit activities in the private sector, public sector or government entities with such activities may find them appropriate. The Public Sector Committee of the International Federation of Accountants (PSC) has issued a guideline stating that IFRSs are applicable to government business entities. As a result, governments become a constituent party in the lobby process towards the IASB (paragraph 9 – preface IFRS).

1.4.3 The standard-setting process or due process

For the purpose of studying lobbying behavior it is essential to know which opportunities are given by the standard setter to its constituents to participate in the lobbying process. According to the IASB, IFRSs are developed through a formal system of due process and broad international consultation that involves accountants, financial analysts and other users of financial statements, the business community, stock exchanges, regulatory and legal authorities, academics and other interested individuals, and organizations from around the world. The IASB consults, in public meetings, the SAC[2] on major projects, agenda decisions and work priorities, and discusses technical matters in meetings that are open to public observation. The formal due process for projects normally, but necessarily, involves the following steps

(the steps that are required under the terms of the IASC Foundation Constitution are indicated by an asterisk – paragraph 18, preface to IFRS):

a) the staff are asked to identify and review all the issues associated with the topic and to consider the application of the IASB Framework to the issues;
b) study of national accounting requirements and practice and an exchange of views about the issues with national standard setters;
c) consulting the SAC about the advisability of adding the topic to the IASB's agenda*;
d) formation of an advisory group to give advice to the IASB on the project;
e) publishing for public comment a discussion document;
f) publishing for public comment an exposure draft approved by at least eight members of the IASB, including any dissenting opinions held by IASB members*;
g) publishing within an exposure draft a basis for conclusions;
h) consideration of all comments received within the comment period on discussion documents and exposure drafts*;
i) consideration of the desirability of holding a public hearing and of the desirability of conducting field tests and, if considered desirable, holding such hearings and conducting such tests;
j) approval of a standard by at least eight members of the IASB and inclusion in the published standard of any dissenting opinions*; and
k) publishing within a standard a basis for conclusions, explaining, among other things, the steps in the IASB's due process and how the IASB dealt with public comments on the exposure draft.

In this due process, the following opportunities for input can be distinguished:

a) participation in the development of views as a member of the SAC;
b) participation in advisory groups;
c) submission of an issue to IFRIC;
d) submission of a comment letter in response to a discussion document;
e) submission of a comment letter in response to an exposure draft;
f) participation in public round-table discussions; and
g) participation in field visits and field tests.

Because studies found evidence that the use of comment letters was highly correlated with the use of other lobbying methods, we will investigate the lobbying behavior of the different constituents towards the IASB by analyzing the

comment letters written by the different parties. Therefore, we will concentrate on the written submission made under (d) and (e). The IASB publishes each exposure draft of a standard and discussion documents for public comment, with a normal comment period of 90 days. In certain circumstances, the IASB may expose proposals for a longer or shorter period.

1.5 Research method

1.5.1 Data collection

As mentioned above, we will study lobbying behavior with the use of comment letters. Comment letters written in the due process are publicly available. The research population of this study consists of comment letters that were written between 2002 and the summer of 2005 in response to discussion documents issued by the IASB and exposure drafts issued by the IASB. The comment letters sent in response to the first document issued by the IASB, which was a discussion document on share-based transactions, were the only ones not included in the analysis. Of the 282 comment letters sent to the IASB in relation to this document, 115 were identical (CL 160–CL 275), only the name of the individual respondent being different. In total, there were 2245 letters written in response to these two types of document. For the purpose of the analysis, these documents are classified according to the type of constituent party. With regard to the companies involved in the lobbying process, we investigated the geographical location.

The 2245 comment letters were first classified in different categories, whereby each category represented a different constituent party. With regard to the classification into different types of constituent, the following classification was used: preparers, the accounting profession, users, national standard setters, regulatory authorities of stock exchanges, governments, individuals, academics, and other interested parties. This classification is based on the pronouncements of the IASB (paragraph 19 – preface to the IASB, 2005).

For the purpose of classifying each comment letter into one of these categories, several steps were taken. First, individuals with ties to specific organizations were grouped with those organizations (a similar approach was used by Larson, 1997). Second, the authors of all letters were examined to determine to what type of constituent they belonged (e.g. preparers, users, accountants, regulatory authorities). Third, responses of subsidiaries of multinational corporations were classified under the multinational corporation itself.

In order to be able to test the third and fourth hypotheses (on the economic position of the lobbying firm and the attitude of the auditor), we needed to classify the responses of the preparers and the auditors according to whether or not they were in favor or against the proposed standard. For this analysis, we chose a substantive exposure draft, namely exposure draft two, which preceded IFRS 2 on share-based payment. A 'substantive' exposure draft implies that the exposure draft proposes a standard for an accounting issue whereby in some countries the new standard completely supersedes the prior existing standard or in other countries no prior standard existed (adapted from Tandy and Wilburn, 1992). The issuance of IFRS 2, 'Share-based payment,' in February 2004 completes one of the first major objectives of the International Accounting Standards Board (IASB) since its reorganization in 2001. As it is the first international standard that regulates the recognition and measurement of share-based payment in the annual accounts, its realization project opened a considerable debate by accounting standard setters, users, preparers, and politicians. The comment letters we will focus on for testing hypotheses 3 and 4 have been written in reaction to exposure draft 2 (ED 2), issued in November 2002. Like the final standard, ED 2 proposes to require entities to recognize share-based payment transactions in their financial statements. This requirement includes recognition of expenses associated with transactions in which options are granted to employees. During the comment period, which ended on 7 March 2003, the IASB received 238 reactions or an equivalent of 2429 pages.

A content analysis of those letters was undertaken in order to determine whether the lobbying party opposed or supported the standard. Positions were classified in the categories: 'in favor,' 'against,' 'neutral,' or 'absent.' In the statistical analysis, the values '1,' '0,' and '−1' were assigned to the categories 'in favor,' 'neutral,' and 'against' respectively. This approach is based on the previous research of Kenny and Larson (1993), Rahman et al. (1994), Ryan et al. (1999), and Georgiou and Roberts (2004). Bearing in mind the shortcomings of these types of classifications mentioned by Francis (1987) and Buckmaster et al. (1994) (see literature review), we used not only the support/oppose classification in general, but also paid attention to the different items discussed in the exposure draft and the different opinions of preparers and auditors on those subitems. Appendix B presents the questions of the ED 2, which have been used for this detailed content analysis.

In order to analyze the hypotheses, which relate lobbying behavior to country characteristics, we assigned the corporate respondents to a single individual country according to the official legal location of the headquarters of the group.

1.5.2 Measurement of variables

The number of comment letters sent by the different groups of constituent parties represented the variables used for testing hypothesis 1 in relation to the participation of the preparers versus the users of financial statements in the lobby process of the IASB.

For the second hypothesis, in relation to the size of the preparers, information on turnover and assets was collected. Consistent with prior literature (see Larson, 1997) we used the Forbes Lists of the 2000 largest US companies and the 2000 largest non-US companies to test whether or not the lobbying companies are among the largest in the world.

Testing the third and fourth hypotheses was done with unit-level data on the suppose/oppose position of the individual companies and auditors taking part in the lobbying process towards exposure draft 2, which preceded IFRS 2. With regard to the hypotheses, which investigate the influence of country-level or domestic characteristics on the lobbying behavior, the following dependent variables and independent variables were used.

The dependent variable is supposed to measure the lobby intensity of a particular country. The basis for this measure could be the number of companies in a country sending comment letters. However, since a number of companies have sent several letters, we have chosen to work with the number of comment letters sent by industrial companies in a country. We kept the number of companies lobbying in a country as a secondary measure that we used to test the robustness of the results obtained based on the number of comment letters sent. In order to correct for the differences in the number of companies present in a country, we divided the two nominators by the number of companies listed on the domestic stock market in the home country of the lobbying company. In this way, we obtain a measure for the degree of involvement in the lobbying process towards the IASB by the individual countries. To determine the number of listed companies on the domestic stock market we relied on the statistics provided by the World Federation of Exchanges. With regard to the countries Belgium, France, The Netherlands, and Portugal, we divided the total number of listed firms on Euronext into different subgroups for those four countries.

The dependent variable for measuring the intensity of lobbying in a single country was: (number of comment letters sent from one country/number of companies listed on the domestic stock market) or (number of companies sending comment letters/number of domestic listed companies on the domestic stock market).

For the measurement of the independent variables, which are used to investigate the influence of domestic characteristics, we have chosen variables that represent these individual country-level characteristics and that have been used in the literature before. The chosen country scores are widely used in the literature, which investigates the influence of institutional and other domestic variables on the quality of accounting data and on earnings management practices. The following scores have been used as independent variables and have been taken from the sources given.

1.5.2.1 Institutional variables

Institutional variables represent the legal and enforcement environment of the firm. With regard to the degree of enforcement of rules present in a country, we use two measures, namely those developed by Hope (2003a,b) and by La Porta et al. (1998). The higher the scores, the higher the level of enforcement. Both Hope and La Porta et al. provide information about the domestic institutional variables that they have used to determine the enforcement score. We will include these individual scores in the analysis as well – they are the level of audit spending (Mueller et al., 1994), judicial efficiency (La Porta et al., 1998), rule of law (La Porta et al., 1998), anti-director rights (La Porta et al., 1998), and legal origin.

1.5.2.2 Cultural variables

We relied on the individual national scores given by Hofstede (1980, 1983, 1991) in his publications to measure cultural differences across the world. We adopted his scores for power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity.

1.5.2.3 Attitude towards compliance

In order to measure this construct we have used the individual country scores on tax compliance used by Dyck and Zingales (2004). The higher the score, the more inhabitants of a country show tax-compliant behavior.

1.5.2.4 Earnings management practices

Leuz et al. (2003) developed an earnings management score for a number of individual countries; we have used these scores to measure the degree of earnings

management in every country. The lower the score, the less earnings management is present in a country.

1.5.2.5 The information environment

The richness of the information environment was measured by the number of analysts following. This score was taken from IBES and collected as the number of analysts per firm.

The descriptive statistics of both the dependent and the independent variables used in the regression analyses are presented in Table 1.1.

Several nonparametric statistical methods will be used to test the hypotheses of Sutton (1984) and Watts and Zimmerman (1986) put forward in section 1.2.2 of this chapter. The differences in lobby patterns among constituent groups will be tested with the Kruskal–Wallis test for differences between rank orders. Differences in positions will be tested with the Wilcoxon rank test. The country-level influences will be tested with the use of nonparametric rank ordered regression. We will only use univariate regressions because, according to Hair et al. (1998), due to the small sample size (<20) regressions are the only appropriate form of analysis with one independent variable.

Table 1.1 Descriptive statistics of the dependent and independent variables

Variable (*N*)	Minimum	Maximum	Mean	Std
Intensity Comment Letters (18)	0.000940	0.173010	0.02721478	0.04018836
Intensity Company (18)	0.000313	0.036550	0.01170252	0.00994351
Enforcement Hope (16)	−3.65	1.21	−1.0444	1.62981
Enforcement La Porta (17)	5.60	10.00	8.6000	1.43571
Audit spending (16)	0.10	0.70	0.3475	0.20917
Judicial efficiency (16)	6.00	10.00	8.9844	1.44184
Rule of law (16)	4.42	10.00	8.9781	1.7798
Anti-director rights (16)	0.00	5.00	3.0000	1.54919
Legal origin (17)	1.00	4.00	2.2353	1.09141
Uncertainty avoidance (17)	23.00	98.00	59.6471	19.20593
Individualism (17)	35.00	91.00	70.3529	14.45225
Power distance (17)	11.00	68.00	40.7059	15.44249
Masculinity (17)	5.00	79.00	53.1765	20.73414
Analyst following (17)	3.50	30.20	15.7059	8.49908
Earnings management (17)	2.00	28.30	15.0235	8.64303
Tax compliance (14)	1.77	5.00	3.6057	1.01722

1.6 Research results

We will discuss all hypotheses put forward in the second part of this chapter. We will start with the general hypotheses of Sutton, followed by the hypothesis of Watts and Zimmerman and the different hypotheses on auditor behavior, and finally we will end with the hypotheses in relation to the country characteristics.

1.6.1 The preparers lobby more often than the users

In this part we test the first hypothesis – namely, that preparers lobby more than users. In Table 1.2 we list the total letters received from all groups of constituent parties. The number of comment letters sent by each category clearly indicates that preparers do indeed lobby more often than users.

In Appendix A these total figures are broken down over the different individual documents issued for comments by the IASB. The documents are listed in chronological order. Comment letters of preparers make up almost half of the submissions.

Table 1.2 Total letters received from all groups

Preparers	**1051**	**(47%)**
Individual companies	263	(12%)
Associations of companies	222	(10%)
Individual banks and the like	249	(11%)
Associations of banks and the like	317	(14%)
The accounting profession	**587**	**(26%)**
Audit firms	134	(6%)
Associations of accountants and auditors	453	(20%)
Users	**30**	**(1%)**
National standard setters	**296**	**(13%)**
Stock exchanges	**35**	**(2%)**
Governments	**33**	**(1%)**
Individuals	**77**	**(3%)**
Academics	**36**	**(2%)**
Other interested parties	**100**	**(4%)**
Consultants	60	(3%)
Actuaries	40	(2%)
TOTAL	**2245**	**(100%)**

It is important to keep in mind the observation of Sutton (1984) that preparers are homogeneous and therefore lobbying can be done through associations. Half of the preparers submissions are indeed done by associations of preparers.

The second largest participating group is the accounting profession. Within the group of single audit firms, the big four audit firms dominate the statistics – they respond to almost every document issued by the IASB. The IASB included in its mission statement that it would cooperate with national standard setters. In order to fulfill this objective, meetings will be organized between the IASB and the national standard-setting bodies. Further, a number of IASB board members have explicit liaison roles with specific national standard setters (see introduction, IFRS Guide, 2005). Although national standard setters have these opportunities to influence the standard-setting process, we learn from Table 1.2 that they still engage in lobbying through producing written submissions.

The group of users of financial statements seems to be almost absent in this influencing process. However, banks, financial institutions, mutual funds, and pension funds might lobby with a user perspective in relation to some documents issued by the IASB, as we will see in the discussion of hypothesis 3.

Stock exchanges do show up as a constituent party in the statistics and so do governments. Almost all government responses originate from Anglo-Saxon countries.

If we concentrate on the geographical dispersion of these constituent parties, we observe that individual companies and associations of preparers mainly originate from western countries, whereas comment letters from the associations of accountants and from national standard setters arrive from all corners of the world.

Although we are able to confirm that preparers lobby more often than users, this does not mean that participation levels of the different constituents are identical for all documents for comments issued by the IASB. For example, in relation to small and medium-sized enterprises the accounting profession sent most comment letters.

When we test if the different constituent parties lobby to the same extent towards all documents issued by the IASB, the hypothesis can be rejected with the highest significance (Kruskal–Wallis, asymptotic significance 0.000). Even when we distinguish the following three subcategories among the comment letters (comment letters in response to discussion documents, comment letters in response to adaptations of existing standards, and comment letters in response to exposure drafts dealing with accounting issues where standards did not previously exist or completely supersede prior standards based upon comprehensive

revaluation of these issues), the Kruskal–Wallis test provides evidence that the rank order of the different categories of lobbying parties differs.

1.6.2 Large companies participate more often in the lobbying process

The study of Larson (1997) revealed that a small fraction of corporations dominated the corporate responses to the IASC[3]. Of all corporate comment letters written, 0.06% of corporations account for 50% of the submissions, so a small number of corporations dominate responses to the IASC. Larson's observation no longer holds since the reform of the IASB. In Table 1.3 we present an overview of the number of companies from different countries that took part in the lobbying process and the number of comment letters they sent.

Table 1.3 Overview of the number of companies and the number of letters sent to the IASB within in a country

Country of origin	Number of companies	Number of comment letters sent
Australia	16	25
Austria	1	3
Belgium	3	3
Finland	1	5
France	4	6
Germany	25	33
Greece	1	1
India	1	1
Ireland	1	1
Italy	1	1
Luxembourg	2	3
Malaysia	1	1
The Netherlands	5	14
New Zealand	2	3
South Africa	1	1
Spain	1	3
Sweden	3	3
Switzerland	8	50
UK	38	82
USA	18	24
Total	133	263

Table 1.3 indicates that only in a few countries companies write more comment letters than average. This happens especially in Austria, Finland, the Netherlands, and Switzerland, and to a lesser extent in the UK.

In order to be consistent with Larson (1997), we also checked whether the companies writing a comment letter were among the largest worldwide, taking as a reference the Forbes list of largest US companies and non-US companies. The pattern discovered by Larson (1997) continues in the 21st century. In the countries where only one or a few companies have sent a comment letter, all companies belonged to the Forbes list of largest non-US companies (Finland, Greece, India, Ireland, Italy, Malaysia, The Netherlands, and Spain). In countries where more companies submitted a comment letter the following percentages belonged to the Forbes list: 83% (USA), 66% (Sweden), 62% (Switzerland), 52% (Germany), 52% (UK), 50% (France), and 43% (Australia). Only companies submitting a comment letter from the following countries did not belong to the Forbes list: Austria, Belgium, Luxembourg, New Zealand, and South Africa.

1.6.3 Companies that suffer from a larger negative economic impact of the standards will lobby more often

To test this hypothesis, we analyzed all the comment letters sent by preparers, users, and the accounting profession in response to exposure draft 2, preceding IFRS 2. Given the fact that the expensing of stock options gives more information on the company's present and future obligations, ED 2 will enhance the quality of financial reporting (Giner and Arce, 2004). Therefore, we can expect that users will support the 'expensing' proposal in ED 2. The use of share-based payment is dissimilar for different industries, so we can expect that the impact of the proposed standard will be disproportionately distributed over the different preparers. Therefore, 'knowledge-based' companies, in which share-based instruments are a common form of payment, will expect to experience more benefits in return for their lobbying efforts compared to enterprises active in traditional, stable industries, where share-based instruments are less common. Pharmaceuticals, software, semiconductor, and high-technology manufacturing are generally thought of as 'knowledge-based industries'. Based on the cost/benefit model we can therefore expect a higher contribution to the lobbying process for these enterprises. So hypothesis 3 becomes: A larger part of the letters written by preparers comes from enterprises active in the technological or pharmaceutical sector.

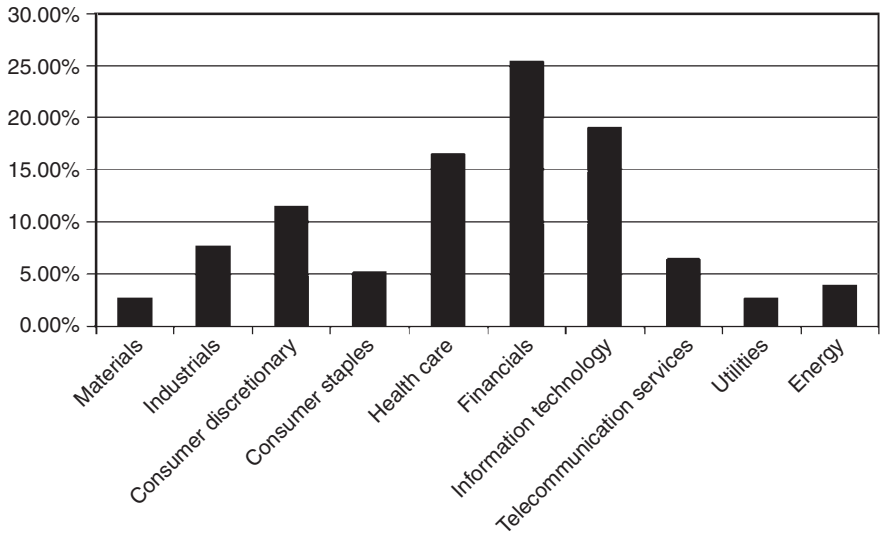

Figure 1.1 Distribution of the lobbying preparers

Figure 1.1 represents the distribution of the lobbying preparers among the 10 sectors of the General Industry Classification Standard. A remarkably large proportion (25%) of those enterprises are active in the financial industry. These findings are, however, not necessarily contrary to the reasoning behind hypothesis 3. Financial institutions and insurance companies experience the consequences of IFRS in two fields, as preparers and, perhaps even more importantly, as users of financial statements (analysts). As a consequence, their lobbying patterns are possibly more closely linked to those of users. When we omit this group of lobbyists, the sectors 'information technology' (19%) and 'health care' (16%) are the best represented. This is completely in accordance with our expectations in hypothesis 3. The least number of comment letters came from enterprises active in the sectors 'materials' (3%), 'utilities' (3%), and 'energy' (4%).

We now focus the analysis on the 'oppose/support' position taken by individual firms. 'Content analysis' was applied to investigate the hypotheses expounded above and to discover the general opinions of the lobbyists on the 'expensing' proposal. Positions were classified into the categories: 'in favor', 'against', 'neutral', or 'absent'. In the statistical analysis the values '1', '0', and '1' were assigned to the categories 'in favor', 'neutral', and 'against' respectively. We will hypothesize that: among preparers, companies from the technological and pharmaceutical sectors take a more negative position towards the proposal to expense the share-based payment transaction than enterprises from other sectors.

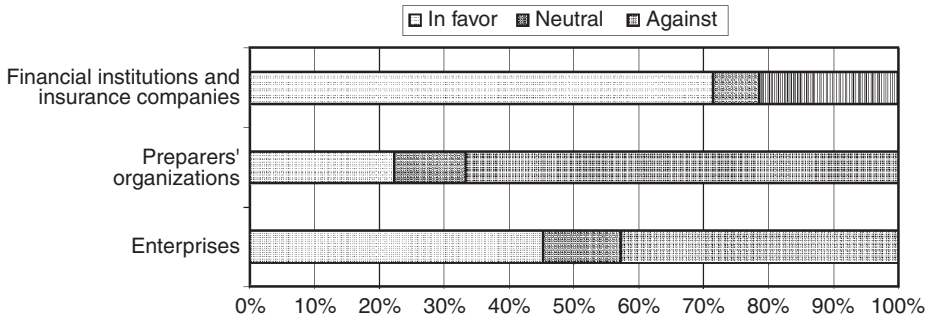

Figure 1.2 Analysis of comment letters sent by the preparers group in response to ED 2

Of the 97 analyzed comment letters written by preparers, 33 were against, eight neutral, and 33 in favor. This gives a general score for the preparers group of 0 or neutral. We can, however, refine our analysis by dividing this group into three subgroups, 'financial institutions', 'preparers – organizations' and 'preparers – enterprises'. Figure 1.2 represents an overview of the positions of these subgroups.

Based on these findings, financial institutions and insurance companies seem to take a generally positive position on the 'expensing' proposal. As we already mentioned in the first part of the analysis, this is possibly due to the fact that they act as users in this instance. To better analyze annual accounts, they will strive for more transparency in financial accounting and therefore belong to the group 'users'. When we omit them from the analysis, we find a generally negative position for the preparers (−0.13).

However, when we look at the subcategory 'preparers – enterprises', we observe a remarkable number of positive attitudes towards the expensing of share-based payment transactions. To more closely investigate where these letters come from, we repeated our analysis for the 10 GICS sectors. The positive lobbying attitudes come especially from the energy, utility, and materials sectors. Other sectors are globally subtle or even take a rather negative position towards the 'expensing' proposal, such as lobbyists active in 'information technology' or 'telecommunication services'.

1.6.4 The position of the auditor in the lobbying process

From the extant literature on the behavior of the auditor in the lobbying process, we recognize that there are several hypotheses that might explain their behavior. Using the data from the content analysis, we will investigate whether or not auditors defend the same opinion as their clients. In Table 1.4 we present the

Table 1.4 Average position for auditors and preparers

	q^0	q^1	q^2	q^{3a}	q^{3b}	q^4	q^5	q^9	q^{10}	q^{11}	q^{13}	q^{16}	q^{19}
Auditors	**1.00**	**0.67**	**1.00**	**1.00**	**0.50**	**−0.33**	**1.00**	**0.67**	**0.67**	**0.83**	**0.17**	**1.00**	**0.80**
Preparers	**0.02**	**−0.27**	**0.27**	**0.33**	**0.64**	**−0.09**	**0.64**	**−0.31**	**−0.42**	**−0.02**	**0.58**	**0.20**	**0.10**
***p*-value**	0.017	0.033	**0.064**	**0.099**	**0.755**	**0.579**	**0.270**	0.025	0.012	0.044	**0.213**	**0.064**	**0.529**

results of the content analysis carried out on a number of different subquestions of ED 2 (see Appendix B).

In the statistical analysis the values '1', '0', and '−1' were assigned to the categories 'in favor', 'neutral', and 'against' respectively. In order to get an idea if both hypotheses are relevant in the context of lobbying towards the IASB, we will analyze whether or not preparers and auditors defend the same opinions with regard to the different questions in relation to ED 2.

Table 1.4 shows the average position for both groups on 13 subjects of discussion from the IASB's invitation to comment. For each issue, the *p*-value from a Wilcoxon rank-sum test is also presented.

For five of the 13 analyzed questions (printed in bold in Appendix B), the points of view of both groups differ significantly (>95%). Remarkably, the major part of these five questions deals with issues that lead to a more complex standard (for example, the use of option pricing models (Q11), the unit of service method (Q9), etc.). Auditors are generally in favor of these complex arrangements, because they will increase audit fees. This is totally in accordance with earlier research on the lobbying behavior of auditors.

1.6.5 The influence of country-level variables on the lobbying behavior

In the study of Larson (1997), countries varied greatly in the rate at which their large corporations lobby the IASC. The countries with the highest percentages were Australia (55%), Hong Kong (67%), and Switzerland (47%). The USA has only 9% of its largest companies lobbying and countries like Korea, Spain, and Italy had no companies lobbying. We notice that after the reform of the IASB the participation level of countries in the standard-setting process is still different. Swiss and Australian companies are still very active in sending comment letters, but they are now joined by the northern part of the 'old part' of the European Union (i.e. Austria, Belgium, Finland, Germany, Ireland, Sweden, the Netherlands, and the UK) and New Zealand. Companies from the 'south' of Europe (France, Italy, Greece, Spain, and Portugal) seldom use comment letters to influence the standard-setting process. The notion that compulsory adoption of IFRS could be a variable influencing the participation in the written lobbying process seems not to hold for all jurisdictions (see low levels in the south of Europe). Participation levels in other parts of the world are still very low, if we consider individual companies. Below we present the results of the hypotheses tested with regard to the characteristics of a country.

Several hypotheses were developed to explain the differences in lobby intensity of companies located in different jurisdictions. We will now discuss the results of the univariate regression models. In Table 1.5 we present the statistical results of those regressions which have as dependent variable the degree of lobbying with the number of comment letters sent in the nominator and whereby the independent variable was found to be significant.

The results reveal that the hypothesis relating to the higher cost of compliance is accepted. The higher the judicial efficiency in a country and the level of enforcement of rules, the more companies do engage in the lobbying process to change standards. A compliant attitude towards tax regulations is a significant variable indicating a high participation in the lobbying process. This is a second hypothesis that is accepted. The hypotheses relating to the cultural variables provide mixed evidence – only the power distances are significant. This implies that in countries with large power distance companies will engage significantly less in lobbying. The hypotheses relating to the information environment of the firm and the earnings management practices are rejected.

When we run the univariate regressions with the dependent variable (number of companies sending comment letters/number of companies on the domestic stock market), the variables enforcement, judicial efficiency, and tax compliance remain significant; the variable power distance, however, becomes nonsignificant but still with a negative coefficient.

We might conclude from this that only enforcement, judicial efficiency, and attitude towards compliance with rules variables are domestic characteristics

Table 1.5 Regression results of the degree of lobbying on domestic characteristics

Independent variable	Coefficient	*t*-value	Significance
Enforcement Hope	4.550	2.035	0.061
	0.465	2.009	0.064
Enforcement La Porta	3.250	1.529	0.124
	0.639	3.275	0.005
Judicial efficiency	3.129	1.465	0.185
	0.632	2.820	0.014
Power distance	13.848	6.208	0.000
	−0.539	−2.474	0.026
Tax compliance	4.055	1.857	0.088
	0.459	1.791	0.098

that might explain the difference in lobbying behavior between companies from different countries. The nonsignificant results with regard to the information environment and local earnings management practices can be explained by the fact that a number of companies are dual listed. Lobbying behavior in these situations might be driven by earnings management practices and the information environment of the jurisdiction in which the stock exchange is located. Part of the companies is dual listed, but a much bigger part than before of companies taking part in the lobbying process towards the IASB is single listed on an EU or Australian stock exchange.

1.7 Conclusion

This chapter analyzed the lobbying behavior of the different constituent parties towards the IASB. The hypotheses of Sutton (1984) that preparers lobby more often than users and large firms lobby more often than small firms are confirmed in this multinational setting.

With the data resulting from a content analysis of comment letters sent in response to the exposure draft preceding the final standard IFRS 2 on share-based transactions, we were able to confirm the economic perspective theory of Watts and Zimmerman (1986). Companies that experience a negative cash flow effect from the proposed standard do indeed engage more in lobbying. Based on the same data we were also able to confirm that auditors do not always defend their clients' position when lobbying towards the IASB, but are driven by their own incentives as well.

The hypothesis of Sutton (1984) that an increase in the cost of compliance will increase the level of preparer lobby was confirmed. The results indicate that in countries with high levels of enforcement, with high judicial efficiency, and with a positive attitude towards tax compliance, companies engage more often in lobbying. With regard to the cultural variables we obtained mixed results; only the existence of large power distance influences the lobbying behavior in a negative way. Variables relating to domestic earnings management practices and the domestic information environment of the firm have no significant influence.

Notes

1. Seventy-eight percent of non-US lobbying corporations had securities traded in the USA.
2. The Standards Advisory Council (SAC) provides a formal vehicle for further groups and individuals having diverse geographical and functional backgrounds to give advice to the IASB.
3. Although 288 corporate comment letters were written in the period under study (1989–1994), 17 corporations account for 157 comment letters or 55% of all comment letters.

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Appendix A

	TOTAL	(%)	1	(%)	2	(%)	3	(%)	4	(%)	5	(%)	6	(%)	7	(%)
Preparers	**1051**	**(47%)**	**9**	**(14%)**	**4**	**(17%)**	**18**	**(18%)**	**60**	**(58%)**	**7**	**(19%)**	**24**	**(42%)**	**32**	**(52%)**
Individual companies	263	(12%)	1	(2%)	1	(4%)	1	(1%)	5	(5%)	1	(3%)	12	(21%)	1	(2%)
Associations of companies	222	(10%)	4	(6%)	3	(13%)	13	(13%)	7	(7%)	2	(5%)	8	(14%)	3	(5%)
Individual banks and the like	249	(11%)	1	(2%)	0	(0%)	0	(0%)	16	(15%)	2	(5%)	2	(4%)	8	(13%)
Associations of banks and the like	317	(14%)	3	(5%)	0	(0%)	4	(4%)	32	(31%)	2	(5%)	2	(4%)	20	(33%)
The accounting profession	**587**	**(26%)**	**31**	**(47%)**	**14**	**(58%)**	**48**	**(49%)**	**26**	**(25%)**	**19**	**(51%)**	**19**	**(33%)**	**16**	**(26%)**
Audit firms	134	(6%)	4	(6%)	4	(17%)	10	(10%)	5	(5%)	5	(14%)	5	(9%)	4	(7%)
Associations of accountants and auditors	453	(20%)	27	(41%)	10	(42%)	38	(39%)	21	(20%)	14	(38%)	14	(25%)	12	(20%)
Users	**30**	**(1%)**	**1**	**(2%)**	**0**	**(0%)**	**1**	**(1%)**	**2**	**(2%)**	**0**	**(0%)**	**0**	**(0%)**	**0**	**(0%)**
National standard setters	**296**	**(13%)**	**19**	**(29%)**	**6**	**(25%)**	**18**	**(18%)**	**10**	**(10%)**	**10**	**(27%)**	**13**	**(23%)**	**11**	**(18%)**
Stock exchanges	**35**	**(2%)**	**1**	**(2%)**	**0**	**(0%)**	**0**	**(0%)**	**3**	**(3%)**	**1**	**(3%)**	**1**	**(2%)**	**1**	**(2%)**
Governments	**33**	**(1%)**	**4**	**(6%)**	**0**	**(0%)**	**5**	**(5%)**	**1**	**(1%)**	**0**	**(0%)**	**0**	**(0%)**	**0**	**(0%)**
Individuals	**77**	**(3%)**	**0**	**(0%)**	**0**	**(0%)**	**5**	**(5%)**	**1**	**(1%)**	**0**	**(0%)**	**0**	**(0%)**	**0**	**(0%)**
Academics	**36**	**(2%)**	**0**	**(0%)**	**0**	**(0%)**	**1**	**(1%)**	**0**	**(0%)**	**0**	**(0%)**	**0**	**(0%)**	**0**	**(0%)**
Other interested parties	**100**	**(4%)**	**1**	**(2%)**	**0**	**(0%)**	**2**	**(2%)**	**1**	**(1%)**	**0**	**(0%)**	**0**	**(0%)**	**1**	**(2%)**
Consultants	60	(3%)	0	(0%)	0	(0%)	2	(2%)	0	(0%)	0	(0%)	0	(0%)	0	(0%)
Actuaries	40	(2%)	1	(2%)	0	(0%)	0	(0%)	1	(1%)	0	(0%)	0	(0%)	1	(2%)
TOTAL	**2245**		**66**		**24**		**98**		**104**		**37**		**57**		**61**	

1 = Draft Memorandum of Understanding on the Role of Accounting Standard Setters and their Relationships with the IASB (10 August 2005)
2 = IFRS 6 Exploration for and Evaluation of Mineral Resources and, as a consequence, an amendment to IFRS 1, First-time Adoption of International Financial Reporting Standards (6 June 2005)
3 = Staff questionnaire on possible modifications of the recognition and measurement principles in International Financial Reporting Standards (IFRS) for use in IASB standards for small and medium-sized entities (SMEs) (2 June 2005)
4 = ED 7, Financial Instruments: Disclosures (27 October 2004)
5 = Proposed Amendments to IAS 39, Transition and Initial Recognition of Financial Assets and Financial Liabilities (22 October 2004)
6 = Proposed Amendments to IAS 39, Cash Flow Hedge Accounting of Forecast Intragroup Transactions (22 October 2004)
7 = Proposed Amendments to IAS 39, Financial Guarantee Contracts and Credit Insurance (22 October 2004)

	8	(%)	9	(%)	10	(%	11	(%)	12	(%)	13	(%)	14	(%)	15	(%)
Preparers	**21**	**(18%)**	**40**	**(52%)**	**37**	**(40%)**	**69**	**(59%)**	**20**	**(40%)**	**34**	**(47%)**	**90**	**(74%)**	**38**	**(45%)**
Individual companies	1	(1%)	2	(3%)	13	(14%)	3	(3%)	2	(4%)	22	(31%)	18	(15%)	16	(19%)
Associations of companies	15	(13%)	22	(29%)	7	(8%)	8	(7%)	8	(16%)	11	(15%)	12	(10%)	8	(9%)
Individual banks and the like	0	(0%)	5	(6%)	9	(10%)	26	(22%)	2	(4%)	0	(0%)	28	(23%)	9	(11%)
Associations of banks and the like	5	(4%)	11	(14%)	8	(9%)	32	(28%)	8	(16%)	1	(1%)	32	(26%)	5	(6%)
The accounting profession	**51**	**(43%)**	**17**	**(22%)**	**22**	**(24%)**	**20**	**(17%)**	**14**	**(28%)**	**22**	**(31%)**	**17**	**(14%)**	**29**	**(34%)**
Audit firms	11	(9%)	5	(6%)	5	(5%)	4	(3%)	4	(8%)	5	(7%)	4	(3%)	5	(6%)
Associations of accountants and auditors	40	(33%)	12	(16%)	17	(18%)	16	(14%)	10	(20%)	17	(24%)	13	(11%)	24	(28%)
User	**1**	**(1%)**	**4**	**(5%)**	**2**	**(2%)**	**2**	**(2%)**	**0**	**(0%)**	**0**	**(0%)**	**1**	**(1%)**	**1**	**(1%)**
National standard setters	**18**	**(15%)**	**12**	**(16%)**	**16**	**(17%)**	**14**	**(12%)**	**8**	**(16%)**	**12**	**(17%)**	**10**	**(8%)**	**12**	**(14%)**
Stock exchanges	**0**	**(0%)**	**0**	**(0%)**	**1**	**(1%)**	**3**	**(3%)**	**3**	**(6%)**	**1**	**(1%)**	**2**	**(2%)**	**2**	**(2%)**
Governments	**9**	**(8%)**	**0**	**(0%)**	**1**	**(1%)**	**2**	**(2%)**	**1**	**(2%)**	**0**	**(0%)**	**0**	**(0%)**	**1**	**(1%)**
Individuals	**9**	**(8%)**	**1**	**(1%)**	**1**	**(1%)**	**1**	**(1%)**	**1**	**(2%)**	**2**	**(3%)**	**2**	**(2%)**	**2**	**(2%)**
Academics	**5**	**(4%)**	**1**	**(1%)**	**2**	**(2%)**	**3**	**(3%)**	**1**	**(2%)**	**0**	**(0%)**	**0**	**(0%)**	**0**	**(0%)**
Other interested parties	**6**	**(5%)**	**2**	**(3%)**	**10**	**(11%)**	**2**	**(2%)**	**2**	**(4%)**	**1**	**(1%)**	**0**	**(0%)**	**0**	**(0%)**
Consultants	5	(4%)	1	(1%)	7	(8%)	0	(0%)	1	(2%)	0	(0%)	0	(0%)	0	(0%)
Actuaries	1	(1%)	1	(1%)	3	(3%)	2	(2%)	1	(2%)	1	(1%)	0	(0%)	0	(0%)
TOTAL	**120**		**77**		**92**		**116**		**50**		**72**		**122**		**85**	

8 = Discussion Paper, Preliminary Views on Accounting Standards for Small and Medium-sized Entities (6 October 2004)
9 = ED Proposed Amendments to IFRS 3, Business Combinations – Combinations by Contract Alone or Involving Mutual Entities (5 August 2004)
10 = ED Proposed Amendments to IAS 19, Employee Benefits – Actuarial Gains and Losses, Group Plans and Disclosures (2004) (2 August 2004)
11 = ED Proposed Amendments to IAS 39, Financial Instruments: Recognition and Measurement: The Fair Value Option (2004) (26 July 2004)
12 = IASB Deliberative Process (18 June 2004)
13 = ED 6 Exploration for and Evaluation of Mineral Resources (2004) (6 May 2004)
14 = ED Fair Value Hedge Accounting for a Portfolio Hedge of Interest Rate Risk (2003) (19 December 2003)
15 = ED 4 Disposal of Non-current Assets and Presentation of Discontinued Operations (2003) (19 December 2003)

Appendix A (*Continued*)

	16	(%)	17	(%)	18	(%)	19	(%)	20	(%)	21	(%)	22	(%)	23	(%)
Preparers	**77**	**(57%)**	**59**	**(46%)**	**147**	**(71%)**	**119**	**(49%)**	**81**	**(51%)**	**33**	**(40%)**	**5**	**(15%)**	**27**	**(35%)**
Individual companies	6	(4%)	23	(18%)	33	(16%)	56	(23%)	30	(19%)	9	(11%)	3	(9%)	4	(5%)
Associations of companies	4	(3%)	14	(11%)	18	(9%)	19	(8%)	13	(8%)	10	(12%)	1	(3%)	12	(16%)
Individual banks and the like	32	(24%)	15	(12%)	43	(21%)	24	(10%)	15	(9%)	7	8%)	1	(3%)	4	(5%)
Associations of banks and the like	35	(26%)	7	(5%)	53	(26%)	20	(8%)	23	(14%)	7	(8%)	0	(0%)	7	(9%)
The accounting profession	**22**	**(16%)**	**31**	**(24%)**	**30**	**(14%)**	**29**	**(12%)**	**37**	**(23%)**	**28**	**(34%)**	**14**	**(41%)**	**31**	**(40%)**
Audit firms	6	(4%)	7	(5%)	7	(3%)	6	(2%)	7	(4%)	6	(7%)	5	(15%)	10	(13%)
Associations of accountants and auditors	16	(12%)	24	(19%)	23	(11%)	23	(10%)	30	(19%)	22	(27%)	9	(26%)	21	(27%)
Users	1	(1%)	2	(2%)	1	(0%)	10	(4%)	0	(0%)	1	(1%)	0	(0%)	0	(0%)
National standard setters	**13**	**(10%)**	**14**	**(11%)**	**14**	**(7%)**	**16**	**(7%)**	**21**	**(13%)**	**12**	**(14%)**	**6**	**(18%)**	**11**	**(14%)**
Stock exchanges	**2**	**(1%)**	**0**	**(0%)**	**2**	**(1%)**	**3**	**(1%)**	**3**	**(2%)**	**3**	**(4%)**	**1**	**(3%)**	**2**	**(3%)**
Governments	**0**	**(0%)**	**1**	**(1%)**	**4**	**(2%)**	**1**	**(0%)**	**2**	**(1%)**	**1**	**(1%)**	**0**	**(0%)**	**0**	**(0%)**
Individuals	**3**	**(2%)**	**10**	**(8%)**	**2**	**(1%)**	**23**	**(10%)**	**9**	**(6%)**	**1**	**(1%)**	**1**	**(3%)**	**3**	**(4%)**
Academics	**1**	**(1%)**	**4**	**(3%)**	**3**	**(1%)**	**12**	**(5%)**	**2**	**(1%)**	**0**	**(0%)**	**1**	**(3%)**	**0**	**(0%)**
Other interested parties	**15**	**(11%)**	**7**	**(5%)**	**4**	**(2%)**	**29**	**(12%)**	**4**	**(3%)**	**4**	**(5%)**	**6**	**(18%)**	**3**	**(4%)**
Consultants	1	(1%)	5	(4%)	1	(0%)	27	(11%)	3	(2%)	3	(4%)	2	(6%)	2	(3%)
Actuaries	14	(10%)	2	(2%)	3	(1%)	2	(1%)	1	(1%)	1	(1%)	4	(12%)	1	(1%)
TOTAL	**134**		**128**		**207**		**242**		**159**		**83**		**34**		**77**	

16 = ED 5, Insurance Contracts (2003) (10 December 2003)
17 = ED 3, Business Combinations (25 November 2003)
18 = Amendments to IAS 32, Financial Instruments: Disclosure and Presentation and IAS 39 Financial Instruments: Recognition and Measurement (2002) (10 September 2003)
19 = ED 2, Share-based Payment (2003) (10 September 2003)
20 = Improvements to International Accounting Standards (2002) (8 April 2003)
21 = ED 1, First-time Application of International Financial Reporting Standards (2002) (3 February 2003)
22 = IAS 19, Employee Benefits – The Asset Ceiling (2002) (18 April 2002)
23 = Preface to International Financial Reporting Standards (2002) (18 April 2002)

Appendix B

The numbers of the questions relate to the questions included in exposure draft 2.

Question 0

ED 2 is based on the idea that share-based payment transactions are a cost for the entity and should therefore be recognized in the profit and loss account. Is this general principle correct?

Question 1

Is the proposed scope (paragraphs 1–3) appropriate?

Question 2

Are the recognition requirements (to recognize an expense when the goods or services received or acquired are consumed) appropriate (paragraphs 4–6)?

Question 3a

Is the 'fair value'-based approach (paragraph 7) appropriate?

Question 3b

Is the requirement to distinguish between an indirect and a direct valuation method appropriate? (paragraph 7)

Question 4

Do you agree that the date when the entity obtains the goods or received services is the appropriate date at which to measure the fair value of the goods or services received (direct method)? (paragraph 8)

Question 5

Do you agree that the grant date is the appropriate date at which to measure the fair value of the equity instruments granted (indirect method)? (paragraph 8)

Question 9

Do you agree that, if the fair value of the equity instruments granted is used as a surrogate measure of the fair value of the services received, it is necessary to determine the amount to attribute to each unit of service received? (paragraph 15)

Question 10

Do you agree that no subsequent adjustments can be made to total equity once the entity has recognized the services received? (paragraph 16)

Question 11

Do you agree that an option pricing model should be applied to estimate the fair value of options granted?

Question 13

Do you agree that vesting conditions should be taken into account when estimating the fair value of options or shares granted? (paragraph 24)

Question 16

Do you agree with the principles-based approach of the draft IFRS? Are there specific aspects of valuing options for which guidance should be given?

Question 19

Are the proposed requirements to account for cash-settled share-based payment transactions appropriate? (paragraph 31)

2

A Fair Go for Fair Value

Janice Loftus

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2.1 Introduction

Historical cost has traditionally dominated accounting practice. As a market-based measure, historical cost is attractive because it provides a conservative measure of expected benefit (at least at the time of acquisition) and is easily verifiable. But historical cost has not gone unchallenged, with critics dismissing it as a flawed basis for reporting on financial position and performance (e.g. Chambers, 1979). Historical cost remained as the dominant measurement in accounting, notwithstanding vigorous debate on the merits of alternative methods of accounting for price changes burgeoning in the 1960s, and fueled by the impetus of double-digit inflation rates in the 1970s (Beaver et al., 1980). Two problems generated by high levels of inflation are: that non-financial assets are likely to be understated, giving rise to asset stripping; and that fixed-interest financial assets are likely to be overstated, due to rising interest rates. In the late 1970s and early 1980s, standard setters responded to criticisms of historical cost, exacerbated by inflation, by experimenting with various alternative measures. More recent fair value innovations reflect dissatisfaction with historical cost, a search for decision-useful information, and greater confidence in market values and other estimates of fair value.

This chapter provides a brief review of some of the experimental initiatives of the Financial Accounting Standards Board (FASB) and the Securities and Exchange Commission (SEC) in the 1970s that sought to address the limitations of historical cost in a period of changing price levels. Those initiatives, and those of other standard setters, were generally unsuccessful and arguably discouraged further innovation and acceptance of fair values in financial reporting.

Following discussion of the earlier initiatives, this chapter focuses on developments in applying fair value measurement to financial instruments. 'Fair value is the amount for which an asset can be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction' (IASB 39, paragraph 9). Arguably, the application of fair value to financial instruments is less contentious than for other assets and liabilities. One of the criticisms of fair value is the inability to observe market prices, particularly for specialized assets. This problem does not apply to financial instruments traded in an active market as they have an observable quoted price. For other financial assets and financial liabilities, fair value can be estimated using established techniques and available information, such as credit risk indicators and interest rates. Another criticism of fair value is that, in the absence of an active market, it requires the estimation of future flows of economic benefits. This estimation is less problematic in the

case of financial instruments because the future cash flows are determined by contract. Another argument against fair value is that it is not relevant for assets that an entity does not intend to trade. However, in the case of financial instruments, the fair value reflects the best available estimate of the present value of the future cash flows embodied in the contract and the risk that the amount and/or timing of cash flows will differ from expectations. Whether held to maturity or exchanged, the flow of economic benefits is in cash or other financial instruments. Accordingly, financial instruments provide the strongest case for the adoption of a fair value model.

The proposals of the International Accounting Standards Committee Steering Committee (1997) and the Joint Working Group of National Standard Setters and the IASC (2000) are discussed in section 2.3, followed by an analysis in section 2.4 of the mixed measurement model and muddled performance measurement prescribed and permitted by IAS 39. The chapter concludes with a discussion of the need for international acceptance of what is meant by performance measurement to clear the way for the adoption of consistent and comparable reporting on the effects of financial instruments on an entity's financial performance and financial position.

2.2 Experimental fair value initiatives

In response to inconsistencies emerging in accounting practice following a period of declining security prices in the USA, the FASB introduced *Statement of Financial Accounting Standard No. 12: Accounting for Certain Marketable Securities* (FAS 12) in 1975. As the market value of many marketable securities fell below cost, some entities carried them at cost while other entities reported the same assets at the lower of cost and market value. Partial recovery of market prices in 1975 resulted in some entities continuing to carry marketable securities at a written-down value that was below both cost and market value (FASB, 1975). The Standard required marketable equity securities to be classified into current and noncurrent portfolios and each portfolio carried at the lower of its aggregate cost and aggregate market value. FAS 12 applied to equity instruments other than redeemable preference stock and Arthur Litke, one of two members who dissented on the issue of FAS 12, argued that the Standard should require all marketable equity securities to be carried at market value, being the best measure of their net realizable value.

While intended to reduce inconsistencies, FAS 12 introduced several inconsistencies in accounting for changes in the market value of financial assets. The

Standard did not apply to enterprises in industries that had a specialized accounting practice for marketable securities, such as investment companies, brokers and dealers in securities, and certain categories of insurance companies. FAS 12 did not apply to other marketable financial instruments, such as bonds. The Standard provided for different treatment of changes in the valuation allowance (the net unrealized loss) between assets classified as current and those classified as noncurrent. FAS 12 did not allow for the recognition of unrealized gains on the portfolio but required unrealized gains to be recognized to the extent that they offset unrealized losses. The inconsistent treatment of unrealized gains and losses reflects the lack of clear guidance on what constitutes performance.

The SEC issued Accounting Series Release (ASR) 190 in 1976, requiring replacement cost disclosures for inventories, productive capacity, depreciation expense, and cost of sales expense. ASR 190 was designed to provide more relevant information in an inflationary economy than that provided by historical cost measures. The replacement cost numbers were supplements to, not substitutes for, historical cost numbers. Providing the information by disclosure without recognition shielded the income statement from any unrealized gains or losses that might have resulted from the application of a replacement cost model, such as current cost accounting. Further, restricting the information to note disclosures also avoided any difficult decisions about capital maintenance concepts implied by capacity-based measures of wealth.

The replacement cost disclosures did not appear to provide relevant information to the market beyond that provided by historical cost. Gheyara and Boatsman (1980) analyzed the 1976 fiscal year disclosures made in early 1977 and found no evidence of information content. Similarly, Beaver et al. (1980) found no security price effects for the announcement of the SEC's proposal, the adoption ASR 190 by the SEC, or disclosures made in compliance with the Release.

The FASB extended disclosure requirements with the issue of *Statement of Financial Accounting Standard No. 33: Financial Reporting and Changing Prices* (FAS 33) in 1979. The required disclosures included accounting numbers adjusted for changes in general purchasing power as well as current cost (replacement cost) measures. Like the SEC, the FASB confined its initiatives to note disclosures.

Mandatory current cost disclosures were also introduced in the UK in 1980. The UK requirements failed to gain acceptance. After a five-year experiment that clearly failed, the UK Standard ceased to be mandatory.

Feedback on FAS 33 was similarly negative (Chambers et al., 1984; Miller and Loftus, 2000) and the requirements were eventually made voluntary by *Statement*

of Financial Accounting Standard No. 89: Financial Reporting and Changing Prices, issued in 1986.

Current cost accounting was also introduced in Australia through numerous bulletins and statements of provisional accounting standards, and subsequently integrated into *Statement of Accounting Practice 1: Current Cost Accounting* in 1983 by the Institute of Chartered Accountants and the Australian Society of Accountants. Current cost accounting disclosures were always voluntary in Australia and were ignored in practice by the private sector (Miller and Loftus, 2000).

The lesson for standard setters from the era of innovation was that their constituents did not welcome radical change. Thus, innovation gave way to incrementalism in accounting reform. For instance, the Accounting Standards Board in the UK declared that its approach to measurement reform would be evolutionary rather than revolutionary (ASB, 1993). Gradual introduction of fair value, or any alternatives to historical cost, would necessitate a mixed measurement model and accompanying hybrid concept of performance measurement.

2.3 Proposals and requirements for fair value for financial instruments

The spate of corporate collapses in the second half of the 1980s and the early 1990s renewed calls for accounting reform. The need to reconsider accounting for financial instruments was fueled by global corporate financial disasters involving derivatives in the mid-1990s (e.g. Procter & Gamble, Gibson Greetings, Japan Airlines, Barings Bank, and Glaxo). The IASC responded by undertaking a joint project with Canada on accounting for financial assets and financial liabilities.

The collaboration resulted in the issue of a Discussion Paper, *Accounting for Financial Assets and Financial Liabilities*, published by the IASC (IASC Steering Committee on Financial Instruments, 1997), introducing proposals for radical reforms. The IASC Steering Committee proposed that entities should measure all financial assets and financial liabilities at fair value on initial recognition, when becoming a party to a financial instrument. They also proposed that all financial assets and financial liabilities should be measured at fair value subsequent to initial recognition, with changes accounted for in profit or loss. The only exception to this was the provision that changes in fair value of hedging instruments could be accounted for as gains or losses directly in equity with subsequent recycling to profit or loss to coincide with the recognition of gains or losses arising from the hedged transaction.

The proposed extension of fair value accounting proved to be highly controversial. The vast majority of financial statement preparers responding to the discussion paper disapproved of full fair value measurement of financial instruments. The lower of cost and market principle was preferred for financial instruments other than those held for trading (IASC, 1997). However, other respondents, including user groups, regulators and academics, and some professional accountancy bodies, accounting firms and standard setters, supported the proposed move to fair value accounting for financial instruments.

It was apparent that more work was needed to gain the support of its constituents and the IASC decided to tackle financial instruments in two stages:

1. In acknowledgment of the urgency of the matter, an interim international standard on recognition and measurement to be completed in 1998.
2. In acknowledgment of the complexity of the matter and the need for an integrated and harmonized standard, the establishment of a Joint Working Group of National Standard Setters and the IASC (JWG) to prepare a comprehensive standard by mid-year 2000.

The interim standard, *IAS 39: Financial Instruments: Recognition and Measurement*, was approved in December 1998 (subject to approval of the final wording) and issued in March 1999. IAS 39 prescribed initial recognition of all financial instruments at cost. The cost of a financial instrument at initial recognition is the fair value at the time that the entity becomes a party to the transaction and any directly attributable transaction costs. Subsequent remeasurement to fair value was required with the exception of loans and receivables initiated by the entity and not held for trading, fixed maturity investments that the entity intends to hold to maturity, and financial assets whose fair value cannot be measured reliably.

The need to resolve the contentious issue of how to account for changes in fair value was avoided by allowing alternative treatments. An entity could choose to recognize in profit or loss all gains and losses on remeasuring financial instruments to fair value, or recognize in profit or loss only those gains and losses on remeasuring financial instruments held for trading, and deferring the recognition of other changes in fair value in earnings until the financial instrument is settled.

While IAS 39 represented a substantial step towards fair value measurement, its application fell significantly short of the IASC Steering Committee's proposals for all financial instruments to be stated at fair value. The Steering Committee had proposed that changes in fair value of all financial instruments, with the exception of hedging instruments, be recognized immediately in profit or loss.

However, under IAS 39 the income statement would not capture changes in the fair value of financial assets held to maturity, loans and receivables, certain hedging instruments, financial assets and, at the discretion of the preparer, any financial asset not held for trading.

The second stage of the IASC's project on financial instruments was undertaken by the JWG, which aimed to develop a comprehensive standard on accounting for financial assets and financial liabilities. Building on the earlier proposals of the IASC Steering Committee, the JWG was committed to a fair value model and included in its objectives the implementation of a coherent framework for the recognition and fair value measurement of financial assets and financial liabilities, and for the presentation and disclosure of gains and losses and hedging activities (JWG, 2000). The resulting proposed standard was predictably similar to the earlier recommendations of the IASC Steering Committee.

The JWG concluded that fair values were able to be determined reliably for all financial assets and financial liabilities other than certain investments in private equity. Accordingly, the JWG proposed that, with the exception of certain private equity investments, all financial instruments, including loans and receivables, be stated at fair value on initial recognition. Subsequently, the financial assets and financial liabilities should be remeasured to fair value, with changes in fair value included in profit or loss. The JWG went beyond the earlier recommendations of the IASC Steering Committee by proposing that hedge accounting be discontinued.

The IASC (2000) concluded that implementation of the JWG's proposals would be a significant step and require a different 'mindset' to apply concepts and techniques from finance and capital markets to derive measures for financial reporting. It also required a step out of the mixed measurement model, albeit in respect to a defined category of assets and liabilities. The JWG believed that the international accounting community was ready to replace the existing deficient mixed measurement model with a comprehensive fair value model that could provide the most relevant information on financial instruments.

However, a comprehensive fair value model, if applied to financial instruments, would necessarily form part of a mixed measurement model when combined with different accounting treatments for other assets and liabilities. For instance, an enterprise may enter into an effective hedge to mitigate risks of changing prices, but the effectiveness of its risk management strategy may be masked by accounting practices that mark the hedging instrument to fair value while applying a different measurement basis to the hedged item. Moreover, the proposed recognition of unrealized gains and losses in earnings was not based on any accepted concept of performance measurement.

While the JWG considered the time was right to embrace fair value accounting for financial instruments, many within the international accounting community particularly the banking industry (Tan et al., 2005), did not. The improvements project of the newly instigated International Accounting Standards Board (IASB), involving the revision of 13 accounting standards, became a major priority of the Board. Rather than embracing the JWG's revolutionary proposals, the IASB adopted a strategy of addressing aspects of accounting for financial instruments that could be dealt with relatively quickly, and deferred reconsidering the fundamental approach, or approaches, to accounting for financial instruments established by IAS 39 (IASB, 2002).

2.4 IAS 39 and the mixed measurement model

IAS 39 adopts a mixed measurement model, with the use of amortized cost and fair value determined, to some extent, by the type of financial asset, management's purpose for engaging in the financial instrument, and management's choice (or designation) on initial recognition. The Standard uses five categories for the classification of financial instruments and these categories determine how they should be measured on initial recognition and subsequent measurement:

- financial assets at fair value through profit or loss
- held-to-maturity investments
- loans and receivables
- available-for-sale financial assets
- other financial liabilities.

A financial asset is categorized as *at fair value through profit or loss* if it is held for trading or designated by the entity as *at fair value through profit or loss* on initial recognition (IAS 39). To be classified as held for trading the financial asset must be:

- acquired principally for the purpose of being sold in the near term
- part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent pattern of short-term profit-taking, or
- a derivative, other than a derivate financial instrument that is a designated and effective hedging instrument.

The Standard allows for considerable management discretion in the classification of financial instruments. Any financial asset within the scope of IAS 39 can

be classified as *at fair value through profit or loss* on initial recognition except for investments in equity instruments that do not have a quoted market price in an active market (and derivatives that are linked to, and must be settled by delivery of, unquoted equity instruments), and whose fair value cannot be reliably measured.

Financial assets that are categorized as *at fair value through profit or loss* are measured at fair value on initial recognition (that is, when the entity enters into the contract). The initial carrying amount does not include transaction costs. Subsequent to initial recognition, they are remeasured at fair value. A gain or loss resulting from the change in fair value of this category of assets is recognized through profit or loss.

The second category, *held-to-maturity investments*, comprises nonderivative financial assets with fixed or determinable payments and fixed maturity, and the entity has the positive intention and ability to hold the asset until it matures with the exception of the following (IAS 39):

(a) those that the entity upon initial recognition designates as *at fair value through profit or loss*
(b) those that the entity designates as *available-for-sale*, and
(c) those that meet the definition of *loans and receivables*.

The criteria for classification as *held-to-maturity investments* reflect a combination of purpose-led classification and, to an extent, management discretion (Loftus, 2003). It is purpose-led because management must have the intention to hold the asset until maturity. But categorizing financial assets that management intends to hold to maturity as *held-to-maturity investments* is not mandatory because management has the discretion, subject to restrictions related to reliable measurement, to designate them as *at fair value through profit or loss*.

IAS 39 requires financial assets that are categorized as *held-to-maturity investments* to be measured at fair value plus transaction costs on initial recognition. Subsequent to initial recognition, financial assets categorized as *held-to-maturity investments* are carried at amortized cost using the effective interest rate method. The amortized cost of a financial asset is the amount at which it is measured on initial recognition, plus or minus cumulative amortization of any difference between the principal amount and the maturity amount, less any reductions for impairment or uncollectibility (IAS 39).

Financial assets are categorized as *loans and receivables* if they are nonderivative financial assets with fixed or determinable payments but are not quoted in

an active market, with the exception of (IAS 39, paragraph 9):

(a) those that the entity intends to sell immediately or in the near term, which shall be classified as held for trading, and those that the entity upon initial recognition designates *at fair value through profit or loss*
(b) those that the entity upon initial recognition designates as *available-for-sale financial assets*, or
(c) those for which the holder may not recover substantially all of its initial investment, other than because of credit deterioration, which shall be classified as *available for sale*.

The first two exceptions provide for mutually exclusive categories of financial assets. The third exception excludes financial assets for which the initial investment is not fully recoverable for reasons other than the debtor's credit deterioration. Such financial assets are classified as *available for sale*. Classifying financial assets as *loans and receivables* when a substantial amount of the initial investment is unrecoverable would be inappropriate because this classification of financial assets is carried at amortized cost subsequent to initial recognition.

Financial assets classified as *loans and receivables* are measured at fair value plus transaction costs on initial recognition (IAS 39). Subsequent to initial recognition, financial assets categorized as *loans and receivables* are recognized at amortized cost using the effective interest method, subject to an impairment test.

Available-for-sale financial assets are those nonderivative financial assets that are:

- designated as available for sale, or
- not classified as *loans and receivables*, *held-to-maturity investments*, or financial assets *at fair value through profit or loss*.

IAS 39 applies multiple bases for the categorization of financial assets as *available for sale* (Loftus, 2003). One basis reflects management discretion because management may designate the assets as *available for sale*. The assets, such as bonds, may otherwise qualify as *held-to-maturity investments*, or meet the definition of *loans and receivables*. However, this is subject to the asset not having been classified as held for trading, which could be on the basis of management intention (acquired principally for the purpose of resale) or the nature of the asset (a derivative financial instrument). The categorization as *available for sale* also reflects, in part, the nature of the asset, as this category is limited to nonderivative financial assets. Thirdly, the *available-for-sale* category also serves as the default category for nonderivative financial assets. Some financial assets may be excluded from being categorized as *held-to-maturity investments* as a

result of prior reclassifications or sales of assets so classified. Thus, their categorization as *available for sale* might not reflect management intention, management discretion, or the nature of the financial assets, but the application of rules restricting categorization as *held-to-maturity investments*.

Assets categorized as *available-for-sale financial assets* are measured at fair value plus transaction costs on initial recognition (IAS 39). Subsequent to initial measurement, the assets are measured at fair value and the gain or loss arising from the change in fair value is measured directly in equity.

The category *other liabilities* includes all liabilities that are not classified as *at fair value through profit or loss*. Accordingly, the category is only available to nonderivative liabilities. *Other liabilities* are recognized at amortized cost using the effective interest rate method in accordance with IAS 39.

IAS specifies alternatives for recognizing gain or loss arising from a change in the fair value of financial assets and financial liabilities that are not part of a hedging relationship: a gain or loss on a financial asset or financial liability classified as *at fair value through profit or loss* shall be recognized in profit or loss; and a gain or loss on holding an *available-for-sale financial asset* shall be recognized directly in equity, through the statement of changes in equity (except for impairment losses and foreign exchange gains and losses) until the financial asset is derecognized, at which time the cumulative gain or loss previously recognized in equity shall be recognized in profit or loss. Thus, the classification of financial instruments determines whether changes in fair value are recognized, and the timing of the effect on profit of those changes in fair value that are recognized.

In the following example, Loftus (2003) demonstrates the inconsistencies that can arise from the mixed measurement model applied by IAS 39. For example, suppose Company A, Company B, and Company C purchase XYZ bonds. Company A categorizes the bonds as *at fair value through profit or loss*, Company B categorizes them as *held-to-maturity investments,* and Company C categorizes them as *available-for-sale financial assets.* IAS 39 then required Company A to recognize the bonds at fair value. Transaction costs would be expensed and changes in fair value would affect reported profit in each reporting period while the bonds are held. Applying IAS 39, Company B would initially recognize the bonds at fair value plus transactions cost, and subsequently measure them at amortized cost, ignoring changes in fair value in the measurement of the assets and profit. IAS 39 requires Company C to recognize the bonds at fair value plus transaction costs and changes in fair value would be recognized directly in equity with recycling through profit when the bonds are derecognized. Thus, Company B and Company C would initially measure the bonds at the same carrying amount

while Company A would differ in the treatment of the transaction costs. Subsequently, Company A and Company C would measure the bonds at fair value while Company B would apply amortized cost. The effect of the investment in the bonds on profit for each period would differ for each of the three companies (interest plus change in fair value or interest determined using the effective interest rate method or interest). The different accounting treatments do not reflect differences in the financial assets. They might not reflect differences in management purposes for holding the assets as all three companies may intend to hold the bonds until maturity. Further, an entity may simultaneously use different categories for accounting for identical or similar nonderivative financial assets.

While IAS 39 promotes the use of fair value, by requiring classification of some financial instruments as *at fair value through profit or loss* and permitting many other financial assets to be so designated, it has retained a mixed measurement model rather than embracing the fair value model proposed by the JWG. In the face of considerable opposition to the JWG proposals, hedge accounting was retained in IAS 39, albeit with tighter restrictions on its application.

2.5 Conclusion

Historical cost has withstood challenges from academics, regulators, and users of financial statements. Criticism of historical cost rose during periods of high inflation and standard setters responded with largely unsuccessful innovations, mostly involving disclosures in notes. While interest in measurements other than cost was growing, concerns about how any changes in value should be accounted for in income or equity proved to be a significant and enduring impediment to the recognition of alternative measures in financial statements.

Gradually, the historical cost model and modified historical cost models have been succeeded by mixed measurement models. Corporate collapses in the late 1980s and 1990s fueled the historical cost debate, with renewed interest in fair values, particularly with respect to financial instruments.

International projects on accounting for financial instruments resulted in proposals by the IASC Steering Committee and the JWG for fair value accounting for financial instruments. The IASB acknowledged that the JWG proposals represented a significant step, but it proved to be a step that it was not prepared to take.

Instead, the improved IAS 39 permits and requires different measurement principles both on initial measurement and on subsequent measurement for identical assets. Similar or identical assets may be accounted for differently

while different financial assets may be included in the same category. For example, management may designate various nonderivative financial assets, including loans and other receivables, as *available-for-sale financial assets*, and both derivate and nonderivative financial assets (other than loans and receivables) may be designated as *at fair value through profit or loss*. The mixed measurement model applied in IAS 39, together with the inconsistent treatment of recognized changes in fair value, results in a blurred concept of performance measurement.

Comparability of financial position and financial performance may be impaired by the mixed measurement model and the mix of criteria prescribed and permitted by IAS 39 for determining how financial assets should be categorized and measured. The nature of financial instruments and the availability of active markets and techniques for estimation of fair value provide the strongest case for giving fair value a 'fair go'. However, the absence of international agreement and conceptual guidance on a consistent measurement model and concept of capital maintenance continue to impede the application of a fair value model. It is hoped that the IASB's performance measurement project may remove longstanding obstacles to the application of a fair value model in the context of financial instruments, where the reliability of fair values is widely accepted and they clearly provide the most relevant information about the effects on financial performance and financial position of this aspect of an entity's activities.

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3

The Behavior Modification Impact of International Accounting Standards on Decision-making and Risk Management

Stanley C.W. Salvary

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> 'We need a technique that will enable us to discover possible alternatives to propositions which we may regard as truisms or necessarily true. In this process logic aids us in devising ways of formulating our propositions explicitly and accurately, so that their possible alternatives become clear. When thus faced with alternative hypotheses, logic develops their consequences; compared with observable phenomena we have a means of testing which hypothesis is to be eliminated and which is most in harmony with the facts of observation.'
>
> (Cohen and Nagel, 1934, pp. 195–196)

3.1 Introduction

In its Framework (April 2001, F.24), the International Accounting Standards Board (IASB) fully recognizes and acknowledges that:

> '[F]inancial statements *cannot provide all the information* that users may need to make economic decisions. For one thing, financial statements show the financial effects of past events and transactions, whereas *the decisions that most users of financial statements have to make relate to the future.*' (Emphasis added)

Also, the following explanation of *relevance* is given in the Framework (F.26–28):

> 'Information in financial statements is relevant when it influences the economic decisions of users. It can do that both by (a) helping them *evaluate* past, present, or *future events* relating to an enterprise and by (b) confirming or correcting past evaluations they have made.' (Emphasis added)

The focus on decision-making instead of accountability leads to a concern for predictive value, as opposed to feedback value, in financial statements. Given that fair value is deemed by many researchers to be the most relevant measure for financial reporting, the desire to enhance users' ability to predict firms' future cash flows leads the IASB to conclude that the changes in market values should be reflected in financial statements. However, other important studies have established that a change in financial accounting measures is not needed; what is needed is the disclosure of information derived from models that provide alternative nonfinancial measures that drive future performance. In studies by Canibano et al. (1999) and Bornemann et al. (1999), it is fully recognized that *decision-oriented information cannot and should not be provided by financial statements*. These researchers

conclude that the problem is better addressed by developing models that would better measure intangibles and provide a framework for better disclosures.

A model for a reporting framework with nonfinancial measures alongside financial measures has been developed by Canibano et al. (1999). Additionally, the Canadian Institute of Chartered Accountants (CICA), concerning the relevance of traditional financial accounting for performance in the new knowledge-based economy, has developed the total value creation (TVC) model. As stated in unequivocal terms, this model, as developed, captures an entity's value-creating activities (where things are going), a future orientation, which is quite distinct from value-realizing activities (from where things are coming), a historic orientation (Upton, 2001, p. 21).

In part due to Kaplan and Norton (1992), business leaders have recognized that to effectively manage, it is not a change in the financial measures that is needed. Instead, it is the development of alternative nonfinancial measures that drive future performance that is needed. For instance, the balanced score card (Kaplan and Norton, 1996, p. 8) complements financial measures of past performance with measures of the drivers of future performance. Accordingly, much of the added information discussed above is presently being used by management, and much of it is already provided to some users such as banks. Management's past reluctance to disclose such information to the public has been overcome by a new sense of urgency to adopt innovative disclosures. According to Keller (2003, p. 2): 'Larger businesses have been taking their own steps to disseminate more relevant, non-required, non-financial information to their investors and other key stakeholders.'

Furthermore, in October 1994, the Special Committee on Financial Reporting of the American Institute of Certified Public Accountants (Special Committee) issued its report, *Improving Business Reporting – A Customer Focus, Meeting the Information Needs of Investors and Creditors*. Interestingly, the Special Committee (1994, p. 94) concluded that although users would like to have more information, *they are not in favor of replacing the current accounting model with a value-based accounting model*. Users wished to retain the conventional model since it provides: (1) a stable and consistent benchmark that is highly useful for understanding the business, identifying trends, and valuing a business by projecting earnings and cash flows; and (2) information that is reliable because the amounts are based on market transactions. Disclosures recommended by the Special Committee (1994, p. 25) are: (1) *Financial and nonfinancial data*; (2) management's analysis of financial and nonfinancial data; (3) *forward-looking information*; (4) information about management and shareholders; and (5) background about the company. Recommendations (1) and (3) expressly identify and separate evaluative/feedback data from decision-making/

predictive/forward-looking data. Indubitably, as revealed by the Special Committee's report, the difference between the information generated by financial and managerial accounting is of great concern. Accordingly, the IASB's emphasis on the *future* and *future events* has to be examined in the context of accounting in its totality.

Financial accounting provides a mapping of cash commitments, but *does not provide a forecast of the future*. Since financial statements provide *no insight as to the future plans of management*, they cannot help users *evaluate future events* – that which has not occurred. However, users can be aided in their decision-making if they were to be provided with managerial accounting information. While internal financial reporting incorporates both financial and managerial accounting information, external financial reporting is comprised primarily of financial accounting information. Therefore, very little information in external financial reports relates to the decision-making (planning) function of management. *Internal* reporting provides evaluated data (information tailor-made for specific decisions governed by *relevancy and reliability*) and *external* reporting provides general information about the firm characterized by *reliability and neutrality* (Salvary, 1985). External financial reporting can be extended to include an immense variety of information about the current capability of an organization; at a minimum, it should include managerial accounting information. Other information can be disclosed as long as such disclosures would not expose the entity to risk of injury (Salvary, 1989b, p. 320).

Invariably, when deciding on the best course of action, management places/utilizes financial accounting information in context with information derived from managerial accounting to arrive at their decisions (Salvary, 1985, pp. 14–15). Inescapably, users have to follow the same path as management by drawing upon all information that is available from whatever source that is reliable. Apparently, in the quest to satisfy users' need for decision-making information, financial reporting is being confused with financial analysis. However, it should be obvious that:

> 'When one is *using the output* of financial accounting for analytical purposes (except in the case of the attest function), one is no longer in the realm of financial accounting. Manipulation of financial accounting data for credit analysis for loans, bankruptcy prediction, etc., removes one from the realm of financial accounting. The output of financial accounting is input for financial analysis; *and financial analysis is part of managerial accounting*. When cognizance is not given to this subtlety, confusion abounds!'
>
> (Salvary, 1989b, pp. 30–32)

As noted by Scott (1997, p. 161), by assuming 'greater responsibility for incorporating fair values into the financial statements proper … accountants are doing some of the investors' work for them through increased use of valuations. If the securities market … [were] fully efficient, this would not be necessary to the extent that value information was available in supplementary form or elsewhere.' Additionally, while its position may have changed at this time, the Financial Accounting Policy Committee (FAPC) of the Association for Investment Management and Research (AIMR) in 1998 maintained that only facts should be provided by accountants and financial analysts will perform the financial analysis (Knutson and Napolitano, 1998, p. 176). Being more specific, the AIMR's FAPC states that: (1) many things, that properly belong in supplementary schedules, should not be forced into the financial statements; (2) factual data, accompanied by supplemental information for clarification, should be the sole contents of financial statements; (3) financial accounting standards must focus on that which is real and portray the substance of exchanges and other economic events accurately and completely; and (4) new standards should provide information about the firm that could not have been estimated by outsiders (Knutson and Napolitano, 1998, pp. 172–175). *While it is possible that one may argue that item (4) was an invitation for the adoption of fair market value accounting*, it does not appear likely since that would be in contradiction to the FAPC's position in items (1), (2), and (3).

Inadvertently, the IASB's efforts to improve financial reporting are misdirected due to the failure to give cognizance to: (1) the difference between the capital market and the commodity market; (2) the role and psychological effect of the capital market; (3) the difference between simplifying assumptions and necessary and sufficient conditions for measurement; (4) economic reality as embedded in plans, decision-making, and operating dynamics; (5) the importance of risk management, decision-making, and performance measurement; (6) the structural and operating differences among the different types of companies; (7) the need for sanity in market pricing and sensibility in financial reporting; and (8) the investment decision, capital budgeting, and recoverable cost. These issues are examined in context of the IASB's objectives and standards.

3.2 The capital market and the commodity market

The international accounting standard-setting process is plagued with the assumed homogeneity of users' need and purpose of financial reports, a problem that has been transferred from the national accounting standard-setting arenas. As posed by the standard setters in the USA and to a lesser extent the UK, the

problem stems from the desire to set accounting standards to satisfy investors' needs.

As stated in its final *Preface to International Financial Reporting Standards* (IASB, 2002), the IASB's objectives are:

(a) to develop, in the public interest, a single set of high-quality, understandable, and enforceable global accounting standards that require high-quality, transparent, and comparable information in financial statements and other financial reporting to help participants in the world's capital markets and other users make economic decisions
(b) to promote the use and rigorous application of those standards; and
(c) to work actively with national standard setters to bring about convergence of national accounting standards and IFRS to high-quality solutions.

According to Levitt (1998, p. 81): 'Any set of accounting standards that seeks global acceptance must be shaped … by looking to the needs of the investors and the capital markets.' With this background, it is understandable why item (a) of the IASB's objectives is:

> 'to develop … a single set of high-quality, understandable, and enforceable *global accounting standards* that require high-quality, transparent, and comparable information in financial statements and other financial reporting to help participants in the *world's capital markets* and other users make economic decisions.' (Emphasis added)

This emphasis on the capital markets is seemingly oblivious to the fact that many countries such as Germany, Japan, and France, with strong bank financing, have built eminently successful economies (Bardhan and Roemer, 1992, p. 107) given a broad social emphasis for financial reporting.

The two functions of the capital market actually represent two distinct markets: (a) a new issues market – the primary market; and (b) an aftermarket market – a secondary market which consists of the outstanding stock of old issues. The primary market provides capital to enterprises for investment purposes (Committee for Invisible Transactions, 1967, pp. 23–25). The secondary market or aftermarket simply provides for the transfer of ownership. Billions of dollars exchange hands in those transactions, yet there is no injection of cash into the coffers of the firms whose shares are traded. Since the *secondary* capital market is a transfer market, it is not critical to the functioning of a successful economy, whereas 'a bank-centric financial system … largely mitigates the planner–manager principal–agent problem, and does so in a way potentially superior to that of the

stock market-centric system' (Bardhan and Roemer, 1992, p. 109). Undoubtedly, the main ingredients for successful operations of an economy are the availability of *savings for investments* and a management philosophy that is conducive to the further development of social exchanges (Salvary, 1998b).

It is the difference between *investing and saving* that establishes the distinction between the commodity market and the capital market. At the initiation of an investment/operating plan which is financed by savings, *based on the capital budgeting model*, a specific stream of cash flows is set in motion and this cash flow stream is valued at the margin. It is uncertainty and the time perspective, which confront the operating decision, that differentiate the *investment decision* from the *savings decision* (Salvary, 1998a).

Traditionally, financial reporting has reported on the firm's investment/operating decisions as executed and the actual consequences of those decisions. Now, since item (a) of the IASB's objectives maintains that: 'financial reporting [is] to help participants in the world's capital markets and other users make economic decisions', *the capital market is now considered as the main show and the commodity market has become the side show*. Although it is the commodity market (providing consumers with goods and services from manufacturing, real estate, banking, insurance, etc.) that drives the economy, the capital market, which involves the transfer of ownership and intertemporal transfer of risk, is deemed to be the basis of economic reality. With this change of focus for financial reporting, the IASB deems it necessary to develop standards that incorporate changes in market prices in the financial accounting measurement process. This condition raises profound questions concerning the economic system:

1. How and where is value created?
2. Can the economy function without the production of goods and services?
3. Can the economy function without the securities market?

(1) Value is created in the *commodity market* with the production of goods and services. (2) Without the production of goods and services there is no economy. Therefore, in the absence of the commodity market, there would be nothing to value. (3) The emergence and functioning of the securities market revolves around the commodity market. In the capital market *wealth* is created and appropriated; the transactions constitute the transfer of cash for ownership. Quite often and over sustained periods, the cash transfer for ownership remotely relates to the underlying value created by firms in the commodity market.

As noted by Newman (2005), through June 2005, Total Dollar Trading Value (DTV) is estimated to be $28.321 trillion, whereas Gross Domestic Product (GDP)

is $12.183 trillion and total market capitalization (MC) $14.733 trillion. DTV is 232.5% of GDP and 192.2% of MC. The fact that these measures are the second and third highest ever recorded, respectively, is a clear indication that the mania for stocks has never really ended. As measured by Bulletin Board, share volume is averaging more than 1.8 billion shares per day, which is more than the totals registered on NASDAQ's popular market! Trading has increased 2.2% over the frenetic activity of 2004. Now daily share volume is four times as high as in 2000. In the 18 months since the end of 2003, inflows totaled $251.8 billion but there has been no price improvement for the Dow; instead, there has been a 2% loss through June 2005. Sadly, prices for individual stock issues are no longer relevant; it is only the various and sundry indexes that count. In the given scenario, it cannot be assumed that constituent stocks are fairly valued; accordingly, the index itself cannot be assumed to be fairly valued. The stock market, instead of being a market based upon studied perceptions of value, has become a game where indexing and other games totally govern prices.

However, a strong sentiment exists among accounting standard setters and researchers that the inclusion of market volatility in financial statements would enhance the transparency and clarity of firms' operating performance and financial position. This market value approach to financial reporting stresses *the information needs of investors* – an information perspective by means of which the short-term interests of investors are served as opposed to a measurement perspective which would focus on corporate reality. This acute short-term orientation is a serious concern, as the following passage reveals:

> 'The economics of the stock market investing are directed toward the short run. In the short run, psychology will have a much greater influence on market prices than underlying corporate facts … As a result, there are many pressures making people in the "Street" short-run conscious. First, there is the tendency for money managers to be judged by the peers and … by their customers on how much appreciation they obtained for their portfolios in recent periods … Second, there is a finance factor – those who borrow heavily to finance a portfolio need to have near-term upside market action because, if the value of the portfolio goes down, their losses as a percentage of equity can be horrendous, and, if the value of the portfolio does not go up, the attrition inherent in interest costs can be unsettling. [Worse yet,] accounting rules and regulations seem designed largely to satisfy the needs of [the] average-opinion-of-average-opinion investors, who have two characteristics: they really don't care about what is going on in business, and they have a vital interest in near-term market fluctuations.'
>
> (Shubik and Whitman, 1971, pp. 64–65)

The *ex post* calculus of financial accounting is the only factual information that is vital for capital market price formation, because it captures the consequences of the firm's plan as it unfolds (Salvary, 2003). Given that the prices of firms' equity securities in the capital market are driven by investors' short-term expectations, they reveal nothing about the actual operating performance and financial condition of those firms.

3.3 The role and the psychological effect of the capital market

Invariably, great emphasis is placed on analysts' quarterly profit forecasts of firms. While not of current vintage, infatuation with analysts' prediction of firms' quarterly profit has intensified in recent times. The market effect on stock prices, when companies fail to meet quarterly predictions, is a clear manifestation that the emphasis in the market is on short-term price movement and not the long-term prospects for the particular firms in question (Puplava, 2001). Given this condition, it is interesting to note that while market volatility is being introduced in financial statements, day traders are advised to expunge volatility from their investment strategy because it leads ultimately to chaos:

> '[V]aluations are much easier to calculate from real earnings (i.e. … company's P/E ratio) than trying to base valuations on "what might happen" down the road. [S]ometimes stocks trade more actively or more wildly on news of potential profits, but … when a company announces [it] may not meet analysts' expectations or may experience an earnings shortfall, it can get quite dangerous. Consider sticking to companies with tangible, consistent earnings when doing your trading as a further means to risk reduction.'
>
> (Johns, 2005)

Technically the value of a firm's share in the capital market should be based upon the long-term expectations of that firm's future earnings, the assessed riskiness of the firm's operation, and the risk-adjusted discount rate for the particular time horizon. Furthermore, it is understood that the values of financial assets, which represent claims to future cash flows, do change, and sometimes radically, due to changes in the interest rates and relevant risks. These changes do constitute signals that are transmitted by the capital market to the commodity market.

This signaling system was recognized by Keynes (1936):

> 'The daily revaluations of the Stock Exchange, though they are primarily made to facilitate transfers of old investments between one individual and another, inevitably exert a decisive influence on the rate of current investment. For there is no sense in building up a new enterprise at a cost greater than that at which a similar existing enterprise can be purchased, whilst there is an inducement to spend on a new project what may seem an extravagant sum, if it can be floated off on the Stock Exchange at an immediate profit.'

Accordingly, current/fair value is a signal which aids in the assessment of plans; however, it is not the appropriate attribute for measurement in financial accounting. In notes to or parenthetically in the financial statements, other values should be disclosed when they serve some useful purpose. Such disclosures, which are necessary to provide transparency and clarity, would ensure that what should be reasonably revealed is not hidden from the general public. Market values serve as signals to specific interests in the conduct of *financial analysis*. For instance, replacement cost, current market value, and exit/breakup value do have significance for the firm's competitors interested in a takeover.

Indubitably, within *specific decision contexts*, market value is a decision variable that management has to and does consider. However, after examining the available options, if management should choose to *use* rather than *sell* assets under its control, then the risk accepted and return to be calculated can only be based upon the decision to use rather than to sell. Once the decision is to use, then the performance measurement must focus on the benefits from the asset's use and not possible gains from the asset's sale, in which case *recoverable cost* is the desired measurement attribute. Note that *recoverable cost* is the attribute that is used to measure when current market value is used in the case of investment companies.

> '[T]he use of market values in the case of investment companies is simply [due to the fact] that the risk-sharing arrangement calls for the investment companies to sell and redeem their shares at the realizable value at the end of each trading day of the portfolio held. In that situation no use value exists to the investment companies; the investment companies merely act as an intermediary … between the individual investor and the securities market. In this situation, the recoverable amount is the current market value, since that is the amount that the individual would have received or paid for the holdings, had the individual been trading for his/her own account in the open market.'
>
> (Salvary, 1985, pp. 54–55)

Unequivocally, the international accounting standard setters do not focus on accounting measurement but on economic/fair value reporting on the activities of a firm. To maintain that fair market value is the real picture of the activities of the firm leads to the conclusion that market volatility is a better indicator of a firm's operating profit than transactions-based accounting. According to Freixas and Tsomocos (2004, pp. 25–28), the debate on book value (transaction based) vs fair value accounting emphasizes the positive role of fair value accounting in disciplining banks. This means that under fair value accounting, if a bank's capital is below the minimum required by regulation, the bank will be forced to close down. Consequently, with fair value accounting, it can be expected that rational bank managers, anticipating a temporary adverse shock, may act in an overly conservative manner. Specifically, managers may be induced to do any of the following: not to invest in risky assets, reduce deposit interest rates, or not distribute dividends. Consequently, ill-fortune and not managerial mismanagement may lead to portfolio choices that would result in equilibrium allocations that are *ex ante* inefficient.

Given the foregoing, it is imperative that standard setters refocus their attention on accounting measurement and not on short-term market movements. Firms' operating plans do provide a sound basis for the measurement of operating profit as generated in the cash flow process; *those plans do reflect the existing reality of the economic situation*. This concern for measurement is fairly well documented as voiced by the British Bankers Association (2000):

> '**[T]he earnings process**: With banking book assets the prime objective is to secure a stable margin between the amount received on interest-earning assets and the amount paid on interest-bearing liabilities. Interest is earned by the daily accrual of interest over the life of transactions, normally in line with cash flows, and not by taking advantage of short-term fluctuations in fair value.
>
> **[M]anagement of the assets and liabilities**: The management's perspective of the performance of banking assets and liabilities is over the longer term and not based on short-term price movements and market perceptions. Even for the management of interest rate risk, the focus is not fair value, but shifts in the yield curve.'

Likewise, the insurance industry has raised the following concerns (Patel, 2003):

> 'Significant volatility will be introduced if changes in fair values of assets and liabilities are taken through the income statement: the current proposals have not addressed the issue of performance reporting … Insurance is seen to be a long-term business and therefore changes in short-term assumptions should not be relevant in measuring long-term performance.'

On its website on 16 August 2005, the American Bankers Association (ABA) maintains that it has strongly opposed fair value accounting. It is the ABA's position that fair value: is appropriate for trading activities or if risk is managed on a fair value basis; is not the most relevant measurement for most financial institutions, since banks are not managed on a fair value basis; and will mislead users of banks' financial statements. Furthermore, the FASB should determine whether fair value disclosures are being used and how they might be improved. Also, a study undertaken by the staff of the European Central Bank (2004) revealed that:

> '[M]arket discipline may be significantly hampered by reliability and data comparability issues. Indeed, the reliability of fair values for several financial instruments is highly questionable. In particular, market credit spreads or internal models still seem to deliver large and varied outcomes for instruments with comparable risk features. The information content of balance-sheet data could be adversely affected. Furthermore, given the proliferation of different internal valuation models, the comparability of balance-sheet data across financial institutions could be severely jeopardized.'

In the past, the lower of cost and market rule, which is now abandoned, was the means by which asset deterioration was measured. Inadvertently, in discussing fair value accounting, the Savings and Loans debacle in the USA is used to emphasize the need for fair value accounting (*The Economist*, 2001; CAS, 2004). In 1979, based on generally accepted accounting principles, several US Savings and Loans (S&Ls) were insolvent (Barth et al., 1986; Barth, 1991), but the US Congress chose to ignore this ominous sign. The debacle was not due to lack of fair value accounting but due: (1) *primarily to changes in laws and regulations which restricted the S&Ls from changing the asset side of the balance sheet in response to changing market forces which had dramatically altered the liability side*; and (2) *the failure to use the lower of cost and market rule* (Salvary, 1997).

Currently, high PE ratios are more a function of the fact that 'Profits are fast becoming irrelevant in a world driven more by expectations than by deference to quarterly earnings' (Grebb, 1999, p. 71). At the end of 2000, it was noted that the majority of share price appreciation in the market was concentrated among companies that were losing money (Puplava, 2000). To illustrate, Tables 3.1 and 3.2 reveal that, in spite of heavy periodic losses reported by Amazon.com Inc., Lucent Technologies, and Nortel Networks CP, the price of their stocks soared until they finally came tumbling down. Given the operating performance of firms and the radical changes in their market values over time, it is clear that accounting measurement and market valuation are two distinct processes.

Table 3.1 Valuation of expected future performance

	Stock price data					
Company	**High**	**Date**	**Current**	**Date/2002**	**Current**	**Date/2005**
Amazon.com	$110+	June 1999	$18+	June 17	$36+	June 17
Lucent Technologies	$80+	June 1999	$2+	June 17	$3+	June 17
Nortel Networks CP	$94+	Jan 1998	$1+	June 17	$2+	June 17

Source: http://www.wsrn.com, 18 June 2002 and 17 June 2005.

Table 3.2 Measurement of past performance

	Income statement data – net income (loss) in $ millions					
Company	**2002**	**2001**	**2000**	**1999**	**1998**	**1997**
Amazon.com	(149.1)	(567.3)	(1411.3)	(720.0)	(124.5)	(27.6)
Lucent Technologies	(11,949.0)	(16,226.0)	1219.0	3458.0	970.0	541.0
Nortel Networks CP	(3585.0)	(27,317.0)	(3470.0)	(170.0)	(537.0)	(829.0)

Source: Income statements of the respective companies.

Given past experience, expectations of analysts/investors have been overly optimistic at times (Daniel et al., 1998, 2001). Particularly prevalent, during the period from 1998 through early 2000, was this over-optimism. This situation was noted in Bell Capital Management Inc.'s *Wealth Management Insights* (2002, p. 1): 'The recent bull market proved conclusively [that] stock prices can reach great heights for [even] worthless companies. Investors bought shares of companies that had never earned a profit and, in some cases, never generated revenues.' Being more specific, Colvin (2000, p. 150) maintained: 'America Online is worth more than GM, Ford, and the entire American Steel industry combined. … AOL's stock price makes sense only if you think the company can increase its annual EVA [economic value added] by an amount equal to the highest EVA ever achieved in American business and increase it by that amount every year forever.' It is important to note that on 24 January 2000, the day of Colvin's article, AOL's stock price was in excess of $80 per share, producing a price/earnings ratio in excess of 180 (Salvary, 2003).

The capital market arrives at a *price/value* of a firm's security; this valuation or pricing *reflects expectations* of that firm's *future multi-period earnings*.

Unmistakably, the measurement of cash flows as they occur is independent of the pricing of expected future cash flows. In spite of the foregoing data, it appears that the cash-flow measurement process in financial accounting is equated by the IASB with the capital market pricing of estimated future cash flows. Financial accounting measures the past operating performance and the current financial position to inform readers via financial statements on what has happened and the current state of affairs. It must be emphasized that financial accounting information is not a substitute for capital market price formation; it validates or invalidates the estimation model used for capital market pricing purposes, and importantly it provides the basis for the market to arrive at proper security prices. Market values have a role to play but it is definitely not by displacing *realization* for income recognition in the measurement of the cash-flow process as undertaken in financial accounting. It must be stressed that fair value accounting entails the elimination of the realistic condition of uncertainty in the financial accounting measurement process and the substitution of the simplifying assumption of certainty in its place.

3.4 Simplifying assumptions versus necessary conditions for measurement

The IASB's call for fair value accounting is reminiscent of MacNeal's (1939) recommendation of the use of economic values in place of accounting measurement. Undeniably, economic values are useful for certain purposes, but they are not useful for all purposes. For example, for the purpose of intercountry comparison, the question may be asked: What is the aggregate value of the financial instruments that are traded in each of the capital markets around the world? The value assigned to the financial instruments traded in each country would be priced out using the unit price that obtained on the last trade for the given observation date. While this would constitute a valid comparison, one recognizes that the aggregate dollar value established for each country will not be the amount that would be obtained if all of these financial instruments were traded at the same time. For this aggregate value to prevail, the law of supply and demand – a necessary condition of the marketplace – would not to be operative.

In the foregoing illustration, a simplifying assumption about market price was substituted for necessary conditions underlying market price. Use of current market is appropriate for a limited number of entities, which are financial intermediaries and trade daily in the capital market (e.g. investment companies). For other companies, disclosure of market values of securities portfolios indicating

the potential for gain and post-balance sheet disclosures of significant events have been and should continue to be standard disclosures in financial statements. Although the usefulness of economic values was established with the example above, they are not suitable for accounting purposes. While *simplifying assumptions* are valid for economic analysis, *necessary and sufficient conditions* must be satisfied for accounting measurements to be undertaken.

Investment is a dynamic process where time and timing are critical factors, and the element of uncertainty adds to the risk of the undertaking. Consequently, organizations follow a dynamic path, which is due to the uncertainty of a future which necessitates continuing adjustments at differing points in time due to overestimates and underestimates. Management's operating plan involves money being committed in period $t-1$ to a plan of action; this money (more or less) resurfaces (periodically or at the end of the plan's fulfillment) in period $t+n$ – the plan's gestation period. Since a gestation period is necessary for the firm to *realize* cash flow from recovery of invested money and any reward for undertaking the investment, the omission of this time factor when measuring the performance of the firm's investment plan would be in violation of a necessary condition for measurement (Salvary, 2003). The inclusion of market volatility under fair value accounting negates the critical importance and existence of the gestation period over which management has carefully prepared its operating plan.

The distinction between accounting measures and market values is noted by Trevino and Higgs (1992, p. 211): '[W]hereas accounting rates of return such as ROI and ROA are measures of the profitability of the firm, MRET [total market rate of return] is a measure of profitability to the shareholder of the firm. There is no necessary relation between the accounting returns and the market returns in a particular year.' In the capital market pricing process, *the profitability of the firm* is of utmost importance. The firm's cash-flow opportunities hinge on the profitability of the firm. Consequently, measurement of the operating plans that firms have in place should not be distorted with market volatility in the quest to provide information that satisfies users' needs.

The IASB, in its Framework F.17, acknowledges the role of profitability in the generation of cash flow:

> *'Performance is the ability of an enterprise to earn a profit* on the resources that have been invested in it. Information about the amounts and variability of profits helps in forecasting future cash flows from the enterprise's existing resources and in forecasting potential additional cash flows from additional resources that might be invested in the enterprise.' (Emphasis added)

However, it must be stressed that profit dominates cash flow. This dominance is due to the fact that profit is the measure of success, whereas cash flow provides the funds for reinvestment in operating assets and the payment of dividends. Given the foregoing, can market volatility be more meaningful than the results of management's operating plans?

The major role of management is planning, and planning implies that there is a future. It is common knowledge that the management of a business enterprise plans its operation. Sound planning and effective execution of plans are critical. The *going concern* is a concept of the future – that is, continuity is impossible in the absence of the future. The continuity of a firm, as a *going concern*, hinges upon its planning process. It is meaningless to plan if there is no future – no continuity. While a firm can plan for its demise, most firms do not plan to go out of business; they generally plan for success and, thus, their continued existence. Firms, when their continuity is threatened, strive to the best of their ability to ensure their continuity. Going out of business is accepted generally when it is the only course of action available to the firm.

Observations have revealed that whenever a set of conditions is satisfied a firm can execute its plan. It is the ability to execute its plan that makes the firm a 'going concern'. The evidence of a going concern resides in the fact that the firm: (1) has committed finance (money) to its operation; (2) has implemented investment plans; and (3) the investment plans provide for recovering the money (finance) invested. It is essential that there be an unbroken connection between the investment plan (financing, production, distribution, and collection) and the recovery plan (revenue stream to be generated from the investment) (Salvary, 1989a, pp. 35–36). Characteristic of a liquidating concern is the disruption of its investment plan from its recovery plan; the latter is no longer operational and the former is no longer valid.

The going concern implies the future, and the future signifies uncertainty. It is with regard to uncertainty that the measurement concept of *realization* emerges. *Realization* is a quality control principle: by reducing the uncertainty in the quantification process to an acceptable level, it ensures equity among the suppliers of resources. The need for interpersonal equity underlies the concept of *realization* in financial accounting. For the purpose of financial reporting, criteria do exist by which to determine whether the necessary conditions for the 'going concern' have been satisfied (Salvary, 1996/1997). When those conditions are satisfied, the use of the estimated recoverable cost (invested resources/committed finance expected to be recovered) approach is justified (Salvary, 1985, 1989a, 1992). In the absence of such conditions, the firm is a liquidating concern

and the *liquidation or exit value* approach to measurement for a liquidating concern is applied.

Given neutrality and equity considerations, as in the case of risk-sharing arrangements in markets for title to claim, the measurement of changes in a firm's resources and the impact of such changes on the functioning of a firm are of prime importance. To determine the effectiveness of the operations of an entity, it is necessary to measure the profit generated by the cash-flow process of a 'going concern', in which case 'matching of periodic revenues with periodic expenses' enters the picture. Since the focus of interest is on a going concern, then *plan gestation* (completion of the earnings process) coupled with *realization* (an acceptable level of uncertainty concerning the collectability of the transformed value) constitute the necessary and sufficient conditions for financial accounting measurement.

The future implies a risk, and the business enterprise undertakes risk for a return. This return is always prospective and is conditioned by value changes in the future. Owing to the inability to predict the future with any degree of certitude, *realization* emerges as a necessary condition for the measurement of realized profit. The role of *realization* is to create a basis for revenue recognition which enables a measurement of profit that is tempered with a relatively low level of uncertainty. In a world of certainty this condition would be unnecessary, inasmuch as its current role is *the reduction of uncertainty to an acceptable level* (Salvary, 1989a, pp. 89–90). With realization, owing to the high degree of uncertainty attached to it, that which is not recognized is unrealized profit. While not intended as a commentary on accounting, the following clearly expresses the position in financial accounting theory:

> 'Once the date of expected realization is made an explicit variable in the analysis of portfolio decisions, the importance of uncertainty can no longer be suppressed. The further into the future the date of realization, the less conviction an individual will have in his ability to describe correctly his expectations via a subjective probability distribution of future eventualities.'
>
> (Davidson, 1972, p. 208)

Realization addresses the realistic condition of uncertainty that is encountered in the financial accounting measurement process. By default, the disregard of realization results in the acceptance of the simplifying assumption of certainty. However, the certainty assumption 'is a distortion of the economic reality faced by the relevant decision maker' (Shwayder, 1967).

Firms' decision-making is independent of users' decision-making. The firm's decision involves profit planning and the management of risks. The focus of the user's decision is on factors that can affect the firm's future profitability and thus affect the firm's future cash flows. Therefore, it seems logical that the actual impact of the firm's decisions should be recognized in the financial statements, whereas, whenever necessary, factors that could affect users' decisions should be disclosed in notes to the financial statements. However, the IASB's Framework embraces the users' decision (*the prediction of future states*) as the criterion to determine the treatment of items in the financial statements and embraces market volatility as economic reality.

3.5 Economic reality, decision-making, and operating dynamics

In the economy, the forces that shape/influence behavior are the resources (contracted for in money terms) and the realized profit (resulting from their use based upon plans devised by firms' management). Essentially, economic reality involves plans (as they are implemented and their gestation) and institutional arrangements, which include contracts. These factors cannot be set aside in favor of market volatility, over which management has no control. Also, it must be emphasized that risk management programs are developed by management to minimize the impact of potentially disruptive problems that can be expected to arise. Evidently, as noted by the concerns coming from various sources, the risk management plans in place are ignored by the IASB.

> 'As a bank supervisor, the Federal Reserve believes that innovations in risk management are very important to the continued improvement of our financial system. New methods and financial instruments allow banking organizations to improve their risk management practices by selecting target levels of risk exposures and shedding or limiting unwanted positions. Whenever possible, the accounting framework should avoid providing a disincentive to better management of risk.'
>
> (Bies, 2004)

Indubitably, the IASB's view of economic reality is plagued with the type of problem noted in the following passage:

> 'Often a system of market forms is constructed *a priori* instead of being obtained from economic reality and found in it. Systems of market forms of this kind do not reproduce the forms in the actual economic world … Working out the different

> forms of markets must start with the real phenomena … They have to be discovered. *This can be done by studying the economic plans of actual economic units;* for the planning data, on which those taking part in a market construct their plans, can be precisely ascertained. *It is from these plans and not from the behavior of economic units, a concept which can be given varying content,* that the forms of market can be discovered.'
>
> (Eucken, 1951, p. 335, emphasis added)

Firms having the same type of assets and liabilities will not have identical values placed on their equity securities by the capital market unless they generate identical earnings and reflect the same risk. It is quite clear that firms do not have similar earnings although they have similar assets and liabilities, simply because of differences in management's philosophy, strategy, and perceptions of operating possibilities. Financial accounting identifies the composition (reflected in monetary transactions) of organizations, while economics attempts to assess behavior (assign optimum values) to those organizations over time and space (markets). With fair value accounting having a prescriptive (normative) system in economic analysis as its underlying framework, market volatility is treated as a necessary and sufficient condition for accounting measurement in a descriptive (positive) system – the firms in the execution of their plans.

Decision-making is concerned with specifying the possible states of the future and selecting the most desirable state. Also, decision-making is under conditions of uncertainty; hence, what has been chosen as the best alternative may turn out to be just the opposite, if the chosen alternative fails to materialize. To know the outcome of a plan, a measure is needed (i.e. a measurement of performance). The measurement of performance is not a measure of the future activities since such cannot be measured, only conjectured/projected. It is a measure of something that has happened – it is feedback on the past, from which experience is gained for future decision-making. Note that the following passage reveals the behavior modification that would result in order to avoid the conflicting results in the firm's financial picture given fair value accounting:

> 'As management attempts to reduce this earnings volatility, we may see changes in risk management practices. Unfortunately, some managers might use fewer credit derivatives to reduce credit risk due to this potential earnings volatility. Accordingly, setters of accounting standards need to consider improvements to the accounting treatment that do not result in a disincentive to those who prudently use credit derivatives for risk management purposes.'
>
> (Bies, 2004)

Since relevance of information is conditioned by the decision at hand, management, when reviewing the options facing the firm, utilizes the planning process of managerial accounting with its focus on the future. Consequently, under fair value accounting:

> 'Certain financing and hedging policies will no longer achieve the desired [business] accounting effect … instead [they will] create volatility in reported profits. The challenge [for management] will be to find good economic strategies that will produce the right accounting treatment.'
>
> (Deloitte IAS PLUS, 2005)

Undeniably, risk management is critical to successful and effective performance. Being fully cognizant that profits – the primary measure of performance – will be affected contrary to the plans that have been laid, management will be induced to make adjustments to its risk management program to minimize the unwarranted impact of fair value accounting.

3.6 Risk management and performance measurement

The importance of risk management to corporate effective functioning cannot be overemphasized. Recent surveys have found that financial executives rank *risk management* as one of their most important objectives (Rawls and Smithson, 1990). The concept and objective of risk management, in a framework of risk management developed by PricewaterhouseCoopers (2004, p. 20), are defined as follows:

> 'Enterprise risk management provides a framework for management to effectively deal with uncertainty and associated risk and opportunity, and thereby enhance its capacity to build value.
>
> Enterprise risk management is a process … designed to identify potential events that may affect the entity and manage risks to be within its risk appetite, [and] to provide reasonable assurance regarding the achievement of entity objectives.'

'Regardless of the effects risk management may have on systematic risk, if diversified equity holders value their firm's risk management program it is because it mitigates the side-effects of volatile cash flow' (Barrese and Scordis, 2003, p. 2). Therefore, it is not surprising that at the end of 1995, the largest 25% of US nonfinancial corporations held $448 billion in cash and marketable securities (Harford, 1999, p. 1971).

Salvary (2004) maintains that firms hoard financial capital (as evidenced by the large portfolios of marketable equity securities held by nonfinancial firms) in order to ensure future availability. Furthermore, when large well-managed portfolios of marketable securities have been acquired with hoarded financial capital, some firms, in addition to benefiting from a lower cost of capital, experience additional benefits from market appreciation which in great part may exceed any premium penalty due to hoarding. In light of the foregoing and consistent with *organizational behavior and risk management*, Salvary (2004) postulates that: *the firm sets as its objective the control of the optimum amount of financial capital at the minimum cost to the firm*. Thus, corporate earnings retention is a case of optimization under conditions of uncertainty.

Fair market value for trading securities and securities held for sale by investment companies is appropriate (Salvary, 1985, 1989, 1992). However, it must be noted that nonfinancial companies acquisitions of marketable securitiēs as short-term use of idle cash are different from securities acquired for investment purposes to ensure the reliability of suppliers and outlets. The object of holding those shares is part of the firms' risk management program. However, as noted above, fair value accounting interferes with risk management.

The essence of accounting for financial instruments is to enable users of accounting information to distinguish between hedging and speculation – to be able to differentiate the instruments that reduce risk and those that increase it. In this respect, since the IASB's approach does not achieve this goal, the information in some cases is definitely misleading. As noted by the Association of Corporate Treasurers (ACT, 2001), the impact of fair values in the profit and loss account/income statement of nonfinancial companies will leave companies with no other choice but to change their risk management policies. In this setting, '*The accounting tail will be wagging the risk management dog.*' Since *risk management activity is invariably concerned with managing 'cash flows' and not fair value*, fair value accounting will lead to the misinterpretation of risks and *risk management activity on the part of the users of financial statements*. This condition would hold since the discussion of the effectiveness of the company's policies would be based on information that is fundamentally different from what appears in the financial statements.

As a significant part of many companies' risk management program, billions of dollars are invested in marketable securities in order to make financial capital available in the future at a predetermined cost (Salvary, 2004). The impact of market valuation on performance measurement of those firms will be quite profound and will induce decision-making that would become necessary under the

circumstances, but contrary to sound management. With accounting for marketable securities at market value, gains are recognized prior to realization; with subsequent declines in the market values, losses are generated. In the absence of *realization*, staggering losses will have to be reported at a later date. In order to avoid the distortion of the firm's operating performance in both the current and subsequent periods, firms will be induced to sell. Such an act would be in contradiction of the plans that had been carefully made by management. Importantly, the forced sales would impair firms' ability to provide for future availability of financial capital, giving rise to the underinvestment problem (Salvary, 2004).

According to the Association of Corporate Treasurers (ACT, 2001), the volatility resulting from the adoption of fair value accounting would tend to drive down value and correspondingly increase the cost of funds. Fund managers maintain that companies should not be too concerned about volatility since *investors will concentrate on cash flow and ignore the fair value information*. Unquestionably, this is the wrong approach to adopt. To put fair values in the financial statements *as opposed to disclosures in footnotes* is based on the fact that volatility is reflected in investors' evaluation of the risk inherent in investing in a particular company.

> 'The financial risks managed by treasurers are cash flow risks not fair value risks. Although … "many" enterprises manage their risks on a fair value basis, we are not aware of any company outside financial services and the property sector that does so across the board. Since the fair value model reflects the results of taking fair value risk, it will not (except coincidentally) give information that will enable readers of accounts to evaluate the success or otherwise of a company's cash flow risk management.
>
> Interest rate risk is a case in point. Many companies select fixed rate debt because they perceive it to be a low-risk strategy. There is a large body of literature that supports this view, based upon the fact that the fixed rate borrower has reduced the risk of financial distress or bankruptcy by eliminating the risk of an increase in variable interest rates increasing its debt servicing costs. This may, for example, occur to enable the company to comply with financial covenants. Or, the company may have incoming cash flows that are not correlated with the interest rate cycle and its objective is to reduce the volatility of its post-interest cash flows.
>
> In neither of these cases is the change in the fair value of the debt of any significance.'
>
> (ACT, 2001)

However, given the broader approach of fair value accounting, each asset in a company's balance sheet would be valued independently in accordance with the IFRS 3 Business Combinations (Deloitte IAS PLUS, 2004). The Association of Corporate Treasurers (ACT, 2001) sees that fair value approach as 'a breakup valuation rather than one based on the concept of going concern'. The position of the Association of Corporate Treasurers is correct, since all assets collectively represent the amount of invested money expected to be recovered as part of an operating plan. All liabilities represent the amount of money expected to be discharged. Participants in the capital market do not place a value on the individual assets of the firm, they place a value on the profit plan that management has in place. So with respect to any change in value of an asset in its exchange market, the change in the value of a firm is zero, if such change is not a change in the particular firm's cash flow related to the assets which are part of the firm's profit plan (Salvary, 1997).

The fact that a firm can sell some assets at random while others have no resale value is irrelevant to the cash-flow plan. Assets come into existence for no other reason but to augment the initial nominal money invested by the firm. As a collective group, and not as individual assets, they reflect the cash-flow generating plan that management has in place. The cash-flow process occurs when financial capital passes from the initial state (the acquisition of productive assets) to the final state (when the products or services generated have been converted into monetary claims). The acquisition of productive assets and the production of goods and services require time for their accomplishment; thus, they are both path functions and their numerical values are completely dependent upon the *cash-flow process* followed in moving from the initial state to the final state. However, concerning IAS 39: Financial Instruments, as per the Casualty Actuarial Society (CAS, 2004, p. 23):

> 'The proposed fair value approach represents a radical departure from the traditional deferral-and-matching approach. The unearned premium reserve liability and deferred policy acquisition cost asset would no longer be elements of the balance sheet (under our interpretation). Premiums would presumably be taken into revenue as the contracts are written. *To the extent that the fair value of the associated policy liabilities is less than the premium after expenses, an immediate gain would be recognized; to the extent that the fair value of policy liabilities is greater, an immediate loss would be recognized.* In essence, under fair value companies will report on the profitability of the policies issued (i.e. written) during the period, rather than on the coverage provided. *This will necessitate greater reliance on pricing assumptions in financial reporting.'* (Emphasis added)

Reliance on pricing assumption, rather than accepting insurance contracts as carefully negotiated by the insurance companies, is due to the IASB's view that market price at a given point in time constitutes the totality of economic reality. Thus, the argument for fair value accounting is due to the belief that: '[T]he use of fair values will move financial reporting closer to underlying economic reality … [M]arket prices include elements for the time value of money and margins for risk-taking, either explicitly or implicitly … [A] closer correspondence between economic performance and financial reporting will improve decision-making, by removing incentives to manage *towards accounting income rather than economic value creation*' (CAS, 2004, p. 7, *emphasis added*).

Already the effect has been felt. In January 2005, AXA, the largest insurer in France, announced that its 2004 net earnings would be affected by its compliance switch to IFRS 4. Moving from French GAAP to IFRS, shareholders' funds would be reduced by 5% and reported revenues would be reduced by 6%. This effect is due to the fact that accounting for certain life insurance contracts (investment contracts without discretionary participation features) will change under IFRS. Those insurance contracts, which will be accounted for as fees and not as premiums, represent approximately 9% of 2003 insurance reserves and 6% of 2003 AXA's French GAAP gross insurance revenues (Bennett, 2005, p. 2). Concern over the spurious volatility introduced by the accounting rules has been expressed by Sir Andrew Large, Deputy Governor of the Bank of England. In order to provide for a less detailed and prescriptive standard to replace IAS 39, he suggested that agreement should be reached on 'the fundamentals' (Snyder, 2005, p. 5).

With IAS 39, the reliance on pricing assumptions is a movement away from measurement and into the realm of prediction (CAS, 2004). IAS 39 overrides the carefully developed operating plans of firms and the existence of contracts to achieve desired ends. This development introduces a serious problem since accountability/stewardship, the purpose of financial reporting, is a function of measurement and not prediction (Salvary, 1979, 1985, 1989a). Once decisions have been made and operating plans are in place, it is the function of financial accounting to measure the consequences of those decisions. The task for financial accounting is to *measure* the *realized* profit and the amount of committed resources that is recoverable (in part the organization's risk exposure) – *ex post* data.

Unmistakably, when the interest rate rises, there is a decline in the market value of debt instruments due to re-pricing of those financial instruments in the market. However, if no deterioration occurs in the obligor's profitability and in the ability to make future payments, reflecting the change in market price in the bondholder's income statement is not an accurate portrayal of the bondholder's

financial position. Below is an illustration of the market valuation process pertaining to a bond and the legal claim of a bondholder.

For a given risk class, the interest paid divided by the prevailing interest rate gives the market value of the bond in perpetuity. The amount of money given to the bond issuer, as principal, is the bondholder's legitimate claim against the issuer. It is understood that the claimant cannot increase the interest on the money invested if interest rates have increased. Thus, conditions are frozen with respect to that investment. Furthermore, given a rise in the interest rate subsequent to the issuance of the bond, if the bondholder were to sell the bond, the money received and reinvested would generate the same absolute amount of interest received on the initial investment. (The reverse is true.) For instance, if a $1000 bond pays $50 in interest and the interest rate has changed to 6%, then the market value of that bond in perpetuity is $833.33. Sale of the $1000 bond for $833.33 does not alter the claim of $1000 against the issuer, and reinvestment of this $833.33 in a new 6% bond will not alter the interest earnings of $50 to the bondholder.

The change in value reflects the marginal cost of money at a specific point in time. Given the ability to hold to maturity, there is no bona fide reason for the bondholder to sell the original bond. The foregoing holds, since there is a trade-off between short-term opportunities and long-term strategies in order to eliminate uncertainty for plan fulfillment. Given profit-planning strategies, a lost short-term opportunity cannot be considered as a valid reason for market value accounting. At this juncture the focus is on the impact of fair market value accounting given the structural and operating differences between and among the different types of companies – investment, insurance, financial, and nonfinancial.

3.7 Structural and operating differences of companies

In banking and insurance, liabilities are created through acceptance of deposits and premiums. In order to satisfy claims as they become due, funds accepted from depositors and policyholders are to be invested in a *profitable* manner to reasonably ensure recovery of such funds.

Given the nature of their product, insurance companies accumulate relatively large amounts of cash, cash equivalents, and investments in order to satisfy future claims and avoid financial ruin (Akhigbe et al., 1993, p. 413). Independent of returns from the investment portfolio, insurance companies must secure an underwriting profit. To be insulated from the need to liquidate investments to satisfy expected claims and losses, each company has to be *profitable* to generate

adequate operating cash flows and liquidity. Furthermore, to match its current underwriting risk profile, each company has to build adequate reserves (Lewis, 1998, p. 185). The importance of cash flow and the avoidance of forced sales of the investment portfolio are critical concerns. Those concerns are particularly important in light of the fact that for the year 2001 life and health insurers suffered a loss of $3.1 billion on the sale of investments and during the first three quarters of 2002 they experienced a staggering loss of $9.6 billion on the sale of investments (Weiss, 2003).

Fortunately, given the concern for liquidity, the insurance industry has national regulated accounting standards to ensure that insurers have sufficient capital and surplus to cover insured losses (Financial Services Fact Book, 2005). Statutory Accounting Principles (SAP) focus on measuring an insurer's ability to pay future claims (NAIC, 2005). While unrealized gains on certain equity securities are reported as a component of stockholders' equity under Generally Accepted Accounting Principles, they are not included in regulatory capital under the various US Agencies' capital standards (Federal Reserve Board, 1998).

Insurance is a crucial national and global industry; by virtue of its risk-sharing and risk-reducing functions, it has a critical role in the financial system and the real economy. Life insurance companies have used accounting systems that rely on an amortized cost approach to valuing assets and liabilities. The movement to fair value accounting is of great concern due to the fact that:

> '[A]n accounting framework should be descriptive with regard to the underlying realities of the lines of business in which a firm is engaged; the accounting model should not itself be the vehicle which shapes business decisions. Much of the industry opposition and concern … has been the fear that implementing fair value standards would result in either: (1) radical reshuffling of lines of business; or (2) complete withdrawal from certain lines of business [the extinction of a certain line of business]; or perhaps (3) cause unwanted changes in portfolio investment decisions.'
>
> (Fore, 2003, pp. 1, 3, 4)

Bank deposits are not similar to insurance policies; the hedging strategies of insurance companies are different from those of banking companies. Consequently, in the application of fair value accounting, the CEA (2005) has made it quite clear that insurance cannot be lumped together with banking: 'Any proposals to amend the fair value option must fully consider all industries, including insurers, to ensure appropriate representation of the underlying economies.' Likewise, the Association of Corporate Treasurers maintain: 'The

financial risks managed by treasurers are cash-flow risks not fair value risks. Although … "many" enterprises manage their risks on a fair value basis, we are not aware of any company outside financial services and the property sector that does so across the board. Since the fair value model reflects the results of taking fair value risk, it will not (except coincidentally) give information that will enable readers of accounts to evaluate the success or otherwise of a company's cash-flow risk management' (ACT, 2001).

According to Bradley (2001, p. 2), a survey by PricewaterhouseCoopers of major companies in the Nordic countries (Nordic Corporate Treasury Benchmarking Survey, 2001) revealed that about two-thirds of the sample companies report under US GAAP or IAS and apply FAS 133 or IAS 39. In the survey, 61% of respondents claimed that fair value accounting had a significant impact on their treasury policies. This finding was not surprising because many companies have implemented strategies to minimize the impact of the volatility introduced with fair value accounting. Consequently, it can be expected that, from the point of view of group-wide risk management, such strategies may increase risk.

In the USA, *Statement of Financial Accounting Standards No. 115* (FASB, 1993), which required *fair value accounting* for equity securities, did induce changes in the management of investment portfolios in the banking industry. These changes were necessary to reduce volatility in reported capital and influence reported profit through recognition of gains on security sales. The problems arising from banking behavior modification have been identified as follows: (1) shortening of the maturity of the investment portfolio may cause bank holding companies to experience a reduction in the interest income earned and an increase in their interest rate risk; (2) reduction of flexibility to sell securities from the held-to-maturity portfolio may cause the cost of managing liquidity and interest rate risk to increase; (3) as a result of the reduced flexibility in liquidity, the availability of credit may be decreased as banks may be unable to meet increases in loan demand; (4) due to increased exposure to changes in interest rates, the banking industry may become more volatile (Beatty, 1995, p. 38).

Apart from the insurance and banking industries, the property management industry is confronted with its own problems. The following discussion represents the findings and issues identified in a study (Nordlund and Persson, 2004) on the impact of IAS 40 (Investment Property) on the financial picture of Swedish companies. Due to the fair value model, the meaning of prudence in the IASB's Framework differs from the traditional concept of prudence. The change in meaning severs the linkage of prudence to the traditional concept of realization. The fair value model focuses on what can be claimed to be a 'true and fair' snapshot

of the items appearing in the balance sheet. In the measurement of performance, emphasis is placed on changes in nominal wealth from one point in time to another. Compared with current accounting rules, companies using the fair value model in almost all cases during the study period reported higher earnings levels and higher equity. Due to fair value adjustments, in certain cases for a number of the companies, the magnitude for earnings exceeded net rental income. Apparently, the underlying cash flows from operations are better reflected under traditional accounting than with fair value accounting. In addition, dramatic effects can emerge with property value downgrades. Over time, consistency in the income statement and the balance sheet becomes questionable given the high degree of uncertainty in fair value assessments and the possible effects on market values due to cyclical movements. Under fair value accounting, there is an absence of a long-term approach with links to real patterns over time. In a longer perspective, there are obvious risks of various types of suboptimization.

The caution about the impact of cyclical movements cannot be ignored (Christie, 2005; newsmax.com, 2005). The recognition of fair (market) values in financial statements has to be viewed in context of the fact that financial accounting provides measures of the profitability of a firm and of the accountability of management. Furthermore, a firm cannot continue to operate *in the long run* if it generates positive cash flows from operation while it sustains losses from operations. The inclusion in the financial statement of changes in market values does not represent cash-flow measurements but the volatility of instantaneous re-pricing of marketable instruments that has taken place in the capital market. Given that the cash flows cannot be shown to be related to market volatility, to alter the basis of the constant (the recoverable amount of a sum of money invested) in financial accounting is to destroy the information on the structure of the system by incorporating the nature of the change (e.g. interest rate effect). However, such 'noise' added to the income statement can have market effects.

Regrettably, with fair value accounting the 'lower of cost and market' measurement rule, which was coupled with the disclosure feature for market values, is abandoned. Such disclosure about market values, provided in the notes or parenthetically in the body of the balance sheet, was useful information to readers of the financial statements for the purpose of *financial analysis*. It is important to note that while readers were informed that the firm had experienced an appreciation in the value of marketable securities, they were not led directly or indirectly to believe that the firm had benefited from the market appreciation. It was left to the readers to provide their own interpretation of this information.

Due to management frauds, serious audit failures, and misguided analyst recommendations[1] (Byrne, 2002; Consumers Union, 2003; University of California, 2003; Feder and Eichenwald, 2004; Hooper, 2004; Eichenwald and Anderson, 2005; FPA, 2005; Market Wire, 2005), financial accounting is blamed for many problems for which it is not in any manner responsible. However, changes are being made to financial accounting rules, while *what is needed is the restoration of sanity in the capital markets and a return to sensibility in financial reporting*. To ignore what has been elaborated upon above and recognize changes in market values that are ephemeral can only result in significant dislocation of firms and even more aggravated market pricing. Noted below are the recent periods of market insanity, during which several capital market booms with subsequent busts resulted in serious financial meltdowns. There is clear evidence that if corrective action is not taken the past situation will most likely be repeated.

3.8 Sanity in market pricing and sensibility in financial reporting

The significant difference between market valuation and financial accounting measurement cannot be overemphasized. That is, a constant earnings stream can take on any value since the valuation process (rate of discount and the investment period) is dependent upon (1) the intensity of the use of money and (2) the liquidity position of the suppliers of money capital. Any change in either direction of market participants' rate of discount or expectations of future earnings will produce a re-pricing of claims in the capital market. Although firms' cash flows have not changed, market prices of the firms' shares will change due to market re-pricing, as explained above. While fair value accounting can only introduce confusion in market pricing, Damant and Palacky (2002) maintain that:

> 'A fair value approach better enables users of financial statements to predict with reliability the amounts, timing, and uncertainty of an enterprise's future cash flows. In that regard, it offers a much greater degree of relevance than historical cost. It also provides a necessary level of understandability, resulting from improved disclosure transparency.
>
> The realistic values in the balance sheet, as represented by fair value measurements, reflect the financial position of the enterprise at the date of the balance sheet, and therefore the starting point for developing the enterprise's expected future cash flows.'

The IASB relies on the efficient market literature that market participants rationally price common stocks as the present value of all future cash flows expected:

> 'Are the markets efficient or are they totally irrational? At the height of its stock market value in 2000, Cisco had a market cap of close to $600 billion. Sales for the previous year were $12.2 billion and net income was only $2 billion. The company had $12.2 billion in sales and $2 billion in profits and was valued at over half a trillion dollars. That isn't rational. It is insanity. It is one reason why the markets reacted with such vengeance and swiftness.'
>
> (Puplava, 2001)

As reported by Highlights Investments Group (2005), on 25 August 1987, the Dow hit a record 2722.44 points and then started its precipitous decline. Subsequently, the Stock Market crashed on 19 October 1987, when the Dow dropped 508 points or 22.6% in a single trading day. This decline was a drop of 36.7% from its high on 25 August 1987. During the crash of 1987, 1.5 trillion dollars of market value of overvalued stocks evaporated because the markets were not able to handle the imbalance of sell orders – no liquidity. Program Trading and the Use of Derivative Securities Software were used by large institutional investment companies to execute large stock trades automatically when certain market conditions prevailed. There is no doubt that the program trading of index futures and derivatives securities was also to blame.

Subsequently, from 1992 to 2000, the economy and the markets experienced a period of robust expansion. The NASDAQ traded at 4234.33 on 1 September 2000. Then it dropped 45.9% from September 2000 to 2 January 2001. Worse was yet to come! In October 2002, the NASDAQ dropped to a low of 1108.49 – a 78.4% decline from its all-time high of 5132.52, a level which was established in March 2000. With the Stock Market crash of 2000, a total of 8 trillion dollars of market value disappeared. That time the causes of the crash were: (1) *Corporate corruption* – many companies inflated profits and used loopholes to hide debt. Outrageous stock options, enjoyed by corporate officers, diluted companies' stocks. (2) *Overvalued stocks* – many companies, with significant operating losses and no hope of turning a profit for years to come, had market capitalization of over a billion dollars. (3) *Day traders and momentum investors* – the Internet enabled online trading by millions of new investors and traders to enter the markets with little or no experience. (4) *Conflict of interest between research firm analysts and investment bankers* – the research arms of investment banks issued favorable ratings on stocks of their client companies that sought to raise capital.

In some instances, highly favorable ratings were given to companies even though those companies were facing serious financial trouble.

Other than explanations from the 'noise trader risk' and greater fool theory, it is difficult to understand how investors could translate cash flows generated by those firms (e.g. Tables 3.1 and 3.2) into such astronomical prices that prevailed in the 1990s. According to Shiller (2000), it was investor enthusiasm rather than real fundamental factors that temporarily sustained high prices displaying the classic features of a speculative bubble. This condition will prevail when many investors believe that it is safe to purchase stocks, not due to their intrinsic value or expected future dividend payments, but because someone else (the greater fool) will buy them at a much higher price. Given similar beliefs of a large cross-section of investors, stock prices are driven by a self-fulfilling prophecy. When noise traders (investors who follow trends and overreact to good and bad news) are active, 'noise trader risk' (the risk resulting from the unpredictability of future opinions of noise traders) is present and deters arbitrage. Given that condition, prices can diverge significantly from fundamental values even when there is no fundamental risk (DeLong et al., 1990).

Arbitrage does help to maintain order in the market. However, in the presence of noise traders, arbitrageurs' short-term bets do not always pay off. This point is vividly confirmed by the collapse of a major player in the market for derivatives, Long-Term Capital Management (LTCM), which was formed in February 1994 as a hedge fund with $1.3 billion of equity. General partners of LTCM contributed over $100 million of the money. Each investor had to invest a minimum of $10 million, with no withdrawals being permitted for three years. After fees, the fund returned to its investors 19.9% (1994), 42.8% (1995), 40.8% (1996), and 17.1% (1997). As a result of diminished investment opportunities, the fund, with an equity of about $7.5 billion in December 1997, returned $2.7 billion to investors. At the beginning of 1998, with an equity of about $5 billion, the fund borrowed more than $125 billion dollars from banks and securities firms. By mid-September 1998, LTCM suffered a loss exceeding $4 billion and its equity dropped to $600 million. Worse yet, at the end of September 1998, the equity of LTCM's 16 general partners had dropped from $1.6 billion earlier in the year to $16 million. Unfortunately, LTCM lost on its short-term bets and was rescued by a consortium arranged by the Federal Reserve owing to the gravity of the situation (Edwards, 1999, pp. 197–198).

Arbitrageurs will usually have short horizons, since even temporary losses do induce their clients to withdraw their money (Lope Markets, 2003). Indubitably, very few people would wish to see a repeat of what happened as described

above. While market insanity cannot be addressed by the international financial accounting standard setters, they certainly can avoid any potential damage to the financial reporting process arising from changes in financial accounting standards. Therefore, it is necessary for the IASB to focus attention on identifying the proper measurement attribute and its underlying rationale. In this regard, the following section focuses on the modeling of the investment decision.

3.9 The investment decision, capital budgeting, and recoverable cost

Throughout the economy, before investment plans are decided upon, cash-flow projections are made to determine the soundness and profitability of the investment. The stock in trade of the banking firm is money; its involvement in the social process is the intermediation of money. The nonbank business firm is involved with the intermediation of consumable goods or services. In either case, an investment decision has to be made. How should the available money capital be invested? To answer that question, the capital budgeting model or a variant of that model is used.

Recoverability of money to be invested is the focus of the capital budgeting model, which happens to be the framework for the investment decision. Irrefutably, the investment decisions of firms are based upon the recoverability of money invested. Based on either the present value model or the discounted cash flow model, the capital budgeting decision resolves the amount of money that should be invested. When invested, this amount of money would constitute the recorded amount for the assets in question. Invariably, the actual rate of return (ARR) in each year may be greater than, equal to, or less than the desired rate of discount (DRD) used in the investment decision. When the ARR is less than the DRD, a loss is sustained by the firm at the planning stage. The loss to be recorded is the difference between the value of assets on the books and the amount of money that would have been invested to date to generate the experienced rate of return (ERR). Given this situation, the value of the firm will have fallen; now the market will have a lower cash flow to value. However, if the ARR is equal to the DRD, then no adjustment is needed. With this situation, no change is experienced in the market value of the firm. Furthermore, if the ARR is higher than the DRD, no adjustment is needed. Importantly, however, in this situation the market will have a higher cash flow to value. *Ceteris paribus*, the value of the firm will have risen (Salvary, 1992, pp. 252–257).

After investment plans have been executed, profit generation from the firm's cash-flow process ensues. *Measuring profit* from the cash-flow process is the economic reality that *is embedded in the accounting framework*. To accommodate this end, financial accounting measurement rules are based on the fundamental law of recovery: recovery prevents/precludes loss. This law, which is operational in all models of investment, is most obvious in the payback model. Undeniably, *recoverable cost*, being linked to investments and explicated by the capital budgeting model, is the measurement attribute observed in financial accounting. This measurement attribute explains the three fundamental measurement rules in financial accounting – *present value for entry decision, lower of cost and market for use decision, and realizable value for exit decision*. Investments constitute accounting phenomena, and financial accounting measurement rules are related to the observed accounting phenomena.

3.10 Discussion and conclusion

The efficiency of the money market is directly related to the ability to measure 'the productivity of money capital at the margin and thereby giving signals either for additional money capital employment or for capital disinvestment and partial liquidation of the firm' (Vickers, 1978, p. 109). Financial accounting generates the information for such an evaluation and the market, through its revaluation of financial assets, ensures the efficient allocation of resources through the use of money. Financial accounting, by its measurement of the recoverability of money in use, enables an evaluation of claims; and, through the measurement of profit, it enables the market to arrive at values for financial assets (claims). This condition is so since the market value is an aggregate of several periods (years) of future earnings/cash flows – a sum of several parts. This aggregation (the market valuation model) is based upon expectations and is subject to revision as information on each part (year) unfolds (Salvary, 1998a).

Profit, which is derived from the cash-flow process, drives the economic system. Assets are stocks of money invested in goods and/or claims; assets give rise to yields. Should the asset values on the balance sheet be reflected at a capitalized rate (market value)? Would those values be a reflection of the cash flows expected to be generated by those firms? Each firm is confronted with its own cash-flow schedule as embedded in its *profit plan*. The assignment of numbers in the financial statement

should reflect the actual results of the firm's profit plan and its impact upon the firm's financial position – nothing else. This information on the firm's actual performance is needed as input into the valuation model to project the expected future performance of the firm. In the absence of this measurement, the assessment of the firm's current performance using changes in market values, which represent expectations of future performance, would not be realistic.

The crux of the problem in the international standard-setting process resides in the defects in the Framework. The IASB is aware that problems do exist. Unfortunately, however, the critical issue of fair value accounting is not on the agenda for change. At the meeting on Tuesday 21 September 2004 (IAS, 2004), the IASB has made it clear that its focus is on improving the conceptual framework and determining whether there are impediments to convergence of the IASC, FASB, and other national frameworks.

For a very important reason, this chapter began with a quote from Cohen and Nagel (1934, pp. 195–196). It ends with a summary, presented below, of the insightful exposition of Colleen Saythe Cunningham, President and CEO, FEI (2004).

To arrive at the right answer, it is necessary to ask the right question. What do we wish to measure? Is it profit or loss? Or is it economic profit? If the latter, then this will entail a huge change in accounting. Scores of valuation experts will now be required to prepare the accounts. Also, there will be a significant shift in how auditors conduct audits and users look at financial statements, yet there is no overwhelming users' support for such a change. Fair value accounting, with its implied perfection in scope and depth of markets and nonexistent modeling techniques, can only cloud an investor's ability to evaluate management's performance. Much of the focus is on relevance; very little focus is on reliability. Hence, there is a definite need to be clear when an accounting number is claimed to be reliable. Of what use is a complex financial statement if it is filled with judgments and assumptions that are beyond the reader's ability to understand. It is clear that the FASB believes that fair value is the primary measurement objective to be embraced by GAAP. It is very likely that the importance of the income statement would be minimized with such a far-reaching change. By including volatility in the income statement, assessing management's performance and predicting future performance would be very difficult. In this setting, users would only be able to rely on the cash-flow statement as a measure of annual performance. Before moving further with piecemeal changes to the accounting model, we should step back, discontinue issuing new standards and a comprehensive review of the entire conceptual framework should be undertaken.

Notes

1. All of these problems are being dealt with by the legal system. Hopefully, with vigorous prosecution and severe penalties, there will be a significant decrease in these types of offences.

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4

Fair Value – The Basis of International Financial Reporting Standards: A Conceptual Contradiction of the Relevant Measurement Attribute in Financial Accounting

Stanley C.W. Salvary

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> 'Information in the scientists' sense is always an instrumental record. This means that in order to understand the nature of information we must examine the nature of instruments and the nature of records … Today information is in a state of qualitative heterogeneity … with hints of an underlying quantitative uniformity. If we can find the clue to the basic variable which would enable every item of information to be located in a homogeneous spectrum, the consequences for communication would be quite incalculable.'
>
> (Meredith, 1966, pp. 114–115)

4.1 Introduction

There is a very strong movement to have a uniform set of accounting standards as the basis of International Financial Reporting Standards (IFRS). In January 2005, IFRS became required within the European Union (EU). While IFRS have been adopted by many other countries (Australia, New Zealand), their adoption is seriously being considered by other countries (Damant, 2005, p. 1). Also, the International Accounting Standards Board (IASB) – the organization that establishes the IFRS – and the Financial Accounting Standards Board (FASB) are having discussions with the goal of achieving considerable convergence of their standards (Deloitte IAS PLUS, 2005a).

Benefits from the use of international accounting standards are: (1) the elimination of duplication of effort in developing national accounting standards; (2) a global instead of a national focus on accounting problems; (3) enabling financial comparisons of companies regardless of domiciles – financial data comparability in international capital markets; and (4) savings for companies seeking capital in foreign capital markets by not having to furnish financial statements in accordance with host countries' financial reporting standards. The most beneficial aspect in developing *international accounting standards* is that a global approach will replace a national approach to standard setting. However, *as the standards-setting process progresses, it is evident from the IASB's framework that the accounting problems, which presented themselves in the national accounting standard-setting arenas, are simply migrating to the international accounting standard-setting arena.*

In the IASB's Framework (2001, F.12–14): 'The objective of financial statements is to provide information about the financial position, performance, and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions.' In April 2005, at the Joint Meeting of the

IASB–FASB (Deloitte IAS PLUS, 2005b), the issue was raised whether the function of *financial reporting is to assist users in decision-making or to compile past transactions*. The agreement arrived at was that the function of financial reporting is to assist with *decision-making*. Strikingly, the Boards agreed that 'general purpose financial reports should not seek to provide information useful to management – if management finds it useful this is a positive but not required as management are able to demand their own reports.' After reaffirming that to assist decision-making is the primary objective of financial reporting, the Boards deliberated on, but did not decide, whether *accountability* and *stewardship* should be incorporated as a subobjective in relationship to decision-making. At the July 2005 IASB Meeting, *stewardship* and *accountability* were examined within the context of providing decision-useful information. Agreement was reached by the members (11 in favour; three opposed) that 'the information needed to assess stewardship or accountability should not be added as an explicit objective of financial reporting by business entities'.

In the Framework (F.10), the IASB maintains that since the interests of all user groups is the ability of an enterprise to generate cash and cash equivalents and of the timing and certainty of those future cash flows, financial statements that meet the needs of investors will satisfy the needs of other users. What was not explicit, in the objective of financial reporting as framed, was made explicit in deliberations at the April and July meetings of the IASB and FASB. The problem that emerged from those meetings is the replacement of reporting on the *stewardship of management as the function of financial reporting* with *providing of information for users' decision-making* on the ability of firms to generate future cash flows. In accord with the IASB, Damant (2005, p. 2) maintains: 'What other aim could there be? It is only future cash flows that can bring benefits to the various stakeholders.'

Understandably, the focus on decision-making leads to a concern for predictive value, as opposed to feedback value. Apparently, the IASB's decision is based on its view that since investors' decision-making requires *future-oriented data*, the measurement of firms' past operating performance and financial position at the reporting date should not be the function of financial reporting. The IASB's focus is motivated by the epistemological objection to transaction-based accounting by some capital market adherents, whose notable feature is the approach to stock market valuation for recently established businesses. *The new valuation approach is not based on earnings*; the constraint of operating performance – profit – is conveniently relaxed (Desmet et al., 2000).

In October 2004, the IASB and the FASB agreed to start a project to converge the Conceptual Frameworks of the respective Boards. Agreement was based on

an understanding, which was arrived at on 21 September 2004 by the IASB and the FASB, that both of their conceptual frameworks, apart from convergence, needed to be improved. It was understood that during convergence, to be consistent with the aim of improving the IASB's Framework, the frameworks of the IASB, the FASB, and other existing conceptual frameworks would be given due consideration (Deloitte IAS PLUS, 2004).

In the interim, convergence of the requirements of these standard-setting bodies for Business Combinations (IFRS 3 and SFAS 141) is in progress. While the proposals retain the fundamental requirement of both statements, the main changes are that fair value must be used to measure an acquired company; implied goodwill in the acquisition, and not just the portion attributable to the acquirer, must be recognized; and fewer exceptions to the measuring at fair value will be allowed for assets acquired and liabilities assumed (Zwirn, 2005). Given the fair market valuation requirement in the standards (IFRS 4: *Insurance Contracts*; and IFRS 7: *Financial Instruments: Disclosures*) promulgated for the insurance and banking industries, *fair market value accounting is the long-term goal* (CAS, 2004, p. 16).

In summary, the Boards' position is: (1) to assist decision-making is the primary objective of financial reporting; (2) general purpose financial reports should not seek to provide information useful to management; (3) information needed to assess stewardship or accountability should not be added as an explicit objective of financial reporting; (4) fair market value accounting is the ultimate goal; and (5) financial statements that meet the needs of investors will satisfy the needs of other users (F.10).

The IASB's emphasis is on cash-flow generation and not on profit measurement. Accordingly, the following realities are to be considered in developing accounting standards: (1) the existence of a credit economy and (2) the fact that profit (as utilized in the price/earnings ratio) is the centerpiece of the pricing of firms' securities. Business is conducted in a *credit economy*, yet the emphasis is on the generation of cash flows instead of profit, which is the measure of accomplishment for business operators. Also, with fair value accounting, a *market volatility measure of profit* instead of *realized profit* will become the basis for pricing of firms' securities.

From an informational perspective, organizational activities involve the adoption of one alternative among several and information based on the adopted course of action is furnished in financial statements. Traditionally, financial reporting focuses on what has occurred; no reference is made of the possible consequences if other rejected courses of action had been adopted. It is financial accounting information that enables decision-makers to ascertain the financial

position and profitability resulting from the course of action *actually undertaken* in light of the then existing circumstances. If financial reporting is to provide factual data that captures the effects of the actual sequence of events, then *financial accounting standards must focus on organizations' actual operating plans within the context of the existing credit economy as characterized by a 'cash-flow process' and not a cash basis focus*.

At the end of 1975 in the USA, the consumer credit outstanding was $168.7 billion; at the end of June 2005, consumer outstanding credit amounted to $2145.6 billion (Federal Reserve Board, 2005). As noted by Salvary (1989, p. 89):

> 'In a pure money economic system (a system in which there is no credit; all transactions are settled immediately), *matching* would not be a [financial accounting] measurement concept, since it would occur automatically in the cash account. It is a credit economic system (a system in which the bulk of the transactions are executed on credit, with cash settlement taking place at some later point in time) that makes *matching a measurement concept*. In a credit economic system, credit flows precede cash flows, and it is credit flows that give rise to cash flows. In a credit economic system, an accrual system of accounting (a system of accruals and deferrals) becomes necessary to enable the recovery process to be measurable. The two concepts (recovery and matching) constitute a unified measurement process which permits a state description of the accounting entity via the measurement property: recoverable cost.'

4.2 Money, a credit economy, and the cash-flow process

Money, an imaginary/conceptual unit, was first introduced as *a unit of account* to facilitate exchange by translating physical exchange ratios into a series of relative money prices. Next, as *a medium of exchange*, money was introduced by means of documents as evidence that exchanges had taken place – *a credit instrument* representing an obligation emerged and was transferable in settlement of an exchange. Finally, with third party financing of production (the rise of the money and capital markets), money became *a store of uncertain value*. The unique quality of money is its general acceptability by all members of society. General acceptance of *paper money* as a medium of exchange is based upon the full faith of the populace in the *credit worthiness* of the issuing authority (Salvary, 1993).

According to Steuart (1767, pp. 406–407): 'Symbolical or paper [fiat] money is but a species of *credit*; it is no more than the measure by which *credit* is measured. *Credit* is the basis of all contracts … He who pays in paper puts his creditor in

possession only of another person's obligation to make the value good to him: here *credit is necessary even after the payment is made*' (*emphasis added*). The following passage provides an insight on the evolution and role of credit (Salvary, 1989, pp. 98–99).

> Society, due to its quest for self-perpetuation, is an adaptive system which introduces *innovative measures*: (1) to deal with a *changing environment*; and (2) to improve its operating efficiency. The economic system was initially a *barter* system of exchange, and *money* was introduced to improve the operating efficiency of the system. The system was significantly improved. *A money economy emerged! Credit was the next innovation introduced by society*. It 'was perfected by new devices such as the techniques of acceptances and of protests of the bill of exchange' (Pirenne, 1933, p. 212). A credit system is a cost *efficient* means of extending a money economic system: transactions in the economic system are significantly increased without any increase in the money base; the cost of increasing and maintaining a larger money supply is virtually eliminated. In this setting, the money base will increase only as the need for liquidity (the desire to hold cash) increases.

Credit causes a greater circulation of cash and replaces cash in circulation. The extent to which these two means of exchange – money and credit – increase together shows that they render the same services, and when the functions of either one are enhanced the other is invoked into more lively activity. This condition does not contradict the fact that in many instances *credit makes cash superfluous* (Simmel, 1978, p. 194). It is evident, based upon the functioning of the economy, that *a credit economy is characterized by a cash-flow process*.

At this stage, it is very important to stress that *cash-flow basis accounting* is significantly different from *cash-flow process* accounting. The former, embodied in the Statement of Cash Flows, merely requires the recording of cash receipts and disbursements. However, regardless of the enterprise, *accrual accounting* is used to measure the *cash-flow process* in its various stages. The cash-flow process entails: (a) financing – cash infusion is secured; (b) investing – a portfolio of productive assets is acquired; (c) transforming – product input is transformed into the vendible product; (d) distributing – the product is distributed; (e) establishing a receivable – vendible value of the product is realized; and finally (f) collecting cash from the product's realized value – the end of the cash-flow process. Financial accounting captures cash flows sequentially from inception, gestation, and culmination of the investment process. The measurement of *firms' annual profit is* arrived at by the accrual accounting *of the cash-flow process* (Salvary, 1998b). This *cash-flow process* explains the findings of Bowen et al.,

(1987, p. 746), which 'suggest that accrual accounting data have incremental explanatory power beyond that contained in cash flows alone'.

The time path or sequence of events in the cash-flow process reveals an efficient functioning of the socio-economic system. Hence, it is very important that this factor be properly recognized. Since it is the role of accounting to describe how organizations behave in markets, the following caveat is applicable to the accounting standard-setting task:

> '[E]conomic plans and actions have always to be seen in their temporal order, and our daily economic life cannot be understood without a knowledge of its structure through time. Nor is the element of time one which can well be introduced subsequently. *The main problem cannot be tackled if the time factor is left out …*
>
> *It is not possible to understand economic life with all its interrelations simply by looking directly at contemporary economic reality.'*
>
> (Eucken, 1951, pp. 27, 37–39)

As an indispensable aid to management, financial accounting, which is an administrative information science, enables an *assessment of management* (Salvary, 1985, 1989, 1992). It provides an observational report with measures based upon concepts corresponding to the structures and regularities of the system (nature of the firm, the role of time, investment plans, contracts, means for settlement of obligations, posting of nominal money prices) from which it abstracts. Indubitably, business is conducted with the primary objective of making a profit; hence, profitability is the true test of business success. The accomplishments of management are to be made public. Thus, financial reporting should inform on the outcome of firms' investment plans – *what has happened* (the *realized profit* resulting from mistakes, uncertainty, and accepted risk) and *not what could have happened*.

4.3 Profit measurement and management's performance assessment

The firm is a conduit involved in a nominal money-augmenting process. Each firm executes its investment plan and the consequences of that plan are measured in money terms. Since there are different profit opportunities to which assets can be placed, the profit associated with a particular combination of assets is directly related to their use and risk associated with the particular use. Firms

set their prices to obtain a specified profit from their investments over a specified period of time with the expectation that the prices as set will prevail. Regardless of the approach, that of price-taker or price-setter, the price used by a firm reflects its expectations based upon an informed judgment on product demand.

The value of a firm's investment plan is arrived at by the capitalization of the cash-flow stream to be generated by that plan. In the measurement of periodic profit, financial accounting provides a measure of that cash-flow stream. However, while the cash-flow stream is stressed it must be understood that it is only in the long run that all the cash will be collected. De facto, in the short run, the cash-flow stream consists of notes and accounts receivables. As measured in financial accounting, *profit* is comprised of two elements: (1) a current cash-flow component (current cash recovery – profit realized in the form of cash) plus (2) a future cash-flow component – an accrual of profit realized in the form of receivables net of payables (Salvary, 1992).

The IASB recognizes performance (F.17) – the ability of an enterprise to earn a profit on the resources that have been invested in it. However, the IASB allows the interests of user groups in the ability of an enterprise to generate cash and cash equivalents and of the timing and certainty of *those future cash flows* (F.10) to overshadow *profitability* – the key measure of a firm's success, which is critical in market valuation of the firm's securities. The value of a firm's security arrived at by capital market participants is not based on the firm's cash flows, but on the *expected profit* from the investment plan that the firm has set in place (Chen and Zhang, 2003; Penman and Yehuda, 2004). This condition explains why return on equity (ROE) and return on investment (ROI) are the two classic measures of firms' profitability.

Cash management is practiced by most, if not all, successful firms. For instance, firms structure debt and cash to meet their needs for certainty in financing their business activities (ACT, 2001) and use idle cash to accumulate marketable securities, in lieu of dividend payments, to provide for future financing (Salvary, 2004). However, it is the use of *credit* that enables firms to enhance their profitability[1]. This is evidenced by the preference of interest bearing credit sales to cash sales (Salvary, 2003) and use of commercial paper ($1.586 billion are outstanding at 24 August 2005 – Federal Reserve Board) to synchronize the inflows and outflows of cash due to differences in timing between payables and receivables.

Managers, *not assets*, adapt to changing market conditions, recognize new uses for existing assets, decide on specific uses of assets, and alter asset combinations given developing conditions. Money recovery and the cost of waiting are

the firm's concerns. Reinvestment in the future will not be undertaken if future expectations indicate that money currently invested cannot be recovered. Furthermore, if current prices can only cover current outlays and future prospects are grim, then the firm will simply abandon the existing investment plan. Profit/loss is a consequence of managerial decisions in an uncertain environment. Invariably, management attempts to select the best among competing alternatives in order to optimize nominal money output given nominal money input.

Since management is responsible for profit, there has to be a suitable basis for assessing management's performance. It is for this reason that the determination of profit using fair value accounting raises serious concerns about the appropriateness of the end result (Bies, 2004; IAIS, 2004; ACT, 2005; Brett, 2005). Indubitably, the future of firms in which they have invested is of great concern to investors/creditors. Obviously, they are profoundly concerned about the reliability of firms' management. Since recovery of their investments will be in the future, they do ask the notable question: Can the firm continue to deliver in the future what it has delivered in the past? The *stewardship of management* is at issue and the reliability measure of management is in great part determined by past operating performance and current financial position – the end result of the firm's investment plan.

While the role of financial accounting in financial reporting is clear, the lingering issue is: What should constitute the basis of the information for *performance assessment*? That is, how should the sacrifices and benefits from the firm's investment plan be measured? If the firm is engaged in a cash-flow process and the focus of its calculation is the recovery of total cash outlays at the minimum, then the investment decision is based on the recoverability of the nominal money invested. Since *recoverable cost*, and not change in market values, captures the essence of the firm's motivation, then *estimated recoverable cost* is the measurement property for measurement of sacrifices and benefits (Salvary, 1985, 1989, 1992).

The firm's output decision is a function of supply and demand. Its *realized profit* from operations is a function of *recoverable cost*. Given *estimated recoverable cost* from operating assets and the firm's expected rate of return, profit can reasonably be predicted. *In the absence of earnings management*, financial accounting information – based on accounting standards that incorporate the *proper measurement attribute, matching, and realization* as fundamental features of accounting measurement – will be neutral, capturing what the firm has done and enabling a proper assessment of management. However, with fair value accounting, neutrality of information about the firm and the assessment of management's stewardship will be affected.

4.4 Neutrality, stewardship, and financial reporting

In the Framework (F.24), understandability, relevance, reliability, and comparability are identified by the IASB as the four principal *qualitative characteristics of financial statements*. These characteristics are attributes that are considered necessary to make the information in financial statements useful to investors, creditors, and others. Importantly, however, *neutrality*, as an essential quality of financial reporting, is not recognized. This lack of recognition for *neutrality* is due to the Boards' position that: (1) to assist decision-making is the primary objective of financial reporting; (2) general purpose financial reports should not seek to provide information useful to management; (3) information needed to assess stewardship or accountability should not be added as an explicit objective of financial reporting; and (4) the assumption (F.10) that financial statements that are prepared to meet the needs of investors will meet most of the general financial information needs of other users.

While the FASB (1980), in *Statement of Financial Accounting Concepts No. 2*, relegated *neutrality* to a secondary role, the IASB eliminated it from the *Qualitative Characteristics of Financial Statements*. This treatment of neutrality is in great part due to the failure to give due cognizance to the evolution of *internal* and *external* financial reporting. When the financier of the enterprise was also the manager of the enterprise, *relevancy* and *reliability* were primary qualities of financial reporting, which at that time was only *internal* financial reporting. The social evolutionary process, characterized by the emergence of new institutions (capital markets, corporations, etc.) and new participants (shareholders, bondholders, professional managers, etc.), gave rise to *external* financial reporting with *neutrality* emerging as an important quality.

While many *new* users emerged, the abstraction of the entity had to be a *true and fair representation of the facts* about the firm consistent with monetary exchange. Financial accounting information is used for decision-making; however, the '*facts*' to be presented are about the firm and not about information to satisfy users' need for decision-making. No single user group can be identified as being the focus of financial reporting. Hence, because *neutrality* requires that the information provided be about the firm's decisions and the consequences of those decisions, it ensured that the interests of the many and varied users of financial accounting information would be served (Salvary, 1981).

Variations over time, from continual modification or amplification of the institutional arrangement, have not altered the basic societal concern. Without a clear understanding of the historical relevance of the institutional development

surrounding *neutrality*, in abstracting from the existing economic environment, the IASB's investor focus introduced a bias which enabled reality to escape the analysis. Fortunately, in May 2005, the IASB and FASB unanimously decided to retain neutrality as a characteristic desired in financial reporting (FASAC, 2005). Thus, *neutrality* will be returned to its role among the essential qualities.

Lamentably, given the IASB's position – general purpose financial reports should not seek to provide information useful to management, and stewardship or accountability information should not be added as an explicit objective of financial reporting – the role of *stewardship* in financial reporting has been abandoned. Evidently, this development is due to the failure to give due consideration to the historical development of accounting concepts. This condition is quite troubling as great importance is attached to the consequences of the failure to understand institutional arrangements and their historical evolution (Salvary, 1981)[2].

It is only from an analysis of observed phenomena that the requisite understanding of the accounting environment can be obtained. The findings from such an investigation would reveal that: (1) *external financial reporting, a part of financial reporting, is deemed to be the totality of financial reporting*; and (2) financial reporting is comprised of *external financial reporting* (financial accounting) and *internal financial reporting* (managerial accounting). The following passage sheds light on this point:

> 'In the thirteenth century, the manors were centers of rural employment and some … were well managed estates, … characterized by a sound system of administration and the annual rendition of accounts … [T]he basic handbook of estate administration was by Walter of Henley … The test of efficiency emphasized in the handbook was profit and loss, and the need for profit making … was recognized by the Statute of Merton (1235) … Essentially, the manor is the origin of the firm … [E]arly days of the manorial system are … similar to the period of individual capitalism, … the owner was the manager-accountant for the business … [L]ater development … is characteristic of security capitalism, in which … organizing the various activities of the firm is placed upon the shoulders of skilled salaried managers and … risk-taking is accepted by investors through the supply of finance …
>
> [T]he partnership … of the seventeenth century … gave way to the joint stock company with limited liability in the nineteenth century. With the separation of the owner from the management of the operations … the function of [external] financial reporting gained prominence …
>
> As a direct consequence of the social evolutionary process, the capital market emerged to accommodate the financing of large scale operations; … With the

> advent of limited liability as a matter of public policy, the univision (single objective) approach to accounting information was altered. Decision-making … within the firm became separate and distinct from the measurement of the performance of the firm as a unit responsible to the suppliers of finance. The result was the emergence [explicit recognition] of *two distinct types* of information: financial accounting information and managerial accounting information …'
>
> (Salvary, 1998a)

The existing institutional arrangement did not exist in its present state, it evolved. Of necessity, a sound comprehension of the historical relevance of institutional developments in accounting is needed, otherwise reality escapes the analysis.

Prior to the separation of owner from management, financial reporting existed solely for internal purposes. One set of accounting reports, consisting of information on stewardship (financial accounting reports) and information for decision-making (managerial accounting reports) was prepared for the owner. With the advent of limited liability and the separation of management from the owner, management was held accountable for its stewardship and had to provide an account of its stewardship to investors/creditors. At this juncture, external financial reporting (financial accounting information as required by law) emerged[3]. However, information useful for decision-making (managerial accounting information) was prepared exclusively for management as part of *internal financial* reporting. Hence, financial reporting was split into *external financial reporting and internal financial reporting*.

4.5 The lower of cost and market rule, fair valuation, and realization

Undeniably, the function of financial reporting is to provide *factual* information about a firm's past performance and current financial position. Financial statements are not to speculate on *how the firm could have been affected* but report on *how the firm actually has been affected* in the conduct of its business. In this regard, the '*lower of cost and market*' measurement rule enabled the recognition of asset impairment in the case of inventories and marketable securities. With the incorporation of market volatility in the measurement of profit, this measurement rule is effectively abandoned. As developed in France by Jacques Savary in 1712 (Littleton, 1933, p. 152), the rule was established to deal with changes in the market that constituted bona fide losses sustained by the firm. The reasoning

provided by Andrews (1949, pp. 41–42), for the '*lower of cost and market*' measurement rule as applied to inventories, is consistent with recoverable cost (Salvary, 1985, 1989, 1992), as the measurement property in financial accounting, and the cash-flow process.

> 'If market values have fallen … the costs expended on the stocks at the beginning of the next accounting year would be greater than the costs at which the business could then acquire similar goods. Now, it is essentially the purpose of the business to hold such goods for ultimate sale and to take the risks of the market. If they were carried at outlay-cost into the balance sheet at the end of the year, the next year would be saddled with what would be consequences of financial risks which were really incurred in the earlier period, and the year in which the business acquired them would be avoiding one of the costs of its having done so – the fall in prices that has taken place … To value at market prices when prices are rising would falsify the cost position and cause the following year to be charged with costs which had not been incurred in fact … the accountant's rule here is a strict application of the logic of his principle of charging as costs the money outlays that have been incurred during any period.'

Since the rule provides for downward revaluation but no upward revaluation, some researchers have attributed this rule to conservatism (Ijiri and Nakano, 1989). Salvary (1992), consistent with Andrews's (1949) logic on the treatment in financial accounting of the *consequences of financial risks*, makes it clear that the attribution to conservatism is invalid:

> 'The approach (no upward revaluation but downward revaluation) is said by some to be attributable to conservatism. The real reason for this approach is the fact while "risk of loss" *is a meaningful concept, "risk of gain" is not an operational concept*. No one hedges against the risk of gain; but those who can hedge against the risk of loss, usually do. The firm is in business to make a gain. It will reflect a gain as it achieves that gain. When the expected gain is larger than the firm had initially anticipated, the firm has not suffered; the recoverable amount of the invested money is unimpaired. Instead, the firm's internal rate of return would have increased, and the increase in earnings will flow through the income statement. However, when the firm is exposed to the risk of loss of money committed (when circumstances reveal that the firm will not recover its investment), consistent with the concept of "risk of loss", there is no alternative but to write down the investment.'

Furthermore, *consistent with the cash-flow process of a credit economy as described earlier, this measurement rule removes investment costs that are no*

longer recoverable, hence no longer part of the cash-flow process. However, with fair value accounting, changes in market values that are not part of a firm's cash-flow process will be required to be recognized.

As per the Framework (F.92), income (is to be recognized) occurs simultaneously with the increases in assets or decreases in liabilities. *Realization* is embedded in the IASB's example: 'The net increase in assets arising on a *sale of goods or services* or the *decrease in liabilities arising from the waiver of a debt payable*.' However, it is change in market values, in accordance with fair value accounting, that is implicit in the statement. A serious problem presents itself because changes in market values follow a cyclical pattern (Kling and McCue, 1987; Janssen et al., 1994; Grenadier, 1995; RICS, 1999) that is not inherently associated with firms' investment plans.

Regrettably, in light of the foregoing, the dilemma for the investors/creditors is that information on the stewardship of firms' management will not be available, yet management will face a more serious problem. Since general purpose financial reports are *not* to provide information useful to management and require information deemed necessary *to assist users with their decision-making*, management will be assessed not on carefully laid plans which they control, but on market volatility which they do not control (ACT, 2005; Brett, 2005). The following passages focus on the imminent problems posed by fair value accounting:

> '[F]air valuations will have an impact on leverage ratios, capital ratios, and other ratios used in the lending and credit-management process.'
>
> (Bies, 2004)

> 'Forecasts and internal performance measurements will no longer be comparable with the results reported in the statutory accounts. Increased volatility of earnings, e.g. through fair value adjustments, will make forecasting more difficult. *Also, internal performance measurements will have to be structured in a way that avoids penalties for fluctuations outside the direct control of management.'*
>
> (Deloitte IAS PLUS, 2003, emphasis added)

> 'Where debt covenants do not provide for changes in accounting regulations, changes to the balance sheet may cause these covenants to be breached. This [will have an] impact on the company's ability to ensure continuity of financing arrangements.'
>
> (Deloitte IAS PLUS, 2005b)

Given the foregoing scenario, the performance of management will be distorted, causing the possible termination of management and improper market pricing of firms' securities. Those problems can be averted with matching of actual sacrifices and benefits as established in the cash-flow process and the restoration of *realization* as an essential condition in the determination of profit. In so doing, the underlying cash-flow process of management's actual plans will be captured.

The recognition of changes in market values as a component of profit conflicts with *realization*; consequently, it is abandoned. Since the IASB's position (F.10) is that all users share the same interest and *the primary objective of financial reporting is to assist decision-making*, then *neutrality* is irrelevant since the *decision of users takes precedence over the decisions as implemented by the firm*. With market volatility incorporated as information for users' decision-making, the results of the firm's operations will be compromised at best and contaminated at worst. The IASB should reconsider its position on *realization* and *neutrality*.

In this fair value accounting movement, accounting measurements are questioned since they do not mimic capital market prices. In the value-relevance literature on standard setting, 'the value-relevance criterion implies that accounting's fundamental role is to measure or help measure market value' (Holthausen and Watts, 2000). In a very penetrating study concerning the value-relevance literature, the researchers ask the following questions: Does the observed association between earnings and security prices suggest that financial accounting standards are created to maximize that association, or that changes in those standards are attempts to increase that association? Does the nature and evolution of contemporary balance sheets intimate that financial accounting standards are designed to equate the recorded amounts with the market value of the equity? The researchers identified characteristics of the financial statements that are inconsistent with the valuation criterion. The explanations for those characteristics are consistent with financial statements as *inputs* into investors' decision models that involve valuation, with the balance sheet being an *input* as described by the FASB but inconsistent with it of itself being an estimate of value (Holthausen and Watts, 2000).

Undeniably, the IASB, due to its capital market orientation (Damant, 2005, p. 2), seeks to find solutions to financial reporting from movements in the securities markets; however, participants in the capital market are looking to accounting to provide information about the firm to arrive at the value of the firm. The value of a firm's share in the capital market is based upon investors' expectations of that firm's future profit, the assessed riskiness of the firm's operation, and the prevailing interest rate for the particular time horizon.

The valuation of a sum or sums of money to be received at some future point in time is based upon demand and supply conditions for money, reflecting changes in the risk-free interest rate and the inherent risk in the existing supply alternatives of future cash flows. Since market prices of firms' equity securities are driven by the expectations of investors, they reveal nothing about the actual operating performance and financial condition of those firms. Financial accounting information, which is the only factual information about the entity/organization, is vital for capital market price formation due to the fact that from the information content of current period's profit and residual recoverable cost, a general picture of the firm is obtained.

It is necessary to draw attention to the distinction between market values and accounting measures as stressed by Trevino and Higgs (1992, p. 211): '[W]hereas accounting rates of return such as ROI and ROA are measures of the profitability of the firm, MRET [total market rate of return] is a measure of profitability to the shareholder of the firm. There is no necessary relation between the accounting returns and the market returns in a particular year.' As measured in financial accounting, profit (which is central to the market valuation process) is comprised of two elements: (1) *a current cash-flow component* (earnings realized in the form of cash – current cash returns) plus (2) *a future cash-flow component* (earnings realized in the form of credit – an accrual of estimated discounted future cash flow) (Salvary, 1992).

The market valuation process, which facilitates transfers of titles to claims, captures the changes in financiers' beliefs about risks and liquidity. Although a firm's profit is relatively constant, the price of the firm's security is highly variable. This condition holds since two elements (the discount rate and the investors' planning horizons/time frame) of the market pricing/valuation model are *highly sensitive* to money market conditions and personal expectations. The discount rate is sensitive to changes in the interest rate which reflect the availability of money, and the investors' planning horizon/time frame is sensitive to investors' liquidity considerations. Also, investors' projections of future earnings, which are based upon the firm's current period's profit, are subject to optimism or pessimism (Salvary, 1998b).

Since *investors' expectations* are at times highly optimistic or highly pessimistic, market values are ephemeral in nature. Consequently, the inclusion of changes in market value will contaminate the financial accounting measurement of firms' profits; the contaminated information when furnished to the market participants, more likely than not, will produce distorted market pricing of some firms' securities. This effect is due to the *causative order of association between*

market value and accounting profits: market value is arrived at after the projection of future profit, and this projection occurs only after the measurement of the current period's profit has been reported. The measurement of profit in financial accounting does not begin with market value as a given; *market valuation begins with the release of financial accounting information in the financial reports*. Given an ill-conceived order of *association between market value and the profit generated in the cash-flow process*, the inclusion of market volatility in financial statements will simply result in a distorted portrayal of firms' current period profit and financial position.

4.6 The IASB's association of fair market value with the cash-flow process

The IASB's definition of fair value is: 'The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.' The FASB's definition of fair value is: '[T]he price at which an asset or liability could be exchanged in a current transaction between knowledgeable, unrelated willing parties' (FASB and IASB, 2004, p. 2). Except for the choice of words, the two definitions of fair market value are essentially the same. The following illustrations are examples of fair value: WorldCom's purchase of MCI and AOL's purchase of Time Warner. Both situations involved people, based upon all accounts, who were knowledgeable and engaged in arm's length transactions. WorldCom paid $37 billion for MCI on 10 November 1997 (PBS – The News Hour, 1997), while America Online purchased Time Warner for $106 billion on 11 January 2001 (PBS – The News Hour, 2001). In both cases the values were outrageous. In its financial report for 2002, AOL Time Warner wrote off approximately $90 billion of goodwill (Salvary, 2003) and WorldCom wrote off $45 billion (Krazit, 2003).

As the saga has unfolded over the last few years, fair market value transactions have resulted in a chronic overstatement of assets in many corporations' balance sheets owing to the goodwill that emerged from the business combination mania. This condition has led to massive amounts of writeoffs. Between the years 1998 and 2000, according to Fulcrum Financial Inquiry (2003), approximately 28,800 business purchases occurred. Within this three-year period, a 30% growth of intangible assets was experienced for S&P 500 companies and by 2001 intangible assets amounted to about 44% of book equity of those companies. In 2002, the goodwill writeoffs by US public companies amounted to approximately $750 billion. With about $690 billion of goodwill remaining on

the balance sheets of the S&P 500 companies, goodwill writeoffs were estimated to be about $200 billion.

It is very difficult to comprehend how those fair values would enable a better prediction of the profitability of the cash-flow process, when profits generated by those firms were in no manner related to the 'fair values' assigned by the investors. This condition exists since market valuation is a function of the various valuation models employed by investors. An insight into one such valuation approach that has been flaunted in the last few years follows:

> 'In forecasting the performance of high-growth companies like Amazon, we must not be constrained by current performance. Instead of starting from the present – the usual practice of DCF valuations – … start by thinking about what the industry and the company could look like when they evolve from today's very high growth, unstable condition to a sustainable, moderate-growth state in the future; and then extrapolate back to current performance. The future growth state should be defined by metrics such as the ultimate penetration rate, average revenue per customer, and sustainable gross margins. Just as important as the characteristics of the industry and company in this future state is the point when it actually begins.'
>
> (Desmet et al., 2000)

It is remarkably clear that, in this new valuation approach, the association between fair market values and current profit generated by the cash-flow process has been disrupted. What is even more staggering is the existence and extent of 'program trading'. As reported by Newman (2005), approximately two-thirds of the volume of company shares traded on the New York exchange are program trades. As rebalancing of the major indexes (including the Russell and S&P) takes place, certain stocks are sold and others are purchased in order to effectively reflect those indexes. More than three-quarters of all shares traded during the week of 24 June 2005 on the NYSE were traded to achieve the desired mix. Given that programmed ('algorithmic') trading is used to rebalance portfolios to the desired outcome, none of those programmed traded shares were based on value. Statistical formulas are used to determine which stocks to trade, when to trade them, and at what price. Big securities firms are making aggressive use of this approach and sharing their systems with institutional clients. Consequently, with such trading what a company's share should be worth given existing prospects does not enter into the decision-making process; therefore, it would take a gigantic leap of faith to associate the cash-flow process with those market values.

Since they are derived from/represent two different and distinct processes, financial accounting measurement and capital market valuation do differ. The

focus in financial accounting is upon *measuring the amount of profits generated by the cash-flow process as derivable from existing investment projects – income statement; and estimating the recoverable amount of yet to be recovered committed resources (the organization's risk exposure) – balance sheet*. In the absence of earnings management by firms, financial accounting information enables cash flows to be predictable. This condition holds since the approach employed in financial accounting is based on the cash-flow planning process involving transactions as embodied in the capital budgeting model, in which case Estimated Recoverable Cost − Committed Finance/Money Outlays = Money Recoveries Discounted over the Recovery Period at the Firm's Internal Rate of Return (Salvary, 1985, 1989, 1992).

To the IASB, a capital market *value*, not a transaction-based *measure*, is *the* approach to be used in financial accounting, because the market provides the assessment of investors. The IASB finds support in Smirlock et al.'s (1984) view of the deficiency in accounting: 'Future firm's rents [earnings] … will be [is] appropriately capitalized by an efficient market … Relying on capital markets to value rents avoids or substantially mitigates most of the shortcomings inherent in accounting profit rates [accounting measurement of profits].' While the capital market provides a value of a firm's security, it cannot measure the cash flow that has been generated by the firm in the earnings process. It should be obvious that signals generated by a signaling system – the capital market – must not be confused with information depicting an operating system – the firm (Salvary, 1989, pp. 50–52).

Measurement, without which quantitative comparison is not possible, is the essence of relevance. To measure, a single attribute that corresponds to the structure of the observed phenomena has to be identified. In the absence of a single measurement attribute (i.e. recoverable cost), a mixed model would result from the use of divergent measurement attributes as described by the FASB and IASB. Accordingly, due cognizance has to be given to the reality of the credit economy, which is characterized by a cash-flow process, and the single measurement attribute – recoverable cost – which underlies the investment decision.

4.7 The Frameworks' measurement bases and the mixed attribute model

In *Statement of Financial Accounting Concepts No. 5* (FASB, 1984, pp. 66, 67), the FASB identified five different attributes (historical cost/historical proceeds, current (replacement) cost, current market value, net realizable (settlement)

value, and present (or discounted) value of future cash flows) that are currently used to measure the items reported in financial statements. The FASB maintained that the use of a particular attribute depends on the nature of the item and the relevance and reliability of the attribute. The FASB (1984, p. 70) stated that:

> 'Rather than attempt to characterize present practice as being based on a single attribute with numerous exceptions for diverse reasons, this concepts Statement characterizes present practice as based on different attributes. Rather than attempt to select a single attribute and force changes in practice so that all classes of assets and liabilities use that attribute, this concepts Statement suggests that use of different attributes will continue, and discusses how the Board may select the appropriate in particular cases.'

Except for replacement cost, the IASB's Framework (F.100) contains basically the same measurement bases that are present in the FASB's (1984) and the International Accounting Standards Committee's (1989) Conceptual Frameworks. Also, the FASB's position as noted above is repeated in a slightly different fashion by the IASB (F.101). Common to those Frameworks is the failure to identify a single measurement attribute. This problem has migrated from the national standard-setting arenas to the international standard-setting arena.

Drawing upon the FASB's line of reasoning, the Special Committee of the AICPA (1994) concluded that standard setters should continue to use a *mixed model*, whereby assets and liabilities are measured in financial statements at cost, lower of cost and (market) value, and fair (realizable) value. Nevertheless, the positions of the FASB, IASC, and IASB on the use of 'different attributes' and that of the AICPA's Special Committee on a 'mixed model' cannot be sustained in light of the logical analysis presented by Salvary (1992). One attribute that leads to a *unique* model of financial accounting measurement has been identified by Salvary (1985, 1989, 1992). The various measurement rules in financial accounting, which give rise to the appearance of different attributes, are necessary for the convergence of a heterogeneous group of items into a homogeneous measure. Financial accounting measurement of the cash-flow process and the uniqueness of recoverable cost as the measurement attribute have been reinforced by means of social theory (Salvary, 1997).

The descriptive theory of financial accounting measurement rules is based upon what their construction permits them to measure (Salvary, 1992). The rules are related to investments, which, unequivocally, can be considered as observed accounting phenomena. In this fashion, the logic underlying financial accounting measurement rules is established. Since accountants are not conversant with the

basis for the rules, in some instances applications of the measurement rules in current practice are not consistent with the explanation for the measurement rules. This condition explains what is perceived to be diverse measurement bases in financial accounting and gives rise to the appearance of a mixed attribute model of financial accounting.

4.8 Investments, measurement rules, and market simulation

As explained by Salvary (1992), financial accounting provides an observational report, which describes observations of *resources* in a *space* and *time* setting. The measurement attribute is related to the concept of recovery: an *investment* made with the expectation of recovering, at the minimum, the investment cost and in addition a return for undertaking the *investment*. Given this scenario, the economic environment is describable by stating how much recoverable cost is embodied in what forms (assets), at what places (accounting entities), at what dates (fiscal year ends). While the asset is independent of the organization, the *recoverable cost* attribute of the asset is dependent on the organization and the time at which it is held by the organization. Essentially, financial accounting provides information on *how much money commitment is undergoing what types of transformations in which organizations at what dates*, and in binary opposition, *the financing of those commitments*. *Resources controlled by business firms are heterogeneous spatial configurations that share a common decision-oriented property: recoverable cost*. Based upon the reasoning presented by Faden (1977, pp. 7, 37, 38), *the accounting entity is a measurable space*. Hence, if financial accounting information is to be relevant, then financial accounting measurement must conform with measurement theory since *investments* constitute the observed phenomena. Consistent with measurement theory, the next section demonstrates that recoverable cost, as the measurement attribute in financial accounting, is captured in a market simulation approach.

Investments give rise to assets. The financial accounting measurement rules, which are used to measure assets, follow a basic market simulation process. This process is depicted by the following equations, which represent three distinct but sequential decisions facing the firm: (1) the *entry* (investment) decision (**I**); (2) the *use* (operation) decision (**O**); and (3) the *exit* (termination) decision (**T**). Three models, presented below, underlie the three decisions encountered in the conduct of business: (i) measurement of recoverable cost ($\mathbf{C}_{\mathrm{I}}^{*}$) at the time of initial investment (entry decision); (ii) continuing measurement of recoverable

cost ($\mathbf{C}_{\mathrm{O}}^{*}$) during the course of operations (use decision); and (iii) final measurement of recoverable cost ($\mathbf{C}_{\mathrm{T}}^{*}$), when an asset is no longer part of the recovery plan (exit decision).

***Present value of estimated future cash flow*:**

$$\mathbf{C}_{\mathrm{I}}^{*}=\sum_{n=1}^{N}\mathbf{R}_{n}(1+\mathbf{r}_{n})^{-n}\ \text{(net present value method – NPV)} \tag{4.1}$$

***Lower of cost and market measure of cash flow*:**

$$\mathbf{C}_{\mathrm{O}}^{*}=\mathbf{S}-\mathbf{M}\ \textbf{(S} = \text{sellimg price; } \mathbf{M} = \text{markup)} \tag{4.2}$$

***Realizable value measure of cash flow*:**

$$\mathbf{C}_{\mathrm{T}}^{*}=\mathbf{RV}\ \textbf{(RV} = \text{realizable value)} \tag{4.3}$$

All the measurement rules are derived from a market simulation model. The first measurement rule is the use of the money received in exchange for claims against the firms as the basis or value of the claims. The recoverable cost approach, which is implied by or at least inferred from equation (4.4), is evident at the inception of all investment decisions.

$$\mathbf{PVI}-\mathbf{C}=\mathbf{NPV} \tag{4.4}$$

Based upon the NPV, the investment decision, if rational, to commit **C** (cash outflow) is made if, and only if, any one of two conditions holds: $\mathbf{PVI}=\mathbf{C}$ or $\mathbf{PVI}>\mathbf{C}$ (i.e. if $\mathbf{NPV}\geq\mathbf{0}$). If an investment decision is made and $\mathbf{C}>\mathbf{PVI}$ at the time of the transaction, then the financial accounting rule holds that **C** (initial cash outflow) be written down to **PVI**. Since **PVI** is equal to **C*** (estimated recoverable cost) in equation (4.1), then **C** is set equal to **C***.

As it stands, *an asset* is recorded at the lower of fair market value received and fair market value given up in all of the following situations: in an exchange for another asset, is a self-constructed asset, acquired for cash or in an exchange for debt or equity securities. The logic behind the observed practice is that it is unlikely that someone will give the firm more value than what is received in return. Simply put, an asset is not to be recorded at an amount in excess of its fair market value. For the self-constructed asset, amounts expended in excess of a fair market-based outlay are excluded from the asset's recorded value.

Financial accounting measurement is guided by equation (4.1), which ensures that the consequence of a bad decision (e.g. loss on acquisition) is reflected in the income statement. At the time of initial measurement, equation (4.1) reflects a market simulation approach. For the entry decision, the estimated recoverable cost ($\mathbf{C}_{\mathrm{I}}^{*}$) is the decision-maker's risk exposure based upon the firm's expectations of what prices (**S**) will be over the life of the investment. Decisions at the margin reflect market conditions, and prices (**S**) in the seller's market are a critical variable.

4.8.1 Lower of cost and market valuation

Subsequent to the asset's acquisition, equation (4.5) serves as the basis to measure the asset's use value and constitutes the basis for the second measurement rule:

$$\mathbf{C}_{\mathrm{O}}^{*} = \mathbf{S} - \mathbf{M} \tag{4.5}$$

S (selling price of firm's output) is market determined. **M** (margin/markup), which is the expected gain, is contingent upon **S**. The operating decision, which occurs after entry decision, is influenced by current and expected **S**. Based upon the prevailing market conditions and the firm's normal **M**, then $\mathbf{C}_{\mathrm{O}}^{*}$ emerges as the amount recoverable. This condition holds due to the fact that the firm's output is of no utility to the firm (Arrow, 1981, p. 142). As a consequence, the firm experiences a period of storing (measured in nominal money terms) until other parties are ready to exchange either money or a receivable for such output. Hence, changing consumer demand, for the firm's output after entry, establishes the amount of money committed (**C**) that is recoverable ($\mathbf{C}_{\mathrm{O}}^{*}$).

The recovery process is based upon the ability to charge consumers the planned selling price. In an irreversible decision, if the conditions under which the plan was laid were to materialize, then money committed plus the rewards for undertaking the commitment will be recovered. Occasionally, less than full recovery is experienced when market conditions are worse than projected. Should an asset no longer fit into the firm's operating plan, realizable value – the third measurement rule – is applied to determine the recoverable investment cost.

4.8.2 Realizable value

Equation (4.6), which is market simulation for the exit decision measurement for terminal and obsolete processes, completes the simulation process:

$$\mathbf{C}_{\mathrm{T}}^{*} = \mathbf{RV} \tag{4.6}$$

Since the firm recognizes that the asset is no longer part of the recovery plan, the firm disposes of the asset to minimize future adverse consequences. Realizable value (**RV**), the amount obtainable from disposal of the asset in the seller's market, is market based. Accordingly, **RV** determines $\mathbf{C}_{\mathrm{T}}^{*}$ (recoverable cost) at the time of the exit decision, in which case the amount that will be recovered ($\mathbf{C}_{\mathrm{T}}^{*}$) is the cash flow from the sale of the asset and not from the use of the asset.

In the above situations, $\mathbf{C}_{\mathrm{I}}^{*}$, $\mathbf{C}_{\mathrm{O}}^{*}$, and $\mathbf{C}_{\mathrm{T}}^{*}$ represent the amount of money that would be committed by the decision-maker consistent with existing market conditions. In each and every situation (*cost, lower of cost and market, and realizable value*), one is looking at a measurement to arrive at the estimated recoverable amount of an original invested sum of money. The three measurement rules are necessary to deal with the heterogeneous conditions resulting from the fact that *planning is undertaken under conditions of market uncertainty*. Since money invested is represented not by one homogeneous grouping of assets but by a heterogeneous group of assets, the diverse measurements applied are necessary to measure the recoverable amount of money invested. Under this measurement process, the heterogeneity of assets converges to a homogeneity of value.

4.9 Summary, discussion, and conclusion

While financial reporting has evolved *pari passu* with organizational/institutional changes in society, it is now deemed to be out of touch with economic reality. In an effort to introduce economic reality, information useful for users' decision-making has replaced *information about the consequences of the firm's decisions* as the center of financial reporting. Unfortunately, the side show now replaces the main show. By replacing stewardship and realized income measurement with users' decision-making and fair value income measurement, financial reporting has been dislodged from its mooring.

After an investment decision has been implemented, the need to decide on the particular asset form no longer exists. Bygones are bygones! The measurement of performance in the use of the assets in the firm's portfolio is now at hand. An assessment of the asset portfolio, while necessary, is indifferent to the management (old versus new) at the time of the assessment; it focuses on assets' use and market conditions – product demand. The information emanating from the ensuing assessment affects the decision to continue or abandon the operation associated with each asset. It is expectations of future economic conditions which provide guidance on what portion of the remaining unrecovered amount is

recoverable. It is not the available service capacity, but the usable service capacity of each asset given market conditions that determines the recoverable amount of the investment cost. At the end of each period, the amount of existing investment cost (e.g. underwriting costs of insurance policy) estimated to be recoverable in future periods establishes the amount that should have been recovered in the current period, whether recovered or not. In this measurement process, any investment cost not recovered constitutes a loss.

Firms generate cash flows and fair market value changes (which are ephemeral in nature) are due to changes in the interest rate, the investment horizon, and changes in expectation of future cash flows. A firm's cash flow is unimpeded by any of those factors. Furthermore, the amount of cash invested and the asset form which it takes do not determine the cash flow. The rate of return on invested money depends on management's ability to manage effectively. Management's plan is the medium for creating cash flows. There are different rates of return on investments to reflect varying degrees of risk inherent in the various investment projects. It is the perceived risk due to differences in managerial talent that causes a difference in valuation. To change financial accounting reports to reflect perceived differences by market participants is to destroy the efficiency of the capital market. It is like moving the North Star and expecting navigators to use the North Star as a location point – a guide (Salvary, 1998c, p.259).

The suppliers of finance are synonymous with the financial capital markets. Individual savings take the form of bank deposits, insurance policies, and debt or equity securities. Individual savings constitute, in part, the financial capital pool – money and securities markets. Such funds are entrusted to entrepreneurs with the hope that the entrepreneurs will safeguard the corpus (principal) and operate profitably so that a return on the principal can be generated. Short-term investors are only concerned with stock price movement regardless of the reason. However, long-term/serious investors, with a vested interest in the future of the firms, are concerned with the reliability of entrepreneurs. The reliability measure is in great part determined by information on past performance. Unequivocally, the stewardship of management is critical; thus, its role in financial reporting should be restored.

Finally, it must be remembered that not all firms are publicly traded. Many of those nontraded firms are large, have very profitable operations, utilize the financial resources of the financial markets, and contribute significantly to the general welfare of the economy. So due cognizance has to be given to the fact that the function of financial reporting is independent of the presence or absence of a securities market.

Notes

1. For instance, in 2003, Sears, Roebuck & Co. sold its credit business to Citigroup. At that time about 59 million credit card accounts were involved, of which 25 million were active. In the past, Sears had relied on profits from the credit operation to smooth out bumps in retail revenue (Consumer Affairs.com, 2003; Carpenter, 2004). Citigroup paid Sears about $32 billion, of which about $2.9 billion was a 10% premium on the $28.6 billion in receivables Sears held on its private label and bank card portfolios (Wolverton, 2003).
2. The work of Finley (1973) was undertaken expressly to demonstrate the fallacious analysis resulting from the failure to give cognizance to the historical development of institutional arrangements.
3. External financial reporting was established in 1844 and reaffirmed in the Companies Acts of 1856 and 1862 (Redford, 1960, p. 183). Both creditors and investors are to be protected via a monitoring system which accounting provides in the form of the balance sheet (Edey and Panitpakdi, 1956, p. 359).

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5

Fair Value Accounting Under IAS/IFRS: Concepts, Reasons, Criticisms

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5.1 Introduction

Over the past years financial accounting has – in many areas and for several reasons – been turning away from historical cost numbers. This trend has been supported by empirical findings that the information content of traditional (historic cost) financial accounting is low and may even decline over time (Lev and Zarowin, 1999). The IASB, as the standard setter of the International Financial Reporting Standards (IFRS; earlier International Accounting Standards – IAS), seems to favor fair values (FVs) over historical cost (HC) in many reporting situations. Several standards allow or even prescribe FVs for the measurement in periods after initial recognition. The IASB does not yet propose 'full' fair value accounting (FVA), which would be characterized by recognizing every asset and liability at its FV (and through profit or loss), though recent standards and drafts of the IASB show a clear expansion tendency in the use of FVs. Examples include the fair value option in IAS 39 or the fair value model as proposed in the joint IASB/FASB project on revenue recognition. Describing extensively every opportunity or obligation to use FVs in IAS/IFRS would be beyond the scope of this chapter. Our aim is not to give a comprehensive overview of the application of FVA in IAS/IFRS, but to discuss its basic concepts and the underlying reasons for application of FVA, as well as addressing criticism against it.

The chapter is organized as follows. In section 5.2, basic properties of FVA and the scope of its application under IAS/IFRS are described. In section 5.2.1, a definition of FV (as in IAS/IFRS) is provided. FVA leads to regular revaluations of assets and liabilities and thus begs the question how positive revaluation amounts should be dealt with. This issue will be addressed in section 5.3 and the consequences for capital maintenance in section 5.3.1. Section 5.4 will give some examples of FVA under IAS/IFRS. In particular, revaluations of property, plant, and equipment (IAS 16), intangibles (IAS 38), financial instruments (IAS 39), and investment property (IAS 40) will be discussed. Obviously, FVA's range of applications under IAS/IFRS is relatively broad at present. However, the range of applications could even increase. Thus, it is important whether FVA can be justified from a theoretical perspective. First, FVA may be justified by the argument that it increases decision usefulness (and thus value relevance) of financial reports (section 5.5.1). Second, leaving reporting entities with the option of adopting either the cost or the revaluation model, their choice provides a signal (about their quality) to the capital market. This is discussed in section 5.5.2. Third, we address the question of whether FVA might prove to be a hurdle for the harmonization process between internal and external reporting in impeding

contracting with managers based on accounting measures (section 5.5.3). Finally, section 5.6 concludes.

5.2 Fair value accounting and the IFRS: basic properties and scope of application

5.2.1 Definition of fair values

The IASB defines FV in several IAS/IFRS as 'the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction' (e.g. IAS 18.7). While this definition is rather intuitive, it is unclear how to measure FVs in many reporting situations. The definition of FV refers to an observable market value based on an 'arm's length transaction'. In practice, however, there are many problems related to the measurement of FV. While the definition sounds reasonable, its usefulness for practical purposes is poor: observable and 'objective' market values remain limited only to the (exceptional) cases in which an active market exists. If such a market does exist, the use of FV is sometimes labeled as 'marking to market'. Active market values may be absent for several reasons: markets may be inefficient – for example, when transactions occur only rarely. Assets or liabilities may probably not be fungible at all (e.g. for special assets or intellectual property), or markets may be incomplete. In these cases, it is not clear which value should be used as an estimate for FV. Values can be derived from professional appraisers; other methods include broadly accepted valuation models such as discounted cash-flow estimations or the 'Black and Scholes' technique for valuation of options. When such models are applied, the use of FV leads to a 'marking to model' estimate. The most serious disadvantage of valuation models is their extensive reliance on management's subjective estimates and assumptions. Thus, not only measurement errors may occur, but, even worse, managers may deliberately distort financial reports. This relates to the classical tradeoff in accounting that actual or forward looking (here: FV) information is demanded but cannot be supplied reliably (Lambert, 1999). Hence, proponents of FVA praise its decision usefulness, while critics point to the fact that there are implementation problems, and a serious lack of objectivity and verifiability (Magee, 1978).

5.2.2 Treatment of holding gains and losses

Market values, net realizable values, net selling prices – or other FV estimates – are typically used in financial accounting systems to adjust carrying amounts downwards. As Cotter and Richardson (2002, p. 435) point out, adjustments to values

below historical costs are not at all contentious as the recognition of impairments is in line with the conservative nature of accounting. Accounting systems with obligatory impairment tests, followed up by asset write-downs and prohibition of asset write-ups over historical cost, are 'conservative' because they require a higher degree of verification for recognizing good news than bad news in financial statements (Basu, 1997, p. 4). Thus, under conservatism, holding losses are (asymmetrically) realized while holding gains are not. This is an important reason for HCA's systematic differences in the timeliness and persistence of earnings in bad-news and good-news periods (Basu, 1997, p. 4).

The principal difference between HCA and FVA is the underlying allocation pattern of holding gains (Magee, 1978, p. 47). Under HCA, a market transaction (i.e. the sale of goods) always precedes revenue recognition[1]. When the market value of a certain asset exceeds its carrying amount, a holding gain arises that will not be realized until this asset is sold. Under FVA, a revaluation would lead to realization of that 'holding' gain. Recognition under FVA makes accounting earnings more symmetrical: not only are future negative developments (i.e. risks) immediately recognized, but also future positive developments (i.e. chances) can or have to be. Allowing positive revaluations is a controversial matter in standard setting, as subjective FV estimates may lead to less reliable and thus less relevant information in financial statements (e.g. Easton et al., 1993). This would be exactly the opposite of what proponents of FVA want to achieve (Cotter and Richardson, 2002, p. 435). While (positive, upward) revaluations are, until now, generally – and in particular for long-lived fixed assets – not allowed under US and German GAAP, they have a long tradition in both Australian and UK GAAP. The IASB seems to be predisposed towards FVA because IAS/IFRS allow or even prescribe fair valuation in many reporting situations[2]. However, the treatment/realization of holding gains is different under different standards. In some standards, holding gains are recognized in earnings; in others, they are merely documented in equity (and thus affect only comprehensive, but not net, income).

5.2.3 FVA and capital maintenance

Under HCA, increasing prices of assets normally do not affect the accounting numbers. This relates to a certain concept of capital maintenance. Capital maintenance concepts define which part of a period's 'increase' in capital (if any) can be regarded as profit. HCA maintains capital as the original (nominal) money capital. This is a specific form of financial capital maintenance (which can be measured either in nominal monetary units or in units of constant purchasing power).

In contrast, FVA is sensible to current price changes (regardless of whether these price changes can be traced back to inflation or other changes in the market values of specific assets). In a number of IAS/IFRS, revaluations lead to a recognition of increased asset values (and to an increase in equity, but not to an increase in income of that period). As the revalued asset will be depreciated over the remaining useful time, depreciation amounts will increase (compared to former depreciation based on historical cost). Thus, FVA considers increased replacement costs: after revaluation, a period's income is positive only if the depreciation amount based on current cost is earned. This relates strongly to the concept of 'physical capital maintenance' as defined in the IFRS Framework. Under this capital maintenance rule, a profit is earned 'only if the physical productive capacity of the enterprise (or the resources of funds needed to achieve that capacity) at the end of the period exceeds the physical productive capacity at the beginning of the period, after excluding any distributions to, and contributions from, owners during the period' (F.104). Under the concept of 'physical capital maintenance', increases in prices of assets held over the period, conventionally referred to as holding gains, are treated as capital maintenance adjustments – that is, part of equity and not of profit (F.109).

FVA also relates, albeit not strictly, to economic income. If the FVA estimate is the present value of an asset's future net cash inflows, the usefulness of a particular asset for a particular firm – possibly in combination with other assets (cash generating units) – is recognized in the balance sheet. However, measuring an economically 'correct' value of the firm is complicated. The best proxy is its market value. In a world of perfect and complete markets and certainty, fair values (or market values) of all thinkable assets and liabilities would be well defined and observable. Then and only then would it be possible to explain a market value of a firm as the sum of its net assets. Supposing the theoretical case that equity can be measured as present value of all future cash flows of the firm, the degree to which equity of the previous period has been maintained tells to what extent management was able to hold (or increase) the potential of the firm to generate future cash flows. It is beyond dispute that managers should maintain or even increase this ability, and incentives that would encourage them to do just that should be set.

However, existing FVA systems are far from measuring equity as the present value of a firm's future cash flows. FVA in the real world may reduce the gap between the market value and book value of the firm, but it does not measure the firm's value in a way that helps to determine the Hicksian income: the balance sheet (even in an FVA system) is not a complete list of the firm's investment

projects measured at net present value. Thus, it is not that clear what the capital maintenance concept of FVA under IFRS exactly is. Alexander (2003, p. 18) attempts to define that in such a system 'the capital to be maintained is the fair value of the (net) assets, i.e. profit is the increase in the fair value of the net assets at the end of the period over that at the beginning of the period'. However, as Alexander (2003) notices himself, this definition is somewhat tautological. He concludes that the IASB should clearly articulate the associated concept of capital maintenance under FVA and demands a clearer conceptual understanding of when FV should be used.

5.2.4 FVA and IAS/IFRS: scope of application

Under IFRS, the use of FV is allowed or prescribed in numerous standards. For example, IAS 16 ('Property, Plant, and Equipment'), IAS 38 ('Intangibles'), and IAS 40 ('Investment Property') allow reporting entities to opt either for the revaluation (i.e. FV) or the cost model. Most financial instruments (regulated in IAS 32 and 39), however, have to be recognized at FV. As already pointed out, even under historical cost accounting, FVs play a role. They are usually invoked to adjust carrying amounts downwards. The same holds also for IAS/IFRS. According to IAS 36 ('Impairment of Assets'), an entity has to assess at each reporting date whether there is any internal or external indication that an asset may be impaired (IAS 36.9). If such indications are given, an impairment test has to be carried out. Impairment losses must be recognized if an asset's carrying amount exceeds its recoverable amount. The recoverable amount of an asset (or a cash-generating unit) is defined as the higher value of either the fair value minus costs-to-sell or the value-in-use (IAS 36.18). The best estimate for FV is a current bid price in an active market or a binding sale agreement at arm's length (IAS 36.25–26). However, in the absence of binding sale agreements or active markets, less reliable estimates for FV are also admissible (IAS 36.27). While FV is somehow objectified on markets, value-in-use is not. The latter measures the value that an entity subjectively attributes to a particular asset. Value-in-use is thus computed as the discounted cash flow of the estimated future cash flows derived from an asset's continuing use (IAS 36.31). Thus, in IAS 36, FV and value-in-use are not equal: FV needs (at least some) justification by the market. This is true for most estimations of FV in IAS/IFRS. However, it is hard to separate FV from value-in-use in cases in which FV is derived from a valuation model ('marking to model').

Figure 5.1 depicts an example, where in t_1 an asset is written down to its recoverable amount. The dotted line shows the new carrying amounts over the useful life of that asset lying below the (bold) line of initially expected carrying amounts over time. After an impairment loss was recognized, it might happen that in some period (here: t_2) the recoverable amount exceeds the (new) carrying amount (dotted line). Then, the asset has to be written up. However, under the cost model (e.g. in IAS 16), the increased carrying amount can never exceed the (net) carrying amount initially expected (bold line), which is the carrying amount that would have been determined if no impairment loss had been recognized in prior years (IAS 36.117). This distinguishes HCA from the 'real' FVA that works more symmetrically. Under FVA, positive revaluations may not only exceed historical cost (above the bold line), they also do not rely on the occurrence of a prior recognition of impairment losses.

Beyond impairments, revaluations are, for example, allowed in IAS 16, IAS 38, IAS 39, and IAS 40. However, the handling of FVA differs in these different IAS with respect to the treatment of revaluation amounts or the estimation of FV. Table 5.1 gives an overview of IAS examples for the different treatments. These differences will now be briefly discussed.

Following IAS 16, all assets are initially recognized at cost (IAS 16.15). For the measurement in subsequent periods, an entity can opt either for the cost or the revaluation model for entire classes of property (IAS 16.29). Opting for the revaluation model requires additional disclosures. These include the effective date of the revaluation and information on whether an independent valuer was involved

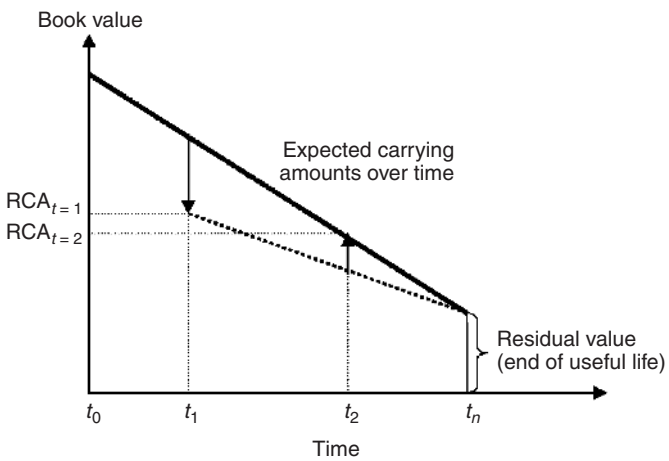

Figure 5.1 Impairment and reversion of impairments under HCA

Table 5.1 IAS example for the applied FVA models in IFRS

IAS	IAS 16 ('Property, Plant, and Equipment')	IAS 39 ('Financial Instruments')	IAS 40 ('Investment Property')
Measurement at recognition	At cost (IAS 16.15).	At FV as on the date of acquisition or issuance corrected for transaction costs (IAS 39.43).	At cost including transaction costs (IAS 40.20).
Measurement after recognition	'Cost model' or 'revaluation model' for entire classes of property (IAS 16.29).	Depends on the classification of a particular asset or liability. Assets are generally measured at FV, apart from available-for-sale assets or loans and receivables. Liabilities are generally measured at amortized cost; some liabilities (e.g. derivatives) are measured at FV (IAS 39.47).	Either by revaluation or cost model for all investments (IAS 40.30). Presupposes that FVs can be reliably determined on a continuing basis (otherwise, cost model prescribed).
Determination of FV	FVs of land and buildings are determined by professional (external) appraisers. FV of machinery, office equipment, etc. is determined by internal estimates (IAS 16.32). In the absence of active markets for particular assets, 'marking to model' applies (IAS 16.33).	If available, the best FV estimate is a quoted market price in an active market (IAS 39, AG71). In the absence of active markets, valuation techniques have to be applied ('marking to model') (IAS 39, AG74).	Best estimates are current prices in an active market (IAS 40.45). If not available, other estimates include (a) prices of properties of different nature, condition, or location; (b) adjusted prices in less active markets; (c) discounted cash-flow projections (IAS 40.46).

(*Continued*)

Table 5.1 (*Continued*)

IAS	IAS 16 ('Property, Plant, and Equipment')	IAS 39 ('Financial Instruments')	IAS 40 ('Investment Property')
Frequency of revaluations	Depends on the changes in FV of particular assets. Some assets need revaluations annually, while for others revaluations every three or five years are sufficient (IAS 16.34).	On every balance sheet date (IAS 39.55).	On every balance sheet date (IAS 40.38).
Treatment of revaluation gains and losses	Increases are, in general, directly credited to equity (revaluation surplus), while decreases are recognized as a loss. If an increase reverses a previous decrease, it is (to that amount) recognized as profit, and vice versa (IAS 16.39–40).	Depends on whether an asset is classified as available for sale (AVS) or as 'at fair value through profit or loss'. Revaluation amounts of the latter category are recognized as profit or loss (IAS 39.55a). Changes in the value of AVS assets are directly recorded in equity (IAS 39.55b). Revaluation of FV liabilities also affects net income (IAS 39.47a).	FV changes are recognized immediately in profit or loss in the period of their occurrence (IAS 40.35).
Disclosure requirements	Application of the revaluation model is accompanied by numerous disclosure	Disclosure requirements include information on the nature of the financial	Disclosure requirements include: method of determining fair

Table 5.1 (*Continued*)

IAS	IAS 16 ('Property, Plant, and Equipment')	IAS 39 ('Financial Instruments')	IAS 40 ('Investment Property')
	requirements. These include the effective date of the revaluation and the information of whether an independent valuer was involved (IAS 16.77).	instruments, as well as terms and conditions that may affect the amount, timing, and certainty of future cash flows (IAS 32.92).	value, extent of use of independent valuers, criteria that were used to classify property as investment, and classified amounts recognized in profit or loss (IAS 40.75).

(IAS 16.77). FVs of land and buildings shall be determined by market-based estimates by professional (external) appraisers, while the FV of machinery or furniture can be determined by internal judgment of the respective market value (IAS 16.32). In the absence of active markets for particular assets (e.g. because of the specialized nature of an asset), either marking to model or a depreciated replacement cost approach applies (IAS 16.33). Revaluations, then, have to be carried out regularly. The appropriate frequency, however, depends on the character of the respective asset. Some assets require annual revaluation; others will face only insignificant changes in FV over time. For the latter, revaluations every three or five years may be considered as appropriate (IAS 16.34). Revaluation losses are commonly recognized in earnings; however, revaluation gains, in general, do not affect earnings. Such increases are directly credited to equity (under a special position labeled 'revaluation surplus'), except when that increase reverses a revaluation decrease previously recognized as profit or loss (IAS 16.39). Similarly, revaluation decreases are not recognized as a loss if they reverse previous positive revaluations of an asset. Instead, these decreases are debited directly to the revaluation surplus in equity (IAS 16.40). With regard to the treatment of revaluation gains and losses, the revaluation model of IAS 38 works in a similar fashion.

This does not apply to IAS 40 where, under the revaluation model, all gains or losses arising from changes in the FV of investment property have to be recognized in earnings of the period in which they arise (IAS 40.35). As in IAS 16, the

initial recognition is at cost (including transaction costs), and the balance sheet preparer can choose either the revaluation or the cost model (corresponding to IAS 16). However, the respective model has to be applied for all investment property of that entity (IAS 40.30). That is, if the revaluation model is chosen, all investment property has to be revalued at each balance sheet date, except such investment property for which the FV is not reliably determinable on a continuing basis (IAS 40.53). The IASB's rebuttable assumption is that it is always possible to determine the FV of investment property. That assumption may be rejected if market transactions are infrequent and alternative reliable FV estimates are not available (IAS 40.53). The best estimates of FVs are current prices in active markets (IAS 40.45). If such prices are not available, however, other estimates can suffice, including (a) current prices in an active market for properties of different nature, condition, or location, (b) recent prices of similar properties on less active markets, with adjustments, and (c) discounted cash-flow projections based on reliable estimates of future cash flows (IAS 40.46).

In IAS 39, a mixture of both treatments of unrealized gains can be found. In general, all financial instruments are initially recognized at FV as on the date of acquisition or issuance, corrected for transaction costs (IAS 39.43). For the measurement in subsequent periods, all financial instruments have to be classified. Financial assets have to be classified either as (a) held-to-maturity, (b) loans and receivables, (c) financial assets at fair value through profit or loss, or as (d) assets available for sale (IAS 39.45). After initial recognition, assets in the first two categories are subsequently measured at amortized costs, while all other assets are measured at FV. Financial liabilities are generally measured at amortized cost (using the effective interest method). Nevertheless, some liabilities (e.g. derivatives) have to be measured at FV (IAS 39.47). If available, the best FV estimate here is a quoted market price in an active market (IAS 39, AG71). If such market prices do not exist, other valuation techniques have to be applied ('marking to model') (IAS 39, AG74). Revaluations occur on every balance sheet date. The treatment of unrealized gains depends on whether an asset is classified as available for sale (AVS), or as 'at fair value through profit or loss'. Increases in value of the latter category are recognized as profit (IAS 39.55a), while increases in the value of AVS assets are directly recorded in equity (IAS 39.55b). Revaluations of liabilities measured at FV also affect net income (IAS 39.47a).

Apparently, the most distinctive feature of FVA in different IAS standards is the treatment of unrealized holding gains. Crediting revaluation surpluses directly into equity corresponds to the concept of physical capital maintenance. FV through profit and loss is, in fact, closer to maintaining economic capital.

However, the extensive (and probably increasing) use of FV under IFRS might merely be attributed to the fact that the IASB (now) follows a balance-sheet-oriented (often labeled as 'static') approach to financial accounting. In the next sections, we will discuss this development (i.e. the justification of FVA) from different theoretical viewpoints. As a starting point, we discuss value relevance (i.e. decision usefulness and reliability) of FVs. Further on, we discuss FVA under a signaling perspective and finally will ask how FVA relates to harmonization of management and financial accounting, i.e. whether FVA is useful for contracting with managers.

5.3 Justifications for the use of fair values in financial reporting

5.3.1 Value relevance and standard setting

From the standard setter's (i.e. the IASB's) perspective, decision relevance is the basic goal of financial reporting. Thus, it is a natural question whether FVA increases decision usefulness of financial reports. If FVs are in fact relevant for investment decision-making, it can be hypothesized that material (unexpected) revaluation surpluses (or decreases) have information content, and thus generate share price revisions (Emanuel, 1989, p. 213). According to this hypothesis, decision usefulness of accounting measures can be empirically examined by means of value relevance regressions (for a critical discussion of this branch of research, see Holthausen and Watts, 2001; see also Barth et al., 2001, for another view). Value relevance studies jointly test whether some accounting information is useful and reliable for investors (Cotter and Richardson, 2002, p. 436f). There are several studies concerned with the question of whether FVs affect market prices[3]. As property revaluations are common in Australia and the UK (Easton et al., 1993), numerous empirical studies use data from these countries. However, revaluations of tangible long-lived assets (generally possible in IAS/IFRS) are not legal under US GAAP. Nevertheless, some securities by banks, insurance companies, or mutual funds are also subject to FVA (Danbolt and Rees, 2003, p. 3), which allows performing value relevance studies with US data in at least these areas. Overall, empirical evidence on revaluations being value relevant is mixed (for an overview of main findings, see e.g. Danbolt and Rees, 2003). Standish and Ung (1982) found only a moderate association between revaluation announcements and stock price revisions, uncorrelated with the size of revaluation.

They suppose that revaluations may only be a pointer for other favorable signals to be priced (Standish and Ung, 1982, p. 704). Emanuel (1989) fails to provide clear evidence that asset revaluations generate share price revisions. Barth (1994), in addition, argues that weak evidence on pricing effects of revaluations might be traced to estimation errors or sectional differences in sample firms. Limiting her analysis to the banking industry, Barth (1994) finds disclosed FVs of investment securities to have explanatory power beyond historical costs. To name a few, Easton et al. (1993), Easton and Eddey (1997), Barth and Clinch (1998), Harris and Muller (1998), and Aboody et al. (1999) also found evidence that revaluation surpluses are indeed relevant for capital markets.

For standard setting, there are further remarkable empirical findings – beyond the basic fact that FVs have value relevance in very different environments and reporting situations. Those findings relate to objectivity, the respective market structure, and the noise components in FV estimates. For example, Barth and Clinch (1998) found evidence that the market usually considers both director and independent revaluations as value relevant. The authors explain this by the fact that, on average, the communication of director's private information through FVA outweighs potential manipulations[4]. Cotter and Richardson (2002) found no significant differences in the reliability of internal versus independent revaluations of long-lived assets, except that of plant and equipment. Given these findings, the IASB's marking-to-model approach in situations where active markets are absent is not as problematic as might be assessed at first sight. However, from Petroni and Wahlen (1995), it can be concluded that the existence of active markets is, in some situations, a prerequisite for value relevance. Here, the authors found that FVs of securities traded in highly liquid (i.e. active) markets were value relevant, while FVs of securities traded in less liquid markets were not. Mixed models (like in IAS/IFRS), in which some assets or liabilities are measured at FV while others are not, can be justified by such findings.

Beaver and Venkatachalam (2000) split fair value disclosures of US banks into nondiscretionary, discretionary, and noise components, and found only noise components not to be priced (while the others were priced to different degrees). Thus, from a standard setter’s perspective, with the market making them out, noise in market values should be no problem. Interestingly, nondiscretionary components in FV estimates – often criticized – are priced at a multiple of greater than one. Beaver and Venkatachalam (2000) explain this by signaling: management’s usage of discretionary fair value disclosures signals future company performance.

5.3.2 Revaluations as signals

Motivations for voluntary revaluations (i.e. choosing the revaluation model instead of the cost model in IAS/IFRS) are not at all self-evident. Scholarly literature provides several explanations (Emanuel, 1989, p. 213). First, revaluations may be helpful in fending off hostile takeovers. Second, revaluations might enhance the matching of expenses with their respective revenues – because of the subsequent charging of current values instead of historical costs (which goes in line with the concept of physical capital maintenance). Third, revaluations allow for disclosure of an entity's 'true' borrowing capacity. Fourth, FVA might lead to the presentation of a (more) true and fair view of a particular company (Standish and Ung, 1982).

Whatever the motivation, voluntary revaluations in fact do deliver signals to the capital market. The only question is, then, whether a revaluation is considered as good or bad news. There are theoretical arguments for both. Lin and Peasnell (1998) point out that, *ceteris paribus*, upward revaluations result in a decrease in return on equity. This being detrimental, revaluations will only be taken out if there is inside information about future positive developments, e.g. an increase in earnings. Increased future cash inflows may then be supposed to overcompensate the increased depreciation amounts in the subsequent periods after the upward revaluation (otherwise, a revaluation would not take place). Thus, the revaluation is, in fact, a forecast of increased future earnings (Standish and Ung, 1982, p. 702). Further, positive revaluations lead to an increase in equity. That has a beneficial effect on the debt-to-equity ratio and may signal a potential for raising further debt.

However, there is also the possibility that capital markets consider revaluations as a negative signal. When the markets do not believe that future earnings will increase, a revaluation announcement appears dubious. Likewise, revaluations are questionable when they take place as a part of a defense strategy against hostile takeovers. Additionally, the signal that a firm has no other possibility to raise further debt than revaluating its assets may also be considered as negative.

Whether the market interprets revaluations as good or as bad news will depend on the particular economic situation that a company faces. First, the costs connected to revaluations have to be considered. Those include, for example, fees for professional appraisers, opportunity costs of internal valuation, additional audit costs, and 'increases in the likelihood of actions against the firm by claimants if the new valuation is not realized' (Cotter and Zimmer, 1995, p. 137). A revaluation will take place only if the benefits from a revaluation exceed its costs. However, there are also costs connected with refraining from revaluating

assets, which have to be considered as well (i.e. costs of suboptimal contracting). Examples are opportunity costs of underinvestment or added costs of inefficient financing strategies (Cotter and Zimmer, 1995, p. 137). These costs allow successful firms to signal their true status by omitting possible positive revaluations and thus to separate themselves from less successful firms (Gaeremynck and Veuglers, 1999, p. 124). This is illustrated by the following example based on revaluations of property, plant, and equipment pursuant to IAS 16. Let us first assume that a higher proportion of equity has positive effects on a company's capital costs. This is somewhat plausible because the equity-to-debt ratio plays a crucial role in ratings that determine costs-of-debt financing. Let us further assume that there are some payments tied to earnings – for example, taxes or parts of executive compensation. Our last assumption implies that, according to either expected increases or decreases of future net cash inflows, successful and less successful companies can be separated and therefore the firm's managers know whether their company is a successful one.

Assuming increasing market prices, revaluation of long-lived assets will lead to a higher proportion of equity in the balance sheet. However, in subsequent periods, earnings will – everything else being equal – be lower if a revaluation took place because of increased depreciation amounts. While this is at a first glance a disadvantage, all payments tied to earnings will also decrease. In the short run, a revaluation thus has two advantages: first, the equity-to-debt ratio improves (i.e. capital costs decrease) and, second, the discounted future savings of decreased earnings-based payments materialize. The question now is, though: Why do not all companies opt for FVA[5]? A plausible answer is that (assuming rational expectations) managers use the option to communicate private information about the firm's true economic situation to the market. Under ideal conditions, a separating equilibrium exists in which it is strictly advantageous for successful firms to opt for the cost model (and vice versa)[6]. Therefore, we have to assume that the capital market assesses companies based on the chosen valuation model (i.e. the cost or the revaluation model), and that applying the cost model signals for successful firms[7]. In separation equilibrium, the two types of firms can clearly be distinguished because the choice has different consequences.

Like unsuccessful firms, successful firms also have *a priori* advantages of opting for the revaluation model (i.e. lower capital costs). However, the serious disadvantage for successful firms is that there will be unjustified discounts in their market values, because they are supposed to be unsuccessful ones. A 'bad' firm opting for the cost model signals that it is a 'good' firm and will have a better valuation than appropriate (see Table 5.2). However, capital costs do not decrease if

Table 5.2 Effects of the cost and revaluation models in successful and unsuccessful firms

Valuation model	Type of firm	
	Successful firm (increasing future cash flows)	**Unsuccessful firm (decreasing future cash flows)**
Cost model	Earnings-based payments increase	Earnings-based payments are equal or decrease
	No advantage from higher equity-to-debt ratio	No advantage from higher equity-to-debt ratio
	Fair pricing as successful firm	Market supposes firm as successful: pricing with premium
Revaluation model	Earnings-based payments are equal or even increase	Earnings-based payments decrease
	Advantage from higher equity-to-debt ratio	Advantage from higher equity-to-debt ratio
	Market regards firm as unsuccessful: pricing with discount	Fair pricing as unsuccessful firm

the revaluation model is not exerted. This allows drawing the following two conclusions: first, the successful firm will not opt for the revaluation model because the managers want to signal that the firm is – according to the true economic situation – a successful one. The economic rationale behind this behavior is that positive outcomes from a revaluation will not be significant, or even be overcompensated by the negative effect of a discount in market value. The second conclusion, accordingly, is that unsuccessful firms can reap bigger advantages from opting for the revaluation model.

It should be stressed that the previous example is simplifying in some respects. First, it is questionable whether the hypothesized decrease in cost of capital will materialize. Second, earnings-based payments are usually not measured using (consolidated) IAS/IFRS reports. Third, a separating equilibrium need not necessarily exist. Fourth, the signal connected to revaluations may not be timely. Fifth, the signal may be connected to others and may not allow an inference of whether a firm really is successful.

Empirical literature provides some characteristics of firms that typically undertake asset revaluations. Among the findings are that firms are more likely to carry

out revaluations when leverage is high (to increase borrowing capacity). Cotter and Zimmer (1995) also point to the fact that revaluations are more likely when operating cash flows in the current period are lower than in the previous one. This effect is even stronger when leverage is high (Cotter and Zimmer, 1995, p. 138). Brown et al. (1992) and Whittred and Chan (1992) found that positive revaluations of long-lived assets are associated with the existence of debt contracts, high leverage, reduction of political costs, simultaneous issues of bonus shares, and avoidance of hostile takeover bids (Cotter and Zimmer, 1995, p. 136). These findings suggest that accounting choices related to FVA provide important signals to capital markets.

5.3.3 Fair value accounting, contracting, and incentives

Decisions concerning financial accounting have possible implications for management accounting and control. Following the IASB's Framework, financial statements shall also inform about 'the results of management's stewardship of the resources entrusted to it' (F.7). If that is the case, incentives can broadly rely on financial accounting measures. This, in fact, would be the key for a harmonization of financial and management accounting often regarded to be achievable by IAS/IFRS reporting. However, there are serious concerns that such harmonization is possible, in particular with respect to FVA.

For contracting and incentive setting, an appropriate assessment base (i.e. a performance measure) has to be found. A performance measure has to serve (at least) the purposes of motivation and control. In more detail, the measure has to fulfill several criteria. To name a few, managers first must be able to influence the respective measure. Second, the measure must be timely. Third, the measure has to be representative of the quality of the agent's work (thus, higher effort has to lead to a higher measure and vice versa). Fourth, the measure should not be (too) susceptible to manipulation. Fifth, the measure should establish compatible incentives; increasing the measure should satisfy both the principal's as well as the agent's interests. Finally, the measure has to allow for Pareto-efficient risk-sharing (Laux, 1999, pp. 29, 81). These criteria are not fully achievable in total because of trade-offs. Interestingly, not all of the criteria should be satisfied entirely to achieve optimal solutions. For example, it is not always advisable to use a performance measure that is (totally) unsusceptible to manipulation. Demski et al. (2004) show that, in some cases, the principal may have advantages even if the agent manipulates the accounting system to get higher rewards linked to the (manipulated) performance measure. The agent can (try to) influence performance, and thus payment, through increasing his productive effort, but he can also manipulate the

measure – e.g. by altering the effective date a sale is consummated, by deferring or accelerating recognition of various revenues and expenses, or by specifying self-serving transaction prices, discount rates, or FV estimates. The principal wants to attempt losses from such manipulations and has – at least – three ways to do that. The first possibility is reducing the direct payoff agents anticipate from manipulation; the second is to increase the agent's cost of manipulation; the third, more 'subtle', possibility consists of limiting losses from manipulation by encouraging and facilitating manipulations. The explanation for this apparently counter-intuitive finding is simple: if an organization helps an agent to manipulate the system, private returns from devoting effort to further manipulation may decrease; employees may thus devote their effort to improving the real (rather than the measured) performance. Even if this behavior seems to be somewhat perverted, it opens the door for a contracting use of FV.

Let us first suppose that an FVA system is used in addition to HCA, i.e. that there are additional FV disclosures. Those disclosures may suffer from measurement errors and a lack of reliability. However, they provide additional information not conveyed in the HCA performance measure. Thus, regardless how noisy they are, it may have a welfare-enhancing effect to (additionally) rely on them in contracts (if there are no observation and administration costs)[8]. Using FVA instead of traditional HCA will change the performance measure. The question then is whether the (new) performance measure is more informative about the agent's action(s). Changing the assessment base, however, may also have some 'real world implications' because the agent may change his effort spending (with respect to his utility maximization and a compensation contract given). Effort may be then spent more extensively on maintaining capital, for two reasons: first, capital maintenance under FVA (as applied in IAS 16) is harder to achieve than under HCA[9]. Second, FVA earnings (as affected by IAS 39 or IAS 40) tend to be more volatile. If managers are now assessed on the basis of an FVA performance measure, they may have stronger incentives to maintain capital than under HCA. The explanation is straightforward. If management is obliged to maintain a firm's equity during an accounting period and gets assessed on that issue, strong incentives are set to prevent losses in equity value through hedging strategies, which may contribute to a significant growth in the utilization of derivates that protect the FV of the firm's equity. Even for small firms, management will become a very complex task: the more complete the FVA system, the more complex is management. Barlev and Haddad (2003, p. 399) expect that the use of FVA allows principals to better evaluate the outcome of their managers' decisions regarding the selection of assets and liabilities for current operations or hedging.

Critics point to the fact that hedging activities may then become equal or even more important than looking for new optimal investment projects. Thus, much effort may be allocated to merely unproductive or nonoperating actions. Several analytical studies examined the allocation of effort, incentives, and favorability of FVA for management control. Magee (1978) explored the effects of current versus historical valuation on the structure of incentives. He found that the agent's allocation of effort will be different under different valuation rules, and concluded that, under HCA, agents will in general neglect future consequences of their actions and concentrate on current operations. Bachar et al. (1997) compared equilibrium dead-weight losses, due to transacting and auditing, across historical cost, lower-of-cost-or-market and FV regimes. One interesting result of this particular study is that it can be favorable to choose different reporting measures for different types of assets. Kirschenheiter (1999) used a principal–agent framework to analyze optimal contracting under historical cost versus market value accounting standards. He showed that principals prefer market value accounting under a market structure, where net realizable values equal market values (because it provides better information about the manager's effort). In situations that are more uncertain, principals prefer historical cost accounting. In a way, these findings justify the IASB's mixed model approach on FVA. Dutta and Reichelstein (1999) showed, for a multi-period agency setting, that residual income combined with FVA for receivables shields managers from the risk associated with financing activities and provides an optimal performance measure. Gaber (2004) also argues that in some (restrictive) situations FVA has positive economic consequences. The latter study, however, is a good example of the need of setting very restrictive assumptions under which FVA turns out as being favorable to HCA. In general, the analytical literature does not recommend FVA for contracting purposes that, in the end, brings the result that FVA is an obstacle to the harmonization of financial and management accounting (Ewert, in press).

5.4 Conclusion

This chapter addressed underlying concepts and general characteristics of FVA, in particular as applied under IAS/IFRS. It was shown that the distinctive feature of FVA, compared with HCA, lies in a different allocation pattern of holding gains. Thus, the realization principle and the concept of capital maintenance under FVA differ from traditional accounting systems. The IASB seems to favor the use of FVs in financial statements, which explains the increasing range of applications. This

begs the question whether this tendency can be justified. The empirical literature provides evidence that FVs are value relevant in various reporting situations. This finding, however, is bound to the legal frameworks and enforcement systems under which the respective capital markets (where the sample firms are traded) are organized. A general advantage of FVA over HCA should not be inferred, even if this conclusion might be drawn from some of the studies. However, while several studies suggest that revaluations of particular assets provide value relevant information to the capital market, standard setters should rather be asked why they are not demanding such information from balance sheet preparers. In a sense, the IASB's 'mixed model', in which fair valuation is demanded in some standards but not in others, seems to be justified. Further, leaving preparers the choice between FVA and HCA is a signaling device. However, it is not self-evident whether revaluations are good or bad news. In some countries (e.g. Australia and the UK) revaluations of long-lived assets are very common and possibly not considered a signal of firms being unsuccessful. In other countries, where the option for such revaluations exists (e.g. Germany), they are rarely exercised. This may point to the fact that the capital market is supposed to react negatively to them. In general, the literature suggests that the economic situation of a particular company is crucial. We conclude that, under a signaling perspective, it might be advantageous to leave FVA as nonobligatory. Finally, we discussed that, from a contracting point of view, FVA might lead to increasing differences between financial and management accounting. In total, FVA is a controversial issue in discussions about the future of financial accounting. On the one hand, standard setters, especially the IASB, seem to increase the range of applications of FVA while, on the other, academics and practitioners have reservations about this accounting system. In this chapter, our aim was to demonstrate that the world is not black and white. In our view, the recent possibilities of FVA under IAS/IFRS have sufficient justification from a theoretical point of view. However, there should be some caution about increasing the range of application of FVA as the classical tradeoff in accounting between decision usefulness and reliability will always remain.

Notes

1. If goods are sold, revenue is recognized when significant risks and rewards of the ownership have been transferred to the buyer. Several other general and transaction-specific conditions (to be found in IAS 18) have to be met.
2. However, FVA does not apply in all reporting situations. This partial use of FVA is sometimes labeled as 'mixed model'.

3. Examples include Warfield and Linsmeier (1992), Amir et al. (1993), Easton et al. (1993), Ahmed and Takeda (1995), Petroni and Wahlen (1995), Barth et al. (1996), Eccher et al. (1996), Nelson (1996), Easton and Eddey (1997), Barth and Clinch (1998), Harris and Muller (1998), Aboody et al. (1999), Beaver and Venkatachalam (2000), Cotter and Richardson (2002), and Danbolt and Rees (2003). It is beyond the scope of this chapter to discuss this research extensively.
4. The reliability of revaluations may be questioned because of existing incentives to inflate assets. Incentives include increasing debt capacity and reductions in political costs (Cotter and Richardson, 2002, p. 438).
5. Empirically, it is true that not all companies use their option to revaluate their assets. In Germany, where all consolidated financial statements of listed companies have to be prepared under IAS/IFRS, only a small number of companies opt for IAS 16's revaluation model.
6. See Hughes and Schwarz (1988) for a similar model of inventory valuation.
7. This assumption is likely to be a realistic one (see Gaeremynck and Veugelers, 1999, p. 123).
8. Another argument for this result is that additional use of FVA information creates a financial statement (or, in other words, an information system) that is more 'fine'. Following Blackwell and Girshick (1954), a 'finer' information system is always better if it does not cause additional costs. One could argue that these arguments do not work because FVA causes additional costs. However, FV estimates have to be collected as correction values in historical cost accounting systems too. So, additional cost will be smaller than one may initially suppose.
9. This is because capital maintenance relies on earning replacement costs.

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6

Does Delaware Incorporation Add Value? An Accounting-based Analysis

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6.1 Introduction

About half of publicly traded US firms are incorporated in Delaware. Moreover, a disproportionately large share of the biggest publicly traded companies is incorporated in Delaware (Bebchuk and Cohen, 2003; Subramanian, 2004; Yee, 2004). In the USA, firms can incorporate in any state regardless of where they operate. Each state enacts its own corporate law and has its own court system for adjudicating disputes. Most US firms incorporate in one of only two states – their home state or Delaware. More than 95% of firms that incorporate outside of their home state incorporate in Delaware.

Why do US firms choose Delaware incorporation? Daines (2001) reported that publicly traded Delaware firms exhibit a value premium over non-Delaware publicly traded US firms. That is, Delaware firms were worth more than non-Delaware firms in terms of Tobin's Q during 1981–1996. Daines suggested that Delaware corporate law facilitates takeovers and improves the market for corporate control, which results in a superior valuation for Delaware firms.

The Delaware value premium has received considerable attention from researchers because, if true, it links the quality of corporate law to firm values. A series of studies by La Porta et al. (1997, 1998, 2002) suggested that differences in law across countries affect firm valuation across countries. However, cross-country studies are plagued by possible country-specific cultural and political differences, not all of which can be controlled for. In this context, the Daines study provides an innovative contribution because, by restricting the study to US firms, many cross-country differences are eliminated. Any systematic difference in valuation between Delaware and non-Delaware US firms would be mostly associated with the state of incorporation, because cultural and political differences across US states are less of a factor.

However, many researchers have questioned the statistical robustness of Daines's results. Bebchuk et al. (2002) and Subramanian (2004) cast doubt on the robustness of the Delaware value premium over time. Gompers et al. (2003) examined the effects of an omitted variable – a 'governance index' – and found that the Daines effect disappears after controlling for the governance index. (Gompers et al. also acknowledged that some of the discrepancy may be caused by using a different sample of firms than Daines.) Bebchuk and Ferrell (2001) and Bebchuk et al. (2002) suggested that the Delaware value premium reported by Daines may be due to the self-selection of better-managed firms into Delaware rather than the effect of Delaware's corporate law on firm value.

While Bebchuk and Ferrell (2001) pointed out that the Delaware value premium may be due to differences between Delaware and non-Delaware firms, prior research has not identified what the underlying differences are. In this chapter, we take a fresh look at the Daines study from an accounting-based perspective. Using techniques from the accounting research literature, we examine whether Delaware value premium exists after controlling for accounting-based firm characteristics of Delaware firms. Although previous research controls for some variables, such as R&D expenditure or return on assets, which affect the cross-sectional distribution of Tobin's Q, it seems that the previous controls were inadequate[1]. We identify accounting conservatism and analysts' forecasts of future earnings growth as the two most significant new controls. These two factors affect the cross-sectional distribution of Tobin's Q. If these two factors are correlated with incorporation in Delaware, ignoring them may distort the measurement of the Delaware value premium.

According to the accounting conservatism score introduced by Penman and Zhang (2002), we find that Delaware firms exhibit more conservative accounting than non-Delaware firms. Furthermore, we find that consensus analysts' forecasts of earnings growth are systematically higher for Delaware firms than those of non-Delaware US firms. Higher Tobin's Q of Delaware firms may be driven by these two factors.

Upon controlling for accounting conservatism or analysts' growth forecasts, our empirical analysis finds that the Delaware value premium becomes statistically insignificant. However, if one focuses exclusively on just smaller firms, the Delaware value premium is significant if one does not control for conservatism and analysts' earnings growth forecasts. However, when accounting conservatism or analysts' long-term earnings growth forecasts are controlled for, the Delaware value premium disappears for smaller firms as well as for larger firms.

This chapter is organized as follows. Section 6.2 presents the main hypotheses. Section 6.3 documents our sample selection. Section 6.4 provides the empirical results. Section 6.5 concludes.

6.2 Development of hypotheses

The Delaware value premium reported by Daines has elicited critical responses. First, Bebchuk et al. (2002) argued that the instability of the Delaware value premium over the years is 'deeply puzzling', since it cannot be a manifestation of

the high-quality corporate law of Delaware. Subramanian (2004) also found that the Delaware value premium is not robust across the years and across small versus large firms. Specifically, he found that smaller Delaware firms were worth more than smaller non-Delaware firms during 1991–1996, but not afterwards, while larger firms, which comprise 98% of his sample by size, exhibited no Delaware value premium for any year during 1991–2002. However, as long as the Delaware value premium is statistically and economically significant over the years 'on average', such a time-series and cross-sectional variation in the magnitude of the Delaware value premium cannot fully support the nonexistence of the Delaware value premium. Second, Gompers et al. (2003) reported that the Delaware value premium is significantly negative after controlling for the corporate governance index. However, there is no conceptual basis for why the addition of the corporate governance index to the Daines model changes the overall result of the Delaware value premium (Subramanian, 2004). Third, Bebchuk and Ferrell (2001) speculated that Daines did not adequately control for potential endogeneity problems. They suggested that Delaware firms might be worth more not because of the beneficial effects of Delaware corporate law, but rather because better-managed firms might choose to incorporate in Delaware. However, they do not identify what kinds of firms self-select into Delaware, leading to the observed Delaware value premium. Overall, the mixed evidence of the existing literature on the Delaware value premium calls for a further investigation.

We examine whether the Delaware value premium exists after controlling for some distinct characteristics of Delaware firms, which are not considered in previous literature examining the Delaware value premium. To this end, we identify two factors, which may affect Tobin's Q, distorting the results of Daines: accounting conservatism and future earnings growth expectation[2]. While these two factors are not driven by Delaware's relatively mild anti-takeover statute, both factors may affect the cross-sectional distribution of Tobin's Q. First, more conservative (aggressive) accounting may pull down (up) the book value of equity (Penman and Zhang, 2002), inflating (deflating) Tobin's Q. However, Delaware's anti-takeover statute may not directly affect how conservative the accounting is. Second, future earnings growth expectation is based on the assumption of the ongoing status of the sole firm, rather than reflecting the potential of takeover of the firm. However, higher future earnings growth expectation may drive Tobin's Q upwards (Penman, 1996). Even though previous research considers R&D expenditure to control for the growth of firm, we use analysts' earnings forecasts as a more reasonable control variable. This is because

analysts' earnings forecasts may be a more direct proxy of '*ex ante*' expectation of future earnings growth than '*ex post*' R&D expenditure.

Thus, in this chapter, we present the distributions of the proxies for accounting conservatism and future earnings growth expectations, as well as the control variables in the existing literature, conducting empirical analyses to test the following null hypothesis:

Hypothesis 1: *There is no difference between Delaware and non-Delaware firms on average in terms of accounting conservatism (future earnings growth expectation).*

Utilizing the empirical results from the test of hypothesis 1, we examine whether the Delaware value premium exists after controlling for additional proxies for accounting conservatism and future earnings growth expectations. Our null hypothesis is as follows:

Hypothesis 2: *There is no Delaware value premium measured by Tobin's Q on average after controlling for accounting conservatism (future earnings growth expectations).*

6.3 Sample Selection

We begin by creating a sample that includes all exchange-traded industrial US firms on COMPUSTAT with necessary data, such as Tobin's Q, sales, number of business segments, stock price, and state of incorporation[3], between 1990 and 2003. Following Daines, we delete regulated utilities (two-digit SIC code 49), banks and financial firms (two-digit SIC codes 60–67). Following Subramanian (2004), we delete American Depository Receipt (ADR) firms. To avoid survivorship bias, however, we do not follow Daines in deleting firms with fewer than five years of data. For a more reasonable cross-sectional comparison, we choose only the December-fiscal-year-end firms. In addition, we delete the firm-year data when a firm's fiscal-year-end changes, since its annual accounting data is ad hoc. We obtain a final sample of 13,715 firm-years from 3323 firms between 1990 and 2003, as reported in Table 6.1(A). However, the sample size differs across analyses depending on the data requirement for each analysis. For example, for the analyses utilizing analysts' earnings forecasts[4] and stock returns, we merge our main sample with the

I/B/E/S and CRSP database. Since analysts selectively follow the firms, the sample size for the analysis using analysts' long-term earnings growth forecasts decreases to 7374 firm-years.

To allow one month for investors (analysts) to reflect the accounting information into their firm valuation (earnings forecasts), we measure the stock prices (earnings forecasts) as of April of the following year. This is because December-fiscal-year-end firms are required to report their annual reports by the end of March. In addition, to reduce the effects of outliers, we winsorize the main variables at the top and bottom 5% of the sample for each of variable.

Table 6.1(B) shows the sample size and the fraction of Delaware firms by two-digit SIC industry classification. Overall, over half (59%) of the sample firms incorporate in Delaware. Since there are significant variances of the portion of Delaware firms across industries, we use industry-adjusted variables, which are calculated by subtracting the industry (two-digit SIC code) median of each variable, to test hypotheses 1 and 2 to control for the potential industry effects.

Table 6.1 Sample size

Year	Sample size
1990	597
1991	601
1992	717
1993	726
1994	815
1995	816
1996	973
1997	1015
1998	1148
1999	1215
2000	1223
2001	1232
2002	1317
2003	1320
Total	13715

Panel A: Sample size by year.

(*Continued*)

Table 6.1 (*Continued*)

SIC code	Industry classification	Delaware	Non-Delaware	Portion of Delaware (%)
1	Agricultural Production – Crops	10	9	52.6
10	Metal Mining	12	1	92.3
13	Oil and Gas Extraction	48	18	72.7
14	Mining and Quarrying of Nonmetallic Minerals	15	23	39.5
15	Building Construction – General Contractors and Operative Builders	5	7	41.7
16	Heavy Construction, except Building Construction	27	0	100.0
17	Construction – Special Trade Contractors	7	0	100.0
20	Food and Kindred Products	78	46	62.9
21	Tobacco Products	9	17	34.6
22	Textile Mill Products	27	1	96.4
23	Apparel, Finished Products from Fabrics and Similar Materials	0	4	0.0
24	Lumber and Wood Products, except Furniture	42	15	73.7
25	Furniture and Fixtures	29	45	39.2
26	Paper and Allied Products	135	95	58.7
27	Printing, Publishing and Allied Industries	24	31	43.6
28	Chemicals and Allied Products	1695	674	71.5
29	Petroleum Refining and Related Industries	64	52	55.2
30	Rubber and Miscellaneous Plastic Products	147	159	48.0
31	Leather and Leather Products	10	21	32.3
32	Stone, Clay, Glass, and Concrete Products	83	29	74.1
33	Primary Metal Industries	164	93	63.8
34	Fabricated Metal Products, except Machinery and Transport Equipment	209	137	60.4
35	Industrial and Commercial Machinery and Computer Equipment	851	748	53.2

Table 6.1 (*Continued*)

SIC code	Industry classification	Delaware	Non-Delaware	Portion of Delaware (%)
36	Electronic, Electrical Equipment and Components, except Computer Equipment	852	647	56.8
37	Transportation Equipment	259	214	54.8
38	Measuring/Analyzing/Control Instruments; Photo/Med/Opt Goods; Watches/Clocks	777	793	49.5
39	Miscellaneous Manufacturing Industries	105	89	54.1
48	Communications	78	95	45.1
50	Wholesale Trade – Durable Goods	234	137	63.1
51	Wholesale Trade – Nondurable Goods	71	90	44.1
52	Building Materials, Hardware, Garden Supply, and Mobile Home Dealers	23	25	47.9
53	General Merchandise Stores	3	22	12.0
54	Food Stores	34	25	57.6
55	Automotive Dealers and Gasoline Service Stations	35	10	77.8
56	Apparel and Accessory Stores	22	30	42.3
57	Home Furniture, Furnishings, and Equipment Stores	17	24	41.5
58	Eating and Drinking Places	178	119	59.9
59	Miscellaneous Retail	137	94	59.3
70	Hotels, Rooming Houses, Camps, and Other Lodging Places	52	43	54.7
72	Personal Services	0	14	0.0
73	Business Services	936	606	60.7
75	Automotive Repair, Services, and Parking	12	8	60.0
76	Miscellaneous Repair Services	6	0	100.0
78	Motion Pictures	9	7	56.3
79	Amusement and Recreation Services	98	47	67.6
80	Health Services	238	87	73.2
82	Educational Services	10	0	100.0
83	Social Services	5	3	62.5

(*Continued*)

Table 6.1 (*Continued*)

SIC code	Industry classification	Delaware	Non-Delaware	Portion of Delaware (%)
87	Engineering, Accounting, Research, Management, and Related Services	168	125	57.3
99	Nonclassifiable Establishments	57	29	66.3
	Total	8107	5608	59.1

Panel B: Sample by Industry Classification.

6.4 Empirical results

6.4.1 Descriptive statistics

We begin by presenting the descriptive statistics of firm-specific variables, testing hypothesis 1, which compare the firm characteristics between Delaware and non-Delaware firms. The chosen variables are used in Daines's empirical model or in this chapter. Results are detailed in Table 6.2.

Table 6.2(A) presents the descriptive statistics of the firm-specific variables used in Daines's model. First, consistent with Daines, we measure Tobin's Q as the market value of assets divided by the book value of assets, where the market value of assets is computed as the market value of common equity plus the book value of preferred stock plus the book value of liability. Consistent with Daines, Delaware firms have higher Tobin's Q than non-Delaware firms. Second, Delaware firms are large (in terms of sales), more diversified (in terms of number of business segments), more R&D intensive, and less profitable in current years (in terms of return on assets). All of these differences are statistically significant at the 1% level. These results are consistent with Daines.

Table 6.2(B) shows the descriptive statistics of the proxies of additional control factors in this chapter. First, following Penman and Zhang (2002), we compute the accounting conservatism score (CSCORE) for Delaware and non-Delaware firms. CSCORE measures the effect of the application of conservative accounting on the balance sheet by the level of estimated reserves that are created by the accounting conservatism, relative to net operating assets. In computing this conservatism score, we consider the estimated reserves based only on the accounting treatment of inventories, R&D, and advertising expenditures. On the basis of CSCORE, Delaware firms are more conservative in accounting. The

Table 6.2 Descriptive statistics of main variables: Delaware vs non-Delaware firms

Variable	State of incorporation	Number of firms	Mean	Std dev.	25%	50%	75%	*t*-statistics of mean difference	*z*-statistics of Wilcoxon score
Q	DEL	8107	2.44	1.85	1.18	1.70	2.94	4.50**	3.71**
	NON-DEL	5608	2.21	1.67	1.13	1.57	2.53		
SALES	DEL	8107	1118	2251	21	130	834	3.97**	6.35**
	NON-DEL	5608	1028	2212	23	105	607		
NSEG	DEL	8107	1.88	1.28	1.00	1.00	3.00	3.14**	2.43**
	NON-DEL	5608	1.82	1.22	1.00	1.00	3.00		
RD/A	DEL	8107	0.11	0.13	0.01	0.05	0.15	8.08**	6.97**
	NON-DEL	5608	0.08	0.11	0.01	0.04	0.11		
ROA	DEL	8107	0.02	0.25	0.07	0.10	0.18	−7.93**	−5.58**
	NON-DEL	5608	0.07	0.21	0.01	0.12	0.20		

Panel A: Tobin's Q and control variables in Daines.

Variable	State of incorporation	Number of firms	Mean	Std dev.	25%	50%	75%	*t*-statistics of mean difference	*z*-statistics of Wilcoxon score
CSCORE	DEL	7358	0.28	0.35	0.07	0.15	0.30	8.09**	3.91**
	NON-DEL	5349	0.23	0.27	0.07	0.15	0.26		
5YREGF	DEL	4413	0.19	0.09	0.12	0.16	0.25	4.12**	2.88**
	NON-DEL	2961	0.18	0.08	0.11	0.15	0.22		

Panel B: Additional control variables.

This table presents the distributions of the main variables within Delaware (DEL) and non-Delaware (NON-DEL) firms respectively. Q is Tobin's Q, as defined in the text; SALES is total net sales; NSEG is the number of business segments; RD/A is R&D expenditure scaled by prior year's total assets; ROA is return on assets, defined as operating income before depreciation divided by previous year's total assets; CSCORE is the accounting conservatism score as defined in Penman and Zhang (2002); 5YREGF is analysts' forecasts of five-year earnings growth. The *z*-statistics of the Wilcoxon rank score differences are derived from the nonparametric test. Both the *t*-statistic of mean difference and *z*-statistics of the Wilcoxon rank score differences are computed from the industry-adjusted variables, which are calculated by subtracting the industry (two-digit SIC code) median of each variable. **Significance level at 1%.

mean CSCORE for Delaware firms is 0.28, while the mean CSCORE for non-Delaware firms is 0.23. The CSCORE difference between Delaware and non-Delaware firms is statistically significant at 1%, as indicated by both the *t*-statistic of mean difference and *z*-statistic of Wilcoxon rank score. Second, we measure the future earnings growth expectations by analysts' long-term earnings growth forecasts. As indicated in Table 6.2(B), Delaware firms receive higher future earnings growth forecasts than non-Delaware firms (the *t*-statistic of mean difference is 4.12, while the *z*-statistic of Wilcoxon rank score is 2.88).

Overall, Table 6.2 indicates that Delaware firms are more conservative in accounting and receive higher future earnings growth expectation. Since both more conservative accounting and higher future earnings growth expectation may lead to higher Tobin's Q, but both factors are not directly affected by Delaware corporate law, we may need to control for both factors to check the robustness of Daines's results and the reasonableness of Daines's story.

6.4.2 Is there a Delaware value premium?

Table 6.3 presents the results of the multiple regression analyses. To remove the effects of the cross-sectional correlation in error terms inherent to panel data, we adopt the 'Fama–MacBeth' approach (Fama and MacBeth, 1973). Thus, Table 6.3 presents the means of coefficients and R^2 from each annual cross-sectional regression, with *t*-statistics calculated from the time-series standard errors of the annually estimated coefficients.

Table 6.3 consists of two sets of results. The first row of the table is based on the regression of Tobin's Q on the dummy variable of incorporation states and the other control variables similarly defined in Daines. The variable of interest is a dummy variable (DEL) that is set to 1 for firms incorporated in Delaware in the observation year, 0 otherwise. The other control variables as in Daines are as follows. We include the log of the firm's net sales as a control for firm size. We include R&D expense, scaled by total assets from the previous year, as a rough proxy for firm-specific growth opportunity. This is because firms with greater investment opportunities are likely to have higher Tobin's Q. To control for the possibility that diversified firms may have lower Tobin's Q, we include number of business segments from the segment reports in the COMPUSTAT database as a rough proxy for firm diversification. Finally, we include ROA and lagged ROA as the basic controls for firm performance. The second row of the table lists the regression results when the additional variable, either CSCORE or analysts' long-term earnings growth forecasts, is controlled for. Considering the

Table 6.3 Delaware incorporation and equity value premium

		Intercept	DEL	Ln (SALES)	RD/A	NSEG	ROA	LAGROA	CSCORE	Adj. R^2	N of year	N of sample
Pooled	Coefficient	0.33**	0.022	−0.06*	5.94**	−0.03*	1.52**	−1.24**		0.19	14	12,707
sample	F/M *t*-stat	(18.21)	(1.03)	(−2.52)	(14.50)	(−2.05)	(8.44)	(−5.02)				
	Coefficient	0.31**	0.018	−0.06**	5.45**	−0.03*	1.58**	−1.21**	0.44**	0.19	14	12,707
	F/M *t*-stat	(16.86)	(0.84)	(−2.56)	(12.49)	(−1.99)	(8.44)	(−4.90)	(5.44)			
Sample	Coefficient	0.32**	0.087*	−0.28**	4.77**	−0.01	1.05**	−1.44**		0.20	14	6347
of smaller	F/M *t*-stat	(14.03)	(2.04)	(−8.12)	(12.75)	(−0.35)	(4.75)	(−4.90)				
firms	Coefficient	0.31**	0.078	−0.28**	4.53**	−0.01	1.09**	−1.45**	0.26*	0.21	14	6347
	F/M *t*-stat	(13.32)	(1.73)	(−8.04)	(10.69)	(−0.23)	(4.75)	(−4.94)	(2.22)			
Sample	Coefficient	0.19**	0.022	0.04*	4.87**	−0.05**	5.36**	0.90**		0.38	14	6360
of larger	F/M *t*-stat	(12.75)	(1.04)	(2.10)	(6.04)	(−4.23)	(22.23)	(2.88)				
firms	Coefficient	0.17**	0.021	0.04	3.91**	−0.04**	5.33**	1.06**	0.85**	0.40	14	6360
	F/M *t*-stat	(11.34)	(1.01)	(1.87)	(5.04)	(−4.04)	(25.04)	(3.85)	(9.29)			

Panel A: Delaware incorporation, equity value premium, and accounting conservatism.

(*Continued*)

Table 6.3 (*Continued*)

		Intercept	DEL	Ln (SALES)	RD/A	NSEG	ROA	LAGROA	5YREGF	Adj. R^2	N of year	N of sample
Pooled	Coefficient	0.25**	0.056	−0.09**	5.90**	−0.03**	3.36**	−0.73*		0.22	14	7374
sample	F/M *t*-stat	(16.24)	(1.82)	(−5.19)	(11.16)	(−3.24)	(9.88)	(−2.10)				
	Coefficient	0.23**	0.004	0.03	4.42**	−0.03**	2.83**	−0.43	6.24**	0.30	14	7374
	F/M *t*-stat	(12.20)	(0.14)	(1.27)	(8.12)	(−3.65)	(9.67)	(−1.51)	(13.54)			
Sample	Coefficient	0.23**	0.128*	−0.31**	4.66**	−0.08*	3.13**	−0.77*		0.18	14	3685
of smaller	F/M *t*-stat	(8.17)	(2.35)	(−10.21)	(9.21)	(−2.29)	(8.67)	(2.19)				
firms	Coefficient	0.24**	0.083	−0.18**	3.64**	−0.07*	2.60**	0.53	5.63**	0.26	14	3685
	F/M *t*-stat	(7.91)	(1.75)	(−8.17)	(6.54)	(−2.22)	(8.66)	(−1.81)	(11.09)			
Sample	Coefficient	0.12**	0.047**	0.08*	4.79**	−0.06**	6.20**	1.22*		0.44	14	3689
of larger	F/M *t*-stat	(6.15)	(2.75)	(2.25)	(4.67)	(−3.56)	(13.90)	(2.38)				
firms	Coefficient	0.12**	0.005	0.17**	3.12**	−0.05**	5.64**	1.24**	6.18**	0.50	14	3689
	F/M *t*-stat	(5.42)	(0.26)	(3.49)	(4.36)	(−3.42)	(13.45)	(2.73)	(7.94)			

Panel B: Delaware incorporation, equity value premium, and future earnings growth expectation.

This table presents the results of cross-sectional year-by-year regressions as of the end of April. Q is Tobin's Q, as defined in the text; DEL is 1 if the firm incorporates in Delaware, 0 otherwise; SALES is total net sales; RD/A is R&D expenditure scaled by previous year's total assets; NSEG is the number of business segments; ROA is return on assets, defined as operating income before depreciation divided by previous year's total assets; LAGROA is ROA in the previous year; CSCORE is the accounting conservatism score as defined in Penman and Zhang (2002); 5YREGF is analysts' forecasts of five-year earnings growth. All variables are industry adjusted by subtracting the industry (two-digit SIC code) median of each variable. The regression equations for Panels A and B are as follows:

Panel A: $Q = \alpha_0 + \alpha_1 DEL + \alpha_2 \ln(SALES) + \alpha_3 RD/A + \alpha_4 NSEG + \alpha_5 ROA + \alpha_6 LAGROA + \alpha_7 CSCORE + \epsilon$

Panel B: $Q = \alpha_0 + \alpha_1 DEL + \alpha_2 \ln(SALES) + \alpha_3 RD/A + \alpha_4 NSEG + \alpha_5 ROA + \alpha_6 LAGROA + \alpha_7 5YREGF + \epsilon$

The coefficients presented are the means of the annual regressions. The numbers within ( ) below coefficient estimates are *t*-statistics calculated from the time-series standard errors of the annually estimated coefficients. Adj. R^2 is the average adjusted R^2 of the annual regressions. **and *indicate the significance level at 1% or 5%, respectively.

size effect on the Delaware value premium reported by Subramanian (2004), we conduct the regressions on pooled samples or on each of the larger/smaller firm samples separately, which are divided by the median sales cutoff[5].

Table 6.3(A) lists the results of the additional control for accounting conservatism. Before CSCORE is controlled for, the coefficient of DEL is statistically significant at the conventional significance level (5%) only for the smaller firm sample. This result indicates that the Delaware value premium may exist only for smaller firms, which is consistent with Subramanian (2004). However, when CSCORE is controlled for, the coefficient of DEL becomes insignificant at the 5% significance level for the smaller firms as well as for the larger firms. Meanwhile, the coefficient of CSCORE is significantly positive, as expected.

Table 6.3(B) shows the regression results when future earnings growth expectation is controlled for. Without controlling for future earnings growth expectation, proxied by analysts' long-term earnings forecasts, the coefficient of DEL is statistically significant at 5% for both smaller and larger firms. However, when future earnings growth expectation is controlled for, the coefficient of DEL becomes statistically insignificant at 5% for both smaller and larger firms. On the contrary, analysts' long-term earnings growth forecasts are significantly positive, as expected.

Overall, our results indicate that when the distinct firm characteristics of Delaware firms (i.e. accounting conservatism or future earnings growth expectations) are controlled for, the Delaware value premium disappears.

6.5 Conclusion

This chapter examines whether the Delaware value premium exists after controlling for some distinct firm characteristics of Delaware firms. We find that Delaware firms exhibit more conservative accounting and receive higher future earnings expectations. When we control for these two factors in Daines's model, the Delaware value premium disappears. We conclude that Daines' Delaware value premium is associated with conservative accounting and higher analysts' expected earnings growth. We do not know if this association is caused by Delaware incorporation or that firms with these two features are more likely to choose Delaware incorporation.

We find that Delaware firms are more conservative in accounting and receive analysts' growth forecasts. It is unknown why Delaware firms have such distinguishing characteristics[6]. To shed some light on why Delaware is such a popular

state of incorporation, it would be useful to comprehensively document the fundamental differences between Delaware firms and non-Delaware firms. We are presently undertaking such a study (Chen et al., 2005).

Notes

1. The existing literature examining the Delaware value premium considers the following control variables: firm size, number of business segments, R&D expenditure, return on assets for both the current year and the previous year.
2. The other factor that may affect the cross-sectional distribution of Tobin's Q is firm-specific risks. More risky firms may have lower Tobin's Q, since more risky firms may have lower market value of equity compared with book value of equity. However, untabulated results indicate that Delaware firms seem to be more risky, compared with non-Delaware firms. This characteristic of Delaware firms will reduce the Delaware value premium, rather than exaggerate it. Thus, in this chapter, we consider only two factors that may distort Daines's results toward the inflated Delaware value premium. Our main results, however, are robust, even though the firm-specific risk factors are additionally controlled for.
3. Historical incorporation state data are taken from Compact Disclosure. This data requirement restricts our sample since 1990, similar to Subramanian (2004).
4. We use the median of individual analysts' earnings forecast as the consensus earnings forecast for each firm to mitigate the well-known optimistic bias of mean analysts' earnings forecasts.
5. Since the Fama–MacBeth approach requires a time-series of coefficient estimates over a sufficient number of years, we focus on the partition of sample across sizes rather than across years.
6. One possibility is that certain types of firms self-select into Delaware states. But why certain types and not others?

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7

Empirical Evidence on the Relation Between Revaluations of Fixed Assets and the Future Performance of Firms in Brazil

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7.1 Introduction

This chapter examines whether revaluations of fixed assets by Brazilian firms are associated with future firm performance, as measured by *ex post* realized operating profit, stock prices, and returns. The motivation for this chapter arises from the debate among managers, investors, regulators, and academics about revaluation of fixed assets. This debate reflects the tradeoff between estimated values, which are presumably more relevant, and historical cost values. For financial instruments, it seems a consensus exists among regulators that fair value (market value or some estimated amount) is a better proxy for economic value than historical cost (see FAS 133 and IAS 39). However, US standard setters and others have pointed out that fair values for fixed assets cannot be reliably measured. If asset revaluations reflect the underlying economic values, restated numbers will have a significant positive relation with future firm performance.

Asset revaluation is one of the most controversial topics in financial accounting. The recent crisis in investor confidence arising from the Enron and WorldCom accounting scandals renewed interest in the quality of financial statements. The debate on revaluation is centered on the balance between relevance and reliability. Historical cost is much more reliable than independent external revaluation, which is influenced by professional judgment and potentially managerial bias. On the other hand, historical values can lose relevance as economic reality changes and the value of assets can be better represented by a revalued amount. The potential manipulation of revaluations, however, is a point of significant concern.

This study focuses on Brazil because its generally accepted accounting rules (BR GAAP) allow fixed assets to be reported in financial statements at revalued amounts, which is not possible under FASB rules. Additionally, there is very little existing research related to a relevant emerging market such as Brazil. Past research about revaluation has been conducted using Australian and UK firms; however, the results obtained in these two countries cannot be generalized. Australia and the UK are common-law developed countries and, according to recent research (Ball et al., 2001), they possess highly informative accounting systems. Brazil, on the other hand, is a code law developing country.

According to Ali and Hwang (2000), five factors drive the relevance of accounting numbers for equity investors: (a) bank versus investor-oriented market; (b) type of regulatory body; (c) influence of tax regulations; (d) ownership concentration; and (e) amount spent on auditing. Brazil clearly complies negatively with

the five items outlined. Given this scenario, it is not obvious that accounting revaluations in Brazil will have the same relevance that previous research in Australia and the UK has shown.

The evidence in this study is based solely on Brazilian data but is relevant to the international debate on asset revaluation, especially for current issues facing the US Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB). For American regulators the evidence shows how asset revaluations are related to firm performance, prices, and returns in conditions that are likely to mitigate the relevance of accounting information *ex ante*. Past research shows that asset revaluation provides useful information for Australian and British firms. Australia, the UK, and the USA have similar corporate governance structures. They are common-law developed countries with firms that rely heavily on credit and equity markets for sources of funding using publicly available information to reduce information asymmetry. In this scenario, financial statements have more relevance. Brazil, on the other hand, is at the other extreme, because the code law of firms in an emerging market, such as Brazil, relies on a special relationship process to obtain funding (insider model). According to past literature, financial accounting is deemed to have a weak relation to firm performance and market-based estimates in such a country. The results show that asset revaluations also have a significant relation to firm performance and prices in Brazil. These results raise some doubts about the requirements imposed by the SEC that foreign firms willing to list their shares on the New York Stock Exchange should comply with US GAAP. Brazilian firms are very active in the American Depositary Receipts market and for them this requirement attempts to reduce and not to increase the value relevance of financial statements.

The findings are even more relevant to regulators such as the IASB that rule over different cultural and economic systems. The argument of using the same accounting rule cannot be applied to different governance structures because it has been used as an obstacle to harmonization. The evidence presented here suggests that this may not be the case for the revaluation of fixed assets. For the reasons presented above, the evidence regarding the Brazilian case adds substantially to the argument that revaluation of fixed assets provides relevant information.

This study draws from Aboody et al. (1999), where it was shown that upward revaluations of fixed assets by UK firms are significantly positively related to changes in future performance measured by operating income and cash flow from operations. These authors also tested the relation between revaluation balances, annual prices, and returns, controlling for debt-to-equity ratios, a methodology commonly used in the literature (Amir et al., 1993; Easton et al., 1993; Barth and

Clinch, 1996, 1998). The results presented by Aboody et al. (1999) show that revaluations of fixed assets are significantly associated with future (*ex post*) economic performance as well as prices and returns. Aboody et al. (1999) also showed that debt-to-equity ratios influence the results, suggesting that asset revaluations in the UK are also used to affect debt-to-equity ratios.

The tests used by Aboody et al. (1999) are repeated here, but without using cash flow from operations, because Brazilian firms are not required to disclose statements of cash flows. The results obtained are generally consistent with those of Aboody et al. (1999) – that is, revaluations of fixed assets provide valuable information in Brazil. Returns regressions, however, did not show statistically significant results between returns and revaluation reserves. Recent research (Lopes, 2005) suggests that earnings are not as informative as book values in Brazil. The ownership concentration in Brazil is large, with no major firm labeled as a public company[1]. In this scenario, earnings lose relevance because insiders have direct access to information. When compared to Germany (Leuz and Wustemann, 2003), Brazil possesses a similar insider system corporate governance model. In this type of model, information asymmetries are resolved via private information channels rather than public disclosure. In an outsider model, firms rely heavily on public debt and equity to raise capital. As the ownership concentration is dispersed, investors have to rely on public sources of information. Consequently, public disclosures are an important form of information asymmetry reduction. In the Brazilian insider model, firms rely on relationships to solve information problems. Leuz and Wustemann (2003) showed that when information problems are likely to be resolved via private channels the contemporaneous association of accounting numbers with stock returns is weak. Thus, it is not a surprise that returns/earnings and revaluation reserves do not present a significant relationship for Brazilian firms.

Overall, the findings here indicate that revaluations reflect changes in values of assets associated with future operating performance and stock prices. These results support the idea that revaluations are reliable estimates of underlying economic values even for a developing code-law country. Our results also suggest that debt-to-equity ratios play a significant role in the revaluation of fixed assets in Brazil, as previous research has shown for Australia and the UK. Revaluation reserves, however, are not timely incorporated into prices.

The rest of the chapter is organized as follows. Section 7.2 discusses the revaluation reserves in Brazilian company law and presents related research. Section 7.3 specifies and presents the results from the future performance and market-based tests. Section 7.4 concludes the chapter.

7.2 Revaluation of fixed assets in Brazilian GAAP and related literature

7.2.1 Brazilian GAAP for revaluation

Brazilian company law (*Lei das Sociedades por Ações*) is the most important accounting normative basis for firms listed on the São Paulo Stock Exchange (BOVESPA). In addition to company law, the Brazilian Securities and Exchange Commission (CVM) issues rules that regulate specific accounting questions not addressed by the law. While CVM statements are considered to be GAAP in Brazil, they cannot be in disagreement with what is exposed in the law. Financial institutions are regulated directly by the Central Bank of Brazil, which has the power to issue accounting statements related to financial institutions. In addition to company law and the CVM, Brazilian firms have to comply with specific accounting guidance provided by the Federal Tax Authority (SRF). In most cases, the tax rules allow for less discretion than company law. Financial statements do not have to comply with tax rules. However, most firms use the same general rules for tax and reporting purposes to avoid costly conciliation between the two sets of rules.

It can be reasonably argued that Brazil represents a unique corporate financial reporting model. The following combination of factors characterizes the unique nature of the Brazilian system:

1. Brazilian accounting is usually classified under the so-called continental model.
2. The government issues all the accounting rules and professional bodies have no effective power to influence these rules.
3. Brazilian firms rely heavily on private deals to obtain finance.
4. Ownership control is very high. Currently there is not a single Brazilian firm for which control of voting rights can be obtained in the capital markets.
5. Brazilian public markets for equity and debt are relatively small and do not provide adequate sources of finance to firms.
6. Investor protection in Brazil is also considered to be very poor, with several well-known cases of expropriation of minority shareholders (see Anderson, 1999).
7. Brazilian managers have considerable discretion over their set of accounting choices. Table 7.1 presents the major features of the Brazilian corporate financial reporting model.

The above scenario differs substantially from what is commonly reported in the literature regarding countries where the tax law has a strong influence on financial

Table 7.1 Brazilian corporate financial reporting model

Accounting regulations	Issued by the government
Sources of finance	Credit based on insider deals
Influence of tax	Large, with most firms' statements based on tax rules
Investor protection	Very low
Ownership concentration	Very high

Specific accounting rules	Brazil	US GAAP	IFRS
Inventory	Lower of acquisition cost or market value. Market values can be used for some items.	Similar to Brazil.	Similar to Brazil.
Depreciation	No specific depreciation method is recommended but any method must be applied consistently.	Similar to Brazil.	Similar to Brazil.
Statements of cash flows	The statement of changes in financial position is required and cash-flow information may be disclosed as supplementary information.	Most companies have to provide a statement of cash flows in financial statements.	The statement of cash flows should be produced as an integral part of the financial statements.
Extraordinary items	Segregated from income from ordinary operations and reported in a separate line on the income statement.	Similar to Brazil.	Similar to Brazil.
Prior period adjustment	Adjustments to the opening balance of retained earnings for corrections of errors in prior periods not related to subsequent events and changes in accounting policies.	Retrospective application of the prior period adjustments when comparative statements are presented to correct prior errors, certain changes in account ing principles, certain adjustments related to prior interim periods.	Treatment for certain changes in accounting policies and corrections of errors in the opening balance of retained earnings.

(*Continued*)

Table 7.1 (*Continued*)

Specific accounting rules	Brazil	US GAAP	IFRS
Changes in accounting policy	Must be explained. The effects of changes in accounting practices are classified as prior year adjustments. However, the financial statements are not restated. An appropriate disclosure should be made if relevant.	The cumulative effect of the change should be shown in the income statement after extraordinary items and before net income in the year in which the change occurs.	The company must give pro forma information on the prior year adjustment basis.
Research and development expenses	May be capitalized as a deferred asset. The amortization period should be determined on expected future economic benefits. Tax legislation requires a minimum amortization period of 5 years while company law allows for a maximum 10-year amortization period.	Only costs of materials and equipment and other facilities purchased from others and with alternative future uses can be capitalized. With the exception of some internally developed software, all other R&D costs are not capitalized.	Research (new knowledge) is not capitalized. Development (application) can be capitalized only under very special circumstances when the project meets strict requirements.

reporting. Harris et al. (1994) reported that German accounting numbers are very conservative and that hidden reserves are a reason for investors' concern. Brazilian financial reporting pursues the same link with tax legislation as does Germany. However, the accounting rules in Brazil allow for much greater flexibility than the Anglo-Saxon model; this is not the case in Germany. This situation arises because firms can present financial statements under accounting methods not allowed by the tax authority (SRF). These firms have to adjust their statements to form the basis for the calculations in a special book (LALUR) designed to conciliate the SRF and company-law regulations. However, tax rules have a major influence since most firms choose to report to avoid costly adjustments on LALUR, which is the

case with inventory methods. For example, a majority of companies adopt FIFO due to tax limitations on using LIFO. Dividends in Brazil, as in Germany, are linked with net income, thus increasing the conservative bias in financial reporting. This structure shows that Brazil possesses a set of accounting rules that allow managers to use a greater degree of discretion than in the so-called Anglo-Saxon model. However, the general structure of the profession and governance uses of the accounting numbers (i.e. dividends) are not so investor oriented. In this sense, the Brazilian corporate financial reporting system can be considered as a hybrid model because of the very liberal accounting rules coupled with a governance system oriented for providing information to the government and creditors that operate under an insider model.

The company law created in 1976 allowed the revaluation of assets of the group called permanent assets. This group is composed of investments, fixed and deferred assets. The CVM (Deliberação, 1995, p. 183) restricted the revaluation to fixed assets and to investments. The SRF (RIR, 1999) restricted the revaluation to fixed assets. Therefore, this chapter only focuses on the revaluation of fixed assets and not of investments and intangible assets. To perform the revaluation, the shareholders' assembly must appoint three independent evaluators who will produce a statement containing the basis for the revaluation performed, the new value of the asset, and the new useful life of the asset. The company, as proof of the revaluation, must maintain this formal document. The amount stated in the evaluator's report is presented in the balance sheet (debit entry) and the depreciation is calculated over the remaining useful life of the asset based on the restated carrying amount. The credit entry is on revaluation reserves (equity). However, the reserve on equity is presented net of tax because revaluation has special tax treatment in Brazil. Australian GAAP recommends similar treatment[2] but revaluation is not taxed as it is in Brazil. The Board has total discretion about the timing of revaluation. However, all assets in the same category must be revalued at the same time at the firm's level. Gains on disposal of revalued assets are considered nonoperational. At the point of sale of a revalued asset the remaining revaluation reserve must be written off. Firms must also disclose the method used for revaluation and the remaining useful economic life of the asset.

There is intense debate over the desirability of revaluation reserves in Brazil. The project to reform company law currently being analyzed in the Congress eliminates the revaluation option. According to this new project, accounting for fixed assets in Brazil will become similar to US GAAP. Until 1995 the SRF allowed companies to adopt the so-called Brazilian method for inflation adjustment. This method is based on a price level adjustment of all of the firm's assets and liabilities (Doupnik

et al., 1995). In 1995, the Ministry of Finance (Brazil's highest economic authority) issued a norm prohibiting companies to use adjusted statements for tax purposes. Many firms can still publish their financial statements adjusted for inflation, but this cannot be the basis for taxation. Some authors state that the revaluation of fixed assets can be a substitute for inflation adjustment (Iudícibus et al., 2003), while other common arguments imply that revaluations are designed only to cook the books in order to improve financial ratios.

The Brazilian corporate financial reporting model differs considerably from that of Australia and the UK, as previously reported in the literature. Evidence of the economic significance of asset revaluations in Brazil increases our knowledge of the relevance of accounting information in alternative situations. Previous research suggests that the Brazilian economic environment can mitigate the relevance of accounting information. The Brazilian governance model is clearly an insider model, where public financial information does not seem to play a relevant role. The investigation of the relevance of revaluation reserves in such extreme conditions can provide valuable input into the debate over revaluation of fixed assets. My results show that revaluation reserves provide significant economic information able to explain future firm performance and prices against the odds with the Brazilian corporate governance model.

7.2.2 Previous research

7.2.2.1 Asset revaluation

This study is closely related to the research conducted by Aboody et al. (1999), where the authors investigated the relation of fixed asset revaluations of UK firms to *ex post* future performance (operating income and cash flows), prices, and returns. They controlled for debt-to-equity ratio as well as for cross-listing and firms' acquisition activities. Aboody et al. found that upward revaluations are significantly positively related to changes in future performance. They also found that revaluation balances are significantly positively related to annual returns and prices. The results of Aboody et al. show that these relations are weaker for higher debt-to-equity ratio firms, suggesting that managers can be motivated by firms' financial health. The relations are also weaker for cross-listed firms and in more volatile economic periods. My work extends that of Aboody et al. by replicating their analysis for Brazil. Aboody et al. claim that their results provide valuable input for regulators and other interested parties in the value relevance of revalued assets. However, their work is based solely on UK data and adds to previous literature based on Australian firms (Sharpe and Walker, 1975; Standish

and Ung, 1982; Easton et al., 1993; Barth and Clinch, 1998). This extensive body of literature is based on Australian and British firms that operate under very similar corporate governance structures, and both countries have adopted common-law regimes. The current study is the first to document the relevance of revaluation reserves in a code-law emerging market. The results will help to generalize the arguments presented thus far. To contribute to international regulators like the IASB, as suggested by Aboody et al. (1999), the implication is that it is necessary to have broader evidence than has been presented so far.

7.2.2.2 Market-based international accounting research

This study also contributes to the so-called market-based international accounting research (Meek and Thomas, 2004). In their survey, these authors pointed out the relevance of examining existing theories in countries other than those in which they have been developed. Such studies, according to Wallace and Gernon (1991), can either support or deny the universality of each theory. Dummontier and Raffournier (2002), however, criticized papers that are limited to replicating American studies without questioning the relevance and applicability of the methodology and hypothesis in a different context. Because this study is based on an emerging market, it provides evidence relevant to regulators in developing countries. From a Brazilian point of view, the results will help the debate by adding a greater degree of generality to the existing arguments.

This study also contributes directly to another area of international accounting research, the so-called accounting classifications. It is common knowledge in the accounting literature that common-law countries present accounting systems oriented toward 'fair presentations', transparency, and full disclosure, while code-law countries are oriented towards legal compliance and opaque disclosure. In common-law countries the tax rules do not have a pervasive influence on accounting as happens in code-law systems. Ball et al. (2001) showed that the properties of earnings and timeliness are more likely to be found in firms listed in common-law-oriented markets (UK, USA, Australia, and Canada) than in code-law countries (France, Japan, and Germany). Some authors (e.g. Cairns, 1997), however, question these results, suggesting that there is a convergence in accounting practices making the traditional code–common law distinction obsolete. This study contributes directly to this debate showing that, despite the classification of Brazil as a code-law country, revaluation of fixed assets does provide relevant information about firms' future performance and that this relevance is reflected by market-based indicators

(prices and returns). The results show that, as evidenced by the literature (Ball et al., 2001), earnings and revaluation of fixed assets have no effect on the timing of returns. However, revaluation reserves are value relevant in relation to prices and future operational performance. The results in this study suggest that the relevance of the distinction between code- and common-law countries is at least secondary in the case of revaluation of fixed assets. Meek and Thomas (2004) suggested that investigations on the relevance of the distinction between code- and common-law countries are welcome. This study presents some evidence that classification of countries into different categories is not an adequate approach to understand the complexities of accounting.

7.3 Models and results

7.3.1 Descriptive statistics

The Economatica database was used for the research because of its completeness of market and financial statement data for firms traded on the Brazilian stock market. The sample was selected from Brazilian firms (excluding financial firms) that presented revaluation reserves on their balance sheets during any of the years from 1995 to 2003. Revaluation reserves were used on a per-share basis for the market-based tests and on aggregate level for the performance-based tests. The number of firm-year observations differs from year to year because not all the firms presented revaluation reserves every year. For the first, second, and third years, 458, 350, and 267 firm-year observations were used respectively. The data only allowed for a three-year period analysis. However, it is possible that asset revaluations can have effects over longer periods. Table 7.2 presents the descriptive statistics of the sample.

7.3.2 Research design and results

7.3.2.1 Future firm performance

The following cross-sectional regression is estimated as proposed by Aboody et al. (1999):

$$\Delta\text{OPINC}_{t+\tau,1} = \alpha_0 + \alpha_1\text{REV}_{ti} + \alpha_2\Delta\text{OPINC}_{ti} + \alpha_3\text{MB}_{ti} + \alpha_4 \log(\text{ASSETS}_{ti}) + \varepsilon_{ti}, \quad (7.1)$$

where:

$\Delta OPINC_{t+\tau,1}$ = operating income in year $t + \tau$,
minus operating income in year t, with $\tau = 1, 2, 3$.

REV_{ti} = revaluation reserve for firm i in year t.

MB_{ti} = market-to-book ratio.

$ASSETS_{ti}$ = total assets at the end of year t.

Equation (7.1) is estimated for changes in operating income over each of the three years. Operating income is income before taxes, interest, depreciation and amortization, and all other nonoperational gains because the focus is on operat-

Table 7.2 Descriptive statistics

Variables	Mean	Median	Std dev.
P_{ti}	0.76	0.04	1.87
BV_{ti}	1.54	0.07	3.39
$EARN_{ti}$	0.1	0.002	0.28
$\Delta EARN_{ti}$	0.03	0	0.54
$\Delta OPINC_{t}$	22,314	1566	136,148
$\Delta OPINC_{t+1}$	24,628	1737	114,874
$\Delta OPINC_{t+2}$	26,396	2888	20,396
$\Delta OPINC_{t+3}$	26,313	4744	63,896
MB	0.49	0.4	0.82
REV_{ti}	80,720	23,978	148,818
Log(ASSETS)	5.72	5.65	0.66
$REVps_{ti}$	0.13	0.01	0.35
Revenues	705,713	202,351	1943.60
R_{ti}	0.25	0	0.54

P_{ti} = Price per share four months after fiscal year end t for firm i. (Most studies using US data take prices three months after the fiscal year end. We use four months due to the extended period Brazilian firms have to report their financial information.)
BV_{ti} = Book value of equity per share excluding the revaluation balance at the end of year t for firm i.
$EARN_{ti}$ = Earnings per share for firm i, year t.
$\Delta EARN_{ti}$ = Earnings change for firm i, year t.
$\Delta OPINC_{t+\tau,1}$= Operating income in year $t+\tau$, minus operating income in year t, where $\tau = 1, 2, 3$.
MB_{ti} = Market-to-book ratio for firm i at the end of year t.
REV_{ti} = Revaluation reserve in year t for firm i.
Log($ASSETS_{ti}$) = Logarithm of total assets at the end of year t for firm i.
$REVps_{ti}$ = Revaluation reserve per share in year t for firm i.
Revenues = Total revenues of firm i at the end of year t.
R_{ti} = Share variation plus dividends for firm i, year t $(P_t - P_{t-1} + Div_t)/P_{t-1}$.

ing performance. The market-to-book ratio controls for effects of risk and control, as proposed by Fama and French (1992). The logarithm of total assets at the end of year is supposed to control for potential effects of size. However, according to Brown and Lo (1999) the inclusion of the logarithm of assets is not an adequate control for scale effects. Based on their conclusion, equation (7.1) is re-estimated deflating the variables by revenues of the year t[3]. If revaluation of fixed assets provides relevant information to investors, we expect the coefficient α_1 to be positive and statistically significant. Aboody et al. (1999) used the net increment in revaluations instead of revaluation reserve. The data presented here does not permit any inference regarding the exact amount of the revaluation that occurred in a given year because the amortization rates are different across firms and are not disclosed. The coefficient α_1 indicates the impact of the overall revaluation reserve on future performance and not only of the revaluation occurring on a given year. This limitation of the data clearly counts against the hypothesis that re-evaluation reserves are value relevant, because the data contained in the increment of reserves is not complete. The results should be interpreted with this limitation in mind. Table 7.3 presents the results.

The results show that revaluation reserves are significantly related to future firm performance, deflated by revenues, for one and two years in advance. This indicates that a revaluation reserve has a strong relation to future performance, as past research suggests.

7.3.2.2 Market-based tests

To test the value relevance of revaluation reserves we use both price and returns specifications. Initially we estimate the following model, which is similar to specifications in Amir et al. (1993), Easton et al. (1993), and Barth and Clinch (1996)[4]:

$$P_{ti}/P_{t-1} = w_{0t} + w_1 BV_{ti}/P_{t-1} + w_2 EARN_{ti}/P_{t-1} + w_3 REV_{ti}/P_{t-1} + \varepsilon_{jt}, \qquad (7.2)$$

where:
P_{ti} = price per share four[5] months after fiscal year end for firm i, year t.
BV_{ti} = book value of equity per share excluding the revaluation balance for firm i, year t.
$EARN_{ti}$ = earnings per share for firm i, year t.
REV_{ti} = revaluation reserve per share for firm i in year t.

Table 7.3 Future firm performance tests

	α_0	α_1	α_2	α_3	α_4	Adj. R^2
$\Delta OPINC_{t+1} = \alpha_0 + \alpha_1 REV_{ti} + \alpha_2 \Delta OPINC_{ti} + \alpha_3 MB_{ti} + \alpha_4 \log(ASSETS_{ti}) + \varepsilon_{ti}$						
Undeflated values (7.1)						
Estimate	159,958	0.09	0.39	2311	12,726	0.35
t-statistic	−3.69	2.60	11.45	0.47	3.73	
p-value	0.00	0.01	0.00	0.64	0.00	
Values deflated by revenues (7.2)						
Estimate	0.20	0.01	0.07	−0.14		0.14
t-statistic	1.67	5.32	7.15	−1.23		
p-value	0.09	0.00	0.00	0.22		
$\Delta OPINC_{t+2} = \alpha_0 + \alpha_1 REV_{ti} + \alpha_2 \Delta OPINC_{ti} + \alpha_3 MB_{ti} + \alpha_4 \log(ASSETS_{ti}) + \varepsilon_{ti}$						
Undeflated values (7.1)						
Estimate	−167,531	0.14	0.42	−4508	13,705	0.35
t-statistic	−3.90	4.45	7.31	−1.08	4.05	
p-value	0.00	0.00	0.00	0.28	0.00	
Values deflated by revenues (7.2)						
Estimate	−0.12	0.05	−0.02	0.04		0.29
t-statistic	−0.89	11.83	−1.81	0.31		
p-value	0.35	0.00	−0.07	0.76		
$\Delta OPINC_{t+3} = \alpha_0 + \alpha_1 REV_{ti} + \alpha_2 \Delta OPINC_{ti} + \alpha_3 MB_{ti} + \alpha_4 \log(ASSETS_{ti}) + \varepsilon_{ti}$						
Undeflated values (7.1)						
Estimate	−293,623	0.02	0.02	−3998	24,488	0.31
t-statistic	−8.28	1.02	0.33	−1.18	8.81	
p-value	0.00	0.31	0.74	0.24	0.00	
Values deflated by revenues (7.2)						
Estimate	0.06	0.01	−0.07	0.01		0.26
t-statistic	0.48	0.63	−8.87	−0.07		
p-value	0.63	0.53	0.00	0.94		

All variables are the same as defined in Table 7.2.

We also estimate a cross-section returns regression:

$$R_{ti} = \gamma_{0t} + \gamma_1 EARN_{ti} + \gamma_2 \Delta EARN_{ti} + \gamma_3 REV_{ti} + \varepsilon_{jt}, \quad (7.3)$$

where R_{ti} is the stock return for firm i in period t, calculated as $(P_{it} - P_{it-1} + div_{it})/P_{it-1}$. This specification is designed to investigate the timeliness of the

revaluation reserve. Equation (7.3) adds information to equation (7.2) because revaluation reserves can be value relevant but not temporally incorporated into prices (returns). This can occur because the Board in Brazil has complete discretion to choose when to revaluate assets. The timing of the revaluation is a function of distinct factors. For example, managers can revaluate their assets close to mergers and can take into consideration covenants and other external pressures. However, this study does not investigate these external forces despite the fact that they can be extremely relevant. If the results in equation (7.3) show a significant relation between returns and reserves, it will be possible to conclude that, despite all external forces, revaluation reserves convey valuable information to prices/returns. However, results from equation (7.3) must be interpreted with caution because the level of revaluation reserves is regressed against returns. This is not the most appropriate specification since returns are more likely to be related to changes in revaluation reserves. However, such inferences are not possible, since there are no increments in reserves in the data.

Table 7.4 presents the results of equations (7.2) and (7.3), and demonstrates a very poor relation between earnings and returns, and between revaluation reserves and returns. These results indicate that despite being value relevant, revaluation reserves do not convey timely information to explain returns. On the other hand, revaluation reserves are value relevant to explain prices. This shows that revaluation reserves in Brazil are value relevant (in terms of prices and future performance), but not timely.

7.3.2.3 Additional analyses

The previous regressions are re-estimated with the coefficient on the revaluation reserves varying with the debt-to-equity ratio. These specifications are an attempt to control for other motivations behind managers' decisions to revaluate assets. Table 7.5 shows the results.

As expected, the results show that for future firm performance, the debt-to-equity ratio presents a negative coefficient for one and two years. For market-based tests, the results are not statistically significant despite the negative sign of the coefficient. As anticipated, the debt-to-equity ratios are negatively associated with future performance, which illustrates that managers can use revaluation reserves to improve their firms' balance sheets instead of representing the underlying economic phenomena.

Table 7.4 Market-based tests

	w_0	w_1	w_2	w_3	Adj. R^2
$P_{ti}/P_{t-1} = w_{0t} + w_1 BV_{ti}/P_{t-1} + w_2 EARN_{ti}/P_{t-1} + w_3 REV_{ti}/P_{t-1} + \varepsilon_{jt}$					
Estimate	1.09	0.02	0.08	0.02	0.07
t-statistic	33.66	3.62	5.33	3.43	
p-value	0.00	0.00	0.00	0.00	
$P_{ti} = w_{0t} + w_1 BV_{ti} + w_2 EARN_{ti} + w_3 REV_{ti} + \varepsilon_{jt}$					
Estimate	0.08	0.41	1.35	−0.29	0.77
t-statistic	1.79	22.38	6.00	−2.32	
p-value	0.07	0.00	0.00	0.02	
	γ_0	γ_1	γ_2	γ_3	Adj. R^2
$R_{ti} = \gamma_{0t} + \gamma_1 EARN_{ti} + \gamma_2 \Delta EARN_{ti} + \gamma_3 REV_{ti} + \varepsilon_{jt}$					
Estimate	0.20	0.46	0.03	0.06	0.05
t-statistic	6.61	4.50	0.59	0.73	
p-value	0.00	0.00	0.55	0.47	

All variables are the same as defined in Table 7.2.

7.4 Conclusions and implications for future research

This chapter examined how fixed asset revaluations in Brazil are related to firms' future performance using *ex post* operating income and market-based metrics as dependent variables. The results indicate that revaluation reserves explain *ex ante* and *ex post* future firm performance measured by prices and realized operational profits respectively. Revaluations do not explain current returns showing that, despite being value relevant, revaluations are not timely. Controlling for debt-to-equity ratios shows that firms' capital structure influences the revaluation decision, as expected. This chapter demonstrates that revaluations of fixed assets provide valuable information in a country with very distinct corporate governance characteristics from other countries previously addressed in the literature.

The results have important implications, especially for US regulators requiring Brazilian firms to adjust their financial statements to US GAAP and thus not allowing for revaluation of fixed assets. The results illustrate that revaluation of fixed assets provides value-relevant information and demonstrate that, in the

Table 7.5 Tests controlling for debt-to-equity ratios

	Performance based					
	α_0	α_1	α_2	α_3	α_4	Adj. R^2
$\Delta OPINC_{t+1} = \alpha_0 + \alpha_1 REV_{ti} + \alpha_2 \Delta OPINC_{ti} + \alpha_3 MB_{ti} + \alpha_4 REV_{ti} \times D/E + \varepsilon_{ti}$						
Values deflated by total assets (7.2)						
Estimate	0.01	−0.01	−0.27	0.01	−0.01	0.08
t-statistic	1.94	−0.61	−6.11	1.83	−0.38	
p-value	0.05	0.54	0.00	0.07	0.71	
Values deflated by revenues (7.3)						
Estimate	0.15	0.00	0.06	−0.05	−0.04	0.28
t-statistic	1.66	4.02	8.43	−0.62	−10.50	
p-value	0.10	0.00	0.00	0.53	0.00	
$\Delta OPINC_{t+2} = \alpha_0 + \alpha_1 REV_{ti} + \alpha_2 \Delta OPINC_{ti} + \alpha_3 MB_{ti} + \alpha_4 REV_{ti} \times D/E + \varepsilon_{ti}$						
Values deflated by total assets (7.2)						
Estimate	0.01	0.02	−0.19	−0.01	−0.00	0.04
t-statistic	2.73	0.76	−3.59	−1.99	−0.34	
p-value	0.01	0.45	0.00	0.04	0.73	
Values deflated by revenues (7.3)						
Estimate	0.08	0.02	−0.04	−0.00	−0.00	0.16
t-statistic	0.75	1.79	−5.33	−0.03	−6.45	
p-value	0.46	0.07	−0.06	0.98	0.00	
$\Delta OPINC_{t+3} = \alpha_0 + \alpha_1 REV_{ti} + \alpha_2 \Delta OPINC_{ti} + \alpha_3 MB_{ti} + \alpha_4 REV_{ti} \times D/E + \varepsilon_{ti}$						
Values deflated by total assets (7.2)						
Estimate	0.02	−0.01	0.01	0.00	−0.00	0.00
t-statistic	3.09	−0.23	0.18	0.09	−0.14	
p-value	0.00	0.82	0.86	0.93	0.89	
Values deflated by revenues (7.3)						
Estimate	0.04	−0.03	−0.07	−0.01	0.00	0.33
t-statistic	0.31	−2.78	−9.27	−0.14	4.94	
p-value	0.76	0.01	0.00	0.89	0.00	
	Market based					
	w_0	w_1	w_2	w_3	w_4	Adj. R^2
$P_t/P_{t-1} = w_{0t} + w_1 BV_t/P_{t-1} + w_2 EARN_t/P_{t-1} + w_3 REV_t/P_{t-1} + w_4 (REV_t/P_{t-1}) \times D/E + \varepsilon_{jt}$						
Estimate	1.09	0.02	0.08	0.02	−0.001	0.06
t-statistic	33.63	3.42	5.12	2.62	−0.67	
p-value	0.00	0.00	0.00	0.01	0.50	

Table 7.5 (*Continued*)

	γ_0	γ_1	γ_2	γ_3	γ_4	Adj. R^2
$R_{ti} = \gamma_{0t} + \gamma_1 EARN_{ti} + \gamma_2 \Delta EARN_{ti} + \gamma_3 REV_{ti} + \gamma_4 REV_{ti} \times D/E + \varepsilon_{jt}$						
Estimate	0.20	0.45	0.02	0.14	−0.01	0.05
t-statistic	6.60	4.38	0.43	1.40	−1.46	
p-value	0.00	0.00	0.67	0.16	0.14	

All variables are the same as defined in Table 7.2.

case of revaluation of fixed assets, adjustments to US GAAP lack theoretical and empirical support.

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Notes

1. Not one firm in Brazil currently has its control floating on the Stock Exchange. Few owners control firms and do not trade their shares frequently.
2. Easton et al. (1993) provide a detailed view of the Australian GAAP for revaluation of fixed assets.
3. We use revenues as proxies for scale effects. We believe that firm value is not adequate in this context because we are not using market-related variables.
4. As suggested by Brown and Lo (1999), we deflated the variables by P_{t-1} to correct for scale effects.
5. Most studies using US data take prices three months after the end of the fiscal year. We use four months due to the extended period Brazilian firms have to report their financial information.

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Hedge Funds and the Stale Pricing Issue

Greg N. Gregoriou, William Kelting, and Mohamed Gaber

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8.1 Introduction

Over the last decade hedge funds have become attractive and efficient alternative investment vehicles for diversifying traditional stock and bond investment portfolios. More recently hedge funds have been the subject of the stale pricing issue since their reported volatility is less than the actual volatility caused by the infrequent trading and smoothing of returns by funds that trade in these illiquid type of markets. The subject of stale pricing implies the practice of pricing a hedge fund's shares based on prices of the stocks in the portfolio that do not accurately reflect a true picture of the true value as a result of timing differences involved when trading illiquid or thinly traded stocks. Because of the timing difference, a US hedge fund manager possessing New Zealand stocks will use the closing prices to obtain the net asset value (NAV) of the fund. This is an erroneous method when it comes to fairly pricing stocks because the hedge fund manager is only basing the NAV of the fund on old or stale pricing information that is approximately 14 hours out (the approximate time difference between the US and New Zealand). In addition, events can occur throughout that time period that can significantly affect the value of the New Zealand stocks, resulting in an erroneous NAV that does not correctly reflect their true and fair value. Differences in time zones can facilitate time-zone arbitrage trading, because the mispricings in global stock markets can result in profits from stock purchased in one market and sold in another at a cost to the shareholders of the hedge fund. For example, an investor having a position in a directional hedge fund uses strategy based on expected market movement owning international equities will try to correctly time the purchase on a certain day when US markets will exhibit a broad increase. The investor's expectation is that international stock markets will increase the following day, based on the broad movement of American stock markets. It is not illegal to take advantage of these timing differences, but there is increasing concern about the fairness to the shareholders of the fund. The Securities Exchange Commission (SEC) has recommended that a redemption fee be made compulsory on investments that are held for less than five business days.

Illiquid securities pose a valuation problem because the last market price for the security might not reflect the present true and fair market value. These valuation problems are further compounded in the case of a basket of hedge funds. Mutual funds, on the other hand, report on a daily basis, whereas the majority of hedge funds report their returns net of all management and performance fees to database vendors on a monthly basis and have not been under the watchful eye of the Securities Exchange Commission (SEC). They are not regulated because they meet exceptions stipulated in Acts enforced by the SEC regarding the number and nature of the fund investors, the nature of the fund itself, or because the offering

of securities is not a public offering. However, in October 2004 the SEC voted 3–2 in favor of allowing its inspectors to audit the books of hedge funds.

Using stale pricing to establish the NAV of a portfolio is not consistent with the position of both the accounting profession and the SEC, which requires that investments be reported at fair value or '… the amount at which the investment could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale' (Harrell and Spiegel, 2004). In a majority of cases, the fair value of an investment is easily determined by obtaining current market price data from a variety of independent pricing sources. Illiquid stocks create a problem in that no existing market price may be currently available. Therefore, an effort must be made to properly estimate the current fair market value. On some occasions where international securities markets close prior to the American markets, if a certain occurrence in the market is anticipated to influence the value of a stock during that time frame which has already occurred, attempts must be made to properly estimate the price of the international stock rather than use the stale international stock's closing price. Using these types of estimates can open the door for unwarranted manipulation. Hedge funds typically charge an incentive fee of 20%, which has a tendency to inflate the NAV. This has been the case for many of the recent hedge fund frauds. The International Organization of Securities Commissions (IOSCO) issued the following statement: 'In order to make informed judgments, investors should be aware of hedge fund policies and procedures for the estimation of asset values.' Moreover, investors must make sure these policies and procedures are adhered to by hedge funds. Small hedge funds that do not have to be registered with the SEC may or may not subject the financial reports to the scrutiny of an independent auditor. Even if an independent auditor is hired to audit an unregistered hedge fund, the scope of the work performed by the auditor may be less than for registered funds. Auditors of registered funds are required to test all portfolio valuations as of the date of the financial statements. In the case of unregistered funds, the extent of testing portfolio valuations is a matter of the auditor's judgment.

These issues are compounded in cases involving funds of hedge funds (FOF) for which the portfolio consists of other hedge funds. For example, only certain funds included in an FOF may be registered, some may be subject to independent auditing, and some may be neither registered nor subject to auditing. Moreover, an FOF manager must wait for the hedge funds in his portfolio to report monthly net returns before determining the final return of the FOF. If a hedge fund is behind schedule in reporting its monthly return, the FOF manager will most likely use the fund's earlier return to acquire an estimate for the monthly return of his FOF. When new investors buy shares in an FOF that is late

in reporting its monthly net returns, investors will be receiving a good deal because the FOF may be undervalued. Investors opting to sell their shares in such an FOF, however, may be getting less than expected (Kazemi and Schneeweis, 2004). Furthermore, the authors observed that hedge funds smooth out returns, thus making hedge funds an ideal option for inclusion in traditional stock and bond investment portfolios.

In many cases where FOFs have several hedge fund managers in their portfolio, concentrating in emerging markets may not always provide investors with correct monthly returns, which may lead to an imprecise explanation of their statistical analyses. Due to returns smoothing, investors may not be able to correctly assess a hedge fund's true risk. Amenc et al. (2004) observed that hedge funds are susceptible to skewness and kurtosis in their returns distribution and it may not be feasible for FOF managers to forecast drops in monthly returns and correctly evaluate an FOF's NAV.

Numerous hedge fund managers employ their skills to make profits from price inefficiencies in world securities and bond markets. Furthermore, a large majority of hedge fund managers are unwilling to disclose their trading strategies and are rather reserved about providing full disclosure of stocks and bonds in their investment portfolio.

Appraising hedge fund performance with standard measures, such as annualized returns, standard deviation, the risk-adjusted measure referred to as the Sharpe ratio, and the correlation coefficient, will likely lead to a biased approximation of the fund's risk–reward profile (Amin and Kat, 2003). Moreover, Murguía and Umemoto (2004) asserted that '… although hedge fund managers may appear to provide returns in excess of their systematic risk exposures, they may be exposed to other risk factors not captured by traditional evaluation measures'. Hedge fund strategies produce non-normal returns and exhibit skewness and kurtosis (the third and fourth moments of a distribution); therefore, measuring the actual performance of hedge funds and deciding whether an FOF manager is accurately reporting net returns is, to some extent, a difficult task. Numerous academic studies have acknowledged that hedge fund strategies display a significant amount of excess returns (alpha), even after adjusting for wide market exposure (Liang, 2001). Nevertheless, these studies do not consider the illiquid securities held by numerous hedge funds.

Stale pricing in the hedge fund industry normally refers to a certain form of over-valuating foreign securities. In some cases, hedge funds use stale pricing as a method to inflate the fund's NAV. In addition, emerging market securities may not offer daily or monthly liquidity and therefore hedge fund managers holding

these securities may need to calculate the average of the latest returns to correctly predict or forecast current returns. Although some hedge funds voluntarily report monthly returns net of all performance and management fees to database vendors, the data may not precisely represent the true value of the fund's NAV. If information is not accessible on illiquid securities then this allows the hedge fund manager to price the securities with any NAV he likes to favor the fund's returns. Often, hedge fund managers may price these assets to reflect the holdings in their portfolio due to be reported to investors at the end of the month. In particular, this is frequently the case of emerging market hedge funds.

8.2 Background information

Since hedge funds are frequently used as portfolio diversifiers, managers have an inducement to report returns that are consistent and uncorrelated to the market. This can artificially decrease the volatility and correlation of hedge funds to traditional market indices (Asness et al., 2001). In addition, Kazemi and Schneeweis (2004) found that quarterly standard deviations are greater than monthly standard deviations, which is consistent with stale pricing. For example, if there is an extreme negative market event, the hedge fund may not be able to precisely mark illiquid securities for numerous months to reflect the new market value of the position. This results in an over-inflated NAV until the securities in the portfolio precisely reflect their true market value. *Consequently, investors would have a false sense of independence from market exposure, and year-end returns would be inflated*.

A number of researchers have used lagged market betas to analyze the true market exposure of hedge funds. For example, Asness et al. (2001) used lagged market betas to examine the true market exposure of certain hedge fund classifications, using convertible arbitrage, fixed-income arbitrage, and event-driven classifications. These classifications typically have a large amount of international stocks, for it is very difficult to obtain a precise price, particularly if the securities are sold over-the-counter (OTC). The more illiquid the market, the more difficult it is to attain a correct price for securities, bonds, and commodities.

The apprehension of hedge funds adding alpha, as discussed in Schneeweis and Spurgin (1999), is rejected by Murguía and Umemoto (2004), who dispute that hedge funds do not provide alpha but rather increase investment opportunities by including alternative investments into traditional stock and bond

investment portfolios. By manipulating international securities in the portfolio, hedge fund managers can influence the alpha of the portfolio. Recent studies have concluded that hedge fund returns are typically overstated (Murguía and Umemoto, 2004) and investors must have the ability to identify these signs and be ready to redeem their shares before a catastrophe or extreme market event, such as the Russian rouble crisis of August 1998. Some hedge funds use stale prices to value their portfolios, thus exposing themselves to arbitrageurs who buy securities at incorrect low prices knowing that they will increase the next day. Arbitrage pricing can methodically reduce a hedge fund's assets under management, causing large daily losses.

The relevance of qualitative factors for hedge fund investing is growing, and investors will probably take them into consideration when evaluating hedge funds. Hedge funds do not follow the same policies as mutual funds in terms of corporate governance, leveraging, pricing, redemption period, monthly performance reporting, management fees, and performance fees.

8.3 Recent developments

The Securities and Exchange Commission (SEC) will be regulating hedge funds, in spite of tough resistance from critics both inside and outside the Commission. On 27 October 2004, the SEC adopted Rule 203(b)(3)-2 that requires most hedge fund advisers with assets more than $25 million to register with the SEC (by 1 February 2006) under the Investment Advisers Act of 1940. The Act applies to the managers of mutual funds, pension funds, corporate trusts, and endowments. This move would significantly widen the SEC's jurisdictional reach. Furthermore, forcing onshore hedge fund advisers to register permits the SEC to understand in-depth how the industry functions and to potentially expose deceptive behavior. Once registered with the SEC, hedge fund advisers would be subject to regular verification checks of their books and records, and would have to divulge to the SEC the number of funds they manage and the assets under management. In addition, they would also have to report information about their investors, employees, and the persons controlling or that are associated with the hedge fund adviser. Moreover, the SEC has planned to tackle the time-zone arbitrage matter by imposing a 2% fee on fund shareholders that redeem their shares within five business days after purchase. The effectiveness of such an action is the subject of a great deal of controversy. For example, hedge funds could still obtain an advantage of time-zone differences through the use of futures contracts.

8.4 Checklist of questions

Investors looking to invest in hedge funds must carefully comprehend the policies and procedures used by funds to value assets, and should be predominantly skeptical of cases where objective, independent pricing sources are not used. A checklist of 24 questions may assist gaining that understanding. The main focus of the checklist is on the subject of valuation and especially valuation of assets where approximations are required. Investors must also be concerned with other issues as well and should be prepared to pose more questions. For example, see the comprehensive checklist by the Investor Risk Committee of the International Association of Financial Engineers (2004).

1. Has the board of directors (or equivalent) adopted a policy for valuation of securities?
2. Is there a committee (or individual) charged with responsibility for valuation?
3. Is the person or committee independent of those responsible for investment management functions?
4. Are independent pricing sources utilized wherever possible?
5. In cases where market prices are not available, how are valuations determined?
6. Are methods of valuation applied consistently over time?
7. Do those individuals determining fair value estimates have the appropriate expertise and experience?
8. Do the methods of valuation appear appropriate under the circumstances?
9. What models, if any, are used to estimate fair values?
10. If models are used, are they provided by an independent source?
11. Are model results compared to actual results on a regular basis?
12. Does the fund have an internal audit function?
13. Are security valuation policies and procedures subjected to the scrutiny of the internal auditors?
14. Who does the internal audit function report to?
15. Are internal audit reports filed on a regular basis and recommendations acted upon?
16. Is the fund registered with the SEC?
17. If registered, who are the independent auditors?
18. Did the independent auditors provide any comments regarding the fund's internal controls, particularly over the valuation of assets?

19. If unregistered, were the financial statements of the fund audited?
20. Who were the auditors?
21. Did the independent auditors provide any comments regarding the fund's internal controls, particularly over the valuation of assets?
22. If the fund is not audited, why?
23. If an FOF, does the manager scrutinize the funds in the portfolio as to their methods for valuation of assets and address questions similar to numbers 1–20?
24. Does the FOF have an established mechanism for regular monitoring of the hedge funds included in the portfolio, including periodic visits?

8.5 Conclusion

Under the direction of a board of directors or equivalent, hedge fund management is responsible for making a good judgment attempt in estimating fair values. The uncertainty inherent in estimating fair value of investments, the incentive fee structure for hedge fund managers, and the frequent lack of regulatory oversight create considerable risk for hedge fund investors. Though stale pricing may be objective, it frequently does not offer a measure of fair value and is inappropriate for decision-making purposes. Fair value estimates may be less dependable but are more pertinent. Investors in hedge funds and managers of FOFs must examine the policies and procedures used by hedge funds to determine fair value. A survey approach such as that suggested in this chapter may be a practical tool in the due diligence process.

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9

Adopting and Implementing International Financial Reporting Standards in Transition Economies

Robert W. McGee

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9.1 Introduction

Much of the world is moving in the direction of International Financial Reporting Standards (IFRS). The European Union has adopted them as of 1 January 2005 (Cuijpers and Buijink, 2005) and IFRS will be required of any new EU applicants. Russia adopted them as of 1 January 2004 (McGee and Preobragenskaya, 2005). Most or all of the former Soviet republics have either adopted them or are in the process of adopting them (McGee, 1999a; McGee and Preobragenskaya, 2006), either *in toto* or piecemeal. The transition economies of Eastern and Central Europe are also adopting them (Garrod and McLeay, 1996; Jermakowicz and Rinke, 1996; Kemp and Alexander, 1996; Zelenka et al., 1996), as have many other countries (Larson, 1993; Arthur Andersen et al., 2000, 2001; BDO et al., 2002; Choi et al., 2002; Street, 2002). Some research has been done about the reform of the accounting and financial reporting system in Armenia (McGee, 1999a), Belarus (Pankov, 1998; Sucher and Kemp, 1998), Bosnia (McGee and Preobragenskaya, 2006), China (Chan et al., 1999), the Czech Republic (Seal et al., 1995; Jindrichovska and McLeay, 2005), Hungary (Boross et al., 1995; Borda and McLeay, 1996), Lithuania (Mackevicius et al., 1996), Poland (Krzywda et al., 1995; Adams and McMillan, 1997; Kosmala, 2005), Romania (King et al., 2001; Roberts, 2001), Russia (Enthoven et al., 1998; McGee and Preobragenskaya, 2005), Slovenia (Turk and Garrod, 1996), and Ukraine (Solodchenko and Sucher, 2005; McGee and Preobragenskaya, 2006).

However, the adoption and implementation process has not always gone smoothly. Just because a government decides to adopt IFRS does not mean that practitioners will immediately erase the old system from their memory banks and start using the new system. Indeed, many clients, as well as their accountants, do not see the need for IFRS. Thus, a selling job has to be done to convince practitioners and their clients that they need to use IFRS. But why is it necessary to sell enterprises and accountants on the need for IFRS? If such a need actually existed, wouldn't the market already be supplying that need? Why is there a need to cram IFRS down the throats of the local population by top-down planning?

This chapter will address some of these issues and will also discuss the problems that various transition economies have encountered on the way to IFRS adoption and the solutions that have been tried. The author relates his experiences as a consultant on several USAID accounting reform projects, as well as the results of some private research he has conducted on accounting reform in several transition economies.

9.2 Adopting and implementing IFRS

Adopting IFRS is one thing. Implementing them is something else. The mere fact that a government might adopt new accounting rules does not mean that they will be swiftly, efficiently, and comprehensively applied and implemented throughout the economy. Old mentalities and ways of doing things have to be replaced, which might take a generation. Ways of doing business also have to be changed. In Russia, for example, the widespread use of barter is hampering the implementation of IFRS (Lindberg, 2002). Furthermore, it might take years for some governments to decide to adopt IFRS (Schneidman, 2003), a move that must take place before any implementation can begin.

The initial step—convincing relevant government officials that they need to adopt IFRS—may not be easy. The approach that was usually used has been for a Western government, such as the United States, or for an NGO, such as the World Bank, International Monetary Fund, TACIS, the European Bank for Reconstruction and Development, Asian Development Bank, or African Development Bank, to pressure the officials of some transition economy or developing economy to adopt some form of internationally recognized financial reporting rules as a condition of obtaining assistance. Countries that want to join the EU are also under pressure to adopt IFRS.

This top-down approach to economic regulation has never worked well in centrally planned economies, yet Western bureaucrats seem to think it will work well in an economy that is trying to cast off the shackles of central planning as they move toward a market economy. One problem with the top-down approach that has often been encountered is the fact that the top-level bureaucrats in the target country are not the ones who must implement the changes. Indeed, they often know little or nothing about accounting or accounting reform, which means they must delegate the details to their subordinates.

If their subordinates understand the problem and are willing to work hard to implement the changes, the transformation process goes well. That was the case in Armenia, where the third-tier people in the finance ministry who had to implement the rules their government adopted supported the change, and were intelligent and hard working (McGee, 1999a; McGee and Preobragenskaya, 2006). The fact that neither the official charged with the task of implementing IFRS nor his assistant had ever taken an accounting course was a problem, but not an insurmountable one. The consulting firm that had the USAID accounting reform contract for Armenia stationed an ex-pat in the finance ministry so that the relevant government officials would have ready and constant access to a foreign expert

who could explain the new rules and how they worked. The ex-pat often had to go through particular International Accounting Standards (IAS) one line at a time, explaining what it meant and scribbling down examples for later reference.

In Bosnia, the implementation process was much different (McGee and Preobragenskaya, 2006). First of all, the accounting reform project in Bosnia was really two different and separate projects. The USAID accounting reform project in Bosnia-Herzegovina began a few years after a series of Balkan wars split the six former republics of Yugoslavia into several separate nations (Holbrooke, 1998; Burg and Shoup, 1999; Zimmermann, 1999). The Dayton Peace Accords of 1995 tried to put Bosnia back together after several years of fighting that had turned the former Yugoslav republic into three warring ethnic groups (Daalder, 2000). The Orthodox Christian Serbs got 49% of post-war Bosnia and called their section Republika Srpska. The Sunni Muslim Bosniaks and Roman Catholic Croats got the other 51% and called their part the Muslim-Croat Federation. Post-war Bosnia had 13 finance ministries, one for each of the 10 cantons, one for each of the major parts of the country, plus one for the nation as a whole.

The finance ministries in the Muslim-Croat Federation and Republika Srpska were in charge of accounting reform in their part of the country and they each took a different approach to reform. The finance ministry in the Muslim-Croat Federation, which is located in Sarajevo, adopted IFRS more or less smoothly, although with some bumps along the way. And they did not adopt all of the IFRS exactly as written in the UK. For example, they adopted only the *indirect* method of accounting for cash flows, although international standards allow the adoption of the direct method as well.

Once the Serbs learned that the Muslim-Croat Federation adopted *just* the indirect method of accounting for cash flows, the powers that be in Republika Srpska decided to adopt *just* the direct method of accounting for cash flows. As a result, the country of Bosnia-Herzegovina has sort of adopted the IAS on cash flows, except that companies in the Muslim-Croat Federation part of the country can use only the indirect method and the companies in Republika Srpska can use only the direct method.

Republika Srpska was also slower to actually implement IFRS. It did it one standard at a time. It also did not adopt some of the standards. For example, it absolutely refused to adopt the IFRS on asset impairment. However, in all fairness, it must be said that other centrally planned economies also have not adopted this standard, or if they have, they refuse to use it.

There is a very good practical reason for not using this standard. This IAS requires companies to write down their assets if their market value is less than book

value. Many enterprises in transition economies have assets that are overvalued. If they wrote them down to market value it would destroy the equity in their balance sheets. Companies don't want to do that, for a variety of reasons. It would be more difficult, or perhaps impossible, to obtain a bank loan or to sell their shares in a reputable stock exchange, for example. And the accountants who audit those companies are extremely hesitant to pressure their clients into reflecting those assets at market value. If they attempted to do so, they would likely lose those clients, since it is still possible to buy an audit opinion in many transition economy countries. If one independent auditor does not issue a clean opinion, there is probably one down the street or around the corner who will do it for the right price.

A number of transition economies have implemented only some of the IFRS standards. Russia, for example, sees no need to adopt the standard on hyperinflation, since it no longer suffers from hyperinflation. It also has no present plans to adopt the standard on derivatives, since few Russian companies have them and even fewer accountants and bankers understand them. So why go to all the trouble of adopting and implementing such a standard if no one will use it for the foreseeable future?

Convincing finance ministry officials to adopt and implement IFRS is not the end of the process but only the beginning. Accounting practitioners and enterprise accountants and managers also need to be convinced that the new rules must be learned and applied. Convincing them has not always been easy to do. There is the inertia problem, which Milton Friedman pointed out a few years ago (Friedman and Friedman, 1984). Basically, this mindset begins with the premise that the best way to do something is precisely the way it is already being done. More than one bureaucrat has told the author that the Soviet system has worked fine for several decades and that there is no need to change anything.

Such a statement has a grain of truth to it. The Soviet bookkeeping system was quite good. Debits were always on the left and credits were always on the right. There was a journal entry for every transaction and everyone knew what those journal entries were. Why change?

One of the major problems with the Soviet bookkeeping system was that it was *only* a bookkeeping system. No sort of meaningful financial analysis or profit planning could be done with those numbers because all prices were determined arbitrarily and there was no such thing as profit. This major deficiency in the Soviet accounting system was one of the main causes of the collapse of the Soviet Union. Resources could not be allocated efficiently and the many decades of misallocation had a cumulative effect. Ludwig von Mises predicted this collapse as far back as the 1920s (1920, 1922, 1923, 1935).

Another problem with implementing IFRS was the general and widespread perception among government officials, enterprise managers, and accounting practitioners that they were not needed or useful. This perception also has a grain of truth to it. The tax accounting systems of many transition economies are based on the cash method or on some national method that has little or no resemblance to IFRS. Tax officials in these countries are only interested in looking at accounting books that use the national standards or the tax standards. They have no use for accounting numbers that are prepared using IFRS because they cannot compute the tax liability using those numbers (McGee and Preobragenskaya, 2005).

In many companies, no one else has any need for numbers prepared with IFRS either. Where there is no demand, there will also be no supply. Why learn rules to make IFRS-based financial statements if nobody is going to read them? In fact, only a small percentage of the enterprises in most transition economies will be able to find anyone who wants to read their IFRS statements. The main exception is the largest enterprises, which are trying to attract foreign capital investment (Preobragenskaya and McGee, 2003). Foreign bankers and other potential investors will demand to see financial statements prepared using either IFRS or US GAAP as a condition of investing. But this exception might apply to perhaps 25 or 50 enterprises in the whole country. The other 5000 or 20,000 enterprises have no use for statements prepared using IFRS.

9.3 Translation problems

Early in the implementation stage, IFRS and ISA (International Standards on Auditing) have to be translated into the local language and made available to the various accounting constituencies in the country. The people in the finance ministry have to have copies so they can read what they have adopted or will soon adopt. At some point, accounting practitioners will have to have access to the standards in a language they can understand. Otherwise, they will not be able to implement them. Accounting educators must have a copy so they can start teaching the new rules and students have to have a copy so they can read their assignments.

However, local language translations of IFRS and ISA do not drop from the sky. Someone has to sit down and do the translation, one sentence at a time. Although there are certain problems that become apparent as soon as an attempt is made to translate IFRS and ISA into the local language, the translation problems encountered in one country are not identical to those encountered in another country. There are some local differences.

The problems encountered in Armenia are typical of the generic kind of problems that are encountered whenever an accounting reform project goes into a country and tries to help the country convert to IFRS and ISA. Choosing a language was not a problem. Although all Armenians are fluent in both Russian and Armenian, the finance ministry as well as most accountants and educators wanted the IFRS to be available in the Armenian language. After the collapse of the Soviet Union, the various former Soviet republics rediscovered nationalism. They wanted to use their own language, not the language of some far-off former central government.

Once the target language was agreed upon, the next thing to do was to find real, living, breathing individuals who could do the translation. IAS (which they were called at the time, in 1998, when the translation started) consisted of hundreds of pages of technical material, as did the ISA. A team had to be hired to do the translation, since one person could do only about five pages a day.

The fact that a team had to be hired rather than a single individual caused a coordination problem because each translator did it a different way. They used different words for the same concept and they each had a different style.

But that was not the first problem that was encountered. As soon as the solicitation to hire translators was published, it was found that no one in the entire country met the requirements needed for the job. What was needed was a team of individuals who knew English, Armenian, and accounting. Although it was not difficult to find people who were fluent in both English and Armenian, it was impossible to find anyone who had any background in a Western accounting system. That is because the universities in Armenia, as well as the universities in the other former Soviet republics and the centrally planned economies of the various Soviet satellite countries, did not teach what would be regarded as accounting in a developed Western economy. All they taught was bookkeeping, and perhaps some auditing and mathematics. There was no such thing as a course on intermediate or advanced accounting, or even management accounting, for the most part.

The translators hired for the Armenian USAID accounting reform project had degrees in physics, chemistry, English literature, and economics. They had to be trained in the terminology of accounting on the job. Frequent meetings had to be held in the early phases of the project to discuss what the various concepts meant. The translation problem was made more difficult by the fact that there were no terms in the Armenian language for some of the English words.

The same problem was encountered when the translation team tried to translate some English language accounting texts into Russian, which was the language

USAID wanted to use for training materials. The reason for choosing Russian was quite simple. USAID had several accounting reform projects going on at the same time and it wanted to be able to use the same training materials for all of its projects in the former Soviet Union. It did not want to have to translate accounting texts into local languages like Georgian, Azeri, Ukrainian, etc. when the students using the book all knew Russian. That caused something of a political problem with the Armenian finance ministry, as well as with some practitioners and university officials. However, when it was explained why Russian was chosen, and it was emphasized that (1) they would be getting the books for free and (2) USAID was not going to change its mind, the problem melted away, at least on the surface.

The Russian translations encountered the same kind of problems that were faced by the Armenian translations. There were no terms in Russian for some of the concepts covered in the books. In fact, the Russian language did not even have a word for *accountant*. It borrowed the German word for bookkeeper – *buchhalter*.

The Russian translation of the International Accounting Standards was not available until 1999, about halfway through the translation of the IAS into Armenian, so the translation team did not have access to the Russian version of IAS for several months. When they did receive copies, other problems developed because the Russian translation was mediocre in parts and in some cases downright incorrect. For example, in one place, the Russian version listed some things that should *not* be done. However, the Russian translation left out the word *not*, causing Russian readers to think that the list was things that were supposed to be done instead of *not* supposed to be done. The Armenian translation team uncovered that error when they were comparing the Russian version with the English version, which they were in the process of translating into Armenian.

The 1999 Russian version of IAS was circulated widely. The second edition was not published for more than five years and it is not known by the present author whether that error was corrected in the revised edition. However, when the author discussed this point in 2003 with the individual who was in charge of the Russian translation, he was unaware that the mistake existed, and I was unable to tell him which page it was on, or even the topic (I had forgotten), so perhaps the mistake continues in the second edition.

The translation problems encountered in Bosnia were similar to those faced in Armenia in some ways, but there were also some major differences. Some English language terms did not have any local language equivalents. But that was not the major problem.

The major problem was choosing which language to use. Prior to the Balkan wars that led to the disintegration of Yugoslavia, the main language of the country

was Serbo-Croatian, although Slovenian, Macedonian, and a few other languages were also in common use in some parts of the country. Serbo-Croatian is basically one language with two alphabets. Serbian uses the Cyrillic alphabet whereas Croatian uses the Latin alphabet, but the vast majority of the vocabulary is the same, although there are some regional pronunciation differences. Everyone knew both alphabets equally well because they would use Cyrillic texts in school one week and Latin texts the next.

When the country split up, and when Bosnia got its independence, a third language – Bosnian – came into existence. It was created in Dayton, Ohio, as part of the Dayton Peace Accords. As part of that peace agreement, the Serbian language was to use the Cyrillic alphabet, Croatian was to use the Latin alphabet, and Bosnian could use either alphabet.

When the translation team was preparing to translate the first group of accounting books, a decision had to be made as to which language to use. Each of the three main ethnic groups in Bosnia – the Orthodox Christian Serbs, the Roman Catholic Croats, and the Muslim Bosniaks – each wanted their own language to be used for all the texts. USAID balked because it did not want to incur the expense of translating each book three times. So a compromise was reached. All sides agreed that one-third of the books would be translated into each language and they all agreed to use all the books that were translated. And since there was already a publishing company in Croatia that was translating some accounting books, the decision was made for USAID to coordinate its efforts with that publishing company so USAID would only have to pay to translate books into Serbian and Bosnian.

That decision seemingly worked well, until the first Serbian book was hot off the press. After spending several months and thousands of dollars translating the book into Serbian, a few copies were presented to the Dean at the University of Sarajevo, the largest university in the country and also a predominantly Muslim university. He took one look at the book, then said that his university could not use that book because it was in the Cyrillic alphabet. He explained that if his students took that book home and their parents saw it, they would be marching into his office to complain. The Muslims, who had been reduced to hiding in their homes for two years during the Serb siege of Sarajevo, wanted nothing to do with anything Serb, including the alphabet.

It would have been very easy to translate the book into Bosnian. Software was available to do the conversion, which would have been mostly a change in alphabet, but the USAID official in charge of the accounting reform project refused to do it. The University of Sarajevo even offered to do the conversion at

no cost to USAID. But USAID refused to turn over the software files. As a result, the translation portion of the project more or less collapsed (McGee and Preobragenskaya, 2006).

9.4 Teaching the new rules to practitioners

Part of any USAID accounting reform project includes training practicing accountants. The accounting system cannot be implemented if the accountants who would implement the changes do not know what the new rules are or how to apply them. The methods used to accomplish this task vary from project to project, but there are some common elements.

To target accounting practitioners who work for the local accounting and audit firms, the local accounting association is approached and USAID makes an offer to provide training, training materials, and instructors to the membership. In most cases, since the local accounting associations are weak and relatively inexperienced in providing such training, USAID provides financial as well as technical support. Some kind of continuing professional education program is established, along the lines of what the AICPA and various state accounting societies do in the United States.

9.5 Reforming university curriculums

No accounting reform project is complete without upgrading the accounting curriculums of at least some universities in the country. The future accountants have to become exposed to the rules their country has adopted and the present university curriculum does not have the courses they will need, so USAID, or TACIS, the EU equivalent, or the World Bank, or some other group offers to provide technical and financial assistance. The approach used in each country is somewhat different, but there are some common elements.

The USAID accounting reform project in Armenia was given marching orders from Washington to convince at least one Armenian university to accept USAID's assistance. The consulting firm that won the USAID contract decided to target the top economics institute in the country, figuring that if that institute agreed to accept the turnkey curriculum the firm proposed, the accounting education segment of the project would be considered a success.

A meeting was set up, the presentation was made, and the educational officials were persuaded to accept USAID's assistance. The fact that the institute wanted

to reform its accounting curriculum anyway, plus the fact that USAID was going to pay the entire cost of texts and training, made their decision easy.

Once the word got out that USAID was setting up turnkey accounting curriculums, the other universities in the country started calling to schedule meetings of their own. The accounting curriculum phase of the reform project was an instant success. Of course, there were some problems. The text materials were not the best and the early translations were mediocre. But the university officials were enthused about the program and the students were even more enthused, since learning the accounting system used in the West was seen as providing them with a one-way ticket out of the country.

The Bosnian program was also an easy sell. The University of Sarajevo was targeted as the first university to be approached, since it was the largest university in the country, it had more than 50% of all the accounting students in the country, and it was a five-minute walk from the consulting firm's offices in Sarajevo. University officials already knew that their accounting curriculum needed to be changed but they didn't know how to go about doing it, until USAID knocked at their door.

After the word got out that the University of Sarajevo was going to have a Western style accounting curriculum, the other seven universities in Bosnia quickly jumped on board, perhaps out of fear that if they did not also offer a Western style accounting curriculum they soon would not have any accounting students. Many young people in transition economies want to leave their country to seek better economic opportunities elsewhere, and Bosnia was no exception. Having knowledge of the accounting system that is used in the West would give them such an opportunity. However, in all fairness, it cannot be said that 100% of the young Bosnian or Armenian or Russian or Moldovan people want a one-way ticket out of their country. Many of them have no burning desire to leave. But many of them do, and this program was seen as a way to achieve their dream.

Under the old Soviet system, students who wanted to study accounting generally did so as part of the economics curriculum. Most Soviet universities did not have a separate accounting major. In fact, the universities that offered any accounting at all often had just a bookkeeping course, and perhaps some kind of auditing or math course. Many universities in the Soviet Union did not offer any accounting courses. One reason for the lack of accounting courses is because the Soviet education system consisted of many specialized institutes. There were institutes for physics, chemistry, physical education, etc., and there was no need to offer accounting courses in such institutes.

That started to change after the collapse of the Soviet Union. Some institutes started offering accounting courses just because they wanted to satisfy the newly increased demand for accounting. With the shift to a market economy came a demand for more accountants and the Soviet educational system could not fill the demand unless it started offering more accounting courses. As a result, some institutes that never before offered accounting courses started offering them, and institutes and universities that had offered accounting in the past expanded their accounting offerings.

Table 9.1 lists the curriculum that accounting majors take at Odessa National University, which has one of the best accounting programs in Ukraine. It is presented to illustrate what one of the better accounting programs looks like.

Table 9.1 provides good detail about the curriculum a Ukrainian accounting student studies. However, breaking down the total curriculum into accounting, other business, and other categories can shed further insight. Table 9.2 does that.

The data in Table 9.2 on the accounting curriculum of Odessa National University reveals a lot about the kind of accounting education Ukrainian students are receiving. However, in order to put things into relative perspective, perhaps it would be worthwhile to compare the accounting education they receive with the accounting education that students receive at a university in a developed Western economy.

Table 9.3 summarizes the curriculum for the Bachelor of Science in accountancy at the University of Illinois at Urbana-Champaign, which is considered one of the top accounting programs in the United States.

Although Table 9.3 provides a brief summary of the requirements for an undergraduate accounting degree at a university in the United States, the data in that table will have to be manipulated before a good comparison can be made to the accounting curriculum offered at a university in Ukraine.

Table 9.4 does that. It converts semester hours into clock hours by multiplying semester hours by 15. It assumes that students will take the maximum number of accounting courses and that they will study 1.5 hours outside of class for every hour spent in class. It also assumes that the total accounting and other business courses comprise 50% of the total curriculum, which is in keeping with AACSB accreditation standards.

Now that semester hours have been translated into clock hours and study time has been added, a fair comparison can be made between the Ukrainian university and the American university. Table 9.5 makes the comparison.

Table 9.1 Curriculum at Odessa National University, Bachelor–four years (7047 hours)

	Studying (hours)					
	Total	In class			Self-study	% of total (8208)
		Total	Lecture	Seminars		
General Humanitarian and Social Economic Disciplines	1512	954	316	638	558	21.5
Federal Component	1512	954	316	638	558	21.5
Foreign Languages	324	216		216	108	4.6
Physical Training	216	216		216	0	3.1
Logic	54	36	22	14	18	0.8
Ukrainian Language (Speech)	81	36	22	14	45	1.1
Ethics and Esthetics	54	36	22	14	18	0.8
Science of Culture	81	36	22	14	45	1.1
Psychology	81	36	22	14	45	1.1
Law	81	36	22	14	45	1.1
Religions	54	36	22	14	18	0.8
Philosophy	108	54	32	22	54	1.5
History of Ukraine	108	54	32	22	54	1.5
Sociology	54	36	22	14	18	0.8
Ecology	54	36	22	14	18	0.8
Political Science	108	54	32	22	54	1.5
Health	54	36	22	14	18	0.8
General Economics Disciplines	3078	1710	1028	682	1368	43.7
Federal Component	3078	1710	1028	682	1368	43.7
Accounting	135	72	44	28	63	1.9
Audit	54	36	22	14	18	0.8
Cash, Loans, Banks	81	54	32	22	27	1.1
Civil Defense	54	36	22	14	18	0.8
Econometrics	81	54	32	22	27	1.1
Economic Analysis	81	54	32	22	27	1.1

Table 9.1 (*Continued*)

	Studying (hours)					
	Total	**In class**			**Self-study**	**% of total (8208)**
		Total	**Lecture**	**Seminars**		
Economics of Entrepreneurship	162	72	44	28	90	2.3
Economics of Labor and Social Relations	108	54	32	22	54	1.5
Finance	108	54	32	22	54	1.5
Finance of Entrepreneurship	81	54	32	22	27	1.1
History of Economic Studies	81	54	32	22	27	1.1
History of Economics	81	54	32	22	27	1.1
Informatics and Computers	270	144	88	56	126	3.8
Insurance	81	36	22	14	45	1.1
International Economics	108	54	32	22	54	1.5
Investment	81	36	22	14	45	1.1
Macroeconomics	108	54	32	22	54	1.5
Management	108	54	32	22	54	1.5
Marketing	108	54	32	22	54	1.5
Mathematics	216	144	88	56	72	3.1
Microeconomics	108	54	32	22	54	1.5
Patent Law Fundamentals	54	36	22	14	18	0.8
Political Science	135	72	44	28	63	1.9
Probability Theory and Mathematical Statistics	108	54	32	22	54	1.5
Programming	108	54	32	22	54	1.5
State Law	81	54	32	22	27	1.1
State Regulation of Economy	81	54	32	22	27	1.1
Statistics	135	72	44	28	63	1.9
Work Force Allocation and Regional Economy	81	36	22	14	45	1.1

(*Continued*)

Table 9.1 (*Continued*)

	Studying (hours)					
	Total	**In class**			**Self-study**	**% of total (8208)**
		Total	**Lecture**	**Seminars**		
Professional Disciplines						
Federal Component	972	468	284	184	504	13.8
Financial Accounting 1	162	72	44	28	90	2.3
Financial Accounting 2	162	72	44	28	90	2.3
Managerial Accounting	135	72	44	28	63	1.9
Organization, methods of auditing	135	72	44	28	63	1.9
Accounting in Foreign Countries	108	54	32	22	54	1.5
Financial Law	108	54	32	22	54	1.5
Information Systems and Technology in Accounting	162	72	44	28	90	2.3
Regional (University) Component	837	522	310	212	315	11.9
Fundamentals of Accounting Theory	81	54	32	22	27	1.1
Audit of Juridical Persons (Companies)	81	54	32	22	27	1.1
Audit of Persons	81	54	32	22	27	1.1
Management Accounting 2	81	54	32	22	27	1.1
Control and Revision	108	54	32	22	54	1.5
Financial Management	81	54	32	22	27	1.1
Corporate Governance	81	54	32	22	27	1.1
Commerce Logistics	54	36	22	14	18	0.8
Contract Law	108	54	32	22	54	1.5
Tax System of Ukraine	81	54	32	22	27	1.1
Electives	648	414	248	166	234	9.2
International Finance	81	54	32	22	27	1.1
Company Budgeting	54	36	22	14	18	0.8

Table 9.1 (*Continued*)

	Studying (hours)					
	Total	**In class**			**Self-study**	**% of total (8208)**
		Total	**Lecture**	**Seminars**		
Audit of Transnational Corporations	54	36	22	14	18	0.8
Labor Law	81	54	32	22	27	1.1
Exchange System	81	54	32	22	27	1.1
Financial Market	81	54	32	22	27	1.1
Management Continuum	108	72	44	28	36	1.5
Personnel Management	108	54	32	22	54	1.5
Total hours	7047	4068	2186	1882	2979	100.0

One difference that is seen immediately is that Ukrainian students spend significantly more time studying than do their American counterparts – 7047 hours compared to 4650 hours, or an additional 51% more time. Of course, these are just rough estimates. Some American students probably spend more than 1.5 hours in study for each hour in class, and the study hours assigned to Ukrainian students are merely part of the official curriculum plan at Odessa National University. Ukrainian students might study more or fewer hours than those suggested.

The accounting portion of the curriculum is about the same for both universities, in terms of percentages – 25.3% for the Ukrainian university and 26.6% for the American university. However, Ukrainian students spend an additional 543 hours studying accounting subjects.

Ukrainian accounting students spend nearly three times as much time studying other business subjects – 3213 hours, compared to 1086 hours for American accounting students. As a percentage of the total four-year program, it is about twice as much – 45.6% compared to 23.4%.

Ukrainians spend somewhat less time studying what might be called liberal arts subjects – 2052 compared to 2325 hours. However, one should not jump to the conclusion that Ukrainian students are therefore less well rounded than their American counterparts. All Ukrainian students can speak at least two languages – Ukrainian and Russian – whereas the vast majority of American students can speak only one language.

Table 9.2 Four-year accounting curriculum at Odessa National University

Course	Hours	% of total
Accounting (totals)	1782	25.3
Accounting	135	
Audit	54	
Financial Accounting 1	162	
Financial Accounting 2	162	
Managerial Accounting	135	
Organization, Methods of Auditing	135	
Accounting in Foreign Countries	108	
Financial Law	108	
Information Systems and Technology in Accounting	162	
Fundamentals of Accounting Theory	81	
Audit of Judicial Persons (Companies)	81	
Audit of Persons	81	
Management Accounting 2	81	
Control and Revision	108	
Tax System of Ukraine	81	
Company Budgeting	54	
Audit of Transnational Corporations	54	
Other business (total)	3213	45.6
Cash, Loans, Bank	81	
Econometrics	81	
Economic Analysis	81	
Economics of Entrepreneurship	162	
Economics of Labor and Social Relations	108	
Finance	108	
Finance of Entrepreneurship	81	
History of Economic Studies	81	
History of Economics	81	
Informatics and Computers	270	
Insurance	81	
International Economics	108	
Investment	81	
Macroeconomics	108	
Management	108	
Marketing	108	

Table 9.2 (*Continued*)

Course	Hours	% of total
Microeconomics	108	
Probability Theory and Mathematical Statistics	108	
Programming	108	
State Regulation of Economy	81	
Statistics	135	
Work Force Allocation and Regional Economy	81	
Financial Management	81	
Corporate Governance	81	
Commerce Logistics	54	
Contract Law	108	
International Finance	81	
Labor Law	81	
Exchange System	81	
Financial Market	81	
Management Continuum	108	
Personnel Management	108	
Non-business	2052	29.1
Total	7047	

Table 9.3 Bachelor of Science in accountancy curriculum, University of Illinois at Urbana-Champaign

Semester hours	Courses
4	Accounting Measurement and Disclosure
4	Decision Making for Accountancy
4	Accounting Institutions and Regulation
4	Accounting Control Systems
4	Assurance and Attestation
20	Total required for accountancy major
3	Accounting and Accountancy I (business core course)
3	Accounting and Accountancy II (business core course)
26	Total required accountancy courses
91	Non-accountancy courses
7	Electives (either accountancy or non-accountancy)
124	Total for BSA

Table 9.4 Bachelor of Science in accountancy curriculum, University of Illinois at Urbana-Champaign, hours spent in study

Course	Class hours	Self-study	Total hours	% of total
Accounting (totals)	495	744	1239	26.6
Accounting Measurement and Disclosure	60	90	150	
Decision Making for Accountancy	60	90	150	
Accounting Institutions and Regulation	60	90	150	
Accounting Control Systems	60	90	150	
Assurance and Attestation	60	90	150	
Accounting and Accountancy I	45	68	113	
Accounting and Accountancy II	45	68	113	
Accounting electives	105	158	263	
Other business	435	651	1086	23.4
Non-business	930	1395	2325	50.0
Totals	1860	2790	4650	100.0

Table 9.5 Four-year accounting curriculum comparison between Odessa National University and the University of Illinois

	Odessa National University		University of Illinois	
	Hours	% of total	Hours	% of total
Accounting	1782	25.3	1239	26.6
Other business	3213	45.6	1086	23.4
Non-business	2052	29.1	2325	50.0
Totals	7047	100.0	4650	100.0

9.6 Credible accounting certification

Another aim of some USAID accounting reform projects is to upgrade accounting certification. The USAID accounting reform project in Armenia, for example, coordinated the effort to bring the ACCA English language certification exams to Armenia. It also assisted the Armenian Association of Accountants and Auditors (AAAA) in establishing a certification exam that incorporated elements of IAS and ISA (McGee, 1999b).

Former Soviet republics generally do not have an accounting or auditing certification that is credible outside the borders of the country. International investors

Table 9.6 CAP and CIPA exam summary, November 2004, exam participants and pass rates

	CAP exams			CIPA exams				Total
	FA-1	T&L	MA-1	FA-2	MA-2	Audit	Finance	
Kazakhstan	714	531	505	99	50	72	48	2019
	46.8%	51.0%	43.2%	22.2%	28.0%	19.4%	20.8%	43.7%
Kyrgyzstan	259	185	171	46	20	35	15	730
	35.5%	49.7%	45.0%	23.9%	20.0%	14.7%	20.0%	38.9%
Tajikistan	106	109	60	5	5	5	5	295
	17.9%	45.0%	21.7%	20.0%	0%	0%	0%	27.8%
Turkmenistan	32	22	36	4	3	0	3	100
	46.9%	59.1%	33.3%	0%	66.7%	0%	0%	42.0%
Uzbekistan	209	103	132	34	35	23	36	572
	50.7%	50.5%	45.5%	29.4%	45.7%	39.1%	33.3%	46.3%
Moldova	32	37	36	12	6	5	1	129
	78.1%	97.3%	61.1%	0%	16.7%	20.0%	0%	65.9%
Russia	7	11	7	1	4	1	4	35
	57.1%	100%	57.1%	0%	25.0%	0%	25.0%	60.0%
Ukraine	438	294	318	139	130	124	106	1549
	59.1%	78.2%	64.8%	22.3%	14.6%	15.3%	14.2%	50.3%

hesitate to invest in a company whose financial statements are audited by someone who does not possess a recognizable and credible accounting certification. One way to provide a credible accounting certification in these countries at minimal cost is to allow the Association of Chartered Certified Accountants (ACCA) to give their exams. ACCA exams have been in existence for more than 100 years and they are well regarded, well known, and respected in 160 countries. They test IFRS and ISA.

But there is a structural problem with giving ACCA exams in former Soviet republics. The exams are in English, which means that only a minority of the accountants in most former Soviet republics can take them. USAID is making an attempt to solve this problem by providing Western-type certification exams in the Russian language. In 2001 it started a pilot program in central Asia. This program consisted of funding the establishment of a two-tier, seven-exam certification program, in the Russian language, that tested on IFRS and ISA. Space does not permit a full description of this program. However, descriptions are given elsewhere (McGee et al., 2004; McGee and Preobragenskaya, 2005, 2006).

The lower-level certification consists of three exams: Financial Accounting 1, Managerial Accounting 1, and Tax and Law. Those who pass all three exams receive the designation Certified Accounting Practitioner (CAP).

The second certification level consists of the following four exams: Financial Accounting 2, Managerial Accounting 2, Audit, and Finance. Those who pass these four exams are awarded the Certified International Professional Accountant (CIPA) designation.

The pilot project started in the five central Asian republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. After the exams had been given a few times the program spread to Russia, Ukraine, and Moldova. Thousands of individuals have taken one or more exams and the program appears to be a success.

The people administering the CAP and CIPA exams no longer release detailed exam data. However, they did release data for the November 2004 CAP and CIPA exams. Table 9.6 summarizes those results, showing the number of participants and the pass rates.

The pass rates on the CIPA exams tend to be lower than the pass rates on the CAP exams. One reason for the lower pass rates is because the CIPA exams test more difficult material.

The table also reveals that Kazakhstan had more participants than the other countries. The reason for this might be because the program was headquartered in Kazakhstan since its inception, although the headquarters has since moved to Moscow. One surprise was the turnout in Ukraine. Although Ukraine has a much larger population than any of the central Asian republics, the exam was not offered in Ukraine until recently, which makes the growth and popularity of the exam in Ukraine even more remarkable. There were few exam takers in Russia, even though Russia has the largest population of any of the former Soviet republics. The explanation for the low turnout is because the exam is relatively new in Russia and marketing of the program started relatively recently. Many Russian accountants still do not know about this certification program.

9.7 Conclusion

Much of the world is moving toward the adoption and implementation of IFRS and ISA. Some countries have been using these standards for decades, but they are new for transition economies. Countries that are moving from central planning to a market economy are facing many difficult hurdles. Accounting reform is one of them.

But the reform movement is well underway. USAID, TACIS, the World Bank, and other organizations that have funded accounting reform programs in the past have helped a number of transition countries to complete the reform process. Projects that are still open are winding down as the reform process becomes complete.

But the actual process of incorporating IFRS and ISA into the economy will take years, if not decades. There is little demand for IFRS in many transition economies, with the exception of the largest enterprises, which are seeking foreign capital. The average domestic company still sees little or no need to adopt IFRS, since their constituency has no need to read IFRS statements. That will change, but only gradually.

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10

International Convergence: The Australian Journey

Janice Loftus

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10.1 Introduction

Australia is a Commonwealth nation with a population of approximately 20 million people (19.7 million in 2002) (World Bank, 2004). Australia has a federal system of government. Corporate regulation originally fell within the domain of the government of each of the nation's six states, as will be discussed below, but companies are now governed by the Commonwealth Government of Australia. Governments are elected in Australia and their continued survival depends on the electorate's confidence in the legislature. The maximum interval between elections is three years. Government ministers are members of parliament and Australia is described as having high cohesion of governing parties (Tiffen and Gittins, 2004, p. 27).

The Australian economy was ranked 13th in the world with a GDP of US $631bn in 2004 (World Bank, 2005). In 2002 the GDP for Australia was US $409.4bn, and the GDP per capita was $28,260 (measured in International dollars, which is a World Bank measure of US dollars adjusted for purchasing power parity) (World Bank, 2004). The Australian economy has undergone some structural change during the second half of the 20th century. Employment in the agricultural sector declined from an average of 9.2% of the labor workforce in 1960–1973, to an average of 5.1% in 1990–1991, consistent with universal decline (Tiffen and Gittins, 2004, p. 55). Employment in the manufacturing sector declined from an average of 24.2% of the labour workforce in 1960–1973, to an average of 13.7% in 1990–1991, reflecting de-industrialization during the latter half of the 20th century (Tiffen and Gittins, 2004, p. 55). Employment in the services sector rose from 53.5% of the labor workforce in 1960–1973, to an average of 71.8% in 1990–1991, consistent with trends in other developed countries (Tiffen and Gittins, 2004, p. 55).

The Australian Stock Exchange (ASX) was established in 1987 by the amalgamation of the six stock exchanges that operated in state capital cities. At 30 June 2005 there were 1774 entities listed on the ASX and the domestic market capitalization was $975bn (US $743bn). Average daily equity transactions numbered 87,500, with an average daily value of $3.181m (US $2.423 million), for the year ended 30 June 2005 (ASX, 2005).

Given the relatively small size of its capital market, Australia became a leading nation in accounting standard setting and the development of a conceptual framework of accounting. Australia developed a pool of intellectual capital through its domestic standard-setting projects and its involvement in international organizations and initiatives.

Australia's involvement in the international harmonization of accounting commenced in the 1970s, and formally when the Australian professional accountancy

bodies jointly became a member of the Board of the International Accounting Standards Committee in 1973. The Australian Accounting Standards Board (and its predecessor, the Accounting Standards Review Board) also supported international harmonization through involvement in the Group of Four-Plus One (G4+1).

In mapping Australia's journey towards international convergence, it is important to understand the changing identity, nature, and power of the key policy-making bodies steering Australian accounting practice. Commitment to international harmonization waxed and waned over several decades that also saw fundamental changes to the structure of financial reporting regulation and standard setting. Between the formation of the International Accounting Standards Committee in 1973 and the decision to adopt International Financial Reporting Standards in 2002, the accounting standard-setting arrangements underwent four major reforms. The first of these reforms occurred in 1984 with the establishment of the Accounting Standards Review Board (ASRB), empowered to review and approve accounting standards. The next reform was the merger of the profession's Accounting Standards Board (AcSB) with the ASRB in 1988, followed by the replacement of the ASRB by the Australian Accounting Standards Board (AASB) in 1991. The new Board was empowered to issue accounting standards and was less dependent on other bodies to submit standards to it. The fourth reform involved the establishment of the Financial Reporting Council in 2000, with broad oversight functions with respect to the AASB.

Each of the five regulatory arrangements is examined to provide insight into Australia's arduous path to international convergence. The developments in international convergence are considered in the context of each stage in the history of Australian standard setting. After reflecting on Australia's journey towards international convergence, this chapter considers a forward-looking question that may well be asked by countries adopting IFRS: Is this the start of a new journey or the end of the road?

10.2 Models of international harmonization or convergence of accounting

Four broad approaches to reducing international diversity in accounting practice are identified in the literature (AASB, 1994a; Miller, 1995a; Howieson, 1997, 1998):

1. Full global harmonization, also referred to as integrated harmonization, with every country adopting the same set of accounting standards.

2. Harmonization of accounting policies with those of another jurisdiction, such as those issued by an international standard-setting body or the domestic standards of another country, such as the United States.
3. Substantial commonality, in which the requirements of domestic standards have some overlap with standards issued by an international standard-setting body, but not driven to full compliance, incorporating 'benchmarked compliance' in which the international accounting standards form the minimum requirement for domestic standards.
4. Internationalization (also referred to as selective harmonization), by which domestic standards are determined in the light of international practice, which is subject to innovation and improvement through cooperation and collaboration among standard setters.

The approaches are not mutually exclusive. For instance, standard setters in one country may actively promote harmonization with accounting standards of another country, particularly where there are strong trade links. This may be achieved by cross-participation, as observers, on the standard-setting bodies, and by cooperation between the standard-setting bodies of the two countries on projects, such as the revision or issue of accounting standards. The standard setters may, at the same time, consider international best practice when setting accounting standards. This may be in collaboration with the country with which they seek to harmonize, or it may be on issues on which the other country does not have an existing standard. Harmonizing with another country and considering international best practice may be long-term policies, or they may be viewed as temporary measures en route to full global harmonization.

As will be discussed below, the Australian standard setters have at times adopted each of the four approaches to international harmonization. At times, international best practice has been an important consideration, while simultaneously promoting harmonization with New Zealand, and attempting to maintain benchmarked compliance with IAS as a strategy in working towards a long-term goal of full convergence with a globally accepted set of accounting standards.

International harmonization of accounting can also be viewed as a process of moving closer towards compatibility with international accounting standards. This chapter examines how the process of harmonization has at times been aided and at other times hindered by the accounting standard-setting arrangements in Australia.

10.3 Models of accounting regulation

Puxty et al. (1987, pp. 282–284) describe accounting regulation in advanced market economies as reflecting various balances between market, state, and community influences. At one end of the spectrum is liberalism, which refers to the exclusive reliance on market forces, such that information is provided only if it is commercially demanded. At the other end of the spectrum, legalism refers to a model of accounting regulation that relies exclusively on the legislative and coercive powers of the state. Between these two extremes, accounting regulation models are categorized as associationism and corporatism. In associationist models of accounting regulation, principles of community play a greater role, but are routinely subordinate to those of the market. Closer to legalism on the market–state spectrum are corporatist models of accounting regulation, characterized by a greater influence of the state, which incorporates organized interest groups into its own centralized hierarchical regulatory structure. Corporatism describes any 'attempt to assign to interest associations a distinct role between the State and civil society (market and community) so as to put to public purpose the type of social order that associations can generate and embody' (Streeck and Schmitter, 1985, pp. 20–21). Figure 10.1 depicts the four models of accounting regulation along the market–state continuum with the subordinated influence of community principles (adapted from Puxty et al., 1987, p. 283).

The ensuing discussion will trace the stages of, and reforms to, standard-setting arrangements in Australia as the regulation of accounting standards moved along the market–state spectrum, from liberalism in the 1960s and 1970s to various forms of corporatism in the 1990s and the new millennium.

10.4 Australian standard setting 1970–1983

In Australia the uniform companies legislation developed by the Commonwealth and state governments required companies, other than exempt proprietary companies, to publish financial statements. Further rules, primarily dealing with disclosure, were included in Regulations attached to the *Uniform Companies*

Figure 10.1 Models of accounting regulation

Act. The directors of the company were (and still are) responsible for the financial statements. Listed companies were also subject to stock exchange listing rules but like the corporations legislation, the rules were primarily concerned with disclosure requirements. The determination of accounting principles was left to the accountancy profession.

The two main professional accountancy bodies, the Australian Society of Accountants (ASA) and The Institute of Chartered Accountants in Australia (ICAA), jointly commenced an accounting standard-setting program in 1972. Initial momentum for this program was achieved by the ASA endorsing the ICAA's Statements of Accounting Practice.

The two professional bodies had founded and, henceforth, jointly funded the Australian Accounting Research Foundation (AARF) in 1966. The Australian Accounting Standards Committee, which was subsequently restructured and renamed as the Accounting Standards Board (AcSB), was a board within the AARF. In 1983 a separate board was established to develop accounting standards for the public sector and the AcSB focused exclusively on drafting accounting standards for financial statements prepared by private sector entities (Henderson and Peirson, 2004, p. 7). The ASA and the ICAA appointed all members to the Boards and approved all standards issued by them. Both professional bodies required their members to comply with the standards issued by the two Boards (Walker, 1987, p. 269).

Government agencies, including the NSW Corporate Affairs Commission, reported high levels of noncompliance with Australian accounting standards (Walker, 1987, p. 270). While the professional bodies may have been able to require their members to comply with accounting standards, they lacked authority and influence over company directors responsible for the published financial statements.

Dissatisfaction with levels of compliance with accounting standards added support to calls for government intervention. In 1974 the Companies and Securities Industry Bill was introduced to Parliament. However, there was a change of government in the following year and the Bill was not enacted (Walker, 1987, p. 270). In 1978 the Accounting Standards Review Committee, appointed by the NSW Attorney General and chaired by Professor Chambers of the University of Sydney, issued a report that was highly critical of both accounting standards and the standard-setting arrangements. The Committee recommended appointment of a national body to ensure that accounting standards issued by the profession conformed to the Companies Act (Accounting Standards Review Committee, 1978).

The debate about the regulatory framework continued throughout the 1970s and early 1980s (Winsen, 1983; Walker, 1987). While the problem of noncompliance could be addressed by giving legal backing to accounting standards (as proposed by the professional accountancy bodies), questions also arose about the appropriate composition of, and representation on, a body vested with the authority to issue accounting standards with the force of law. Some considered that legal backing should be part of broader reforms, including government participation (Walker, 1987, pp. 270–273). The professional accountancy bodies acknowledged that legal backing may involve a tradeoff of their exclusive involvement in the standard-setting process. The ASA and the ICAA proposed that if government participation were required, it should take the form of direct representation on the AcSB, the profession's private sector accounting standards board, or through a standard-setting review board sponsored by the accountancy profession (Prosser, 1983).

The debate on standard-setting arrangements and dissatisfaction with the level of compliance with accounting standards culminated in a resolution in 1980 by the Ministerial Council for Companies and Securities (which comprised the Commonwealth and State Government Attorney Generals) that the National Companies and Securities Commission (NCSC) should consider forming an Accounting Standards Review Board. (For a discussion of the NCSC's original proposals and revised recommendations for the role and functions of the Accounting Standards Review Board, refer to Walker, 1987, pp. 270–272.) This ultimately led to the establishment of a standard-setting board with members appointed by the Ministerial Council in 1984.

While the regulation of financial reporting was close to liberalism in the first era of accounting standard setting from 1970 to 1983, there was movement towards associationism. Financial reporting regulation was not completely left to market forces because the preparation of financial statements, and to some extent their content, was required by legislation. However, the accounting standard-setting arrangements throughout that period are best described as liberalism. Accounting standards were issued by the professional accountancy bodies and were only mandatory for their members. Whether company directors chose to apply the accountancy profession's standards was left to market forces.

10.5 International harmonization of accounting 1970–1983

During the late 1960s and early 1970s there was growing international awareness of the potential benefits of harmonization of accounting standards. This led to

the establishment of the International Accounting Standards Committee (IASC) in 1973 by professional accountancy bodies from Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the UK, and Ireland. The Australian professional accountancy bodies participated jointly in the international harmonization process as a founding member of the Board of the IASC.

Four years after the establishment of the IASC, the International Federation of Accountants (IFAC) was formed in 1977. Its objectives include international development of the profession and harmonization of professional accounting standards (Herrera, 1997). The Australian accountancy bodies joined the IFAC, again supporting, in principle, the full global harmonization of accounting standards.

The Statements of Accounting Practice, which were initially issued as Recommendations on Accounting Principles by the ICAA and endorsed by the ASA in 1972, were closely based on the pronouncements of accounting principles issued by the Institute of Chartered Accountants in England and Wales (Walker, 1987, p. 269). During the late 1960s the accountancy profession in Australia started to look further afield for guidance on accounting principles and techniques. In 1967 an exposure draft issued by a committee of the ICAA on the treatment of income tax included two sentences adapted from Accounting Research Bulletin No. 43 issued by the American Institute of Certified Public Accountants in 1953 (Zeff, 1973, p. 15). This was followed by an exposure draft in 1969 on income, prior period adjustments, and extraordinary items, based on the corresponding pronouncement issued in 1966 by the Accounting Principles Board in the USA (Zeff, 1973, p. 16). Zeff (1973, p. 25) attributes the growing influence of American accounting developments in Australia to the increasing direct investment by US investors in Australian companies.

Developments in accounting in both the UK and North America continued to influence the accountancy profession in Australia. For example, Bulletin No. 16, issued by the ASA in 1974, contained two articles on Disclosure of Forecasts, one by Cohen, and another by Ma and Miller. Both of these made considerable reference to developments in the UK and the USA on reporting forecasts. The adoption of a tax-effect approach to accounting for income tax, instead of the taxes payable approach, was explicitly justified on the basis that it had been adopted by the accountancy profession in the UK, the USA, and Canada (AAS 3, paragraph 4).

When the IASC subsequently started to issue International Accounting Standards (IAS), the professional accountancy bodies started to turn to the international body as a major influence on Australian Accounting Standards. The

ASA and the ICAA jointly issued a Statement of Policy, APS 3, in support of IAS (ASA and ICAA, 1976). The professional bodies proclaimed that Australian Accounting Standards should, at a minimum, meet the requirements of IAS and that any existing Australian Accounting Standards should be reviewed in the event of a corresponding IAS being issued (APS 3, paragraph 2). However, the ASA and the ICAA declined to commit blindly to a policy of harmonization with IAS. If an IAS were issued on a matter not covered by existing Australian Accounting Standards, it should be adopted as an Australian Accounting Standard subject to being completely acceptable (APS 3, paragraph 3). For example, when the IASC issued *IAS 4: Depreciation Accounting* in 1976, the AcSB decided that some of the disclosure requirements of IAS were not necessary and chose not to incorporate them in *AAS 4: Depreciation of Non-Current Assets*, noting this as an exception in the compatibility statement published with the Standard. Similarly, there were several inconsistencies between *AAS 13: Accounting for Research and Development Costs* issued by the AcSB in 1983 and *IAS 9: Accounting for Research and Development Activities* issued by the IASC a few years earlier. The Australian standard permitted deferral of research costs, which were expensed under IAS 9, and AAS 13 imposed more restrictive recognition criteria. In many instances the standards issued by the IASC appeared to have more influence on the agenda of the AcSB than the content of the standards it issued.

In the period leading up to the establishment of the Accounting Standards Review Board, the Australian accountancy profession made an early start on the journey toward international harmonization. It supported the burgeoning movement toward full global harmonization through its involvement in the IASC and the IFAC. Australian accounting standards issued by the AcSB during this period were closely harmonized with those of the UK (Parker, 1986, pp. 85–86) with increasing influence from developments in the USA. The similarities in legal structures and historical links made the UK accounting standards a suitable source for Australian standards setters. Following UK standards was not incompatible with supporting full global harmonization as the UK accountancy profession was also a founding member of the IASC and a key player in the process of international harmonization, and most of the Australian standards predated those issued by the IASC during this period. However, full global harmonization was a long-term objective. The official policy of the accountancy profession at that time was that while benchmarked harmonization to IAS was desirable, a policy of substantial commonality should be adopted, such that Australian Accounting Standards should be compatible with IAS only to the extent that the latter were acceptable.

10.6 Australian standard setting 1984–1988

The second era of Australian accounting standard setting commenced with the establishment of the Accounting Standards Review Board (ASRB) in 1984. There were initially seven members appointed by the Ministerial Council: a chairman selected by the Ministerial Council, two members nominated by the professional accountancy bodies, and four members drawn from a panel proposed by organizations with an interest in financial reporting (Miller, 1991, p. 34). The ASRB was empowered to (Walker, 1987, p. 273; Miller, 1991, p. 34):

(a) determine priorities for the consideration of accounting standards referred to it
(b) review accounting standards referred to it
(c) sponsor the development of accounting standards
(d) seek expert advice as deemed necessary by the ASRB
(e) conduct public hearings as to whether proposed accounting standards should be approved
(f) invite public submissions into any aspect of its functions, and
(g) approve accounting standards.

Walker (1987) noted that the ASRB did not exercise its authority to sponsor the development of accounting standards, instead choosing to rely on other bodies, predominantly the AARF, to submit standards to it.

Accounting standards approved by the ASRB had a weak form of mandatory status. There was a presumption that compliance with accounting standards achieved a *true and fair view*. Directors who did not comply with approved accounting standards were required to disclose the financial effect of noncompliance and explain why compliance with approved accounting standards would not achieve a *true and fair view*. Auditors were required to comment on any justification of noncompliance and report it to the ASRB, which kept a register of such occurrences.

The accountancy profession was displeased with the arrangements. While some had hoped that the ASRB would merely 'rubber stamp' the profession's standards, the Board actively examined each issue and sought to impose its own set of priorities for the submission of standards. The accountancy profession had invested and continued to invest considerable resources in standard setting and did not welcome the ASRB's attempts to dictate priorities and policy (Miller, 1991, p. 34). Throughout most of the first four years of the ASRB, the Accounting Standards Board (AcSB) of the AARF continued its role of issuing

accounting standards for the accountancy profession, and submitted them to the ASRB for approval.

There was considerable tension between the professional accountancy bodies and the ASRB. For instance, the ICAA and the ASA continued to seek changes in the ASRB's powers. There was controversy and uncertainty about whether the ASRB was empowered to amend standards or whether it could only accept or reject standards submitted to it (Walker, 1987, p. 274). Another contentious issue was the uncertainty of ownership of copyright on standards submitted to the ASRB. This was not resolved until September 1985.

During its first 20 months of operation the ASRB issued only two accounting standards. Walker (1987) attributed this to the tardiness of the AARF in providing appropriately drafted submissions on matters identified as priorities by the ASRB. The slow progress in issuing standards attracted criticism (e.g. Boymal, 1985, pp. 18–19, cited by Walker, 1987, p. 279). The Ministerial Council responded by appointing the chairman of the NCSC, Henry Bosch, in 1985, to examine the standard-setting arrangements. Bosch concluded that the process for approving accounting standards was too long; proposals passed through the due process of the profession's Board, the AcSB, before being submitted to the ASRB and subjected to its due process (Bushnell, 1985a). The NCSC, the ASRB, the ICAA, and the ASA agreed upon a set of streamlined procedures to expedite the approval of accounting standards by the ASRB.

The new procedures resulted in enhanced cooperation between the accountancy profession and the ASRB. Some viewed them as indirectly providing legal backing for the profession's accounting standards (e.g. McGregor, 1985; *The Age*, 10 December 1985, cited by Walker, 1987). Some modifications would be required before submitting the profession's standards to the ASRB for approval, but it was expected that 21 standards could be prepared for submission by the end of 1986 (Bushnell, 1985b). Six of the profession's accounting standards were approved within 12 months of the new procedures taking effect.

A further development in 1986 saw government representatives agreeing, in principle, to the replacement of disclosure requirements in the Corporations law with requirements in accounting standards (Walker, 1993, p. 104). However, this was not implemented during the 1984–1988 era.

The cooperative arrangements continued for a few years until a dispute arose between the AARF and the ASRB over the content of the foreign currency standard (Killen, 1987; English, 1988). This resulted in calls from the profession to abolish the ASRB or, as in the case of Geoffrey Cohen, president of the ICAA, to merge the ASRB with the AcSB (Killen, 1987). Some members of the ASRB

responded by proposing a merger of the ASRB with the AcSB, which was approved in 1988.

With the establishment of the ASRB in 1984, 'the accountancy profession was forced into a reluctant marriage with the government on accounting standard setting' (Miller, 1991, p. 35). The regulatory structure, with the ASRB appointed by the Ministerial Council having exclusive responsibility to issue mandatory accounting standards, appears to be a significant step toward corporatism along the market–state axis. Walker (1987) argued that while authority was vested in the ASRB, power over standard setting in Australia remained with the accountancy profession, pointing to the domination of the ASRB by members of the accountancy profession and the frustration of the standard-setting process by the AARF. He argued that there was regulatory capture, evidenced by the streamlined procedures which resulted in fast-tracking approval of the profession's own standards (Walker, 1987), and 'which assured the profession that it would, in effect, control the ASRB' (Walker, 1993, p. 104). According to Walker, the regulatory capture culminated in the reverse takeover of the ASRB by the profession in 1988 (English, 1988, p. 30).

Walker's interpretation of the standard-setting arrangements during this period is consistent with associationism. The legal backing of approved accounting standards, subject to a true and fair override, is a significant change from the more liberal regime of the previous era. Reliance on market and community was achieved through the accountancy profession effectively self-regulating, supported by minor government intervention through the appointment of members of the ASRB and its authority to approve and, hence, give mandatory status to standards submitted to it by the accountancy profession.

However, other interpretations of the standard-setting arrangements from 1984 to 1988 are more consistent with corporatism. Miller (1991, p. 35), noting Walker's view, argued that if the ASRB were captured, it was 'a very troublesome captive'. Godfrey et al. (1994, pp. 315–316) suggested that the standard-setting process may have been captured by well-organized and politically influential preparers. Rahman (1992), adopting the theoretical perspective that key players in standard setting are driven by self-interest, perceived the major interest groups in financial reporting to be the accountancy profession, companies, bureaucrats in government, and politicians. He argued that rather than any one group capturing the standard-setting process, an equilibrium outcome on each issue is reached by the interplay of the competing interests. These alternative views generally place more emphasis on the government providing an oversight function through the authority of the ASRB to issue mandatory accounting standards and the role of the Ministerial Council in appointing its members.

Under alternative interpretations of the standard-setting regulatory arrangements in Australia from 1984 to 1988, financial reporting regulation may be described as associationism or corporatism (Parker, 1986, p. 76). Regardless of who, if indeed anyone, is viewed as having controlled the ASRB, the 1984–1988 era reflects a move away from the near liberalism of the 1970–1983 era towards a greater level of state intervention.

10.7 International harmonization of accounting 1984–1988

Australia continued on its path to international harmonization but did not take a direct route. The accountancy profession maintained its active involvement in the IASC and the IFAC, and the membership of the AcSB was increased from eight to nine to include the Australian representative to the IASC. But international harmonization objectives were not reflected directly in the ASRB's standard-setting process. The ASRB did not include any form of international harmonization, or any reference to international best practice, in its criteria for approving accounting standards. While there was no formal requirement to do so (self-imposed or otherwise) the ASRB did from time to time consider international developments. For example, developments in the USA were explicitly addressed in a report (Miller, 1986) on the funds statements standard prepared for the ASRB. It is interesting to note that only passing reference is made to the corresponding UK standard, SSAP 10.

The AcSB did not directly adopt standards issued by the IASC. Standards issued, or reissued, by the AcSB and approved by the ASRB were mostly compatible with IAS (e.g. AAS 8, AAS 11, and AAS 12) but inconsistencies remained. For instance, *AAS 14: Equity Method of Accounting* was inconsistent with *IAS 3: Business Combinations* because the Australian standard did not require the application of the equity accounting method to unconsolidated subsidiaries; *AAS 17: Accounting for Leases* did not require the same disclosures as *IAS 17: Accounting for Leases.* Also, the Australian standards often allowed fewer choices than the corresponding IAS. For instance, *AAS 18: Accounting for Goodwill* prescribed a maximum amortization period for goodwill while IAS 3 did not.

The position of Australian standard setters on international harmonization was similar to that of other developed nations. International Accounting Standards at the time were generally viewed as permitting too many alternative accounting treatments. In an interview published anonymously in the *Australian Accountant* in April 1986, Bosch, Chairman of the NCSC, acknowledged the

need for the ASRB to become more internationalized. However, he expressed reservations about the suitability of IAS at that time, describing them as 'lowest common denominator' solutions (Potter, 1987).

International cooperation between securities regulators was developing during the 1980s. For example, in 1987 a meeting of securities regulators concentrated on alignment of prospectuses and exchange of information between exchanges. Bosch noted, however, that differences in accounting standards were an impediment to the international alignment of prospectuses (Potter, 1987).

At a meeting of the International Organization of Securities Commissions (IOSCO) in 1988, the adoption of IAS for international filings was considered but rejected because, at that time, many IAS allowed for conflicting treatments to accommodate differences in domestic accounting standards. However, the IOSCO gave strong support to the IASC's project to enhance global comparability of financial reporting by reducing the number of accounting alternatives in IAS (Anonymous, 1989, pp. 22–27).

The accountancy profession, through the AARF, made more explicit reference to international developments when considering accounting issues. Discussion papers on issues on the AcSB's agenda made specific reference to pronouncement issues in other jurisdictions or by the IASC. For example, Discussion Paper No. 4, prepared by Miller and Scott (1980) for the AARF, reviewed standards issued or proposed by the Financial Accounting Standards Board (FASB) in the USA, the Canadian Institute of Chartered Accountants, and the IASC. However, the approach adopted during this era was one of an informed search for an Australian solution to accounting problems, rather than any commitment to harmonizing with standards issued by another authority.

Similarly, when the AARF embarked upon a conceptual framework project in 1979, it was able to draw on the conceptual framework project commenced by the FASB in 1973 (Dean and Clarke, 2003, pp. 289, 292). The initial exposure drafts issued in April 1988, and subsequent statements of accounting concepts, contained numerous similarities to the FASB conceptual framework. The IASC's conceptual framework proceeded concurrently with the project being undertaken by the AARF, resulting in the issue of an exposure draft in May 1988. Thus, the Australian accountancy profession worked simultaneously on two conceptual framework projects: the Australian conceptual framework project being undertaken by the AARF and the international conceptual framework through the involvement of the professional accountancy bodies in the IASC.

The similarity of the Australian and IASC exposure drafts is a result of their common starting point, the FASB's framework, and the influence of the

development of the Australian conceptual framework on the IASC's conceptual framework project. As noted by Sir David Tweedie, Chairman of the IASB, in a speech given in Sydney, in August 2002, 'Now the reason in fact that we are in a position to harmonize international accounting standards is basically because standard setters for many years now have been coming from a single conceptual basis, the conceptual framework that you pioneered much in Australia' (Jones and Wolnizer, 2003, p. 377).

The approaches to harmonization by key players in accounting regulation were mixed during the period from 1984 to 1988. The accountancy profession, through its participation in the IASC, pursued the foundations of full global harmonization with the development of an international conceptual framework of accounting. However, this was not reflected in contemporary undertakings such as the development of the Australian conceptual framework and individual accounting standards. The search for international best practice on the conceptual framework project was limited to the FASB conceptual framework given the dearth of international conceptual framework pronouncements at the time. The ASRB's approach can be described as partial internationalization, at best, with ad hoc reference to international developments on some accounting standards. Unlike the accountancy profession, the ASRB was not directly associated with the IASC. It is not surprising that the ASRB, as a body reporting to the Ministerial Council, gave more precedence to national sovereignty than international harmonization in setting accounting standards.

10.8 Australian standard setting 1988–1990

As discussed by English (1988, pp. 30–33), the ASRB had been dependent upon the AARF to submit accounting standards; only two standards had been submitted by other parties by 1988, and the ASRB did not have sufficient funding to sponsor the preparation of standards by other parties. The professional accountancy bodies had provided annually approximately $1.3m in funding to the AARF, compared with the AASB's annual budget of approximately $200,000. The AARF had also offered free expert advice, which could not have been otherwise afforded within the budgetary constraints of the ASRB.

In September 1988 the Ministerial Council approved a merger of the ASRB with the AcSB of the AARF. The AcSB was dissolved and the ASRB took on the dual functions of preparing and approving accounting standards. The membership of the Board increased from seven to nine and the two professional accountancy bodies were each given the capacity to nominate a member of

their respective bodies to the ASRB. The profession's representatives to the IASC and the International Public Sector Committee were given observer status on the ASRB (McGregor, 1989, p. 87). Under the arrangements of the merger, the AARF provided a secretariat and technical support to the ASRB. The merger formalized the relationship between the AARF and the ASRB that had evolved since 1984.

During the first three years the merged Board made significant progress on both the conceptual framework project and the issue of accounting standards. In 1990 the AARF and the ASRB jointly issued three concepts statements that formed the first three building blocks of the Australian conceptual framework of accounting to guide financial reporting and standard setting in the public and private sectors. The ASRB issued numerous accounting standards during a comparatively brief period on issues including setoff and extinguishment of debt, related party transactions, equity accounting, tax-effect accounting, and the presentation of profit and loss accounts.

During this period the AARF commissioned a report on the institutional arrangements for standard setting in Australia, known as the Peirson Report, which was released in 1990. The Peirson Report recommended the establishment of an accounting standard-setting board which should not be restricted to any particular interest group and be independent of interest groups, including the accountancy profession, business, and government. According to Peirson (1990), a wider section of the community, comprising users, preparers, auditors, and regulators, should have the opportunity to be involved directly in the standard-setting process, in particular through the establishment of broadly based consultative groups. Peirson (1990) also recommended the merger of the AASB with the PSASB.

At around the same time as the standard-setting boards merged, arrangements were being made to introduce a national scheme of corporate regulation to replace the former cooperative system. The Commonwealth Government of Australia passed the *Corporations Act 1989* to replace the *Uniform Companies Act* enacted in each of the states of Australia. This was delayed by a successful legal challenge by three states and the matter was not resolved until 1990. The recommendations of the Peirson Report were not reflected in this round of regulatory reform.

There are different interpretations of the implications of the merger of the AcSB with the ASRB. Adopting Walker's view of the merger, as a reverse takeover of the ASRB by the accountancy profession (English, 1988, p. 30), the changes introduced in 1989 moved the regulation of accounting closer to associationism. However, Miller (1991, p. 31) argues, 'the espousal of the co-regulation

philosophy and the merger in late 1988 of the government-sponsored and profession-sponsored standard-setting bodies for the private sector suggest that the system has been nudged closer to corporatism'.

10.9 International harmonization of accounting 1988–1990

The merged standard-setting Board did not have any formal or consistent harmonization policy during the period from 1988 to 1990. When the first three conceptual framework statements were issued in August 1990, the ASRB issued Release 100, formally incorporating the concepts statements, rather than harmonization, as criteria for setting accounting standards.

Not surprisingly, standards issued by the ASRB were often not harmonized to IAS standards. For instance, the difference that had arisen between AAS 14 and IAS 3 were perpetuated when the ASRB issued the approved version of the Standards, *ASRB 1016: Disclosure of Information about Investments in Associated Companies*; and inconsistencies arose between *ASRB 1024: Consolidated Accounts*, issued in 1990, and *IAS 27: Consolidated Financial Statements*, in the treatment of entities over which the parent's control was temporary.

While not adopting a policy of harmonizing to IAS or generally accepted international practice, the ASRB relied on the lack of international consensus in 1990 when withdrawing *ED 49: Accounting for Identifiable Intangible Assets*, issued in 1989. However, this view was not reflected in numerous other accounting standards, where the ASRB provoked many of its constituents by going further than its overseas counterparts (Miller, 1995a, p. 8).

As noted above in the discussion of the 1984 to 1988 era, the AARF did not have any firm commitment to harmonizing its conceptual framework to the framework being developed concurrently by the IASC. This approach did not change when the PSASB of the AARF joined forces with the ASRB to prepare the Australian conceptual framework of accounting. While there were many similarities to the IASC's conceptual framework issued in 1989, the Australian conceptual framework was considerably more detailed. *Statement of Accounting Concepts 1* also contains some notable differences, such as the inclusion of the reporting entity concept based on the information needs of users (PSASB and ASRB, 1990a).

Thus, Australia's harmonization policy waxed and waned after the merger of the AcSB and the ASRB. The accountancy profession continued to work toward its long-term goal of full globalization through its representation on the IASC.

However, domestic developments and initiatives of the profession did not reflect this long-term goal. The ASRB did not have a formal harmonization policy during the period from 1988 to 1990, preferring instead to be guided by the conceptual framework. The accountancy profession, through the role of the AARF in providing technical support to the ASRB and its appointments to the Board, was able to influence the strategic direction of the ASRB. This provided only limited support for harmonization in Australian standard setting because the accountancy profession's harmonization policy in the short and medium term was one of substantial commonality (APS 3), and the accountancy profession had, through the PSASB and the AARF, and in conjunction with the ASRB, developed a conceptual framework that was not harmonized to the IASC's framework. This created the foundation for tension between international harmonization and a deductive process of standard setting based on an underlying conceptual framework.

10.10 Australian standard setting 1991–1999

Discontent with the cooperative arrangements among the states for the regulation of companies and administration of company law resulted in a series of reforms that commenced in 1989 but did not become effective until the beginning of 1991. The first of these was the passing of the *Corporations Act* in 1989. As discussed above, legal challenge of this Act was not resolved until 1990. Corporate reform could then be dealt with more efficiently because the Commonwealth Government of Australia had established control over almost all aspects of corporate legislation.

Another aspect of the regulatory reforms was the *Australian Securities Commission Act 1989* (*ASC Act*), which established the Australian Securities Commission (ASC – later renamed the Australian Securities and Investments Commission) to replace the NCSC and state Corporate Affairs Commissions by the end of 1990. The ASC had greater powers of inspection and investigation and was better resourced than its predecessor, the NCSC. The divided responsibilities and the absence of accountability to a single parliament were critical flaws in the former cooperative system (Miller, 1991, p. 31). The ASC enhanced the role of the government by providing a more consistent instrument of government policy because it was accountable to a minister of the Commonwealth Government of Australia, rather than to the Ministerial Council of State and Commonwealth Attorney Generals (Miller, 1991, p. 33).

A third aspect of the regulatory reforms was the establishment of the Australian Accounting Standards Board (AASB) as a federal statutory body from 1 January 1991, with the authority to issue accounting standards with the force

of law. Members of the AASB were to be appointed by the Commonwealth Attorney General, four of whom could be nominated by the ICAA and the ASCPA (Australian Society of CPAs, formerly known as the Australian Society of Accountants).

The major functions of the AASB were specified in section 226 of the *ASC Act*. These included: developing a conceptual framework for the purpose of evaluating proposed accounting standards; reviewing accounting standards and sponsoring their development; engaging in public consultation; and changing the form and content of a proposed accounting standard as the AASB considered necessary.

The *Corporations Act 1989* was amended in 1991 to give prominence to accounting standards. The true and fair override was replaced with a requirement to comply with approved Australian Accounting Standards (section 298(1)) and provide additional information and explanation, if necessary, to achieve a true and fair view (section 299(1)). Thus, a strong form of mandatory status was given to accounting standards issued by the AASB.

The AASB and the PSASB furthered the conceptual framework project with the issue in 1995 of *SAC 4: Definition and Recognition of Elements of Financial Statements*. This was a controversial statement. The exposure draft that preceded SAC 4 attracted considerable opposition because it proposed a balance sheet bias and represented a significant departure from traditional accounting practice (Howieson, 1993; Miller and Loftus, 1993; Philp, 1993). A particularly controversial requirement was the recognition of executory contracts (referred to in SAC 4 as agreements equally and proportionately unperformed). Concerns about the content of SAC 4 were exacerbated by a requirement of the ASCPA and the ICAA in *Miscellaneous Professional Statement APS 1* (subsequently amended) that members comply with the statements of accounting concepts.

While the legislated purpose of the AASB's conceptual framework project was to guide its deliberations over accounting standards, the Board did not slavishly apply the principles established in the concepts statements. Howieson (1993) identified six inconsistencies between SAC 4 and Australian accounting standards as at 1993. A subsequent analysis of inconsistencies between the Australian conceptual framework and Australian accounting standards found that half of the differences identified by Howieson remained a decade later and that new inconsistencies had been introduced (Loftus, 2003).

The AASB's only formal criterion for determining the content of accounting standards was the conceptual framework, which was based on an explicit premise of serving users' needs for information. However, it was not uncommon for

the debate and public consultation process to be dominated by preparers. The goodwill debate is an interesting case that demonstrates the interaction of key players and the increasing role of international harmonization in Australian financial reporting.

The amortization requirement in *AASB 1013: Accounting for Goodwill* (originally issued as ASRB 1013) was unpopular with Australian companies. While many companies mitigated its effects by recognizing other intangibles that did not need to be amortized, some went further by using amortization policies, such as the inverse (or reverse) sum-of-the-years'-digits (ISOYD) method, to defer the recognition of expenses for the amortization of goodwill (Miller, 1995a; Day and Hartnett, 1999/2000). The ASC gave prominence to the debate on goodwill amortization in 1993 by challenging the use of the ISOYD method of the amortization. The ASC issued *Practice Note 39: Accounting for Goodwill*, stating that, 'it would be difficult to envisage circumstances in which the pattern of benefits expected to be derived from goodwill would be weighted towards the latter years of the useful life of goodwill …'. The debate attracted intense lobbying from preparers who argued that the Australian requirements placed Australian companies at a disadvantage in international capital markets (Pacific Dunlop, 1994; Miller, 1995a; Day and Hartnett, 1999/2000). Some companies, including Pacific Dunlop, ignored the Practice Note and engaged in lobbying against AASB 1013. The campaign to review the goodwill standard was joined by more large Australian companies, and supported by the Group of 100 (a body of financial executives of large Australian companies and government business enterprises) and the Australian Shareholders Association. However, the AASB did not consider a revision of the goodwill standard to be a priority and did not place it on its agenda at that time.

Some corporations proceeded to lobby the Attorney General, claiming that AASB 1013 had an adverse effect on the international competitiveness of Australian business. The AASB responded, arguing that a review was not necessary because AASB 1013 was harmonized to *IAS 22: Business Combinations*. The Attorney General was reluctant to intervene. As noted by Miller (1995a, p. 5), 'While the AASB is a statutory board with its members appointed for terms of two to three years by the Attorney General, it has the ability (at least in the short run) to make independent decision subject to any new standards being exposed to a veto in the federal parliament.' The independence of the ASC was established by the *ASC Act 1989*, which gave the Attorney General power to give written policy direction, but not to intervene on a specific case.

The matter was eventually resolved by Urgent Issues Group (UIG), a body formed in 1994 to provide timely guidance on urgent accounting issues. In 1995

the UIG issued *Abstract 5: Methods of Amortization of Goodwill*, prescribing the use of the straight-line method of amortization of goodwill. The AASB subsequently revised *AASB 1013* to the same effect. What is noteworthy in this case is the intense lobbying by corporate interests and the demonstration of the increased internationalization of accounting debate in Australia.

Throughout the 1990s there was increasing politicization of the standard-setting process (Godfrey et al., 1997, pp. 384–385; Collett et al., 1998). Miller (1995b) attributes this to the removal of the true and fair override and the ASC's low tolerance of noncompliance with accounting standards. The formation of the ASX in 1987 through the amalgamation of the stock exchanges in each state gave rise to a well-resourced entity that was able to use its lobbying power to promote the interests of the Australian capital market. By the mid 1990s the Group of 100 and the ASX emerged as key players representing corporate interests in standard-setting debates (Collett et al., 1998, p. 9).

The reforms introduced in 1991 provided more centralized regulation of accounting. There was a shift in power from the accountancy profession to the government as the standard-setting body became a statutory body. When viewed in the context of the concurrent developments that brought corporate legislation under the control of the Commonwealth Government, and the establishment of a more powerful securities commission accountable to a Commonwealth minister, the Australian standard-setting arrangements introduced in 1991 are best described as corporatism, moving further toward the state end of the market–state spectrum.

Corporate Australia, with much more at stake given the strong form of mandatory status of accounting standards, coupled with the monitoring activities of the ASC, became a powerful lobbying force throughout the 1990s. While a powerful lobby force, corporate interests did not drive the outcomes of the AASB, which, as noted by Miller (1995b, p. 10), had to maintain a balance between the potentially conflicting interests of its constituents:

> 'While the AASB is not controlled by outside parties, it is constrained by the need to maintain the continuing support of senior people in the Attorney General's department, the accounting profession, and the business sector. If there were a motion for the disallowance of an accounting standard in the House of Representatives, and the Attorney General did not stand up and defend the standard, the authority of the AASB would be undermined. If the leaders of the accounting bodies thought the AASB was stubbornly headed in the wrong direction, they could pull the plug on funding AARF's services for the AASB. Given

enough provocation, and irresponsible action by the AASB, corporate Australia could mount a blitzkrieg of lobbying aimed at the dismantling or restructuring of the AASB.'

The capacity and willingness of corporate Australia to become an active force in standard setting gave impetus to Australia's harmonization policy, as discussed below.

10.11 International harmonization of accounting 1991–1999

The internationalization of Australian business and the growing forces of globalization led to an increasing recognition of the importance of international harmonization among key players in accounting regulation. However, there was little consensus on the form of harmonization that should be adopted.

In an isolated commitment to a narrower form of harmonization in 1994 with the accounting standards of another jurisdiction, the AASB issued *Policy Statement 4: Australia–New Zealand Harmonization Policy*, which outlined a joint policy of harmonization of conceptual frameworks and accounting standards. This development reflected the impact on accounting practice and regulation of a bilateral agreement for economic cooperation, the *Closer Economic Relations Agreement*. This was the first major instance of direct influence of economic policy on accounting standard setting in Australia.

The accountancy profession had continually supported international harmonization through its participation in the IASC. During the 1990s the professional accountancy bodies stepped up their efforts to promote harmonization in Australia. The executive director of the ICAA called for 'real service, not lip service, for the cause of internationalization' (Harrison, 1995, p. 6). Another sign of the accountancy profession's increased commitment to international harmonization was the increased representation on the IASC from one member to two members and one technical adviser in 1994 (Miller, 1995a, p. 15). Other key supporters of international harmonizations were large corporations, the ASX, and the Group of 100 (Howieson, 1997, p. 190; Collett et al., 1998, p. 9).

The goodwill debate also reflected the increased internationalization of accounting issues in Australia. Corporate lobbyists argued on the basis of disadvantage in international capital markets, while the AASB supported its position on the basis of international harmonization, rather than appealing to the conceptual framework which was, at the time, the explicit criteria to be applied in standard setting.

Some of the support for harmonization reflected concern that Australia should not get ahead of the rest of international practice (Philp, 1993, p. 19; Miller, 1995a, pp. 8–10). The ICAA acknowledged widespread community concern that Australian standard setters needed to take more heed of international precedents in its 1993 Annual Report (Miller, 1995a, p. 9). Similarly, the national president of the ASCPA commented that the professional bodies were concerned that 'Australia does not get too far out in front of the world as to do so would create problems for those Australian companies which trade and borrow internationally' (Paton, 1993, p. 5).

Concurrently, the international campaign for harmonization gained support from an agreement between the IASC and the IOSCO in 1995. The IASC undertook to complete a core set of standards by 1999 that the IOSCO would consider endorsing for cross-border offerings. The IASC accelerated the core standard program in 1996 to target completion in 1998. This involved a revision of existing standards so as to reduce the number of accepted alternative accounting treatments. Endorsement would mean that financial statements completed in accordance with IAS by foreign listed entities would be accepted by stock exchanges without the need for reconciliation to the domestic GAAP of the stock exchange.

The AASB faced growing pressure for internationalization from key players within Australia. Another influence from beyond Australian shores was the AASB's involvement in the G4+1, a group of standard setters from Australia, Canada, New Zealand (which joined after the group's name was established), the UK, the USA, plus the IASC. The G4+1 shared similar conceptual frameworks and cooperated on projects of accounting issues, such as intangible assets. Through involvement in the G4+1, Australia was able to influence the progress and content of standards being developed by the IASC.

The AASB responded to the various pressures for international comparability with the release of a discussion paper on international harmonization (AASB, 1994a). Three broad categories of harmonization were identified: full global harmonization, which was considered to be impractical in the short term and which required unacceptable compromises on financial reporting quality; harmonization to accounting standards issued in another jurisdiction, such as the USA; and internationalization, which was viewed as a cooperative arrangement through which international best practice would be considered in domestic standard setting. The USA was considered as the most likely choice if Australia were to harmonize to the standards of another jurisdiction, reflecting the increasing links between some of Australia's largest corporations and US capital markets.

The 10 responses received to the AASB's discussion paper are summarized by Miller (1995a). All respondents supported some form of international harmonization. One respondent, the Group of 100, urged standard setters to work towards a restructured IASC with a view to achieving more robust accounting standards. In contrast, a submission from the Association of Accountants in Australia and New Zealand, an association of academics, while supporting international comparability, stressed the need for national sovereignty in standard setting to enable appropriate responses to the needs of Australian business and society.

Following a review of responses to its discussion paper, the AASB with the PSASB issued *Policy Statement 6: International Harmonization Policy* in 1996. The harmonization policy reflected a long-term strategy of working towards full global harmonization with an interim policy of benchmarked harmonization, whereby compliance with Australian standards would, to the extent acceptable, constitute compliance with IAS. However, the reverse might not apply as the Australian standard setters would continue to add additional disclosure requirements or remove alternatives, as they saw fit. The conditional harmonization, which was subject to the IAS being acceptable, leaves considerable scope for inconsistencies to arise. If the IASC issues an accounting standard which adopts policies other than those preferred by the AASB, or which is inconsistent with the Australian conceptual framework, the extent of harmonization could vary: 'There must be a willingness to suffer a loss of autonomy and sacrifice some accounting preferences' Miller (1995a, p. 10). As the AASB proceeded along its path of benchmarked harmonization toward its long-term destination of full global harmonization, it was destined to be challenged by obstacles such as having to forgo some of its preferred choices and the need to give priority to harmonization over the conceptual framework and make decisions that would, at times, provoke some of its constituents.

The pressure for international comparability inevitably led to tensions with the AASB's policy on the role of the conceptual framework in standard setting. SAC 4 contained several inconsistencies with the IASC's conceptual framework, particularly in relation to the definition of revenue. When asked whether harmonization would divert the AASB from the conceptual framework, at a meeting of the Accounting Standards Interest Group at the AAANZ Conference in Hobart, Ken Spencer, Chairman of the AASB, replied that harmonization was probably distracting the AASB and that the Board could not always direct most of its attention to the conceptual framework (Howieson, 1997, p. 202).

The ASX viewed harmonization as a matter of urgency because it was concerned by the potential loss of Australian listings to other stock exchanges (Humphry, 1997). In 1997 the ASX strengthened the AASB's resolve to make international harmonization a priority by providing $1 million to fund a harmonization project to be undertaken by the AASB and the AARF. The ASX raised the money by imposing a 3% levy on annual listing fees for 1997 and 1998.

In the late 1990s many Australian accounting standards were revised as part of the harmonization program undertaken by the AASB and AARF to reduce the number of inconsistencies with IAS, which were also being revised at that time. Even with the impetus from the ASX, the AASB did not fully harmonize to IAS. Identifiable intangible assets, other than research and development costs, continued to be unregulated, notwithstanding that the IASC had issued a standard on intangible assets. Similarly, regulation of reporting on financial instruments in Australia lagged behind international developments. In 1997 the IASC commenced a two-stage project to develop accounting standards for financial instruments. The first stage was the development of an interim international standard on recognition and measurement, and the second stage was the establishment of the Joint Working Group comprising national standard setters and the IASC to prepare a comprehensive standard. The first stage culminated in the issue of *IAS 39: Financial Instruments: Recognition and Measurement* in 1999 as an interim standard. The AASB decided against issuing a corresponding Australian accounting standard. The failure to harmonize (or even partially harmonize) to IAS 39 left a gap in Australian reporting requirements with respect to the recognition and measurement of financial instruments, resulting in the omission from financial statements of many transactions involving derivative financial instruments and their effects on financial position and financial performance before settlement.

The financial and political aspects of the standard-setting arrangements in place from 1991 to 1999 facilitated the direct intervention by the ASX. From a financial perspective, Peter Day, Deputy Chairman of the ASC and former chairman of the Group of 100, the AASB, and the Urgent Issues Group, had expressed concerns about the lack of resources for standard setters amid the growing cost of standard setting, driven by the increased complexity of issues on the standard-setting agenda. Second, the corporatism of the 1990s smoothed the way for the ASX, which had no standard-setting authority, to provide direction to the AASB. The AARF, while a long-standing supporter of harmonization, was also a strong supporter of the conceptual framework. However, the influence of the accountancy profession in standard setting had been weakened over a series of reforms.

The ASX initiative, which effectively gave policy direction to the AASB, was not challenged by the Australian Government because the objective was consistent with its own. In 1997 the Treasury launched the Corporate Law Economic Reform Program (CLERP), which included a proposal for an even stronger commitment to IAS. CLERP (Commonwealth of Australia, 1997, p. 28) suggested: 'From 1 January 1999, the AASC should issue identical exposure drafts of standards for public comment to those issued by the IASC with the objective that the final standards issued by the AASC would be consistent with Australian law and be the same as those issued by the IASC, unless the Government, upon advice from the FRC, determines that to do so would not be in Australia's best interests.' The AASC and the FRC refer to a proposed reformed and renamed standard-setting body and an oversight body respectively. The Treasury's proposal would effectively remove standard-setting power from the AASB to the IASC, with changes requiring the support of the FRC and the approval of the Australian Government. The role of the AASB would have been reduced to putting a 'local wrapper' around standards issued by the IASC.

The Treasury's proposals were opposed by key players in accounting standard setting, including large companies and the accountancy profession (Brown and Tarca, 2001, pp. 281–282). In a joint submission on the CLERP proposals, the Australian Society of Certified Practising Accountants and the Institute of Chartered Accountants argued that adoption of IAS was premature (ASCPA and ICAA, 1998).

Another opponent of immediate full harmonization was the AASB: 'The AASB believes that committing to the adoption of IASC standards without amendment is premature, and based on a number of myths which need to be dispelled' (Spencer, 1998, p. 20). The first 'myth' that Spencer sought to dispel was that IASC standards were globally accepted. Only 10 countries (Croatia, Cyprus, Kuwait, Latvia, Malta, Oman, Pakistan, Trinidad and Tobago, Malaysia, and Papua New Guinea) adopted IASC without amendment at that time. Second, he rebutted the assumption, or 'myth', that immediate adoption would benefit Australia. While acknowledging that adoption of IASC standards might provide some cost savings for large Australian entities seeking a foreign listing, smaller Australian entities that rely on domestic sources of capital would incur additional costs with no corresponding benefit (Spencer, 1998, p. 21). The third 'myth', that IASC standards are as rigorous, was countered on the premise that IASC standards allowed more flexibility and were less suited to the Australian environment (Spencer, 1998, p. 21). He also rejected the view that immediate adoption was widely supported. He argued that the AASB's current policy was widely accepted, citing a survey of listed entities undertaken by the ASX, which found

that 87% favored a harmonization policy over immediate adoption of IAS (Spencer, 1988, p. 22). Lastly, Spencer argued that the assumption, or 'myth', that endorsement by the IOSCO of IAS for cross-border listing was imminent was not realistic, particularly given the public consultation process that would need to be followed by the SEC.

Towards the end of the second millennium, the AASB, the accountancy profession, the Commonwealth Treasury and other key players, including the ASX and the Group of 100, were united by a common goal of international harmonization. However, few supported slavish adoption of IAS and the harmonization policy was effectively one of substantial commonality with IAS.

10.12 Australian standard setting 2000 onwards

Major changes were made to the standard-setting structure by the *Corporate Law Economic Reform Program (CLERP) Act 1999*, which amended the *ASIC Act 1989*. The reforms were consistent with the general recommendations of the Peirson Report commission a decade earlier by the AARF. The AASB was reconstituted as a body corporate, responsible to the Financial Reporting Council (FRC), which is appointed by the Treasurer. The functions of the AASB were widened to include setting accounting standards for the public sector and not-for-profit entities. Accordingly, the accountancy profession's PSASB was disbanded. The UIG, which was originally established by the AARF, also came under the AASB in 2000. The functions of the AASB were specified in section 277(1) of the *ASIC Act*:

> 'To develop a conceptual framework, not having the force of an accounting standard, for the purpose of evaluating proposed accounting standards and international standards.
>
> To make accounting standards under section s.334 of the *Corporations Law* for the purposes of national scheme laws.
>
> To formulate accounting standards for other purposes.
>
> To participate in and contribute to the development of a singe set of accounting standards for worldwide use.
>
> To advance and promote the facilitation of the development of accounting standards that require the provision of financial information that is relevant and reliable, facilitates comparability, and is readily understandable to allow users to

> make and evaluate decisions about allocating scarce resources and assessing the performance and financial position of entities.'

The reconstituted AASB commenced with a full-time chairman, who is appointed by the Treasurer, and nine part-time members, who are appointed by the FRC. The number of part-time members has since been increased to 12.

The AASB was provided with a secretariat funded by the Treasury. The secretariat had, until then, been provided by the AARF. This change involved a transfer of a significant number of the staff of the AARF, a private sector body established by the two major professional accountancy bodies, to the AASB, a public sector corporation.

The FRC was established in 2000 as a statutory body comprising key members of the business community, the professional accountancy bodies, governments, and regulatory agencies. The FRC oversees the AASB, advises the Commonwealth Government of Australia on accounting standard setting, monitors developments in international accounting standards, and determines the broad strategic direction of the AASB. In October 2003, the FRC's oversight function was extended to the Auditing and Assurance Standards Board (AUASB), which until then had been a board of the AARF.

Another aspect of the current regulatory framework is that the statutory standard-setting body reports indirectly to the Federal Treasurer rather than to the Attorney General. Arguably, this has advanced the perspective of accounting standard setting as a potential instrument of national economic policy. This is also reflected in the objectives of the new arrangements, as stated in the *ASIC Act* (section 224):

> 'To facilitate the development of accounting standards that require the provision of financial information that allows users to make and evaluate decisions …
>
> To facilitate the Australian economy by reducing the cost of capital, enabling Australian entities to compete effectively overseas, and having accounting standards that are clearly stated and easy to understand.
>
> To maintain investor confidence in the Australian economy (including its capital markets).'

The current standing-setting arrangements in Australia reflect corporatism and have moved further towards the state end of the market–state spectrum with the reforms introduced at the beginning of 2000, such as the transfer of the AARF

secretariat for the AASB to the Treasury, the disbandment of the accountancy profession's public sector standard-setting board, and the transfer of the UIG from the AARF to the AASB. Interest associations, comprising key stakeholders from the business community, professional accounting bodies, governments, and regulatory agencies, are assigned the role of overseeing a standard-setting body, for public purposes including facilitating the Australian economy by lowering the cost of capital and enhancing the international competitiveness of Australian business. As international harmonization became increasingly accepted as a strategy to make large Australian corporations more internationally competitive, the shift of power and objective reflected in the new standard-setting arrangements cleared the road for the advancement of Australia's harmonization policy.

10.13 International harmonization of accounting 2000 onwards

The CLERP reforms introduced in 2000 did not include the Treasury's proposal (Commonwealth of Australia, 1997) that IAS should be adopted as Australian accounting standards for domestic reporting, with departures from IAS requiring Government approval, on the recommendation of the FRC. The Government backed away from its extreme position on adopting IAS in the light of considerable opposition to the proposals at that time. However, with the CLERP reforms in 1999 an international harmonization objective became enshrined within legislation as one of the functions of the FRC (ASIC Act 1989, section 225(2)):

The FRC functions include:

- Furthering the development of a single set of accounting standards for worldwide use with appropriate regard to international developments;
- Promoting the continued adoption of international best practice accounting standards in the Australian accounting standard-setting processes if doing so would be in the best interests of both the private and public sectors in the Australian economy.

The reconstituted AASB revised its harmonization policy in 2002. Policy Statement 6, on international harmonization, was withdrawn. Policy Statement 4, which had dealt with harmonization between Australian and New Zealand accounting standards and conceptual frameworks, was reissued to encompass an extended harmonization/convergence policy. Policy Statement 4 also reflected a stronger commitment to harmonization to IFRS. It reduced the circumstances in

which a standard issued by the IASB would not be adopted in Australia; a standard issued by the IASB should be adopted by the AASB unless it was not considered to be in the best interests of the Australian public and private sectors. Policy Statement 6 (paragraph 2.2) had provided for benchmarked harmonization, such that the method adopted in an Australian standard should be an alternative allowed under the corresponding IAS, and the IAS disclosures should form the minimum for an Australian standard. While acknowledging the ideal of a single global set of standards, the earlier policy statement referred to harmonization as compatibility of national standards in all significant respects.

International developments would soon start to drive Australia's international harmonization policy further along the road to full harmonization. In 1997 the IASC commenced a strategic review of its structure and processes that resulted in the international standard-setting body ceasing to be controlled by a board of national professional accountancy bodies. A new structure, involving a 14-member board, was approved by the IASC member bodies in 2000 and came into effect in April 2001. The IASC was replaced by the International Standard Setting Board (IASB), whose members are appointed by the Trustees of the International Accounting Standards Committee Foundation (IASCF). The reforms established a partnership between the IASB and national standard-setting bodies to strengthen the development of an internationally accepted set of accounting standards (IASCF, 2001).

Other significant milestones in the international journey towards harmonization include laws passed in 1998 in Belgium, Germany, France, and Italy permitting the use of IAS for domestic financial reporting by large companies. In 1999 the IOSCO commenced its review of the core set of standards, which resulted in a recommendation in 2000 that its members allow the use of 30 IASC standards, with supplemental treatments as necessary, in the financial statements of cross-border listings (IASCF, 2001). The IASB undertook an improvements project, resulting in the issue of 13 exposure drafts in May 2002 proposing amendments to its standards (FRC, 2002a). In a move much welcomed by the IASB, the European Union in June 2002 approved the adoption of regulations to require the use of IAS and International Financial Reporting Standards (IFRS) issued by the IASB by 1 January 2005 (IASB, 2002). These global developments collectively reflect growing international acceptance of standards issued by the IASB.

While in 1999 the Australian Government had backed away from a full harmonization policy, the global developments in the first few years of the new millennium strengthened its resolve. The next phase of the Corporate Law Economic Reform Program (CLERP 9) was announced in June 2002. Within a

month, the FRC announced the adoption of IFRS for the preparation of domestic financial statements for reporting periods commencing on or after 1 January 2005 (FRC, 2002b). The Government's support for the FRC's strategy was reflected in the announcement in June 2002 by the Treasurer and the Parliamentary Secretary of approval for $2 million in funding to help Australia meet its goal of adopting international accounting standards (Commonwealth of Australia, 2002). Convergence with IFRS was subsequently included in the CLERP 9 Discussion Paper released by the Treasury in September 2002.

The decision to adopt IFRS was not as popular as might have been expected given earlier support for IAS from large companies in Australia and the Group of 100. A major factor in this was the uncertainty created by the timing of Australia's adoption of IFRS; many IFRS were still being revised as part of the IASB's improvements project.

But the adoption of IFRS had strong support from the ASIC, and Australian business soon realized it was 'past the point of no return' on a highway to international convergence. The AASB issued and revised accounting standards and concepts statements as part of its international convergence program under the direction of the FRC. Parts of the Australian conceptual framework differed from the IASB's *Framework for the Preparation and Presentation of Financial Statements*, originally issued by the IASC in 1989. As part of the international convergence program, the AASB (2004a) issued the *Framework for Preparation and Presentation of Financial Statements* (*Framework*), which is equivalent to the IASB's framework. The *Framework* replaced SAC 3 and SAC 4, previously issued by the PSASB and the AASB in 1990 and 1995 respectively. Thus, the very detailed Australian conceptual framework documents were effectively replaced by the less-developed framework of the IASB in the interests of international convergence.

While more harmonized to IFRS than ever before, Australia has not completely substituted IFRS for Australian standards. The FRC (2002b) had envisaged an amendment to the *Corporations Act* to require that financial statements be prepared in accordance with IFRS instead of standards issued by the AASB. This did not eventuate. Instead, the AASB issues 'Australian Equivalents of International Financial Reporting Standards'. The AASB continues to modify the standards issued for the IASB for application in Australia. However, the scope of the modifications is restricted to limiting the alternatives permitted by an IFRS, prescribing additional disclosures, such as those prescribed for related party transactions, and other modifications essential to enable the standards to be applied by Australian entities. For instance, *IAS 7: Cash Flow Statements* permits

a choice between the direct method and the indirect method of presenting cash provided by operations. When issuing *AASB 107: Cash Flow Statements* in 2004, the AASB deleted paragraph 18(b), effectively removing the indirect method as an alternative. When issuing *AASB 119: Employee Benefits* in 2004, the AASB specified the use of government bond discount rates to determine the present value of employee obligations (paragraph AUS18.1). This modification was considered necessary because the conditions of an active and liquid corporate bond market do not apply in Australia. Other modifications introduced by the AASB include the incorporation of the reporting entity concept into Australian standards, which effectively reduces their application to exclude entities for which it is not reasonable to assume the presence of users dependent upon general purpose financial reports.

In requiring the adoption of a full harmonization policy by 2005, the FRC was exercising its power under the *ASIC Act* to give strategic direction to the AASB. In their joint submission in response to the CLERP 1 proposals in 1997, the professional accountancy bodies had suggested three criteria that should be met before the adoption of international accounting standards: IAS have been adopted by major capital markets; an effective role for Australia in the IASC has been established; and the adoption of IAS has received substantial support from Australian constituents through an extensive due process (ASCPA and ICAA, 1998, p. 2).

The first criterion suggested by the professional accountancy bodies was partially met; at the time of the FRC's decision, IAS had been adopted by one major capital market. A major trigger for the FRC's decision appears to have been the EU's announcement of the adoption of IFRS. However, the European capital market is not targeted by many of Australia's larger companies in their attempts to raise foreign capital. Australian companies that raise capital abroad are more likely to list in the USA than in the EU (Lonergan, 2003).

There is no evidence that the second criterion, relating to the establishment of Australia's role in the IASB, was considered in the FRC's decision. There was clearly an intention that the AASB would continue to try to work with the IASB towards the development of a single set of high-quality accounting standards. However, the power to influence international standards was potentially weakened by the agreement to accept IFRS that had not yet been issued by the IASB. The adoption of IFRS has undermined Australia's ability to influence the IASB by undermining its negotiating power (Lonergan, 2003).

Lastly, the professional accountancy bodies' recommendation that the adoption of international accounting standards be subject to substantial support

expressed through due process was not satisfied. Under the corporatist standard-setting structure established in 2000, no due process or public consultation was required for this decision.

10.14 The beginning of a new journey or the end of the road?

Opponents of the adoption of IFRS argued that Australia's position as a key player in international standard setting would be diminished (Collett et al., 1998; Brown and Tarca, 2001, 2005; Lonergan, 2003). Lonergan argued that the loss of intellectual capital, the diminished negotiating power, and the loss of credibility would impede any role Australia might play in influencing the development of international accounting standards. His article, 'The Emasculation of Accounting Standard Setting in Australia', reflects the view that the adoption of IFRS was the 'end of the road' for Australia's role in international standard setting.

While adoption of IFRS may have impaired Australia's negotiating power, it is not clear that, with a relatively small capital market, Australia had any significant bargaining power to lose since the disbandment of the G4+1 in 2001. Australia's influence in global standard setting has reflected the international reputation for intellectual capital and the investment in standard setting of the Australian accountancy profession, the AASB, and other stakeholders. Australia's role as a major player in the development of the international conceptual framework and accounting standards has been established through the involvement of Australians on international committees and boards, and the initiatives and projects undertaken in the past few decades by the AARF and the AASB. Australia's influence in international accounting standard setting has been through participation rather than by negotiation.

Three years after the FRC announced mandatory adoption of IFRS, it is appropriate to take stock of Australia's role in the international arena. Richard Humphry, former Chairman of the ASX, is a trustee of the IASCF (IASCF, 2004, p. 20). One IASB board member is appointed as a liaison member to the Australian and New Zealand standard setters. The IASB board member currently appointed to that position is Warren McGregor, former Chief Executive Officer of the AARF (p. 21).

Kevin Stevenson is the Director of Technical Activities, IASB, and the non-voting chairman of the International Financial Reporting Interpretations Committee (IFRIC) (IASCF, 204, p. 21). Mr Stevenson is a former member of the AASB and the UIG, and a former Executive Director of the AARF. Wayne

Lonergan, a former member of the AASB, was a member of the IFRIC until his term expired on 30 June 2005.

Another Australian, Peter Day, is a member of the Standards Advisory Council (IASCF, 2004, p. 21). Mr Day is the Executive General Manager, Finance, of Amcor Ltd, and the former Deputy Chairman of the ASIC, former Chairman of the Group of 100, the AASB, and the UIG.

The AASB continues to have a statutory function 'to participate in and contribute to the development of a single set of accounting standards for worldwide use' (ASIC Act, section 277(1)). The AASB fulfills this function by issuing IASB exposure drafts for comments, making submissions on IASB exposure drafts, and participating in IASB research projects. The IASB undertakes research projects and encourages domestic standard setters to be involved as members of its research project teams. The AASB is involved in projects on revenue recognition and insurance, and leads long-term projects on extractive activities, intangible assets and goodwill, and joint ventures.

The AASB's project managers presented the three research projects that are led by Australia for discussion at a forum organized by the Accounting Standards Interest Group of the Accounting and Finance Association of Australia and New Zealand in July 2005. Participants in the Accounting Standards Interest Group Forum comprise academics and practitioners with an interest in financial reporting regulation, and include several current and former members of the AASB, the PSASB, and the UIG. The projects and the forum discussions are briefly summarized to provide insights into the processes of Australia's involvement in international standard setting.

The four countries involved in the extractive activities research project team are Australia (team leader), Canada, South Africa, and Norway. Key issues being considered by the project team include: how reserves and resources should be defined; whether reserves should be recognized as assets; treatment of predevelopment costs; and disclosures (Brady, 2005). The discussion in the forum focused on issues of definition and measurement. Attempts to define reserves are complicated by the breadth of activities encompassed globally by extractive activities.

Australia leads the IASB joint ventures research project team, with other team members coming from Hong Kong, Malaysia, and New Zealand. The IASB has established the following guidelines: that the distinction between control of an investment and control of the underlying assets and liabilities should be improved; and that such distinction should be based on the substance of the arrangement (Hamidi, 2005). The forum discussion focused on issues concerning control and measurement. There was a suggestion that the joint venture and

extractive industry projects should not be considered in isolation because many extractive activities are undertaken through joint ventures. Inconsistent policy outcomes between the two projects could potentially result in the outcome of one project effectively undoing the intended outcome of the other. In an extreme example, accounting for the investment in the joint venture at cost would effectively undo a policy of fair value accounting for reserves. However, joint consideration of the two projects was not practical because the scope of the projects had already been defined by the IASB and separate teams had been formed.

The third IASB research project led by the AASB is on intangible assets and goodwill. The research project has two components: accounting for internally generated intangible assets, internally generated goodwill, and separately purchased intangible assets; and accounting for intangible assets and goodwill acquired in a business combination. At the time of the presentation, the IASB advisors appointed to the project were in the process of clarifying its scope and approach, with consideration being given to proposals suggested by the AASB (Ardern, 2005). The project had been motivated by international commercial developments, including outsourcing of manufacturing and other activities, growing importance of customer relations and the growth of public–private partnerships (PPPs), private finance initiatives (PFIs), and build–own–operate–transfer (BOOT) contracts (Ardern, 2005). The discussion that followed the presentation raised concerns about the appropriateness of considering accounting for intangibles arising from a business combination separate from accounting for a business combination. The deliberations of the IASB's Business Combinations (Phase I and Phase II) projects potentially limit the range of feasible solutions that might be considered by the project for intangible assets and goodwill. Concern was also raised about the appropriateness of considering joint ventures and intangible assets in isolation, given the growing relevance of PPPs, PFIs, and BOOTs in many economies. Treating issues such as intangibles arising from a PPP separately from accounting for joint ventures, which might capture PPPs, could potentially result in inconsistencies between accounting standards.

Australia, through the AASB, is actively participating in international research projects that, in turn, influence the content of accounting standards issued by the IASB. To some extent, the work of the research project teams is constrained by the scope of their projects and the manner in which broader accounting issues, such as business combinations, are divided to form smaller projects. This process potentially limits the range of solutions that might be considered by the project teams.

The emasculation of Australia's role in international standard setting has not transpired since the FRC's decision in 2002 to adopt IFRS. Australia has

commenced a new journey, through involvement of Australians in the IASCF, the IASB, the IFRIC, and the Standards Advisory Council, and through participation in, and leadership of, IASB research project teams. However, concerns about the potential loss of intellectual capital (Lonergan, 2003) are long-term considerations that could not be revealed by an analysis undertaken only three years after the FRC's decision to adopt IFRS. For Australia's new journey not to reach a 'dead end' there must be continued commitment of resources by stakeholders, such as the government, business, and the accountancy profession, to maintain Australia's intellectual capital and support the involvement of the AASB and others participating in the development of a single set of globally accepted accounting standards and conceptual framework.

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11

Determinants of Bias in Management Earnings Forecasts: Empirical Evidence from Japan

Koji Ota

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11.1 Introduction

A major disclosure difference between Japan and other countries is that management of almost all listed firms in Japan provides forecasts of next period's earnings. This practice was initiated by the stock exchanges in 1974, during which a letter was sent to listed firms requesting them to disclose forecasts of key accounting information. Although the forecasts are technically voluntary, most Japanese firms comply with the request and provide them. As a consequence, management forecasts of the upcoming period's sales, ordinary income, net income (earnings), earnings per share, and dividends per share are announced simultaneously with the most recently completed period's actual accounting figures in annual press releases[1]. This unique setting in Japan makes it possible to conduct a large-scale study on management forecasts over a long period of time.

While management forecasts are much less common in the USA, a number of recent studies have investigated and found several factors that are associated with systematic bias in management earnings forecasts (MEFs). For example, Frost (1997) and Koch (2002) found optimistic bias in MEFs issued by financially distressed firms. Choi and Ziebart (2000) and Irani (2000) documented that firm size, firm performance, abnormal earnings growth, etc. are all related to the bias in MEFs. In contrast to the USA, there has been little research in Japan that examines the properties of management forecasts, despite the fact that their provision is a major feature of the Japanese disclosure system. This lack of research on Japanese management forecasts is partly because the dataset is not readily available in electronic form and needs to be collected manually for each forecast.

The first objective of this chapter is to investigate the determinants of bias in MEFs. This chapter investigates the effects of 10 factors on bias in MEFs using a sample of 28,000 forecasts announced by Japanese firms over the period 1979–1999. They are macroeconomic influence, industry, firm size, exchange/OTC, external financing, financial distress, prior management forecast errors, growth, losses, and management forecasts of dividends. The results of both univariate and multivariate analyses show that these factors are all associated with forecast errors. The major findings of these analyses are: (1) yearly mean management earnings forecast errors are highly correlated with annual GDP growth rates ($r = 0.863$); (2) firms in the price-regulated industries issue pessimistic MEFs; (3) MEFs of small firms and OTC firms are optimistic; (4) MEFs of equity-issuing firms are pessimistic; (5) financially distressed firms and loss-making firms announce optimistic MEFs; (6) firms whose prior MEFs were pessimistic (optimistic) tend to

remain pessimistic (optimistic) in their current forecasts; and (7) MEFs that are accompanied by an increase in forecast dividends are pessimistic.

The second objective of this chapter is to examine the extent to which the aforementioned systematic bias in MEFs is reflected in share prices. Because of the information asymmetry that exists between managers and outsiders about future performance of firms, it is both rational and practical for investors to use MEFs as a basis for their own forecasts. If investors fixate on MEFs, share prices of firms that issue optimistic earnings forecasts will be overvalued while those that issue pessimistic earnings forecasts will be undervalued. Then, a trading strategy taking a long position in the stock of firms reporting relatively pessimistic MEFs and a short position in the stock of firms reporting relatively optimistic MEFs will generate positive abnormal stock returns. To test the hypothesis, predicted management forecast errors are estimated for each firm using a fixed effects model with panel datasets. Only *ex ante* factors are used as independent variables to make the strategy actually implementable. The hedge portfolio strategy based on the predicted management forecast errors produces positive abnormal returns in 14 of the 15 years examined, with a 15-year average return of 4.5%, suggesting the possibility that information about systematic errors in MEFs may not be fully incorporated into share prices.

The provision of next period's earnings forecasts by management is a major feature of the Japanese disclosure system. Despite this fact, little research has been conducted on the nature of the information, partly due to difficulties in obtaining the data. This study is probably the first to investigate the properties of Japanese MEFs. Its findings suggest the existence of systematic bias in Japanese management forecasts. Furthermore, investors appear to fixate on MEFs and do not fully incorporate systematic forecast errors into share prices.

The remainder of the chapter is organized as follows. The next section describes the background on Japanese management forecasts. Section 11.3 describes the data and Section 11.4 investigates the determinants of bias in MEFs. The market awareness of systematic bias in MEF is examined in Section 11.5 and Section 11.6 concludes the chapter.

11.2 Background on Japanese management forecasts

The timing and extent of corporate disclosure in Japan is affected by legal and stock exchange policies. The Securities and Exchange Law, which covers companies listed on the security exchanges, requires firms to file annual securities reports (*Yuka Shoken Hokokusho*) with the Ministry of Finance within three

months of the fiscal year end. The Ministry of Finance Ordinance prescribes the form and content of the annual securities report, and the report provides detailed information on the business activities and financial condition of an enterprise in a fiscal year. Although the scope and amount of information being disclosed in the annual securities report is extensive and comprehensive, there is a three-month time lag between the disclosure of the report and the end of the firm's fiscal year.

In order to supplement the lack of timeliness in statutory disclosure under the Securities and Exchange Law, Japanese stock exchanges, which are self-regulatory organizations, request that listed firms publish condensed financial statements (*Kessan Tanshin*) immediately upon board of director approval of a draft of financial statements[2]. As a result, earnings figures are made public well before the three-month legal deadline. For the vast majority of Japanese companies, earnings announcements take place 25–40 trading days after the fiscal year end. This practice of timely disclosure was initiated by the stock exchanges in 1974, at which time a letter was sent to listed firms requesting them to disclose key accounting information. Management earnings forecasts for the upcoming period are provided in the condensed financial statements, together with current financial results (sales, ordinary income, net income, earnings per share, and dividends per share)[3]. Thus, technically speaking, the provision of MEFs is voluntary without any legal backing. In fact, some financial institutions, especially securities firms, do not provide management forecasts, citing the difficulty of predicting the future business environment. However, on the whole, compliance has been so high that almost all firms provide earnings forecasts[4]. This is partly due to continuous efforts made by stock exchanges to comply with the request and partly due to the guidelines prescribed by the Ministry of Finance Ordinance regarding revisions of MEFs. Under the guidelines, firms are required to announce revised forecasts immediately when a significant change in previously published forecasts arises (e.g. ±10% of sales, ±30% of ordinary income, ±30% of net income). As far as firms follow the guidelines, they are not to be held responsible for failing to meet their initial forecasts. This is in contrast with the safe harbor for forward-looking statements in the USA (the Private Securities Litigation Reform Act of 1995). The Reform Act was intended to encourage companies to make good-faith projections without fear of a securities lawsuit, but has been said to be ineffective due to ambiguity in interpretation (Rosen, 1998). In addition, shareholder litigations against companies and management are traditionally less common in Japan. These factors seem to have contributed to create the favorable environment in which most firms issue earnings forecasts in Japan.

11.3 Data

11.3.1 Sample selection

The sample is selected from the 1979 to 1999 time period using the following criteria:

1. The firms are listed on one of the eight stock exchanges in Japan or traded on the over-the-counter (OTC) market.
2. The accounting period ends in March (78% of listed firms).
3. Banks, securities firms, and insurance firms are excluded (5% of listed firms).

There are eight stock exchanges in Japan, namely Tokyo, Osaka, Nagoya, Sapporo, Niigata, Kyoto, Hiroshima, and Fukuoka. The Tokyo Stock Exchange (TSE) is by far the largest among them. As of June 1999, 2433 firms were listed on the stock exchanges in Japan, of which 1854 firms were listed on the TSE. In terms of volume and value, the TSE accounts for 80–90% of the nation's trading. The OTC market (currently called the JASDAQ market after the NASDAQ market in the USA) consists of small and newly listed firms. As of June 1999, the number of issues listed on the OTC market stood at 853. However, it accounts for merely 2–4% of the trading volume and value in Japan.

Annual accounting data and stock price data were extracted from *Nikkei-Zaimu Data* and *Kabuka CD-ROM 2000*. MEFs were manually collected from the *Nihon Keizai Shinbun* (the leading business newspaper in Japan). Other necessary data, such as stock splits, capital reduction, and changes in par values, were collected from *Kaisha Shikihou CD-ROM*. The selection process yielded 29,177 firm-year observations.

11.3.2 Management forecast error

The MEF error is defined as the difference between actual earnings and management forecast of earnings scaled by the share price at the beginning of the fiscal year. It is calculated for each firm-year observation as:

$$\mathrm{MFERR}_{i,t} = \frac{E_{i,j} - \mathrm{MF}_{i,j}}{P_{i,j}},$$

where:
$\mathrm{MFERR}_{i,t}$ = management forecast error for firm i in period t

$E_{i,t}$ = actual earnings per share for firm i in period t
$MF_{i,t}$ = management forecast of earnings per share for firm i in period t, which is usually announced within 10 weeks into the accounting period t
$P_{i,t}$ = share price of firm i at the beginning of period t.
(The subscript i, which denotes a sample firm, will be omitted in the following sections for clarity.)

A positive MFERR implies a pessimistic forecast, while a negative MFERR indicates an optimistic forecast. To ensure that the results are not sensitive to extreme values, observations in the top and bottom 1% of MFERR are removed[5]. This results in a final sample of 28,593 firm-year observations[6].

11.4 Determinants of bias in management earnings forecasts

11.4.1 Univariate analysis

This section tries to identify factors that are associated with bias in management forecasts. Since there are almost no prior studies investigating systematic bias in Japanese management forecasts, many factors examined in this section are based on the US literature on management forecasts. Although the two disclosure systems are quite different, one is effectively mandatory and the other is voluntary, I believe that the arguments used in the US research can help make predictions of bias in Japanese management forecasts.

11.4.1.1 Macroeconomic influence

Previous research in the USA on bias in management forecasts has produced varying results. Studies using management forecast data released in the 1960s and early 1970s found evidence of optimism in management forecasts (McDonald, 1973; Basi et al., 1976; Patell, 1976; Penman, 1980; Ajinkaya and Gift, 1984; Waymire, 1984). However, studies using management forecast data from the late 1970s and early 1980s found no evidence of optimism in management forecasts (McNichols, 1989; Frankel et al., 1995). Bamber and Cheon (1998) collected MEFs during the 1981–1991 period and found that management forecasts were optimistic. Irani (2000) also reported optimism in MEFs during the 1990–1995 period. Thus, these results appear to be driven by the time periods that were examined.

Figure 11.1 plots the yearly mean MFERR from 1979 to 1999. Of the 21 years examined, 17 years have negative mean MFERRs and four years have positive mean MFERRs. They are all significantly different from zero at the 5% level or higher except for two years, namely 1979 and 1990. One noticeable finding is that the mean MFERR is significantly positive for the 1987–1989 period. This period coincides with the alleged economic bubble period of the late 1980s in Japan. Figure 11.1 also provides time-series plots of the annual real GDP growth rate for the 1979–1999 period. The yearly mean MFERR and the real GDP growth rate are observed to peak and bottom out at the same period, and the correlation coefficient between the two variables is 0.863 and is statistically significant at the 1% level[7].

Thus, the yearly mean MFERR appears to be largely influenced by a macroeconomic factor. This indicates that managers are not able to predict accurately the macroeconomic trend for the coming period and issue earnings forecasts based on the previous year's economic situation. Therefore, MEFs tend to be pessimistic when the economy is booming and optimistic when the economy is declining[8].

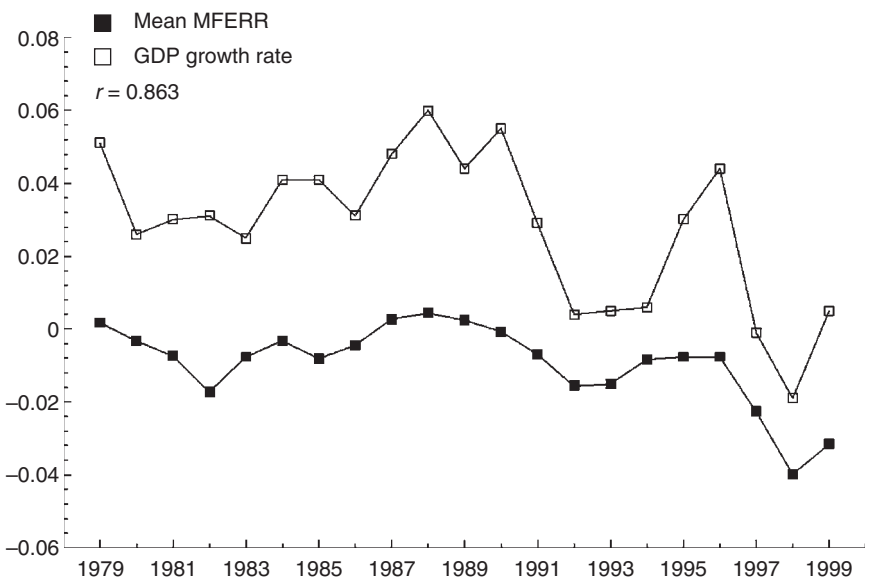

Figure 11.1 Yearly mean management forecast error and real GDP growth rate, 1979–1999. This figure depicts the yearly mean MFERR and the real GDP growth rate for the 1979–1999 period. $MFERR_t = (E_t - MF_t)/P_t$, where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, and P_t is share price at the beginning of period t. The total number of observations is 28,593

11.4.1.2 Industry

The cross-industry variation in MFERR is examined with particular emphasis on price-regulated industries. The positive accounting theory suggests that managers in price-regulated industries have incentives to decrease reported earnings to avoid appearing overly profitable (Watts and Zimmerman, 1986). In a similar argument, they may not want to look profitable even at the forecast stage and may announce relatively pessimistic earnings forecasts.

Figure 11.2 depicts cross-industry variation in the mean MFERR. Of the 29 industries examined, 27 industries have negative mean MFERRs and two industries, *Electricity and Gas* and *Communication*, have positive mean MFERRs. They are all significantly different from zero at the 5% level or higher. Both the *Electricity and Gas* and *Communication* industries are in the price-regulated category. Thus, firms in price-regulated industries appear to publish pessimistic earnings forecasts.

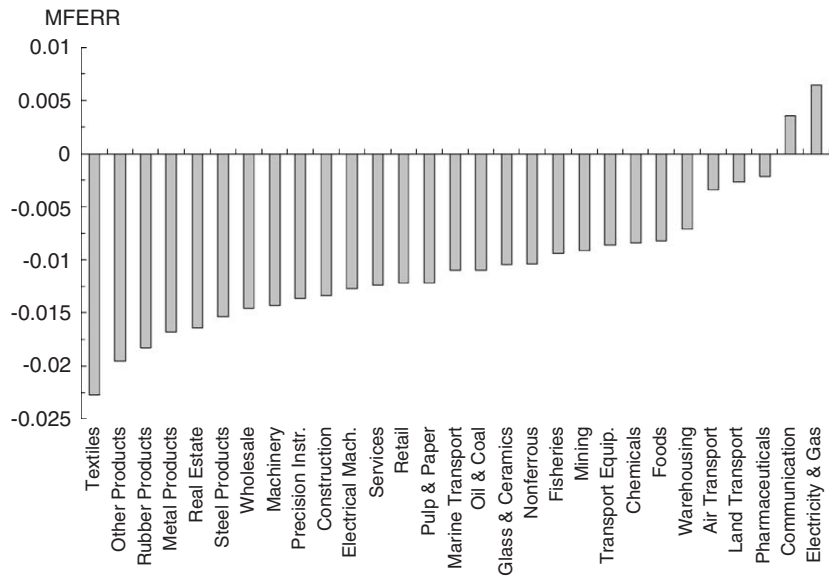

Figure 11.2 Cross-industry variation in mean management forecast error. This figure depicts cross-industry variation in mean MFERR. Sample firms are classified into 29 industries according to Toyokeizai industry classification. $\text{MFERR}_t = (E_t - \text{MF}_t)/P_t$, where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, and P_t is share price at the beginning of period t. The total number of observations is 28,593

11.4.1.3 Size and exchange/OTC effects

Previous studies on analysts' forecasts have shown that firm size is related to bias in analysts' earnings forecasts (Brown, 1997; Das et al., 1998; Matsumoto, 2002). They found less optimism in analysts' earnings forecasts for large firms. Choi and Ziebart (2000) also reported a similar size effect for MEFs without providing a theoretical explanation for their findings.

I hypothesize that managers of large firms may regard published earnings forecasts as commitments to interested parties. Their projections therefore tend to be conservative in order to avoid missing the forecasts. On the other hand, managers of small firms may consider earnings forecasts as their targets for the upcoming period. As a result, their projections tend to be optimistic. This may be particularly true for OTC firms that are not only small but also young.

To investigate the size effect, the following regression equation is estimated:

$$\text{MFERR}_t = \alpha_0 + \alpha_1 \text{LNMVE}_t + \varepsilon_t,$$

where:
LNMVE_t = log of the inflation-adjusted market value of equity three months after the beginning of period *t*.

Table 11.1(A) reports the results of the regression equation. It shows that the estimated coefficient of LNMVE is 0.0055 and is statistically significant, which suggests that MEFs of large firms are more pessimistic than those of small firms.

Next, the exchange/OTC effect is examined by testing the difference in the mean (median) MFERR between exchange firms and OTC firms. Table 11.1(B) presents the results. The mean (median) MFERRs for exchange firms and OTC firms are −0.0110 (−0.0011) and −0.0189 (−0.0045) respectively. The difference in the two means (medians) is statistically significant at the 1% level. Thus, MEFs of OTC firms appear to be more optimistic than those of exchange firms.

Lastly, the size effect, the exchange/OTC effect, and the interactive effect are examined simultaneously using the following regression equation:

$$\text{MFERR}_t = \alpha_0 + \alpha_1 \text{LNMVE}_t + \alpha_2 \text{OTC}_t + \alpha_3 \text{OTC*LNMVE}_t + \varepsilon_t,$$

where:

$$\text{OTC}_t = \begin{cases} 1 & \text{if a firm is an OTC firm in period } t \\ 0 & \text{otherwise} \end{cases}, \text{ and}$$

$$\text{OTC*LNMVE}_t = \begin{cases} \text{LNMVE}_t & \text{if a firm is an OTC firm in period } t \\ 0 & \text{otherwise} \end{cases},$$

The estimation results reported in Table 11.1(C) show that all estimated coefficients are statistically significant. This indicates that small OTC firms announce the most optimistic management forecasts.

11.4.1.4 External financing

Frankel et al. (1995) documented a positive association between firms' tendencies to access capital markets and to disclose earnings forecasts. However, they did not find statistically significant bias in MEFs of financing firms and argued that potential legal liability and reputation costs deter management of financing firms from issuing optimistic forecasts. Similarly, Irani (2000) hypothesized that managers may exhibit optimism in their forecasts if their firms are planning to access capital markets in the near future. However, he also did not find optimism in MEFs of financing firms.

One potential limitation of both studies with regard to research design is that they treated debt financing and equity financing equally. Richardson et al. (2004) argued that analysts obtain much of their information about earnings prospects directly from firm management, and that firms issuing new equity guide analysts toward beatable forecasts to avoid earnings disappointments. Thus, while equity-financing firms are sensitive to investors' perceptions of their profitability, debt-financing firms may not be as sensitive because investors are probably more concerned about their default risk.

Based on the foregoing reasoning, I treat debt financing and equity financing separately and examine bias in MEFs announced by debt-financing firms and equity-financing firms.

Table 11.2(A) shows that the mean (median) MFERR of debt-financing firms is higher than that of non-debt-financing firms, −0.0061 (−0.0003) vs −0.0135 (−0.0017), and the difference in the two means (medians) is statistically significant. Similar results are obtained between equity-financing firms and non-equity-financing firms, 0.0028 (0.0020) vs −0.0126 (−0.0015), though the difference in the two means (medians) is larger. These results indicate relative pessimism in MEFs for both debt- and equity-financing firms. However, debt-financing firms tend to be large firms, such as utilities and public transport, and previous results

Table 11.1 Size and exchange/OTC effects

	α_0	α_1	Adj. R^2	N
Regression model	$MFERR_t = \alpha_0 + \alpha_1 LNMVE_t + \varepsilon_t$			
Coefficient	−0.0692	0.0055	0.036	28,593
(*t*-statistic)	(−39.33)**	(32.85)**		

Panel A: Size effect.

	N	Mean MFERR	Median MFERR	Difference in means[a]	Difference in medians[b]
Exchange firms	24,738	−0.0110	−0.0011	0.0079	0.0034
OTC firms	3855	−0.0189	−0.0045	(8.73)**	(12.42)**

Panel B: Exchange/OTC effect.

	α_0	α_1	α_2	α_3	Adj. R^2	N
Regression model	$MFERR_t = \alpha_0 + \alpha_1 LNMVE_t + \alpha_2 OTC_t + \alpha_3 OTC*LNMVE_t + \varepsilon_t$					
Coefficient	−0.0643	0.0051	−0.0540	0.0058	0.039	28,593
(*t*-statistic)	(−32.95)**	(27.61)**	(−8.65)**	(8.66)**		

Panel C: Size and exchange/OTC effects.

The definitions of the variables are: $MFERR_t = (E_t - MF_t)/P_t$, $LNMVE_t = \ln(MVE_t/\text{Consumer Price Index})$,

$$OTC_t = \begin{cases} 1 & \text{if a firm is an OTC firm in period } t \\ 0 & \text{otherwise} \end{cases},$$

$$OTC*LNMVE_t = \begin{cases} LNMVE_t & \text{if a firm is an OTC firm in period } t \\ 0 & \text{otherwise} \end{cases},$$

where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, P_t is share price at the beginning of period t, and MVE_t is the market value of equity three months after the beginning of period t.

[a] The unequal variances *t*-test is used and its *t*-statistic is reported in parentheses in this column.

[b] The Wilcoxon rank-sum test is used and its *z*-statistic is reported in parentheses in this column.

* Significant at the 0.05 level (two-tailed). ** Significant at the 0.01 level (two-tailed).

Table 11.2 External financing

	N	Mean MFERR	Median MFERR	Difference in means[a]	Difference in medians[b]
Debt-financing firms	5754	−0.0061	−0.0003	0.0074	0.0014
Non-debt-financing firms	22,839	−0.0135	−0.0017	(14.37)**	(10.48)**
Equity-financing firms	1072	0.0028	0.0020	0.0154	0.0035
Non-equity-financing firms	27,521	−0.0126	−0.0015	(29.21)**	(17.02)**

Panel A: External financing.

	Firm size (1P is the smallest and 5P is the largest quintile)					
	1P	2P	3P	4P	5P	Total
Number of debt-financing firms	365	602	912	1395	2480	5754
Number of equity-financing firms	118	278	266	239	171	1072

Panel B: Impact of size on external financing. Quintile portfolios are constructed according to $LNMVE_t$ with the first quintile portfolio (1P) comprising the smallest firms and the fifth quintile portfolio (5P) comprising the largest firms.

	α_0	α_1	α_2	α_3	Adj. R^2	*N*
Regression model	$MFERR_t = \alpha_0 + \alpha_1 LNMVE_t + \alpha_2 BONDS_t + \alpha_3 OFFER_t + \varepsilon_t$					
Coefficient	−0.0693	0.0055	0.0004	0.0151	0.040	28,593
(*t*-statistic)	(−37.98)**	(30.63)**	(0.52)	(11.09)**		

Panel C: External financing and size effects.

The definitions of the variables are: $MFERR_t = (E_t - MF_t)/P_t$, $LNMVE_t = \ln(MVE_t/\text{Consumer Price Index})$,

$$BONDS_t = \begin{cases} 1 & \text{if a firm issued either straight bonds or convertible bonds in period } t \\ 0 & \text{otherwise} \end{cases},$$

$$OFFER_t = \begin{cases} 1 & \text{if a firm made a seasoned public offering in period } t \\ 0 & \text{otherwise} \end{cases},$$

where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, P_t is share price at the beginning of period t, and MVE_t is the market value of equity three months after the beginning of period t.

[a] The unequal variances *t*-test is used and its *t*-statistic is reported in parentheses in this column.

[b] The Wilcoxon rank-sum test is used and its *z*-statistic is reported in parentheses in this column.

** Significant at the 0.01 level (two-tailed).

suggest that large firms tend to announce pessimistic management forecasts. To investigate the influence of size effect, all firm-year observations are classified into quintile portfolios according to LNMVE and the number of debt- and equity-financing firms is tallied for each portfolio. Table 11.2(B) reveals that the number of debt-financing firms increases rapidly as the quintile portfolio based on LNMVE becomes larger. Such a trend is not observed for equity-financing firms.

To control for the impact of firm size on MFERR, the following regression equation is estimated:

$$\text{MFERR}_t = \alpha_0 + \alpha_1 \text{LNMVE}_t + \alpha_2 \text{BONDS}_t + \alpha_3 \text{OFFER}_t + \varepsilon_t,$$

where:

$$\text{BONDS}_t = \begin{cases} 1 & \text{if a firm issued either straight or convertible bonds in period } t \\ 0 & \text{otherwise} \end{cases},$$

and

$$\text{OFFER}_t = \begin{cases} 1 & \text{if a firm made a seasoned public offering in period } t \\ 0 & \text{otherwise} \end{cases}$$

The estimation results reported in Table 11.2(C) indicate that MEFs of equity-financing firms are pessimistic even after controlling for the size effect, while MEFs of debt-financing firms are not. These findings suggest the different impacts of different types of financing on bias in management forecasts.

11.4.1.5 Financial distress

Prior research has documented optimism in financial disclosures released by managers of financially distressed firms. Using a sample of 81 UK firms that received modified audit reports, Frost (1997) found that managers of distressed firms make disclosures about expected future performance that are overly optimistic relative to actual financial outcomes. Koch (2002) found that MEFs issued by distressed firms exhibit greater optimism and are viewed as less credible by analysts than similar forecasts made by nondistressed firms. While both Frost (1997) and Koch (2002) conducted univariate analyses, Irani (2000) performed a multivariate analysis and found a positive linear correlation between optimism in MEFs and the degree of financial distress.

In Koch (2002) and Irani (2000, 2001), the probability of bankruptcy is used as a proxy for financial distress, which is derived from the coefficients provided by Ohlson (1980). However, these coefficients cannot be applied to Japanese firms without modification to estimate the intensity of financial distress.

Moreover, Penman (2001) suggested that the Ohlson (1980) estimates were made quite a while ago and the coefficients should be re-estimated from more recent data. Therefore, I employ the principal components method of factor analysis to condense the variables used in the Ohlson (1980) bankruptcy probability model. The factor scores from the first component are used as a proxy for financial distress.

The following nine variables are included in the Ohlson (1980) bankruptcy probability model:

$$\text{SIZE} = \ln, \left(\frac{\text{Total Assets}}{\text{GNP Price-level Index}}\right), \text{TLTA} = \left(\frac{\text{Total Liabilities}}{\text{Total Assets}}\right),$$

$$\text{WCTA} = \left(\frac{\text{Working Capital}}{\text{Total Assets}}\right), \text{CLCA} = \left(\frac{\text{Current Liabilities}}{\text{Current Assets}}\right),$$

$$\text{NITA} = \left(\frac{\text{Earnings}}{\text{Total Assets}}\right), \text{FUTL} = \left(\frac{\text{Operating Cash Flows}}{\text{Total Liabilities}}\right),$$

$$\text{INTWO} = \begin{cases} 1 & \text{if earnings were negative for the last two periods} \\ 0 & \text{otherwise} \end{cases},$$

$$\text{OENEG} = \begin{cases} 1 & \text{if total liabilities exceed total assets} \\ 0 & \text{otherwise} \end{cases},$$

$$\text{and CHIN} = \frac{E_t - E_{t-1}}{|E_t| + |E_{t-1}|}.$$

Of the nine variables, SIZE is omitted from the analysis because it is already represented by LNMVE. The results of factor analysis are shown in Table 11.3(A). The expected signs are from the Ohlson (1980) bankruptcy probability model. The signs of factor loadings and score coefficients (factor weights) of the first principal component are all consistent with the expected signs from the Ohlson (1980) model, suggesting that the first principal component represents the intensity of financial distress.

The factor scores from the first principal component are defined as a new variable, DIST, and the following regression equation is estimated:

$$\text{MFERR}_t = \alpha_0 + \alpha_1 \text{DIST}_t + \varepsilon_t,$$

where:

DIST_t = the factor scores from the principal component analysis on the variables used in the Ohlson (1980) bankruptcy probability model.

Table 11.3 Financial distress

Variables	Expected sign	Factor loading	Score coefficient
TLTA	+	0.833	0.296
WCTA	−	−0.878	−0.312
CLCA	+	0.844	0.299
NITA	−	−0.531	−0.188
FUTL	−	−0.304	−0.108
INTWO	+	0.350	0.124
OENEG	+	0.371	0.132
CHIN	−	−0.087	−0.031
Eigenvalue			
(% of variance explained)	2.818		
	(35.2%)		
Correlation between factor score and MFERR	−0.120**		

Panel A: Principal component analysis. The variables used to perform the principal component analysis are from the Ohlson (1980) bankruptcy probability model. The definitions of the variables are:

$$\text{TLTA} = \left(\frac{\text{Total Liabilities}}{\text{Total Assets}}\right), \text{WCTA} = \left(\frac{\text{Working Capital}}{\text{Total Assets}}\right), \text{CLCA} = \left(\frac{\text{Current Liabilities}}{\text{Current Assets}}\right),$$

$$\text{NITA} = \left(\frac{\text{Earnings}}{\text{Total Assets}}\right), \text{FUTL} = \left(\frac{\text{Operating Cash Flows}}{\text{Total Liabilities}}\right),$$

$$\text{INTWO} = \begin{cases} 1 & \text{if earnings were negative for the last two years} \\ 0 & \text{otherwise} \end{cases},$$

$$\text{OENEG} = \begin{cases} 1 & \text{if total liabilities exceed total assets} \\ 0 & \text{otherwise} \end{cases}, \text{ and CHIN} = \frac{E_t - E_{t-1}}{|E_t| + |E_{t-1}|}$$

	α_0	α_1	Adj. R^2	N
Regression model	$\text{MFERR}_t = \alpha_0 + \alpha_1 \text{DIST}_t + \varepsilon_t$			
Coefficient	−0.0196	−0.0142	0.014	26,176
(*t*-statistic)	(−26.98)**	(−19.48)**		

Panel B: Effect of financial distress. The definitions of the variables are: $\text{MFERR}_t = (E_t - \text{MF}_t)/P_t$ and DIST_t = the factor scores from the principal component analysis on the variables used in the Ohlson (1980) bankruptcy probability model, where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, and P_t is share price at the beginning of period t.

** Significant at the 0.01 level (two-tailed).

The results reported in Table 11.3(B) show that the coefficient on DIST is significantly negative, −0.0142. This indicates that firms in financial distress measured by DIST tend to issue optimistic earnings forecasts.

11.4.1.6 Persistence of prior management forecast errors

Several studies have presented evidence of the persistence of management forecast errors. Williams (1996) found that the accuracy of a prior management earnings forecast serves as an indicator to analysts of the believability of a current management forecast. Hirst et al. (1999) conducted an experimental study and found that prior forecast accuracy by management affects investors' earnings predictions when current management forecasts are given to them. Although these results do not provide direct evidence of the persistence of management forecast errors, they suggest that analysts and investors believe in this persistence.

To examine the persistence of management forecast errors, the following regression equation is estimated:

$$\text{MFERR}_t = \alpha_0 + \alpha_1 \text{MFERR}_{t-1} + \alpha_2 \text{MFERR}_{t-2} + \alpha_3 \text{MFERR}_{t-3} + \varepsilon_t.$$

The results reported in Table 11.4(A) show that the estimated coefficients on lagged management forecast errors are all significantly positive and become smaller as the lags get longer, 0.3480, 0.1030 and 0.0368 respectively. This indicates that firms whose previous forecasts were optimistic (pessimistic) tend to remain optimistic (pessimistic) in their current forecasts.

11.4.1.7 Growth

Previous research suggests that high-growth firms have more incentives to announce pessimistic forecasts. Matsumoto (2002) and Richardson et al. (1999, 2004) investigated the propensity for firms to avoid negative earnings surprises and found that high-growth firms are more likely to guide analysts' forecasts downward to meet their expectations at the earnings announcement. Choi and Ziebart (2000) also found some weak evidence that high-growth firms tend to release pessimistic management forecasts. One possible explanation for these findings is that the stock market reaction to negative earnings surprises is particularly pronounced for high-growth firms (Skinner and Sloan, 2002). These results suggest that high-growth firms are inclined to issue more pessimistic earnings forecasts in order to avoid earnings disappointments.

Table 11.4 Persistence of prior management forecast errors, growth, and losses

	α_0	α_1	α_2	α_3	Adj. R^2	N
Regression model	$MFERR_t = \alpha_0 + \alpha_1 MFERR_{t-1} + \alpha_2 MFERR_{t-2} + \alpha_3 MFERR_{t-3} + \varepsilon_t$					
Coefficient	−0.0087	0.3480	0.1030	0.0368	0.114	21,761
(*t*-statistic)	(−27.77)**	(43.98)**	(10.68)**	(3.76)**		

Panel A: Persistence of previous MFERRs.

	α_0	α_1	Adj. R^2	N
Regression model	$MFERR_t = \alpha_0 + \alpha_1 GROWTH_t + \varepsilon_t$			
Coefficient	−0.0720	0.0569	0.025	25,652
(*t*-statistic)	(−31.37)**	(25.79)**		

Panel B: Growth.

	N	Mean MFERR	Median MFERR	Difference in means[a]	Difference in medians[b]
Negative earnings firms	2942	−0.0482	−0.0164	−0.0401	−0.0153
Positive and zero earnings firms	25,013	−0.0081	−0.0011	(−25.13)**	(−26.20)**

Panel C: Losses.

The definitions of the variables are: $MFERR_t = (E_t - MF_t)/P_t$ and $GROWTH_t = Sales_{t-1}/Sales_{t-2}$, where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, and P_t is share price at the beginning of period t.

[a] The unequal variances t-test is used and its t-statistic is reported in parentheses in this column.

[b] The Wilcoxon rank-sum test is used and its z-statistic is reported in parentheses in this column.

** Significant at the 0.01 level (two-tailed).

To examine whether MEFs announced by high-growth firms are more pessimistic, the following regression equation is estimated using annual sales growth rates as an indicator of growth:

$$MFERR_t = \alpha_0 + \alpha_1 GROWTH_t + \varepsilon_t,$$

where:
$GROWTH_t = Sales_{t-1}/Sales_{t-2}$.

The results reported in Table 11.4(B) show that the coefficient on GROWTH is significantly positive, 0.0569. Thus, MEFs of high-growth firms appear to be more pessimistic.

11.4.1.8 Losses

Evidence from the analyst forecast literature indicates that analysts' forecasts are more optimistic for loss firms than for profit firms (Richardson et al., 1999, 2004; Brown, 2001). Choi and Ziebart (2000) also found that firms with losses tend to announce optimistic earnings forecasts for the next year. These results suggest that managers reporting losses for the current period are inclined to issue more optimistic earnings forecasts than those reporting profits. To investigate whether earnings forecasts issued by firms with losses are more optimistic than by those with profits, the mean (median) forecast error for loss firms is compared with that for profit firms.

Table 11.4(C) shows that the mean (median) MFERR is −0.0482 (−0.0164) for loss firms and −0.0081 (−0.0011) for profit firms. The difference in the two means (medians) is statistically significant. Thus, management forecasts of firms with losses appear to be more optimistic than those with profits.

11.4.1.9 Signaling effect of management dividend forecast

Modern corporate finance theory initiated by Modigliani and Miller proposes that, in the presence of perfect capital markets, the dividend policy of a firm *per se* is irrelevant to its valuation (the dividend irrelevance hypothesis). On the other hand, the 'information content of dividends' hypothesis asserts that managers use dividends to signal changes in their expectations about future prospects of the firm (Aharony and Swary, 1980; Healy and Palepu, 1988; Hand and Landsman, 2005). A major difficulty in assessing the impact of dividends on share prices lies in disentangling these two effects, the dividend irrelevance effect and the dividend signaling effect. Conroy et al. (2000) exploited the unique setting in Japan, where managers simultaneously announce the current year's dividends and earnings as well as forecasts of next year's dividends and earnings, to provide a strong test for the two effects. They found that unexpected changes in forecasts of next year's dividends are valued by the Japanese market (the dividend signaling effect), while unexpected changes in current dividends are not (the dividend irrelevance effect). The results hold after controlling for the effects of current and future earnings information.

Based on these studies, I hypothesize that an increase (decrease) in management forecast of next year's dividends from current dividends signals the strong (weak) future performance of the firm.

Table 11.5(A) shows that firms with increased management forecasts of dividends from current dividends have higher mean (median) MFERR, −0.00995 (−0.00038), than those that did not change or decreased management forecasts of dividends from current dividends. A marginal difference in mean (median) MFERR is observed between firms without change in forecast dividends and those with decreased forecast dividends, −0.01271 (−0.00152) and −0.01126 (−0.00153) respectively. The result of the one-way ANOVA rejects the null of no difference in the three mean (median) MFERRs. Table 11.5(B) reports the results of the multiple comparison analysis. It shows that firms with increased forecast dividends have significantly higher mean and median MFERRs than those without change in forecast dividends, and have significantly higher median MFERR than those with decreased forecast dividends.

These results are thus consistent with the hypothesis that an increase in management forecast of next year's dividends from current dividends possesses some information about strong future performance of firms beyond that conveyed by MEFs. However, there appears to be little information in a decrease in management forecast of next year's dividends.

11.4.2 Multivariate analysis

To provide a more comprehensive analysis of the determinants of bias in MEFs, a multivariate model is estimated using the 10 factors identified in the univariate analysis as independent variables. The regression model is:

$$\mathrm{MFERR}_t = \beta_0 + \beta_1 \mathrm{LNMVE}_t + \beta_2 \mathrm{OTC}_t + \beta_3 \mathrm{OTC{*}LNMVE}_t + \beta_4 \mathrm{OFFER}_t + \beta_5 \mathrm{DIST}_t + \beta_6 \mathrm{MFERR}_{t-1} + \beta_7 \mathrm{MFERR}_{t-2} + \beta_8 \mathrm{GROWTH}_t + \beta_9 \mathrm{LOSS}_t + \beta_{10} \mathrm{DIVUP}_t + \beta_{11} \mathrm{INDUST1-28}_t + \beta_{12} \mathrm{YEAR81-98}_t + \varepsilon_t,$$

where:

$$\mathrm{LOSS}_t = = \begin{cases} 1 & \text{if } E_{t-1} \text{ is negative} \\ 0 & \text{otherwise} \end{cases},$$

$$\mathrm{DIVUP}_t = = \begin{cases} 1 & \text{if a firm increased forecast dividends for period } t \\ 0 & \text{otherwise} \end{cases},$$

Table 11.5 Signaling effect of management forecasts of dividends

	N	Mean MFERR	Median MFERR	Difference in means[d]	Difference in medians[e]
Increase in MF dividends[a]	2634	−0.00995	−0.00038		
No change in MF dividends[b]	22,240	−0.01271	−0.00152	$F_{(2,27952)}$ 5.35**	$\chi^2_{(2)}$ 34.69**
Decrease in MF dividends[c]	3081	−0.01126	−0.00153		

Panel A: One-way ANOVA.

Differences between three groups	Difference in means[f]	Difference in medians[g]
Increase in MF dividends − No change in MF dividends	0.00276 (2.98)**	0.00114 (5.87)**
Increase in MF dividends − Decrease in MF dividends	0.00131 (1.10)	0.00115 (3.75)**
No change in MF dividends − Decrease in MF dividends	−0.00145 (−1.67)	0.00001 (−1.12)

Panel B: Multiple comparisons.

The definitions of the variables are: $\text{MFERR}_t = (E_t - \text{MF}_t)/P_t$, where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, and P_t is share price at the beginning of period t.

[a] Increase in MF dividends comprises firm-year observations that increased management forecasts of dividends for the next year compared to current year dividends.

[b] No change in MF dividends comprises firm-year observations that did not change management forecasts of dividends for the next year from current year dividends.

[c] Decrease in MF dividends comprises firm-year observations that decreased management forecasts of dividends for the next year compared to current year dividends.

[d] The one-way analysis of variance (ANOVA) is used to test differences in the three means and its *F*-statistic is reported in this column.

[e] The Kruskal–Wallis one-way analysis of variance (ANOVA) by ranks is used to test differences in the three medians and its χ^2-statistic is reported in this column.

[f] For parametric tests, Tukey's multiple comparison method is employed and its *t*-statistic is reported in parentheses in this column.

[g] For nonparametric tests, the Kruskal–Wallis multiple comparison method is employed and its *z*-statistic is reported in parentheses in this column.

** Significant at the 0.01 level (two-tailed).

$INDUST1-28_t$ = a set of industry dummies, and
$YEAR81-98_t$ = a set of year dummies.

The results are reported in Table 11.6. The expected signs are based on the univariate analysis. The signs of the estimated coefficients are all consistent with those from the univariate analysis and they are statistically significant at the 5% level or higher. Overall, the model explains 20.6% of the variation in MFERR. Thus, the multivariate analysis reconfirms the univariate results that the 10 factors, which are macroeconomic influence, industry, firm size, exchange/OTC, external financing, financial distress, prior management forecast errors, growth, losses, and management forecasts of dividends, are all associated with bias in MEFs.

11.5 Market awareness of bias in management earnings forecasts

This section investigates the extent to which systematic errors in MEFs are reflected in share prices. Managers usually have access to inside information that is not available to outsiders. Therefore, managers are considered to have an informational advantage over market participants. Because of this information asymmetry, it will be both rational and practical for market participants to regard management forecasts as a primary source of information about future performance of firms. If the stock market fixates on earnings forecasts released by management and does not correctly adjust for systematic errors in the forecasts, share prices of firms that issue optimistic earnings forecasts will be overvalued while those that issue pessimistic earnings forecasts will be undervalued. However, as the end of the accounting period nears, information about the actual performance of firms will be disseminated in the market and price reversals will occur. Then, a hedge portfolio strategy of buying firms reporting most pessimistic MEFs and selling short those reporting most optimistic MEFs at the time of their release would generate positive abnormal stock returns.

To test whether systematic errors in MEFs are impounded into share prices, the predicted $MFERR_t$ is calculated for each firm using the estimated parameters from the following fixed effects model[9]:

$$MFERR_{t-1} = \gamma_1 FIRMDUM_{t-1} + \gamma_2 LNMVE_{t-1} + \gamma_3 DIST_{t-1} + \gamma_4 GROWTH_{t-1} + \gamma_5 LOSS_{t-1} + \gamma_6 DIVUP_{t-1} + \gamma_7 YEARDUM_{t-1} + \varepsilon_t,$$

Table 11.6 Multivariate analysis of the determinants of bias in management earnings forecasts

Variables	Expected sign	Coefficient	*t*-statistic[a]	*F*-statistic[a]
Regression model	$MFERR_t = \beta_0 + \beta_1 LNMVE_t + \beta_2 OTC_t + \beta_3 OTC*LNMVE_t + \beta_4 OFFER_t + \beta_5 DIST_t + \beta_6 MFERR_{t-1} + \beta_7 MFERR_{t-2} + \beta_8 GROWTH_t + \beta_9 LOSS_t + \beta_{10} DIVUP_t + \beta_{11} INDUST1-28_t + \beta_{12} YEAR81-98_t + \varepsilon_t$			
CONSTANT	?	−0.0534	−9.55**	
LNMVE	+	0.0016	8.98**	
OTC	−	−0.0263	−2.53*	
OTC*LNMVE	+	0.0029	2.68**	
OFFER	+	0.0035	4.60**	
DIST	−	−0.0016	−3.75**	
$MFERR_{t-1}$	+	0.1852	11.42**	
$MFERR_{t-2}$	+	0.0463	4.36**	
GROWTH	+	0.0180	6.80**	
LOSS	−	−0.0093	−5.27**	
DIVUP	+	0.0023	2.70**	
INDUST1 – 28				7.36**
YEAR81 – 98				67.27**
Adj. R^2	0.206			
N	24,023			

The definitions of the variables are: $MFERR_t = (E_t - MF_t)/P_t$, $LNMVE_t = \ln(MVE_t/\text{Consumer Price Index})$,

$$OTC_t = \begin{cases} 1 & \text{if a firm is an OTC firm in period } t \\ 0 & \text{otherwise} \end{cases},$$

$$OTC*LNMVE_t = \begin{cases} LNMVE_t & \text{if a firm is an OTC firm in period } t \\ 0 & \text{otherwise} \end{cases},$$

$$OFFER_t = \begin{cases} 1 & \text{if a firm made a seasoned public offering in period } t \\ 0 & \text{otherwise} \end{cases},$$

$DIST_t$ = the factor scores obtained from the principal component analysis on the variables used in the Ohlson (1980) bankruptcy probability model,

$$GROWTH_t = \frac{Sales_{t-1}}{Sales_{t-2}}, \quad LOSS_t = \begin{cases} 1 & \text{if } E_{t-1} \text{ is negative} \\ 0 & \text{otherwise} \end{cases},$$

$$DIVUP_t = \begin{cases} 1 & \text{if a firm increased forecast dividends for period } t \\ 0 & \text{otherwise} \end{cases},$$

$INDUST1-28_t$ = a set of industry dummies, and $YEAR81-98_t$ = a set of year dummies, where E_t is actual earnings per share for period t, MF_t is management forecast of earnings per share for period t, P_t is share price at the beginning of period t, and MVE_t is the market value of equity three months after the beginning of period t.

To control for outliers, observations with studentized residual greater than two are removed.

[a] *t*-statistics and *F*-statistics are based on White's heteroskedastic-consistent standard error.

* Significant at the 0.05 level (two-tailed). ** Significant at the 0.01 level (two-tailed).

where:
$FIRMDUM_t$ = a set of firm dummies and
$YEARDUM_t$ = a set of year dummies.

To make the strategy actually implementable, only *ex ante* factors that are related to management forecast errors are used as independent variables. The model is estimated annually from 1984 to 1998 using panel datasets with at least five-year data available for each firm, and the estimated coefficients are used to obtain the predicted $MFERR_t$. For example, to obtain the predicted management earnings forecast error for a firm in the year 1990, the predicted $MFERR_{1990}$, a set of estimated coefficients derived from data for the 1979–1989 time period are used.

At the end of June for each year from 1985 to 1999, firms are ranked according to their predicted $MFERR_t$ and assigned in equal numbers to quintile portfolios. The top quintile portfolio comprises firms with the highest predicted $MFERR_t$ (predicted to be most pessimistic in their earnings forecasts) and the bottom portfolio comprises firms with the lowest predicted $MFERR_t$ (predicted to be most optimistic in their earnings forecasts). The strategy is to take a long position in the top quintile portfolio and a short position in the bottom quintile portfolio and maintain these investments until the end of September (for a three-month period)[10]. The results of the same strategy based on the actual forecast errors are also reported for comparison purposes.

Figure 11.3(A) plots the abnormal returns from the hedge portfolio strategy based on the actual forecast errors for the 15 years. The returns are positive in all years, with a 15-year average return of 8.0%. This suggests that having perfect foresight on management forecast errors can produce consistent abnormal returns. Figure 11.3(B) plots the abnormal returns from the same strategy based on the predicted forecast errors. The returns are positive in 14 of the 15 years, with a 15-year average return of 4.5%. Thus, the hedge portfolio strategy based on *ex post* forecast errors can generate abnormal returns of as much as 8.0%, and the same strategy based on *ex ante* forecast errors can still produce abnormal returns of 4.5%. These findings may suggest that the stock market fixates on management forecasts and does not completely impound systematic errors in MEFs into share prices.

11.6 Conclusion

The first objective of this chapter was to investigate the determinants of bias in management earnings forecasts (MEFs) announced by Japanese firms over the period 1979–1999. The results of both univariate and multivariate analyses show

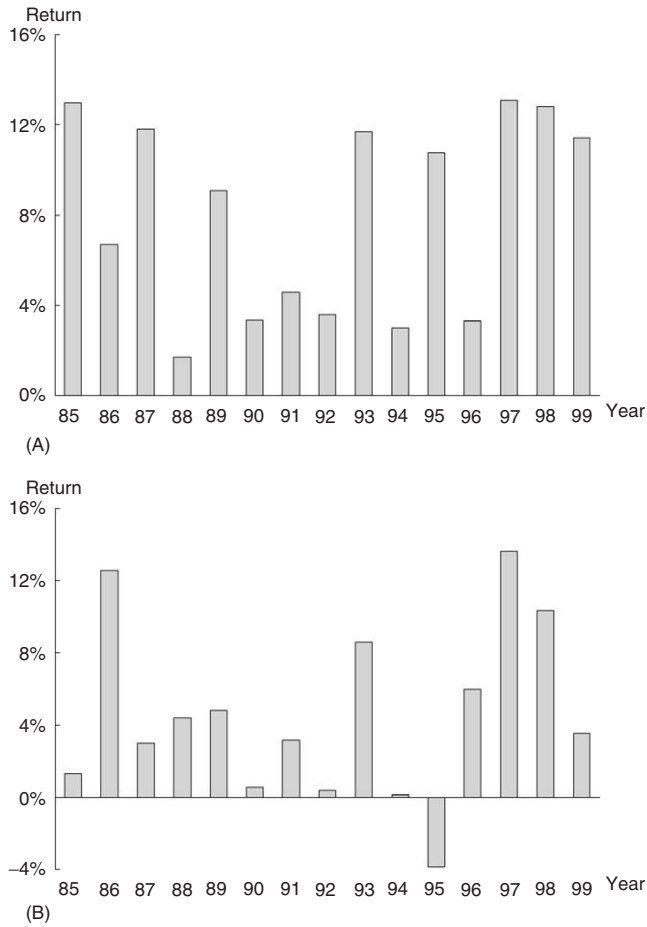

Figure 11.3 (A) Abnormal returns produced by the hedge portfolio strategy based on the actual management forecast errors (MFERR). (B) Abnormal returns produced by the hedge portfolio strategy based on the predicted management forecast errors (MFERR). In both cases, firms are ranked according to the MFERR at the end of June from 1985 to 1999 and assigned in equal numbers to quintile portfolios. The top quintile portfolio comprises firms with the highest MFERR and the bottom quintile portfolio with the lowest MFERR. The strategy is to take a long position in the top quintile portfolio and a short position in the bottom quintile portfolio and maintain these investments until the end of September

that the 10 factors, which are macroeconomic influence, industry, firm size, exchange/OTC, external financing, financial distress, prior management forecast errors, growth, losses, and management forecasts of dividends, are all associated with bias in MEFs. The second objective of this chapter was to examine the extent to which systematic forecast errors are reflected in share prices. The

results of the hedge portfolio strategy show that abnormal returns can be earned by predicting errors in MEFs, suggesting that share prices may not fully reflect information about systematic errors in MEFs.

The provision of the next period's earnings forecasts by management of almost all listed firms is a major feature of the Japanese financial disclosure system. Despite that, there has been little research so far on the properties of Japanese management forecasts, partly due to difficulties in obtaining the data. This study is probably the first to investigate the properties of Japanese MEFs. The findings in this chapter suggest the existence of systematic bias in Japanese management forecasts and also provide some evidence of the stock market's fixation on management forecasts. Perhaps future research on the impact of management forecasts on analysts' forecasts would likely shed more light on the nature of management forecast information and its influence on the stock market.

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Notes

1. The term 'earnings' used in this chapter indicates 'net income' unless otherwise stated.
2. The condensed financial statements (Kessan Tanshin) are available from the Tokyo Stock Exchange website (http://www.tse.or.jp).
3. All forecasts are published in the form of point forecasts except for dividends per share, which are sometimes provided in the form of range forecasts.
4. A survey reports that, by 1980, more than 90% of listed firms, excluding those in the financial sector, provided management forecasts.
5. The results presented later are qualitatively similar when observations in the extreme 0.5% and 1.5% are removed.
6. When the analysis requires first-differenced variables and/or lagged variables, the sample size becomes smaller accordingly.
7. Using the yearly median MFERR instead of mean MFERR produces similar results. The correlation coefficient between the yearly median MFERR and the real GDP growth rate is 0.826.
8. McNichols (1989) reports a large negative mean (median) MFERR for the year 1982. The US economy posted −2.0% in real GDP growth rate in 1982, which was the worst in the last 50 years.
9. A fixed effects estimation uses the time-demeaned data. Therefore, any variable that is constant or has little variation over time is excluded from the model.

10. The return cumulation period is limited to a three-month period from the end of June to the end of September. This is because the sample firms used in this study are all March fiscal year-end firms and they publish new forecasts for full-year earnings at the same time as they report semi-annual earnings, at the end of September. The analysis (not reported here) indicates that higher abnormal returns cannot be earned by extending the return cumulation period to nine and 12 months.

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12

Expected Earnings Growth when there is a Growth Option

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12.1 Introduction

Growth firms, by definition, have recurring opportunities to make positive net present value (NPV) investments. The classical NPV rule states that a firm should invest in a project whenever the present value of expected profits exceeds the present value costs. Costs typically include cash expenses as well as depreciation and amortization of operating assets. From the real options perspective, this list is incomplete. When investment is irreversible, the decision to invest is associated with a commitment. Making an investment surrenders the opportunity to postpone the commitment, perhaps indefinitely. Since this opportunity has value, the decision-making calculus should take it into account. A firm should invest only when the present value of expected profits exceeds the present value of classical costs plus the value of the opportunity to postpone commitment.

Real options theory provides an organizing rubric for recognizing and quantifying the value of such opportunities. A generic feature of real options theory is the 'addition principle'. Adding a new (call or put) option into a portfolio of assets increases the price of the portfolio by the price of the new option[1]. The addition principle postulates that firm value equals the value of in-place projects plus the value of growth options (Myers, 1987; Brealey and Myers, 2002):

$$V_\tau = \text{'Value of projects in place'} + \text{'Option value'}. \tag{12.1}$$

Equation (12.1) states that option value *adds* linearly to the valuation function. The addition principle holds even if the option depends on exogenous information or is contingent.

Related to, but distinct from, the addition principle is the 'nonlinearity hypothesis'. According to the nonlinearity hypothesis, options make valuation functions depend nonlinearly on earnings. While not grounded in formal theory[2], this hypothesis probably owes its conception to the well-known convex relationship between the Black–Scholes call-option value and stock price. Likewise, textbook solutions (e.g. Dixit and Pindyck, 1994; Kulatiklaka and Perotti, 1998) typically look either convex or concave with respect to fundamental asset values. Consistent with the nonlinearity hypothesis, Burgstahler and Dichev (1997) attributed the convex empirical relation between price and earnings to the presence of 'adaptation' options. Subsequent modeling studies offered closed-form (Yee, 2000, 2005; Ashton et al., 2003; Gietzmann and Ostaszewski, 2004; Yee, 2005) and numerical (Schwartz and Moon, 2000)

solutions of real options models that exhibit a convex relationship between price and earnings and cash flows.

How universal is the nonlinearity hypothesis under GAAP accounting? Does a growth firm with linear revenue recognition, capitalization, and expensing policies have a convex price–earnings relation? Assuming that the value of in-place projects is linear in earnings, equation (12.1) implies that V_I is nonlinear in earnings if, and only if, option value is nonlinear in earnings. But why does option value depend on earnings? Option value depends on earnings if (a) the option-exercise decision relies on (trailing) earnings or (b) accrual accounting induces a relation between option value and earnings[3].

But it is not at all obvious that option-exercise decisions depend on trailing earnings generated by projects in place. An option holder seeks to maximize future gains from new projects, which are not necessarily informed by the performance of in-place projects. For example, due to leasing policies of the US government, oil exploration firms lease adjacent offshore tracts of land that contain uncertain deposits of oil. Lessors have an option (but not an obligation) to drill new oil wells. Their exercise decision involves a tradeoff between drilling and potentially obtaining oil sooner or waiting for their neighbors to drill first and disclose information about the size and quality of the oil deposit. In equilibrium, firms exercise their options based on project-specific information (Paddock et al., 1988). Firm-wide trailing earnings are irrelevant. Similarly, pharmaceutical firms exercise their options to develop new drugs based on project-specific considerations, not trailing EPS, which aggregates information from other projects (Healy et al., 2002). In these examples, the presence of growth options, by itself, does not cause nonlinear price–earnings relations.

It is the accounting rules that ultimately induce or suppress nonlinearity in the price–earnings relation. Hence, the task at hand is to examine the connections between accrual accounting, growth options, and price–earnings relations. I will address the following questions in a setting with a growth option and *linear* accounting policies:

- What special accounting policies achieve linear earnings–value relations in the presence of a growth option?
- What do the achieved linear earnings–value relations look like, and how do they differ from known earnings–value relations?
- In the presence of a growth option, are capitalized earnings (suitably dividend adjusted) a sufficient valuation attribute in the long run?

The answers to these questions will demonstrate that, when earnings are sufficiently similar to 'economic' or Hicksian earnings, then linear weighted averages of earnings forecasts suffice as valuation attributes even in the presence of growth options. Unless option-exercise policy relies on earnings, the presence of a growth option does not, by itself, cause earnings nonlinearity.

Section 12.2 endows a firm with a growth option and characterizes the ensuing expected cash flows. The contingent (nonlinear) nature of the option-induced cash investment distinguishes the model here and from Feltham and Ohlson (1996). In Feltham and Ohlson, an exogenous linear dynamic governs cash investments. In contrast, the cash outlay pertaining to the exercise of a growth option is a contingent one-time transaction determined by the firm's option-exercise strategy. Aside from this key difference, the remainder of the analysis follows the spirit of Feltham and Ohlson and Ohlson and Zhang (1998). Section 12.3 defines the linear accounting policies that define operating earnings, and section 12.4 describes the linear earnings–value relation implied by the linear accounting policies. Section 12.5 concludes.

12.2 Perpetual growth option: model setup

This section models a firm with a project that contains one growth option. In the model, a risk-neutral firm has an opportunity (but not an obligation) to make an irreversible one-time investment of I dollars to grow a project. The project's NPV is proportional to K_τ an observable random variable that fluctuates stochastically. The investment may be made at any time–there is no deadline. This means the firm has a 'perpetual growth option', whose exercise price is I and whose underlying asset value varies stochastically with K_τ. For simplicity, the firm has only one such option.

The following variables characterize cash flows from operations:

- $cr_\tau \in (-\infty, \infty)$: cash revenues during period τ
- $ci_\tau \in \{0, I\}$: cash investment during period τ
- $c_\tau \equiv cr_\tau - ci_\tau$: free cash flow during period τ
- K_τ: i.i.d. random variable with a regular and bounded density $\phi(K)$ and strictly positive support on $[0, K_{\max}]$
- ε_τ: mean-zero, unpredictable random variable
- $\Theta_\tau \in \{0,1\}$: the number of growth options outstanding at the end of period τ.

Assume $(K_\tau, \varepsilon_s) = 0$ for all τ and s.

Cash revenues evolve according to the dynamic:

$$cr_{\tau+1} = \gamma cr_\tau + K_\tau ci_\tau + \varepsilon_{\tau+1} \tag{12.2}$$

where $0 \le \gamma \le 1$. The $\gamma cr_\tau + \varepsilon_{\tau+1}$ terms on the right-hand side of equation (12.2) reflect cash revenues from existing projects; γcr_τ is the persistent component of cash revenues and $\varepsilon_{\tau+1}$ is the unpredictable component. Equation (12.2) is similar to the cash revenues dynamic in Feltham and Ohlson (1996); the only differences are the stochastic[4] nature of K_τ and how cash investments ci_τ will be determined.

Feltham and Ohlson (1996) assume that cash investments are persistent, e.g. $ci_{\tau+1} = \omega ci_\tau + \varepsilon'_{\tau+1}$, which means the firm is pre-committed to making investments every period. In contrast, $ci_\tau = 0$ here unless and until the firm chooses to exercise its growth option. Θ_τ is an indicator variable that keeps track of whether the firm has a growth option outstanding at the end of period τ. In particular, if the firm waits until period τ_* to exercise its growth option, then:

$$\Theta_\tau = \begin{cases} 1 & \tau < \tau_* \\ 0 & \tau \ge \tau_*. \end{cases}$$

At the start of period τ, the firm observes[5] $\{cr_\tau, \Theta_{\tau-1}, K_\tau\}$. If the firm has no growth options remaining ($\Theta_{\tau-1} = 0$), then $ci_\tau = 0$ must be zero. On the other hand, if $\Theta_{\tau-1} = 1$, the firm chooses whether to make a $ci_\tau = 0$ or a $ci_\tau = I$ dollars investment. If it chooses to invest $ci_\tau = 0$ dollars, the firm defers exercise of its option till a later date. If $ci_\tau = I$ dollars, the firm exercises its growth option and has none left ($\Theta_\tau = 0$).

The firm's 'investment rule' determines how the firm decides when to exercise its growth option. I will focus on the following (standard) investment rule: when the firm has an outstanding growth option, it waits until K_τ exceeds some pre-established threshold value K_*, at which time it immediately exercises the option by investing $ci_\tau = I$ dollars. But if $\Theta_{\tau-1} = 0$, $ci_\tau = 0$ regardless of how large K_τ is. Formally:

Definition 1. A 'threshold-K_* investment rule' is:

$$ci_\tau = \begin{cases} 0 & \Theta_{\tau-1} = 0 \text{ or } K_\tau \le K_* \\ I & \Theta_{\tau-1} = 1 \text{ or } K_\tau > K_* \end{cases},$$

where K_* is some pre-specified real number in the interval $[0, K_{\max}]$.

The standard NPV decision rule is a special case of a threshold-K_* investment rule with $K_* = R - \gamma$. Under the NPV decision rule, the firm makes the investment as soon as its expected return, $\frac{K_\tau I}{R - \gamma}$ here, exceeds its cost, $ci_\tau = I$. The NPV decision rule is suboptimal when the firm has an opportunity to defer its investment. The benefit of deferring investment is that the firm might obtain a bigger K_τ in the future[6]. The firm must balance the expected *discounted* value of a potentially bigger future return against the value of the certain return today. Threshold-K_* investment rules enable the firm to strike such a balance. Lemma 2 below will show that a threshold rule with $K_* > R - \gamma$ but smaller than $K_{\max}$ is superior to the NPV decision rule.

If the firm has a threshold-investment rule, the net present value (NPV) of the firm's free cash flows is[7]:

$$V_\tau \equiv \sum_{s=1}^{\infty} R^{-s} E_\tau[c_{\tau+s}], \tag{12.3}$$

where $E_\tau[\cdot]$ averages over the random variables $\varepsilon_{\tau+1}$ and $K_{\tau+1}$. The first Lemma states the NPV of a firm's free cash flows if the firm implements the threshold-K_* investment rule:

Lemma 1. Equations (12.2) and (12.3) and the threshold-K_* investment rule imply:

$$V_\tau = \frac{E_\tau[cr_{\tau+1}]}{R - \gamma} + g(K_*)\Theta_\tau,$$

where $E_\tau[cr_{\tau+1}] = \gamma cr_\tau + k_\tau ci_\tau$,

$$g(K_*) = \left(\frac{I}{R - \Phi(K_*)}\right) \int_{K_*}^{K_{\max}} \mathrm{d}k \phi(k) \left\{\frac{k}{R - \gamma} - 1\right\},$$

and $\Phi(K_*) \equiv \int_0^{K_*} \mathrm{d}k\, \phi(k)$.

Proof: All proofs are given in the Appendix.

Lemma 1 is consistent with equation (12.1), the addition principle: firm value equals the NPV of cash flow from projects in place plus the value of the outstanding growth option, $g(K_*)$. The value of $g(K_*)$ depends on the investment

threshold κ_*. Since neither the payoff value of the growth option nor the investment rule depends on the status of existing projects, $g(\kappa_*)$ does not depend on cr_τ or ci_τ. The proof of Lemma 1 also describes a heuristic derivation of $g(\kappa_*)$.

The value of the growth option, $g(\kappa_*)$, is bigger under some threshold-κ_* investment rules than others. Figure 12.1 depicts $g(\kappa_*)$ if the density function $\phi(\kappa)$ is constant on the interval $[0,\kappa_{\max}]$ for two different values of $\kappa_{\max}$. In Figure 12.1, $R - \gamma = 0.2$. Under the NPV decision rule, the firm exercises the option as soon as $\frac{\kappa_\tau I}{R-\gamma} > I$. Accordingly, the NPV decision rule is equivalent to the threshold-κ_* rule with $\kappa_* = \kappa_{\text{NPV}} \equiv R - \gamma = 0.2$. As depicted in Figure 12.1, $g(\kappa_*)$ achieves its maximum at $\kappa_* > \kappa_{\text{NPV}} = 0.2$. The option is worth more if the firm demands a larger threshold than that stipulated by the NPV rule. (See Appendix for elaboration on this and other properties of $g(\kappa_*)$.)

A rational firm maximizes the value of its growth option by choosing the threshold value κ_* that maximizes the value of $g(\kappa_*)$. The threshold-κ_* investment rule that maximizes $g(\kappa_*)$ is the 'optimal threshold investment rule'. Lemma 2 states the NPV of the firm if it implements the optimal threshold investment rule.

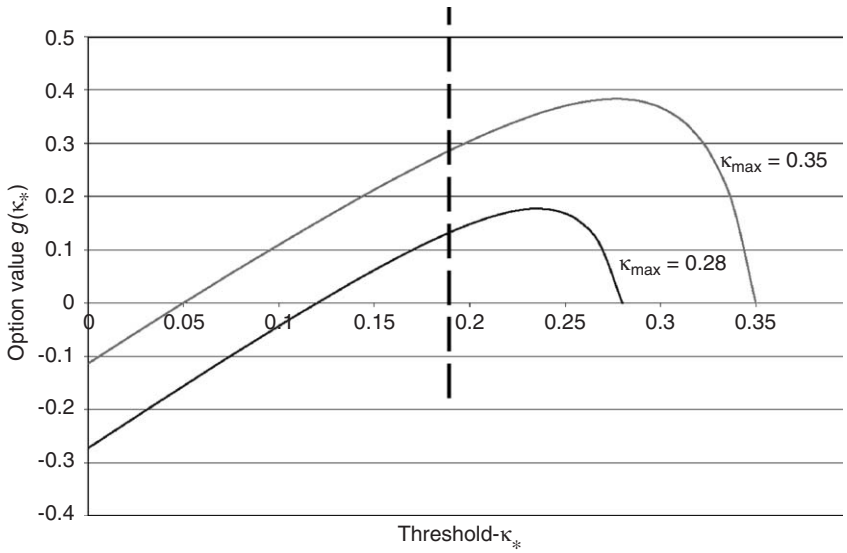

Figure 12.1 Option value $g(\kappa_*)$ as a function of the threshold-κ_* investment rule for the constant density $\phi(\kappa) = 1/\kappa_{\max}$ with support on $[0,\kappa_{\max}]$. For comparison, $g(\kappa_*)$ is plotted for two different values of $\kappa_{\max}$. For both plots, $R = 1.1$, $\gamma = 0.9$, and $I = 1$

Lemma 2. Equations (12.2) and (12.3) imply that the optimal threshold K_* is unique and that

$$V_\tau = \frac{E_\tau[cr_{\tau+1}]}{R-\gamma} + G\Theta_\tau,$$

where $G \equiv g(K^*)$ and $K_* = K^*$ is the unique solution to

$$g(K^*) = \left\{\frac{K^*}{R-\gamma} - 1\right\} I \tag{12.4}$$

with $g(\cdot)$ as stated in Lemma 1.

Equation (12.4) indicates that it is optimal to exercise when the value of the option, $g(K^*)$, equals the immediate net return from exercising, $\left\{\frac{K^* I}{R-\gamma} - I\right\}$. This is because, when $g(K^*) = \left\{\frac{K^*}{R-\gamma} - 1\right\}$, the firm is rationally indifferent between the option and the transaction.

Lemma 2 says that optimally utilized growth options add linearly to firm value in accordance with the addition principle, equation (12.1). While V_τ is nonlinear in the investment threshold, K_*, V_τ is linear in cash revenues, cash investments, and the value of the growth option, $G \equiv g(K^*)$.

12.3 Accounting policies and earnings–value relations

Lemma 2 shows that the presence of a growth option does not induce a nonlinear cash–value relation. Does it induce a nonlinear earnings–value relation? This question is ambiguous without defining earnings. Accordingly, I will focus on a narrower question: Is it possible for *linear* accounting rules similar to those introduced in Feltham and Ohlson (1996) and Ohlson and Zhang (1998) to achieve *linear* earnings–value relations in the presence of a growth option?

To address this question, we introduce the following notation and terminology:

- $oa_\tau \in (-\infty, \infty)$: operating assets at the end of period τ
- $ox_\tau \in (-\infty, \infty)$: operating earnings, which equal free cash outflow plus accruals so that $ox_\tau = cr_\tau - ci_\tau + oa_\tau - oa_{\tau-1}$

- cum-dividend operating earnings and operating earnings forecasts

$$\overline{ox}^{c}_{\tau,s} \equiv \begin{cases} ox_\tau - \phi^{-1}c_\tau & s = 0 \\ E_\tau[ox_{\tau+1}] & s = 1 \\ E_\tau\left[ox_{\tau+s} + \phi^{-1} \times \sum_{u=1}^{s-1} R^{s-u} c_{\tau+u}\right] & s \geq 2, \end{cases}$$

where $\phi \equiv \frac{R}{R-1}$.

Definition 2. An 'accounting policy Π' is a quintuplet $\Pi \equiv \{\delta_0, \delta_1, \delta_2, \delta_3, \delta_\Theta\}$ of real constants such that:

$$oa_\tau = \delta_0 oa_{\tau-1} + \delta_1 cr_\tau + \delta_{2K_\tau} ci_\tau + \delta_3 ci_\tau + \delta_\Theta \Theta_\tau .$$

Definition 3. An accounting policy $\Pi \equiv \{\delta_0, \delta_1, \delta_2, \delta_3, \delta_\Theta\}$ is 'investment-rule independent' if, and only if, the policy parameters $\{\delta_0, \delta_1, \delta_2, \delta_3, \delta_\Theta,\}$ do not depend on the investment threshold K_*.

I will focus on investment-rule-independent accounting policies because how an asset is capitalized and subsequently expensed traditionally depends only on features specific to the *asset*—not on the firm's strategy for acquiring said asset. For instance, in GAAP, PPE depreciation is based on useful life and historical cost. Whether equipment was purchased as part of a long-term strategic plan has no bearing on its accounting treatment. Hence, I will focus on investment-rule-*independent* accounting policies, which are more institutionally realistic.

Under $\Pi \equiv \{\delta_0, \delta_1, \delta_2, \delta_3, \delta_\Theta\}$,

$$ox_\tau = -(1-\delta_0) oa_{\tau-1} + (1+\delta_1) cr_\tau + \delta_{2K_\tau} ci_\tau - (1+\delta_3) ci_\tau + \delta_\Theta \Theta_\tau . \tag{12.5}$$

$(1-\delta_0)$ is the depreciation rate; $(-\delta_1)$ is the amount of period-expense allocated under revenues-based costing; $\delta_{2K_\tau} + \delta_3$ is the capitalization factor for new investments; and δ_Θ specifies the per period accounting appreciation for an outstanding growth option. For example, $\Pi \equiv \{1,0,0,0,0\}$ is cash-basis accounting ($ox_\tau = cr_\tau - ci_\tau$). Similarly, $\Pi \equiv \{1,0,0,0,-1\}$ is cash-basis accounting minus a growth option depreciation expense of \$1 per period. In contrast, $\Pi \equiv \{\delta_0 < 1,0,0,1,0\}$ is a policy with operating-asset depreciation, cash-based revenue recognition without revenues-based costing, and capitalization of investments at historical cost.

At issue is the usefulness of operating earnings as a valuation attribute under different accounting policies. Forward earnings are a sufficient valuation attribute if earnings are the same as economic earnings[8]. To begin with, observe that no investment-rule-independent accounting policy can enable trailing or forward operating earnings to be a sufficient valuation attribute:

Observation 1. $V_\tau = \phi o\overline{x}^{c}_{\tau,0}$, a threshold-$K_*$ investment rule, and equations (12.2), (12.3), and (12.5) imply $\Pi = \left\{1, -\left(\frac{1-\gamma}{R-\gamma}\right), \frac{R-1}{(R-\gamma)R}, \frac{1}{R}, \phi^{-1}g(K_*)\right\}$. Similarly, $V_\tau = \frac{\phi o\overline{x}^{c}_{\tau,1}}{R}$, a threshold-investment rule, equations (12.2), (12.3), and (12.5) imply $\Pi = \left\{1, -\left(\frac{1-\gamma}{R-\gamma}\right), \delta_2, \delta_3, \delta_\Theta\right\}$, where $\{\delta_2, \delta_3, \delta_\Theta\}$ is any triplet that satisfies $\delta_2 \int_{K_*}^{K_{\max}} \mathrm{d}k\ \phi(k)k - (1-\delta_3)\int_{K_*}^{K_{\max}} \mathrm{d}k\ \phi(k) + \delta_\Theta \frac{\Phi(K_*)}{I} = r\frac{g(K_*)}{I}$.

Observation 1 shows that there is no investment-rule-independent accounting policy that achieves[9] $V_\tau = \phi o\overline{x}^{c}_{\tau,0}$ or $V_\tau = \frac{\phi o\overline{x}^{c}_{\tau,1}}{R}$. Therefore, constant trailing or forward price-to-earnings ratios are achieved in the presence of a growth option only by an accounting policy specifically tailored to how the firm is expected to exercise its growth option. An accountant who is uncertain about the firm's K_* threshold cannot achieve $V_\tau = \phi o\overline{x}^{c}_{\tau,0}$ and $V_\tau = \frac{\phi o\overline{x}^{c}_{\tau,1}}{R}$.

Observation 1 suggests that accounting policies with $\delta_0 = 1$ and $\delta_1 = -\left(\frac{1-\gamma}{R-\gamma}\right)$ play a special role in facilitating earnings-based representations of value. For instance, consider:

$$\Pi_0 \equiv \left\{1, -\left(\frac{1-\gamma}{R-\gamma}\right), 0, 1, 0\right\}. \tag{12.6}$$

Π_0 is investment-rule independent, does not depreciate operating assets, and capitalizes new investments at historical cost. Equations (12.5) and (12.6) imply $ox_\tau = cr_\tau - \left(\frac{1-\gamma}{R-\gamma}\right)cr_\tau$ which stipulates cash-based revenue recognition and period expense equal to $\left(\frac{1-\gamma}{R-\gamma}\right)cr_\tau$.

Under Π_0, $ox_\tau = \left(\frac{R-1}{R-\gamma}\right)cr_\tau$. This implies $\frac{\phi E_\tau[ox_{\tau+1}]}{R} = \frac{E_\tau[cr_{\tau+1}]}{R-\gamma}$, where $\phi \equiv R/(R-1)$. Since $V_\tau = \frac{E_\tau[cr_{\tau+1}]}{R-\gamma} + g(K_*)\Theta_\tau$ by Lemma 1:

Observation 2. Equations (12.2), (12.3), (12.5), and (12.6) and a threshold-investment rule imply:

$$V_\tau = \frac{\phi \overline{ox}^c_{\tau,1}}{R} + g(\kappa^*)\Theta_\tau \tag{12.7}$$

Observation 2 says that, in the *absence* of growth options (when $\Theta_\tau = 0$), forward operating earnings are a sufficient attribute under Π_0. That is, Π_0 is the accounting policy that equates accounting earnings to economic earnings in the absence of a growth option. But when there is a growth option, Π_0 no longer achieves economic earnings. In the presence of a growth option, forward earnings by itself is an insufficient valuation attribute under Π_0.

Is it possible to rewrite equation (12.7) so that a linear combination of forward earnings replaces the $g(K_*)\Theta_\tau$ term? To this end, $E_\tau[\Theta_{\tau+1}] = \Phi(K_*)\Theta_\tau$ if the firm follows a threshold-K_* investment policy. This implies that Θ_τ evolves in expectation auto-regressively with persistence $\Phi(K_*)$. ($\Phi(K_*)$ is also the probability that the growth option survives for one more period.) Following Liu and Ohlson (2000), Ohlson (2001), and Yee (2004a, b), this implies that a linear combination of earnings forecasts proxies[10] for Θ_τ in equation (12.7). Replacing Θ_τ in equation (12.7) with earnings forecasts achieves $V_\tau = (1-\alpha)\frac{\phi \overline{ox}^c_{\tau,1,}}{R} + \alpha\frac{\phi \overline{ox}^c_{\tau,2}}{R^2}$ with $\alpha = \frac{R}{R-\Phi(K_*)}$. Therefore, under accounting policy Π_0, a weighted average of forward earnings forms a sufficient valuation attribute in the presence of a growth option. *A fortiori*, it turns out that the result (if not the same argument) prevails for a broader class of accounting policies than Π_0:

Proposition 1. Equations (12.2), (12.3), and (12.5), a threshold-investment rule, and any accounting policy of the form:

$$\Pi_0 \equiv \left\{1, -\left(\frac{1-\gamma}{R-\gamma}\right), \delta_1, \delta_3, \delta_\Theta\right\} \tag{12.8}$$

for *any* triple of real numbers, imply that:

$$V_\tau = (1 - \alpha)\frac{\phi \overline{ox}^{c}_{\tau,1}}{R} + \alpha\frac{\phi \overline{ox}^{c}_{\tau,2}}{R^2} \tag{12.9}$$

with $\alpha = \dfrac{R}{R - \Phi(K_*)}$.

Proposition 1 is the central result of this section. It offers three points. First, it provides a counter-example to the nonlinearity hypothesis. A linear weighted average of earnings forecasts is a sufficient valuation attribute in the presence of a growth option under an accounting rule that *would* equate accounting earnings to economic earnings when there is no growth option. The linear formula is achieved without requiring accounting policy to depend on investment rules (e.g. the option exercise threshold K_*). As note 10 explains, abnormal earnings growth, $\overline{ox}^{c}_{\tau,2} - R\overline{ox}^{c}_{\tau,1}$, proxies for the value of the option.

The second point concerns the weight coefficient $\alpha = \dfrac{R}{R - \Phi(K_*)}$. Since $0 \le \Phi(K_*) \le 1$, $1 \le \alpha \le \phi$.

The third and final point is that equation (12.9) is less demanding on the accounting system than equation (12.7). Proposition 1 states that *any* accounting policy parameters $\{\delta_2, \delta_3, \delta_\Theta\}$ are compatible with the weighted average formula, equation (12.9), whereas equation (12.7) demands $\{\delta_2 = 0, \delta_3 = 1, \delta_\Theta = 0\}$. In other words, to achieve equation (12.9), historical cost capitalization ($\delta_3 = 1$) is unnecessary; equation (12.9) obtains whether one capitalizes or expenses the exercise price right away.

12.4 Long-run earnings growth with a growth option

Sections 12.1 and 12.2 examine a firm with a linear accounting policy and a growth option and show that $V_\tau = (1 - \alpha)\dfrac{\phi \overline{ox}^{c}_{\tau,1}}{R} + \alpha\dfrac{\phi \overline{ox}^{c}_{\tau,2}}{R^2}$ under an accounting policy that would equate accounting earnings to economic earnings when there is no growth option. Thus, the presence of a growth option under this accounting policy merely introduces a second forward-earnings attribute into the valuation function. While this price–earnings relation formally looks like the Ohlson–Juettner-Nauroth (2005) model, its weight parameter α has a different interpretation. The traditional interpretation identifies α with the long-run earnings growth rate. In a growth option setting, α relates to the firm's option-exercise strategy, which determines the option's per-period survival probability $\Phi(K_*)$.

This section establishes the relationship between long-run expected earnings growth, the option survival probability, and weight parameter α in the presence of a growth option.

One may think that Proposition II in Ohlson and Juettner-Nauroth (2005; hereafter termed 'OJ'), which relates α to long-run earnings growth, applies here. In the present notation, Proposition II states that, if $V_\tau = (1-\alpha)\frac{\phi o\bar{x}^{C}_{\tau,1}}{R}$, $\frac{\phi o\bar{x}^{C}_{\tau,2}}{R^2}$, $\alpha = \frac{R}{R-g}$ where $1 \le g < R$, and there exists some T so that $\frac{E_\tau[ox_{\tau+s}]}{E_\tau[cr_\tau + s - ci_\tau + s]} \le \frac{R-1}{R-g}$ for all $s \ge T$, then $\lim_{u\to\infty} \frac{E_\tau[ox_{\tau+u}]}{E_\tau[ox_{\tau+u}]} = g$.

Proposition II does not apply to the growth option model because the presence of a growth option invalidates at least one of its assumptions. In particular, since Proposition 1 in section 12.2 states that $\alpha = \frac{R}{R-\Phi(K_*)}$ in the presence of a growth option, $\Phi(K_*)$ corresponds to g in the OJ model. Since Proposition II requires $g \ge 1$, it applies only if $\Phi(K_*) \ge 1$. But, being a probability, $\Phi(K_*) \le 1$. Therefore, the only case where Proposition II applies is when $\Phi(K_*) = 1$ – that is, if the option has zero probability of ever being exercised. Hence, OJ's Proposition II does not apply, except perhaps in the trivial case when the growth option has no probability of being exercised[11].

The inapplicability of the OJ result does not rule out that long-run earnings growth may still relate to α or to $\Phi(K_*)$. Examination of the formula for $E_\tau[ox_{\tau+s}]$ is instructive. Equations (12.2), (12.3), and (12.5), a threshold-K_* investment rule, and accounting policy Π_1 imply for all $s \ge 1$ that $E_\tau[ci_{\tau+s}] = (1 - \Phi(K_*))\Phi^{s-1}(K_*)I\Theta_\tau$ and:

$$E_\tau[ox_{\tau+s}] = \left(\frac{R-1}{R-\gamma}\right)E_\tau[cr_{\tau+s}] + \Lambda(\delta_2,\delta_3,\delta_\Theta)\Phi^{s-1}(K_*)I\Theta_\tau, \tag{12.10}$$

where

$$E_\tau[cr_{\tau+s}] = \gamma^s cr_\tau + \frac{\int_{K_*}^{K_{\max}} dk\,\phi(k)k}{\Phi(K_*)} I\Theta_\tau \begin{cases} \gamma^{s-1} S & \gamma = \Phi(K_*) \\ \dfrac{\gamma^s - \Phi^s(K_*)}{\gamma - \Phi(K_*)} & \gamma \ne \Phi(K_*) \end{cases} \tag{12.11}$$

and $\Lambda(\delta_2,\delta_3,\delta_\Theta) \equiv \left\{\delta_2 \int_{K_*}^{K_{\max}} dk\,\phi(k)k - (1-\delta_3)\int_{K_*}^{K_{\max}} dk\,\phi(k) + \delta_\Theta \frac{\Phi(K_*)}{I}\right\}$.

Equation (12.10) shows that earnings forecasts depend on cash-flow forecasts as well as the accounting policy and the investment rule parameters. Taking the $s \to \infty$ limits of equations (12.10) and (12.11) yields the long-run earnings growth, payout, and firm–value growth ratios.

Proposition 2. Equations (12.2), (12.3), and (12.5), a threshold-K_* investment rule, and accounting policy Π_1 imply for all $s \geq 1$ that:

(i) $$\lim_{s\to\infty} \frac{E_\tau[ox_{\tau+s}]}{E_\tau[ox_{\tau+s-1}]} = \max\{\gamma, \Phi(K_*)\}$$

(ii) $$\frac{E_\tau[ox_{\tau+s}]}{E_\tau[cr_{\tau+s} - ci_{\tau+s}]} = \left(\frac{R-1}{R-\gamma}\right) \begin{cases} 1 & \gamma \geq \Phi(K_*) \\ \dfrac{1 + \left(\dfrac{R-\gamma}{R-1}\right)\vartheta\Lambda}{1-(1-\Phi(K_*))\vartheta} & \gamma < \Phi(K_*) \end{cases}$$

(iii) $$\lim_{s\to\infty} \frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]} = \max\{\gamma, \Phi(K_*)\},$$

where $\vartheta \equiv \dfrac{\Phi(K_*) - \gamma}{\displaystyle\int_{K*}^{K\max} \mathrm{d}k\phi(k)k}$ and

$$\Lambda(\delta_2, \delta_3, \delta_\Theta) \equiv \left\{ \delta_2 \int_{K*}^{K\max} \mathrm{d}k\phi(k)k - (1-\delta_3) \int_{K*}^{K\max} \mathrm{d}k\phi(k) + \delta_\Theta \frac{\Phi(K_*)}{I} \right\}.$$

Because γ and $\Phi(K_*)$ do not exceed unity by definition, formula (i) implies that long-run earnings shrink rather than grow. The shrinkage rate is independent of accounting policy and, depending on whether cash revenues or the option is more persistent, equals $\min\{1-\gamma, 1-\Phi(K_*)\}$.

Formula (i) in Proposition 2 highlights the fact that α relates to the long-run earnings growth rate *only* if the survival probability of the option exceeds the persistence of cash revenues from assets in place. On the other hand, if $g > F(k^*)$, then $\lim_{s\to\infty} \frac{E_\tau[ox_{\tau+s}]}{E_\tau[ox_{\tau+s-1}]} = \gamma$, while α remains $\alpha = \dfrac{R}{R - \Phi(K_*)}$. Therefore, when cash revenues from assets in place are more persistent than the growth option, α is unrelated to the long-run earnings growth rate. The probability of option survival always determines α whether $\gamma < \Phi(K_*)$ or $\gamma \geq \Phi(K_*)$.

Formula (ii) highlights the fact that even the long-run payout ratio depends on accounting policy and the threshold-K_* investment rule. Life would be simpler if the payout ratio converged in the long run to a constant value that is independent of details of investment policy and whether investments are capitalized or expensed. Unfortunately, the dependence of the right-hand side of formula (ii) on $\Lambda(\delta_2,\delta_3,\delta_\Theta)$ and K_* highlights that this is not so in the presence of a growth option. Formula (ii) also violates the payout ratio bound assumed in OJ's Proposition II. Formula (ii) implies that the long-run payout ratio may exceed $\frac{R-1}{R-\Phi(k_*)}$ when $\gamma<\Phi(K_*)$. When $\gamma<\Phi(K_*)$ and the long-run payout ratio exceeds $\frac{R-1}{R-\Phi(k_*)}$, the payout ratio condition in OJ's Proposition II is violated. This is another reason why OJ's Proposition II does not apply to the growth option model.

Comparing formulas (i) and (iii) in Proposition 2 reveals that $\lim_{s\to\infty} \frac{E_\tau[ox_{\tau+s}]}{E_\tau[ox_{\tau+s-1}]} = \lim_{s\to\infty} \frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]}$; that is, in the long run, earnings grow (or, more aptly, deteriorate) at the same rate as firm value, and this equality holds regardless of investment policy and accounting policy. Thus, even though capitalized forward earnings do not suffice as a univariate valuation attribute according to Proposition 1, the long-run earnings shrinkage rate equals the ex-dividend shrinkage rate of V_τ independent of accounting and investment policy, and independent of the option survival probability.

The fact that $\lim_{s\to\infty} \frac{E_\tau[ox_{\tau+s}]}{E_\tau[ox_{\tau+s-1}]} = \lim_{s\to\infty} \frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]}$ may lead one to conjecture that capitalized earnings might suffice as a univariate valuation attribute in the long run. If true, this would reaffirm the idea that a far-ahead earnings forecast casts a wide net that captures all value-relevant information about a growth option. But is this true?

X.J. Zhang (2000) offers a possibly relevant theorem. His result states that, because of canceling errors, permanent earnings are a sufficient valuation attribute in the long run under certain conditions. The following equality summarizes Zhang's result in the present notion[12]:

$$\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s}-c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} = 1+\phi\left(\frac{H-1}{H}\right)(BP-1), \tag{12.12}$$

where $H \equiv \lim_{s\to\infty} \frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]}$ and $BP \equiv \lim_{s\to\infty} \frac{E_\tau[oa_{\tau+s}]}{E_\tau[V_{\tau+s}]}$ is the long-run book-to-price ratio. Equation (12.12) implies:

(a) Under unbiased accounting ($BP = 1$), $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} = 1$.

(b) If firm value freezes in the long run ($H = 1$), then $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} = 1$.

(c) If accounting is conservative ($BP < 1$) and firm value shrinks in the long run ($H < 1$), then $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} < 1$.

Point (c) implies that, when accounting is conservative and firm value shrinks, then dividend-adjusted capitalized earnings are an insufficient valuation attribute even in the long run.

Which of these cases apply to the growth option model? Are dividend-adjusted capitalized earnings a sufficient valuation attribute in the long run under Π_1 accounting in the presence of a growth option? First, suppose $\gamma = 1$. Then, $H = \max\{\gamma, \Phi(K_*)\} = 1$, which implies case (b) applies and $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} = 1$. Second, suppose $\gamma < 1$. Then, $H = \max\{\gamma, \Phi(K_*)\}$ is less than unity (unless $K_* = K_{\max}$, in which case the option is worthless) so that, according to equation (12.12), $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} \neq 1$ unless accounting is unbiased ($BP = 1$). But generally $BP \equiv \lim_{s\to\infty} \frac{E_\tau[oa_{\tau+s}]}{E_\tau[V_{\tau+s}]}$ diverges under Π_1 accounting unless one assumes a special initial value[13] for oa_τ. Hence, equation (12.12) does not directly apply when $\gamma < 1$ (see note 12).

Rather than applying equation (12.12), one can compute $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\}$ by brute force when there is a growth option. Proposition 3 reports the results of this calculation.

Proposition 3. Equations (12.2), (12.3), and (12.5), a threshold-K_* investment rule, and accounting policy Π_1 for any $\{\delta_2, \delta_2, \delta_\Theta)$ imply:

$$\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} = \begin{cases} 1 & \gamma > \Phi(K_*) \\ 1 + F\{\delta_2, \delta_2, \delta_\Theta\} & \gamma \leq \Phi(K_*), \end{cases}$$

where $F\{\delta_2,\delta_2,\delta_\Theta)$ – whose expression is given in the Proof – may be either negative or positive depending on $\{\delta_2,\delta_2,\delta_\Theta)$.

Proposition 3 shows that, if $\gamma > \Phi(K_*)$, then dividend-adjusted capitalized earnings are a sufficient long-run valuation attribute. This result obtains whether the option exercise expenditure is capitalized ($\delta_3 = 1$) or expensed ($\delta_3 = 0$), since it holds for any accounting policy Π_1. But if the growth option's survival probability $\Phi(K_*)$ exceeds γ, then dividend-adjusted capitalized earnings do *not* suffice as a valuation attribute even in the infinite long run. In this case, a weighted average of two earnings variables is necessary to span the valuation function even in the infinite long run.

12.5 Conclusion

In the Introduction, I raised three questions:

- What special accounting policies achieve linear earnings–value relations in the presence of a growth option?
- What do the achieved linear earnings–value relations look like, and how do they differ from known earnings–value relations?
- In the presence of a growth option, are capitalized earnings (suitably dividend adjusted) a sufficient valuation attribute in the long run?

To address these questions, I studied a firm with a linear accounting policy, Π_1, and a growth option. An attractive feature of Π_1 is that it capitalizes cash flows similarly to economic earnings. In the absence of a growth option, accounting earnings equal economic earnings under Π_1 accounting. Another attractive feature of Π_1 is that it does not depend on the firm's investment strategy. Proposition 1 shows that Π_1 implies the valuation function is $V_\tau = (1 - \alpha)\frac{\phi o\bar{X}^c_{\tau,1}}{R} + \alpha\frac{\phi o\bar{X}^c_{\tau,1}}{R^2}$, where $\alpha = \frac{R}{R - \Phi(K_*)}$.

X.J. Zhang's (2000) analysis of canceling errors and the valuation sufficiency of permanent earnings in the long run does not generally apply in the presence of a growth option and Π_1 accounting. This is because the book-to-price ratio diverges (does not exist) in the long run unless one imposes additional conditions on the accounting system. Nonetheless, Proposition 3 shows that in the presence of a growth option and any Π_1 accounting system, $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\} = 1$ whenever the persistence of cash revenues exceeds

the per-period survival probability of the growth option ($\gamma > \Phi(K_*)$); otherwise, $\lim_{s\to\infty}\left\{\frac{E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]}{E_\tau[V_{\tau+s}]}\right\}$ may be greater or less than unity depending on the accounting system. Therefore, if the likelihood of the growth option's survival is big enough, permanent earnings are not a sufficient valuation attribute even in the infinite long run. A weighted average of earnings forecasts is necessary to span the valuation function in the anticipated presence of a growth option.

These results offer two conceptual outcomes. The first is that, within a large class of linear accounting policies (Π_1) that would equate accounting earnings to economic earnings in the absence of a growth option, linear weighted averages of earnings forecasts suffice as valuation attributes in the presence of a growth option. The presence of a growth option by itself does not cause earnings nonlinearity. In the absence of an option-exercise strategy that benchmarks to trailing earnings (a mechanism not considered here), there are two potential sources of nonlinearity. The first is the relationship between the value of the option and the fundamental parameter (K_τ) determining the payoff of the option when it is exercised. As indicated by Lemmas 1 and 2, option value is nonlinear in the fundamental parameter. The second potential source is the mapping of the option value to earnings by the accounting rules. If this mapping is nonlinear, then the earnings–value relation would be nonlinear. Distinguishing between these two sources allows us to see that the first potential source, K_τ, is *irrelevant*; it is ultimately the accounting rules that determine the linearity of valuation functions. Therefore, just because options are frequently nonlinear in their fundamental parameter does not necessarily (or even frequently) imply that value must be nonlinear in *earnings or earnings forecasts*.

The second possible outcome is that the presence of a growth option changes the relationship between long-run earnings growth and the weight parameter α in the weighted-average valuation formula. When the only available positive NPV investment is the growth option, Proposition 1 states that $\alpha = \frac{R}{R - \Phi(K_*)}$. Since $\lim_{s\to\infty}\frac{E_\tau[ox_{\tau+s}]}{E_\tau[ox_{\tau+s-1}]} = \max\{\gamma, \Phi(K_*)\}$ by Proposition 2, α does not relate to long-run earnings growth if the option survival probability, $\Phi(K_*)$, exceeds the persistence γ of cash outflows from in-place assets. This observation may have a bearing on empirical studies that use the Ohlson–Juettner-Nauroth framework and assume α relates to long-run expected earnings growth.

Notes

1. The addition principle fails if, and only if, the assets in place and the new option are synergistic. For instance, if the exercise of the new option is contingent on the performance of the assets in place or if the firm faces binding project selection constraints, then the value of the option depends on cash flows from assets in place. Yee (2000) offers an example of a closed-form solution when the addition principle fails.
2. Indeed, I will demonstrate in this article that price–earnings relations are linear in the presence of growth options under a large class of linear accounting policies.
3. Earnings-based compensation and other agency effects, which will not be considered here, are other mechanisms that might cause option value to depend on trailing earnings (e.g. Glover, 2001; Govindaraj and Ramakrishnan, 2001). I will also not consider financing constraints, another mechanism that might induce a relationship between trailing earnings and option exercise: a cash-constrained firm may be unable to finance desired growth following several periods of disappointing earnings.
4. G. Zhang (2000) also assumes equation (12.2) with stochastic κ_τ. However, G. Zhang imposes the additional condition that $\Phi_\tau = \begin{cases} 1 & \tau = t-1 \\ 0 & \tau \geq t+1 \end{cases}$, if t is the current date. This means the Zhang option expires at $\tau = t+1$ whether the firm exercises it or not. In other words, Zhang's option is a *one-period* European option rather than a perpetual option as I have here.
5. Equation (12.2), the value of γ and all realized values of $\{cr_\tau, ci_\tau, \Theta_\tau, \kappa_\tau, \varepsilon_\tau\}$ are assumed to be common knowledge.
6. The other common rationale for deferring investment, the 'bad news principle' (Bernanke, 1983), does not apply to this growth option because the value of the project does not depend on subsequent values of κ_τ once the investment has been made.
7. One might question whether the NPV formula applies to operating assets and cash flows, since firm-specific assets are not individually traded and priced in financial markets. This issue has been addressed at length in existing literature. Equation (12.3) is valid if capital markets are complete enough that the presence of the project and associated growth options does not alter the investment opportunity set available to investors (Dixit and Pindyck, 1994). In equation (12.3) – which is also the basis of the DCF approach in capital budgeting – R is one plus the risk-free rate. If investors are risk averse, this seemingly restrictive assumption prevails if all risk has been diversified away or if expectation values are adjusted to incorporate a premium for undiversified risk (Cox and Ross, 1976; Rubinstein, 1976).
8. Economic earnings are defined as $e_\tau = V_t + c_\tau - V_{\tau-1}$. This implies that $V_\tau = \dfrac{\phi \bar{e}_{\tau,1}}{R}$.
9. To see that there is no investment-rule-independent triplet $\{\delta_2, \delta_3, \delta_\Theta\}$ that solves the stated constraint, assume $\{\delta_2, \delta_3, \delta_\Theta\}$ do not depend on κ_*. Taking the derivative with respect to κ_* of the constraint yields $-\delta_2 \kappa_* + (1 - \delta_3) + \dfrac{\delta_\Theta}{I} = \dfrac{rg'(\kappa_*)}{I\phi(\kappa_*)}$. The right-hand side of this expression is nonlinear in κ_* while, if $\{\delta_2, \delta_3, \delta_\Theta\}$ are all κ_* independent, the left-hand side is linear in κ_*. Therefore, the constraint is incompatible with investment-rule-independent $\{\delta_2, \delta_3, \delta_\Theta\}$.

10. $V_\tau = \frac{\phi \overline{ox}^{c}_{\tau,1}}{R} + G\Theta_\tau$ for all τ and the no-arbitrage relation (stated in the Proof of Lemma 1) imply $\left(\overline{ox}^{c}_{\tau,2} - R\overline{ox}^{c}_{\tau,1}\right) = (R\Theta_\tau - E_\tau[\Theta_{\tau+1}])rG$. Since $E_\tau[\Theta_{\tau+1}] = \Phi(K_*)\Theta_\tau$, this implies $G\Theta_\tau = \frac{\overline{ox}^{c}_{\tau,2} - R\overline{ox}^{c}_{\tau,1}}{(R - \Phi(K_*))r}$. Placing this expression for $G\Theta_\tau$ into V_τ yields $V_\tau = (1 - \alpha)\frac{\phi \overline{ox}^{c}_{\tau,1}}{R} + \alpha \frac{\phi \overline{ox}^{c}_{\tau,2}}{R^2}$ with $\alpha = \frac{R}{R - \Phi(K_*)}$.

11. Proposition 2 will show that OJ's payout ratio assumption, $\frac{E_\tau[ox_{\tau+s}]}{E_\tau[cr_{\tau+s} - ci_{\tau+s}]} \leq \frac{R-1}{R-g}$, is also violated when $\Phi(K_*) > \gamma$.
12. The following assumptions suffice to establish this formula: the clean surplus relation, equation (12.3), $0 < H < R$, and the existence (finiteness) of the following limits: H, BP, and $\lim_{s\to\infty} \frac{E_\tau[c_{\tau+s}]}{E_\tau[V_{\tau+s}]}$. Since $E_\tau[V_{\tau+s}] \overset{s\to\infty}{\to} 0$ for the growth option model, these limits provide binding constraints on the accounting system. In his paper, X.J. Zhang (2000) analyzes only the growth firm case ($H \geq 1$), but the idea of his analysis applies even when $0 < H < 1$, which is the relevant situation here.
13. The reason BP diverges is because $E_\tau[V_{\tau+s}] \overset{s\to\infty}{\to} 0$ while $E[oa_{\tau+s}] \overset{s\to\infty}{} oa_\tau + \sum_{u=1}^{\infty} E[ox_{\tau+u} - c_{\tau+u}] - \sum_{u=s+1}^{\infty} E[ox_{\tau+u} - c_{\tau+u}]$ does not typically vanish. On the right-hand side of the expression for $E[oa_{\tau+s}]$, oa_τ is a thus-far unspecified initial condition and $\sum_{u=1}^{\infty} E[ox_{\tau+u} - c_{\tau+u}] \neq 0$ by calculation. If one *defines* the accounting system so that $oa_\tau = -\sum_{u=1}^{\infty} E[ox_{\tau+u} - c_{\tau+u}]$, then $E[oa_{\tau+s}] \overset{s\to\infty}{\to} 0$. Then BP does converge, and equation (12.12) applies. In this accounting system, one can show that $BP = 1$ only if $\gamma > \Phi(K_*)$.
14. Net realized return $\frac{K_\tau I}{R - \gamma} - I$ is not necessarily negative even if $K_* < R - \gamma$ because the threshold-K_* rule stipulates only that the firm exercises whenever $K_\tau < K_*$. Since the value of K_τ is random, its realized value upon exercise will exceed the threshold value K_*, sometimes significantly. Hence, $\frac{K_\tau I}{R - \gamma} - I$ may often be positive even if $K_* < R - \gamma$.
15. By Bayes' rule, $E\left[\frac{KI}{R - \gamma} - I \,|\, K > K_*\right] = \frac{\int_{K_*}^{K_{\max}} dk\phi(k)\left\{\frac{kI}{R-\gamma} - I\right\}}{1 - \Phi(K_*)}$.

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Appendix

12.A1 Option value g(k*) pertaining to constant density

Figure 12.1 depicts the value of $g(k_*)$ in the special case that $\phi(\kappa) = 1/\kappa_{\max}$ with support on the interval $[0,\kappa_{\max}]$. If $\phi(\kappa) = 1/\kappa_{\max}$, brute force computation yields $g(\kappa_*) = \left(\frac{\kappa_{\max} - \kappa_*}{R\kappa_{\max} - \kappa_*}\right)\left\{\frac{\kappa_{\max} + \kappa_*}{2(R - \gamma)} - 1\right\}I$. The function $g(k_*)$ is depicted in Figure 12.1 for two different values of $\kappa_{\max}$. As shown, $g(k_*)$ is a concave function that rises to a maximum and then falls to $g(k_*) = 0$. The following three features are instructive:

- In Figure 12.1, $R - \gamma = 0.2$. Under the NPV decision rule, the firm would exercise its option as soon as $\frac{\kappa_\tau I}{R - \gamma} > I$. Accordingly, the NPV decision rule is equivalent to the threshold-κ_* rule with $\kappa_* = \kappa_{\text{NPV}} \equiv R - \gamma = 0.2$. But, as depicted in Figure 12.1, $g(k_*)$ achieves its maximum, not at $\kappa_* < \kappa_{\text{NPV}} = 0.2$, but at some larger value. The option is worth more if the firm demands a larger threshold than that stipulated by the NPV rule.
- For threshold-κ_* rules with thresholds $\kappa_* < \kappa_{\text{NPV}}$, the net return realized at exercise *may* be negative[14]. In Figure 12.1, $g(k_*)$ is negative if threshold κ_* is sufficiently less than $\kappa_{\text{NPV}} = 0.2$. $g(k_*)$ achieves its maximum somewhere between $\kappa_* = \kappa_{\text{NPV}}$ and $\kappa_{\text{NPV}} = \kappa_{\max}$. Since the probability that $\kappa_\tau = \kappa_{\max}$ is zero, the firm would have to wait forever under the threshold-κ_* investment rule, so $g(\kappa_{\max}) = 0$.
- The more volatile κ_τ is, the more upside potential the growth option has. Accordingly, $g(k_*)$ increases when κ_τ is more volatile. In this example, the variance of κ_τ equals $\kappa^2_{\max}/12$. Accordingly, as depicted in Figure 12.1, $g(k_*)$ for the $\kappa_{\max} = 0.35$ distribution is strictly greater than $g(k_*)$ for the $\kappa_{\max} = 0.28$ distribution.

12.A2 Proofs of Observations, Lemmas, and Propositions

Proof of Lemma 1. Equation (12.3) implies the no-arbitrage relation:

$$RV(\Theta_\tau, cr_\tau, ci_\tau, K_\tau; K_*) = E_\tau[cr_{\tau+1} - ci_{\tau+1} + V(\Theta_{\tau+1}, cr_{\tau+1}, ci_{\tau+1}, K_{\tau+1}; K_*)].$$

When $\Theta_\tau = 0$, the firm has no more options, which implies $\Theta_{\tau+1}$ and $ci_{\tau+1} = 0$ regardless of the value of $K_{\tau+1}$. This means the no-arbitrage relation reduces to:

$$RV(0, cr_\tau, ci_\tau, K_\tau; K_*) = E_\tau[cr_{\tau+1} + V(0, cr_{\tau+1}, ci_{\tau+1}, K_{\tau+1}; K_*)].$$

One can verify that the Feltham and Ohlson (1996) valuation function

$$V(0, cr_\tau, ci_\tau, K_\tau; K_*) = \frac{\gamma cr_\tau + K_\tau ci_\tau}{R - \gamma} = \frac{E_\tau[cr_{\tau+1}]}{R - \gamma}$$

solves this equation. If the firm exercises its option during period τ, then $ci_\tau = I$; otherwise, $ci_\tau = 0$.

When $\Theta_\tau = 1$, we know the firm did not exercise its option during period τ or before (because Θ_τ would be zero if it did). Hence, $\Theta_\tau = 1$ implies $ci_\tau = 0$. The firm will make an investment of $ci_{\tau+1} = I$ if $K_{\tau+1} > K_*$ and $ci_{\tau+1} = 0$ otherwise. If the firm makes the $ci_{\tau+1} = I$ investment, then $\Theta_{\tau+1} = 0$; if not, then $\Theta_{\tau+1} = 1$. This means equation (12.3) reduces to:

$$\begin{aligned} RV(1, cr_\tau, ci_\tau = 0, K_\tau; K_*) &= E_\tau[cr_{\tau+1} - cr_{\tau+1} + V(\Theta_{\tau+1}, cr_{\tau+1}, ci_{\tau+1}, K_{\tau+1}; K_*)] \\ &= \gamma cr_\tau + E_\tau[V(1, \gamma cr_\tau, 0, K_{\tau+1}; K_*) \,|\, K_{\tau+1} \le K_*]\Pr(K_{\tau+1} \le K_*) \\ &\quad + E_\tau[V(0, \gamma cr_\tau, N, K_{\tau+1}; K_*) - I \,|\, K_{\tau+1} > K_*]\Pr(K_{\tau+1} > K_*). \end{aligned}$$

Plugging in the trial solution $V(\Theta_\tau, cr_\tau, ci_\tau, K_\tau; K_*) = \frac{\gamma cr_\tau + K_\tau ci_\tau}{R - \gamma} + g(K_*)\Theta_\tau$ and canceling out all the cr_τ terms yield $Rg(K_*) = g(K_*) \int_0^{K_*} dk\phi(k) + I \int_{K_*}^{K_{\max}} dk\phi(k) \left\{ \frac{k}{R - \gamma} - 1 \right\}$. Rearranging this equation yields the expression for $g(K_*)$ given in the Lemma.

Alternatively, the expression for $g(K_*)$ can be heuristically derived and understood as follows. First, $g(K_{\max}) = 0$ because, if $K_* = K_{\max}$, the growth option will never be exercised since the threshold is set too high to be attained with positive

probability. At the other extreme, if $K_* = 0$, the option will be exercised with certainty next period. Accordingly, the value of the growth option under the threshold-0 rule is the expected discounted value of making the investment next period: $g(0) = \frac{I}{R}\int_0^{\kappa_{\max}} dk\phi(k)\left\{\frac{k}{R-\gamma} - 1\right\}$. More generally, $g(K_*)$ equals the expected NPV of exercising the first time that $K_\tau > K_*$. The probability that $K_t \leq K_*$ for $s-1$ consecutive periods and then $K_\tau > K_*$ the immediately subsequent period is $[\Phi(K_*)]^{s-1}[1-\Phi(K_*)]$. Hence, the expected discounted value of free cash flows from the option, which in accordance with the threshold-K_* investment rule might be exercised any period s in the future, is:

$$g(K_*) = \sum_{s=1}^{\infty} R^{-s}[\Phi(K_*)]^{s-1}[1-\Phi(K_*)]E\left[\frac{KI}{R-\gamma} - I \middle| K > K_*\right].$$

$E\left[\frac{KI}{R-\gamma} - I \middle| K > K_*\right]$ is the expected net return upon exercise conditional on[15] $K_\tau > K_*$. Performing the sum, which can be done in closed form here because $E\left[\frac{KI}{R-\gamma} - I \middle| K > K_*\right]$ does not depend on s, recovers the expression for $g(K_*)$ stated in Lemma 1.

Proof of Lemma 2. Start from Lemma 1. The derivative of $g(K_*)$ with respect to threshold value is:

$$\frac{\partial g(K_*)}{\partial K_*} = \frac{I\phi(k_*)}{(R-\Phi(k_*))^2}\left\{\int_{K_*}^{\kappa_{\max}} dk\,\phi(k)\left\{\frac{k}{R-\gamma} - 1\right\} - (R-\Phi(K_*))\left\{\frac{K_*}{R-\gamma} - 1\right\}\right\}.$$

Setting $\frac{\partial g(K_*)}{\partial K_*} = 0$ yields the first order condition (FOC) for the optimal value K^* of K_*. Recalling that $g(K_*) = \left(\frac{I}{R-\Phi(K_*)}\right)\left\{\int_{K_*}^{\kappa_{\max}} dk\,\phi(k)\left\{\frac{k}{R-\gamma} - 1\right\}\right\}$ and rearranging the FOC yields the expression for $g(K^*)$ given in the Proposition. One must also verify that $\frac{\partial^2 g(K_*)}{\partial K_*^2}\Big|_{K_* = K^*} < 0$ to be assured that K^* maximizes the value of the growth option. Calculation yields $\frac{\partial^2 g(K_*)}{\partial K_*^2}\Big|_{K_* = K^*} = -\frac{I\phi(K_*)}{(R-\Phi(K_*))(R-\gamma)} < 0$.

Proof of Observation 1. Comparing the expression for V_τ in Lemma 1 to $\phi\overline{ox}^{c}_{\tau,0}$, where equation (12.5) defines ox_τ, and requiring $V_\tau = \phi\overline{ox}^{c}_{\tau,0}$ for all values of $\{oa_{\tau-1}, cr_\tau, {}_{K_\tau}ci_\tau, ci_\tau, \Theta_\tau\}$, yields five conditions on the accounting policy parameters $\{\delta_0, \delta_1, \delta_2, \delta_3, \delta_\Theta\}$:

$$(1 - \delta_0) = 0$$
$$\phi(1 + \delta_1) - 1 = \frac{\gamma}{R - \gamma}$$
$$\phi\delta_2 = \frac{1}{R - \gamma}$$
$$\phi(1 - \delta_3) - 1 = 0$$
$$\phi\delta_\Theta = \gamma(K_*).$$

The unique solution to these five conditions is $\Pi = \left\{1, -\left(\frac{1-\gamma}{R-\gamma}\right), \frac{R-1}{(R-\gamma)R}, \frac{1}{R}, \phi^{-1}g(K_*)\right\}$. On the other hand, equating the expression for V_τ in Lemma 1 to $\frac{\phi\overline{ox}^{c}_{\tau,1}}{R}$ and requiring equality to hold for all values of $\{oa_\tau, E_\tau[cr_{\tau+1}], {}_{K_\tau}ci_\tau, ci_\tau, \Theta_\tau\}$ yields (only) three conditions on the accounting policy parameters $\{\delta_0, \delta_1, \delta_2, \delta_3, \delta_\Theta\}$:

$$1 - \delta_0 = 0$$
$$\frac{1 + \delta_1}{R - 1} = \frac{1}{R - \gamma}$$
$$\delta_2 \int_{K_*}^{K_{\max}} \mathrm{d}k\phi(k)k - (1 - \delta_3) \int_{K_*}^{K_{\max}} \mathrm{d}k\phi(k) + \delta_\Theta \frac{\Phi(K_*)}{I} = r\,\frac{g(K_*)}{I}.$$

Any policy of the form $\Pi = \left\{1, -\left(\frac{1-\gamma}{R-\gamma}\right), \delta_2, \delta_3, \delta_\Theta\right\}$, where $\{\delta_2, \delta_3, \delta_\Theta\}$ is any triplet that satisfies the last condition, solves these conditions. The following identities were used to derive the last condition: $E_\tau[\Theta_{\tau+1}] = \Phi(K_*)\Theta_\tau$, $E_\tau[ci_{\tau+1}] = (1 - \Phi(K_*))I\Theta_\tau$, and $E_\tau[{}_{K_{\tau+1}}ci_\tau + 1] = \int_{K_*}^{K_{\max}} \mathrm{d}k\phi(k)kI\Theta_\tau$.

Proof of Observation 2. Under accounting policy Π_0, $ox_\tau = \left(\frac{R-1}{R-\gamma}\right)cr_\tau$ or, equivalently, $\frac{\phi ox_{\tau+1}}{R} = \frac{cr_{\tau+1}}{R - \gamma}$. Taking the expectation value of both sides yields $V_\tau = \frac{\phi\overline{ox}^{c}_{\tau,1}}{R} + g(K_*)\Theta_\tau$.

Proof of Proposition 1. Under accounting policy $\Pi_1 = \left\{1, -\left(\frac{1-\gamma}{R-\gamma}\right), \delta_2, \delta_3, \delta_\Theta\right\}$, equations (12.2), (12.3), and (12.5), and a threshold-K_* investment rule, imply:

$$E_\tau[ox_{\tau+s}] = \left(\frac{R-1}{R-\gamma}\right) E_\tau[cr_{\tau+s}] + \left\{\delta_2 \int_{K_*}^{K_{\max}} dk\ \phi(k)k - (1-\delta_3)\int_{K_*}^{K_{\max}} dk\ \phi(k) + \delta_\Theta \frac{\Phi(K_*)}{I}\right\} \Phi^{s-1}(K_*) I \Theta_\tau,$$

where $E_\tau[cr_{\tau+s}] = \gamma^s cr_\tau + \left(\frac{\gamma^s + \Phi^s(K_*)}{\gamma + \Phi(K_*)}\right) \frac{\int_{K_*}^{K_{\max}} dk\ \phi(k)k}{\Phi(K_*) I \Theta_t}$ for all $s \geq 1$. (To derive these expressions, the following identities are used: $E_\tau[\Theta_{\tau+s}] = \Theta^s(K_*)\Theta_t$, $E_\tau[ci_{\tau+s}] = (1 - \Phi(K_*))\Phi^{s-1}(K_*) I \Phi_\tau$, and $E_\tau[K_{\tau+s},\ ci_{\tau+s}] = \int_{K_*}^{K_{\max}} dk\ \phi(k)k\ \Phi^{s-1}(K_*) I \Phi_\tau$, for all $s \geq 1$.) The expression for V_τ in Lemma 1 equals $(1-\alpha)\frac{\phi \overline{ox}^C_{\tau,1}}{R} + \alpha \frac{\phi \overline{ox}^C_{\tau,2}}{R^2}$ for all values of $\{oa_\tau, E_\tau[cr_{\tau+1}], {}_K ci_\tau, ci_\tau, \Theta_\tau\}$ if, and only if,

$$\frac{\alpha I}{R} \int_{K_*}^{K_{\max}} dk \phi(K) \left\{\frac{k}{R-\gamma} - 1\right\} = \gamma(K_*)$$

$$\left\{\delta_2 \int_{K_*}^{K_{\max}} dk\ \phi(K)\, k - (1-\delta_3)\int_{K_*}^{K_{\max}} dk\ \phi(K) + \delta_\Theta \frac{\Phi(K_*)}{I}\right\}\left\{1 - \alpha + \frac{\alpha}{R}\Phi(K_*)\right\} = 0$$

The first condition requires $\alpha = \frac{R}{R - \Phi(K_*)}$. When $\alpha = \frac{R}{R-\Phi(K_*)}$, the second condition is automatically satisfied *regardless of the values of* $\{\delta_2, \delta_3, \delta_\Theta\}$.

A direct way to see why the weighted average obtains independent of the accounting policy parameters $\{\delta_2, \delta_3, \delta_\Theta\}$ is to examine the expression for the implied forward earnings, $E_\tau[ox_{\tau+s}]$, given above. Only the second term of the expression for $E_\tau[ox_{\tau+s}]$ depends on $\{\delta_2, \delta_3, \delta_\Theta\}$. Hence, the weighted average $(1-\alpha)\ \frac{\phi \overline{ox}^C_{\tau,1}}{R} + \frac{\phi \overline{ox}^C_{\tau,2}}{R^2}$ depends on $\{\delta_2, \delta_3, \delta_\Theta\}$ only through the weighted average of the second term of $E_\tau[ox_{\tau+s}]$, which simplifies to:

$$\left\{\delta_2 \int_{K_*}^{K_{\max}} dk\ \phi(k)k - (1-\delta_3)\int_{K_*}^{K_{\max}} dk\ \phi(k)k + \delta_\Theta \frac{\Phi(K_*)}{R}\right\}\left[(1-\alpha) + \alpha\frac{\Phi(K_*)}{R}\right]\frac{I}{r}\Theta_\tau.$$

The factor in brackets $\left(\left[(1-\alpha)+\alpha\frac{\Phi(K_*)}{R}\right]\right)$ vanishes identically when $\alpha=\frac{R}{R-\Phi(K_*)}$ independent of $\{\delta_2,\delta_3,\delta_\Theta\}$.

Proof of Proposition 2. Taking the $s\to\infty$ limit of equations (12.10) and (12.11) yields:

$$\lim_{s\to\infty}E_\tau[cr_{\tau+s}]=\begin{cases}\gamma^s\left\{cr_\tau+\dfrac{\int_{K_*}^{K_{\max}}\mathrm{d}k\;\phi(k)k}{(\gamma-\Phi(K_*))\Phi(K_*)}I\Theta_t\right\} & \gamma>\Phi(k_*)\\ \gamma^s\left\{cr_\tau+\dfrac{\int_{K_*}^{K_{\max}}\mathrm{d}k\;\phi(k)k}{\Phi(K_*)\gamma}\;sI\Theta_t\right\} & \gamma=\Phi(k_*)\\ \Phi^s(K_*)\dfrac{\int_{K_*}^{K_{\max}}\mathrm{d}k\;\phi(k)k}{(\Phi(K_*)-\gamma)\Phi(K_*)}I\Theta_\tau & \gamma<\Phi(k_*)\end{cases}$$

$$\lim_{s\to\infty}E_\tau[cr_{\tau+s}]=\begin{cases}\gamma^s\left(\dfrac{R-1}{R-\gamma}\right)\left\{cr_\tau+\dfrac{\int_{K_*}^{K_{\max}}\mathrm{d}k\;\phi(k)k}{(\gamma-\Phi(k))\Phi(K_*)}I\Theta_\tau\right\} & \gamma>\Phi(K_*)\\ \gamma^s\left(\dfrac{R-1}{R-\gamma}\right)\left\{cr_\tau+\dfrac{\int_{K_*}^{K_{\max}}\mathrm{d}k\;\phi(k)k}{\Phi(K_*)\gamma}\;sI\Theta_\tau\right\} & \gamma=\Phi(K_*)\\ \Phi^{s-1}(K_*)\left\{\left(\dfrac{R-1}{R-\gamma}\right)\dfrac{\int_{K_*}^{K_{\max}}\mathrm{d}k\;\phi(k)k}{(\Phi(K_*)-\gamma)}+\Lambda\right\}I\Theta_\tau & \gamma<\Phi(K_*),\end{cases}$$

where $\Lambda(\delta_2,\delta_2,\delta_\Theta)$ is as given in the main text. The formulas in Proposition 2 then follow from these expressions. For instance,

$$\lim_{s\to\infty}\frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]}=\lim_{s\to\infty}\left\{\frac{\dfrac{E_\tau[cr_{\tau+s+1}]}{R-\gamma}+g(K_*)E_\tau[\Theta_{\tau+s}]}{\dfrac{E_\tau[cr_{\tau+s}]}{R-\gamma}+g(K_*)E_\tau[\Theta_{\tau+s-1}]}\right\},\text{ where } E_\tau[\Theta_{\tau+s}]=\Phi^s(K_*)\Phi_\tau.$$

When $\gamma>\Phi(K_*)$, the $E_\tau[cr_{\tau+u}]$ terms dominate in both the numerator and denominator, which implies $\lim_{s\to\infty}\frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]}=\lim_{s\to\infty}\frac{E_\tau[cr_{\tau+s+1}]}{E_\tau[cr_{\tau+s}]}=\gamma$. On the other hand, when $\gamma<\Phi(K_*)$, the terms proportional to $\Phi^s(K_*)$ dominate in both the numerator and denominator, which implies $\lim_{s\to\infty}\frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]}=\Phi(K_*)$. When $\gamma=\Phi(K_*)$, the numerator is proportional to $\Phi^s(K_*)=\gamma^s$ while the denominator is proportional to $\Phi^{s-1}(K_*)=\gamma^{s-1}$. Hence, $\lim_{s\to\infty}\frac{E_\tau[V_{\tau+s}]}{E_\tau[V_{\tau+s-1}]}=\Phi(K_*)=\gamma$.

Proof of Proposition 3. Lemma 1 implies $E_\tau[V_{\tau+s}]=\frac{E_\tau[cr_{\tau+s+1}]}{R-\gamma}+g(K_*)E_\tau[\Theta_{\tau+s}]$. Applying $E_\tau[ci_{\tau+s}]=\left(\frac{1-\Phi(k_*)}{\Phi(K_*)}\right)I\,E\tau[\Phi_{\tau+s}]$ to equation (12.10) yields:

$$E_\tau[\phi ox_{\tau+s}-c_{\tau+s}]=\frac{E_\tau[cr_{\tau+s+1}]}{R-\gamma}-\frac{I}{\Phi(K_*)}\left\{\int_{K_*}^{k_{\max}}\mathrm{d}k\;\phi(k)\left\{\frac{k}{\mathrm{R}-\gamma}-1\right\}-\phi\Lambda\right\}E_\tau[\Theta_{\tau+s}].$$

Identifying part of the term in brackets with $g(K_*)=\left(\frac{I}{R-\Phi(K_*)}\right)\int_{K_*}^{k_{\max}}\mathrm{d}k\;\phi(k)\left\{\frac{k}{R-\gamma}-1\right\}$ yields:

$$E_\tau[\phi ox_{\tau+s}-c_{\tau+s}]=E_\tau[V_{\tau+s}]+\{\phi\Lambda I-Rg(K_*)\}\frac{E_\tau[\Theta_{\tau+s}]}{\Phi(K_*)}.$$

Since $E_\tau[\Phi_{\tau+s}] = \Phi^s(K_*)\Phi_\tau$, the second term of $E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]$ falls off like $\Phi^s(K_*)$ when $s \to \infty$. In comparison, Lemma 1 implies:

$$\lim_{s\to\infty} E_\tau[V_{\tau+s}] \sim \begin{cases} \left(\dfrac{\gamma^{s+1}}{R-\gamma}\right)\left\{cr_\tau + \dfrac{\int_{K_*}^{K_{\max}} dk\ \phi(k)k}{(\gamma - \Phi(K_*))\Phi(K_*)} I\Phi_\tau\right\} & \gamma > \Phi(K_*) \\ \gamma^s\left\{\dfrac{\gamma cr_\tau}{R-\gamma} + g(K_*)\Phi_\tau\right\} & \gamma = \Phi(K_*) \\ \Phi^s(K_*)\left\{\dfrac{\int_{K_*}^{K_{\max}} dk\ \phi(k)k}{(R-\gamma(\Phi(K_*) - \gamma)} I + g(K_*)\right\}\Phi_\tau & \gamma < \Phi(K_*). \end{cases}$$

Comparing the expressions for $E_\tau[\phi ox_{\tau+s} - c_{\tau+s}]$ and $\lim_{s\to\infty} E_\tau[V_{\tau+s}]$ yields:

$$\lim_{s\to\infty} E_\tau[\phi ox_{\tau+s} - c_{\tau+s}] \sim \begin{cases} E_\tau[V_{\tau+s}] & \gamma \geq \Phi(K_*) \\ \left\{\dfrac{\int_{K_*}^{K_{\max}} dk\ \phi(k)k}{(R-\gamma(\Phi(K_*) - \gamma)} I + g(K_*) + \left(\dfrac{\phi\Lambda I - Rg(K_*)}{\Phi(K_*)}\right)\right\}\Phi^s(K_*)\Theta_\tau & \gamma < \Phi(K_*). \end{cases}$$

Dividing both sides by $\lim_{s\to\infty} E_\tau[V_{\tau+s}]$ yields the desired result.

13

The True Cost of Employee Share Options: The Recent Debate and Potential Costs for a Case Study Firm

Colette Grey, Derry Cotter, and Edel Barnes

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13.1 Introduction

Until publication of Financial Reporting Standard No. 20, which specifies the accounting treatment to be adopted by entities making share-based payments[1], with accounting periods beginning on or after 1 January 2005 for listed entities (and 1 January 2006 for unlisted entities), no compensation expense was recorded for employee share options (ESOs) if the exercise price on the date of grant was equal to (or greater than) the market price of the shares at that time, a differential referred to as intrinsic value. Intrinsic value, accounted for as an expense, is any excess of the market price of a share over the exercise price of the option at the date of grant. However, use of ESOs is widespread and there is both evidence that their use increased substantially during the dotcom bubble and some speculation that favorable financial reporting treatment precipitated this trend (Matsunaga, 1995). This is particularly the case for the high-tech and startup sectors, which rely on the provision of stock options to attract and retain skilled employees, where frequently revenues and cash flow are sufficiently low to make purely cash-based payment unattractive. The ability to avoid the recognition of compensation expense reduces the perceived cost of granting ESOs and overall employment expense in consequence. O'Sullivan (2002) contends, for example, that a requirement to expense ESOs could have hit US company profits generally by approximately 9%, the impact on the high-technology sector alone being closer to 33%. This suggests that a requirement to recognize compensation expense for ESOs is likely to reduce their use for some firms. Heretofore, a firm that expected reported income to be low could have reduced reported compensation expense under the recent liberal financial reporting regime, by substituting ESOs for other forms of compensation, an approach no longer feasible. Despite limitations to the study, Matsunaga postulates:

> 'The current financial reporting rules pertaining to employee stock options (ESOs) affect the compensation practices of some firms. … results support a positive relation between the use of ESOs and the firm's reliance on income-increasing accounting methods, and a negative relation between the extent [to which] a firm is below its target income level and the use of ESOs.'
>
> (Matsunaga, 1995, p. 23)

It is widely recognized that providing ESOs has important financial reporting incentives. A study on options granted to chief executive officers in Canada concludes:

> 'Empirical results strongly support the importance of financial reporting incentives in determining the mix of cash and options granted to Canadian CEOs.'
>
> (Klassen and Mawani, 2000, p. 256)

In addition to financial reporting incentives, the recent accounting treatment of ESOs has implications for wider corporate finance issues. Firms that grant ESOs and avoid any charge to earnings do not expense full/true compensation costs and in consequence they artificially boost corporate earnings. It has also been argued that managers may favor share repurchases over conventional distributions in light of the documented positive share price implications of repurchases, which in turn has implications for the fair value of those managers' share options. Hill et al. (2002) suggest that corporate lobbying of the Financial Accounting Standards Board (FASB) on *Exposure Draft: Accounting for Stock-Based Compensation* (FASB, 1993) that preceded SFAS 123, *Accounting for Stock-Based Compensation* (FASB, 1995), may have been motivated by managerial concerns. These concerns center on whether mandatory expensing of ESOs might cause changes to compensation contracts, an argument that also supports a managerial self-interest hypothesis. Forcing firms to expense ESOs could have a knock-on effect on dividend, compensation, and financing policies.

The extant literature (Rouse and Barton, 1993; Samuels and Lymer, 1996; Coller and Higgs, 1997; Hemmer et al., 1999; Saly et al., 1999) is consistent in maintaining that options have value to the employee and impose a cost on the issuer. In this context, the standard-setting authorities favor fair value accounting and a consequent charge to the profit and loss account (income statement), a practice that implies that ESOs constitute an expense to reporting entities and should properly be recognized as such. In addition to intrinsic value, however, share options derive value from the possibility that underlying share values will increase before the options expire, a time value. An option's *fair value* is thus the sum of intrinsic value plus this time value. Conceptually it would be superior to measure and record compensation expense at fair value rather than at intrinsic value. The problem is that there is no clear, objective method by which to calculate fair value, and this concern was reflected in the various submissions to the ASB and FASB (and subsequently to the IASB) in respect of their proposals for accounting for share-based payments. Option pricing models are considered to offer potential measurement methods, but as these models were developed to estimate the fair value of publicly traded options, while ESOs have characteristics that distinguish them importantly from these securities, the appropriateness of some of these models may be questioned (see Maller et al., 2002).

While there is little argument about whether or not the provision of ESOs represents an expense to issuing companies, there is much greater complexity of debate regarding the issues of *what* recognition date to adopt and, in particular, *how* to measure fair value. Within this context, the two specific issues we

address in this chapter are (a) *when* to recognize ESOs and (b) *how* to measure the cost to the company of these employee share options, with particular reference to the ASB (2000) proposals, which provide a useful precursor to FRS 20 (equivalent to IFRS 2) now coming into force. The ASB proposals essentially recommend that transactions involving share-based payment be measured at the fair value of the shares or share options at vesting date, while FRS 20 recommends measurement at fair value but with recognition at grant date.

The remainder of this chapter is organized around five distinct sections as follows. Section 13.2 provides a review of the extant literature in the area by examining the issues central to any study of accounting for ESOs. Section 13.3 presents a brief description of the company chosen for the case, and of the research design, while section 13.4 presents the main findings of the study. Section 13.5 places the ASB proposals in the context of the lengthy international debate on the recognition of ESOs. Section 13.6 summarizes and concludes.

13.2 Literature review

13.2.1 ESO value and accounting income

Rouse and Barton (1993) argued that the question of employee share compensation is highly controversial, mainly because it can have a potentially significant impact on financial statements and on the nature and level of employee compensation. Fixed share option plans (plans which do not incorporate a performance condition for vesting, rather depending on an employee continuing to render service to an employer for a specified period of time) typically result in no compensation expense, as they generally have no intrinsic value when granted (i.e. the exercise price is equal to market price at the date of grant). These authors recognized that, in addition to intrinsic value, stock options are likely to have a time value related to the possibility of share price increases before option expiration, so that the *fair value* of these options is likely to be positive. Since most ESOs have no intrinsic value at the grant date, Rouse and Barton concluded that a valuation approach that omits time value essentially excludes a key element of value for virtually all employee stock option plans. Not recognizing compensation expense for ESOs suggests that the options have no value or, more pertinently, that a company incurs no cost in granting them (Robbins, 1988). Arguments against the inclusion of compensation expense have centered largely on the premise that the expense is difficult to measure accurately rather than on the basis that no expense arises.

In the USA, the FASB tried to promulgate fair value accounting for ESOs and faced enormous opposition, in particular from the high-technology sector. The FASB argued that recording share options at fair value is preferable to intrinsic value for three reasons:

> 'Employee stock options have value; valuable financial instruments given to employees give rise to compensation cost that is properly included in preparing an entity's net income; and the value of employee stock options can be estimated within acceptable limits for recognition in financial statements.'
>
> (FASB, 1995, paragraph 75)

Despite the above assertions, lobbying of the FASB was such that the Board was forced to compromise, the result being that reporting entities were required to calculate a charge based on the fair value of ESOs, but were not necessarily mandated to charge that compensation expense to income. Instead, disclosure in the notes to the financial statements was deemed sufficient[2]. Samuels and Lymer (1996) addressed the accounting treatment of ESOs issued to directors, the practical problems of treating these share options as a cost, and whether the financial accounts can give a true and fair view if these costs are omitted. They argued that when a director exercises an option, the shares received could potentially have been sold in the market at a higher price than that being paid by the director. An entry should therefore appear in the financial accounts of the company recognizing the benefit received by the director and the cost to the company. These authors used case study methodology to demonstrate how ESOs could be valued and postulated that when the granting of an ESO is ignored in the accounting records of a company, the resulting financial statements cannot be said to give a 'true and fair view' of that company's performance:

> 'It can be argued that the company, in granting an ESO, is incurring a cost: an option has a value. Investors are often willing to pay to receive an option. A number of companies have an active market in options on their shares. The director is therefore being granted something of value: he or she is being given the chance of making a gain. The company therefore is incurring an opportunity cost, which can either be seen as the value of the option with its conditions if it were sold, or the present value of the difference between the exercise price of the option and the expected price of the share when it is exercised.'
>
> (Samuels and Lymer, 1996, p. 252)

Authors dating from Weygandt (1977) and Matsunaga (1995) have supported the recognition of ESOs as a compensation expense, given the practice of

substituting ESOs for other compensation forms, if income is expected to be below target:

> 'Valuing stock options as the difference between the market value at the date of grant and the option price is considered by most accountants as a valuation that results in an understatement of the value of the option.'
>
> (Weygandt, 1977, p. 42)

Mozes (1998) considered the practice of measuring the value of ESOs at their intrinsic value, and concluded that virtually no option grant that is out-of-the-money on the grant date will ever be reflected in the profit and loss (income) account. An obvious shortcoming of this 'intrinsic value' approach is that it ignores the true value inherent in an option to purchase shares at a predetermined price during an extended period.

13.2.2 Recognition date

Three key dates arise in the life of ESOs – namely, the date the option is granted (grant date), the date the option vests (the time the option could first be exercised), and exercise date (the date the option is either exercised or is allowed to lapse). From an accounting perspective, entries could be made in the financial statements on any of these dates (Samuels and Lymer, 1996). Robbins (1988) maintained that valid conceptual arguments support each approach, and concluded that there is simply no way to demonstrate the superiority of one over the other two. Supporters of *grant date* measurement (e.g. Foster et al., 1991) point out that this is the date when an organization makes decisions regarding the number of options to give the employee and the terms of those options. The employer commits to the transaction at that date, because the employee, by continuing to work the required number of years, essentially has control over option exercise. Compensation measurement subsequent to the grant date would allow changes in the company's stock price to affect reported compensation expense, even though stock price changes may bear no relationship to the value of the services rendered by the employee (Robbins, 1988). Samuels and Lymer (1996) argued that the possibility that the option might never be exercised is the key reason why recognizing grant of an option at the date of grant might not represent a suitable expensing approach. They noted that, before vesting date, an options contract is a contingent liability; it becomes a full liability only when the qualifying period is complete. Prior to the vesting date, the company has no liability to the holder of the option,

thus rendering the vesting date as the most appropriate time for initial entry. As with the date of grant, recording the entry at the vesting date requires an estimate of the value of the option. The argument employed in favor of use of the exercise date for value estimation is that the stock option represents a contingency until it is exercised or lapses (Robbins, 1988). Thus, the ultimate value of the option cannot be determined until the exercise date. Furthermore, exercise date measurement produces symmetry between the compensation expense recognized by the employer and the value received by the employee.

> 'A practical reason in favor of this date is that it is only at this time that the true value of the option is known. At this date the size of the benefit to the executive is known, as is the opportunity cost to the company. It is only *ex post* that the cost can be accurately measured.'
>
> (Samuels and Lymer, 1996, p. 253)

Against use of the exercise date is the argument that charging the entire *actual cost* of the option to the profit and loss account in the year the option is exercised leads to an uneven recognition of costs. If the date of grant is used the expense can be spread over time, an argument that also applies, albeit to a lesser extent, to vesting date recognition. A further problem associated with recognition at exercise date is that the cost to the company becomes dependent upon a choice made by an employee of the company.

13.2.3 Measuring fair values

In measuring compensation expense, there can be no argument but that fair value is conceptually superior to intrinsic value. However, as discussed above, the problem with the fair value approach is the lack of a clear, objective method by which to calculate it. Option pricing models were developed to value *traded options* but ESOs have characteristics that render them different from traded options, such as nontransferability and the possibility of early exercise (Coulton and Taylor, 2002, provide a useful discussion of these differences). Two option pricing models are considered by the FASB to be appropriate for valuing ESOs, the Black–Scholes (BS) option pricing model and a binomial model. The majority of companies in the USA (where disclosure, at least, of the fair value of ESOs was required) used the BS model. During discussions regarding the measurement of fair value by the G4 + 1 group (2000), it was always considered that the BS model would be used. In consequence, the ASB Discussion Paper, *Share-Based Payment* (ASB, 2000), does not

prescribe the precise model to be used for option valuation, although use of the BS model is assumed. In any model, however, the following features of an option, currently accepted as relevant to its value, need to be taken into account: the share price (S), the option exercise price (X), the expected volatility of the share price (δ), dividends expected to be paid on the share (Div), the market rate of interest (r), and the term of the option (T). Intrinsic value is defined by the difference ($S - X$); the remaining four variables are relevant to the option's time value.

The ASB and subsequently the IASB argued that the quality of financial statements, and in particular their consistency and comparability, would be enhanced by adopting fair value as the basis for estimation of the value of options issued to employees. They also argued that option pricing models seem to provide the only practicable means of determining this fair value in the absence of observable market prices. To allow for the nontransferability of ESOs, the expected life should be used as a basis for calculating fair value. In addition, options forfeited prior to measurement could be excluded from the calculation (ASB, 2000). Finally, the ASB advocated vesting date measurement, the main point of difference between the ASB (2000) Discussion Paper and FRS 20 which followed it, and which recommends grant date measurement. We choose here to compare the ASB proposals (vesting date measurement) with the likely fair value at date of grant (an approach that reflects the FRS 20 (IFRS 2) recommendations), in respect of the employee share options granted in 1997 by ESAT Telecom Group plc, to assess the potential impact on income/loss of expensing ESOs for this case study company.

13.3 Case study: ESAT Telecom Group

Our empirical analysis involves an assessment of the likely effect of the ASB proposal to include, as an expense in the profit and loss account, ESOs valued at fair value on vesting date, for ESAT Telecom Group plc, together with an assessment of the potential cost of the FRS 20 recommendations which requires measurement at grant date. A key element of our approach is the inclusion of share options granted to all *employees* (as distinct from purely executives, the general focus of studies in the area) in addition to measurement at each year-end prior to vesting with final measurement at vesting date. Our chosen company ESAT Telecom Group plc, at the time of analysis, was a telecommunications company based in Dublin, Ireland, and was founded in 1991 by a group of investors to offer alternative telecommunications services in competition with the state monopoly. For the period of our analysis the company provided data, Internet access, sophisticated broadband data, and telephonic services in the Republic of Ireland.

ESAT Telecom Group plc employee share option grants (1997) provided a particularly interesting example, in the context of option expense recognition and measurement, because the firm was a high-technology entity, arguably likely to be adversely and disproportionately impacted by the proposal to expense ESOs and because all share options granted to employees during 1997 were granted at below market value. Table 13.1 describes these stock options, all of which had a term of seven years from date of grant.

The average vesting period for options granted was 1.7 years (20 months). Early exercise was anticipated with the estimated life of these options being three to five years (Offering Memorandum, 1999). Prior to vesting date, options over 638,991 ordinary shares were canceled following the cessation of employment of a number of option holders. At grant date ESAT did not have publicly traded options so it was not possible to compute an implied volatility metric, which is found to be a more precise predictor of future volatility than historical measures (Chiras and Manaster, 1978). Share prices used to calculate volatility were those quoted on the NASDAQ. It was not possible to obtain a full series of Irish share price data for the period of our study as ESAT Telecom Group plc was quoted on the Dublin Stock Exchange only for the period June 1999 to June 2000. Implicit in our approach is an assumption that the notional series of price changes on the Irish Stock Exchange would have correlated highly with that of the NASDAQ quote, and that factors driving price changes would be essentially similar for the two quotations. There was no share split between the 1997 ESO grant and vesting dates for these options.

Figure 13.1 shows weekly closing share prices of American Depository Shares (ADS $) of ESAT Telecom Group plc, quoted on the NASDAQ for the period 14 November 1997 to 30 September 2000. Given the limited period of trading in ESAT shares, it was not possible to impute historic three-year volatility measures. Clearly the rise in share price was dramatic over this period – by the earliest vesting date, market price of the shares had almost quadrupled relative to

Table 13.1 Details of ESAT Telecom Group plc 1997 share option plan

Date of grant	Number of options granted	Exercise price at grant date (IR £)
22 May 1997	1,506,031	2.4407
19 October 1997	994,613	2.4407
6 November 1997	361,400	2.4407

Source: Annual Report and Accounts (1997, p. 44).

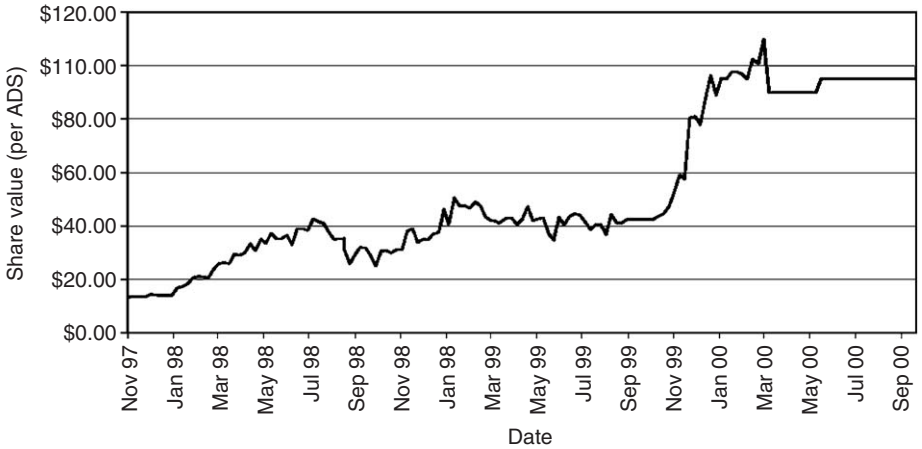

Figure 13.1 ESAT Telecom Group plc, weekly share price, ADS ($): November 1997 to September 2000. *Source:* DATASTREAM, code EA:ESA

share price at grant date, resulting in a potentially substantial gain to holders of the ESOs.

The extant literature on option pricing (Black and Scholes, 1972; Latane and Rendleman, 1976; Merton, 1976; Boyle and Ananathanarayanan, 1977) indicates that bias in the BS model can be significantly reduced by extending the time period over which share returns are collected for the purposes of computing variance, and by employing returns subsequent to measurement date (the date the option value is calculated for the purposes of computing the compensation expense to appear in the financial statements). Hence, volatility was calculated, where possible, using 60-trading-day estimation periods for both the 60 days pre-measurement (historic) and the 60 days post-measurement (future) metrics. The pre-measurement data collection period ended on the date of option value measurement; the post-measurement data collection periods began on the date of measurement (see Foster et al., 1991; Coller and Higgs, 1997). Another typical window for measuring volatility is 60 months, but due to the limitations imposed by the brief share quotation period it was only possible to measure volatility over a 36-month period. In summary, we compute three measures of volatility: 60-day historical, 60-day future, and three-year volatility. For measurement on the dates of grant and at the year-end, 31 December 1997, historical data was not available. The risk-free rate was calculated using rates on Irish government bonds, sourced from NCB stockbrokers, Dublin. Yield was calculated at the various measurement dates matching the time to maturity of the bonds to the

options' remaining life at those dates. Time to exercise varied depending on the date of measurement: to facilitate comparison we select three and five years from the date of grant as the bases for calculation, as per the Offering Memorandum (1999, F23). The term of the options granted by ESAT Telecom Group plc was seven years, but this term was not used because (a) the estimated life was given as three to five years, and (b) the study by Huddart and Lang (1996) found a pervasive pattern of early option exercise. Moreover, Huddart (1994) provided evidence that the cost of an ESO to the employer might be much less than the BS valuation. The accepted accounting practice of reducing the time parameter in the BS model from time to maturity to the expected time to exercise adjusts, albeit crudely, for this bias. Thus, the fair value of the ESOs was calculated using an expected life of both three and five years. Exercise price for all the 1997 options was IR£2.4407. At commencement of trading on the NASDAQ on 12 November 1997, ESAT Telecom plc issued ADS ($) with one ADS representing two ordinary shares. All 1997 ESOs were granted prior to that date. The initial public offering price of $13 per ADS was used as the share price at dates of grant, and was then converted to IR£ at the relevant date of grant (IR£4.31, IR£4.42, and IR£4.31 respectively). From 12 November 1997 closing prices on the NASDAQ were used to calculate volatility. All BS inputs other than the volatility metric were in IR£, converted at the closing rate on the relevant date. In respect of amortization period, the ASB (2000) proposal requires measurement at vesting date. It was thus necessary to estimate compensation expense at each year-end prior to the vesting date. Compensation expense for the ESOs granted in 1997 was amortized from the date of grant to the date the employees became unconditionally entitled to the options (vesting date). The average vesting period for these options was 1.7 years (20 months). The compensation expense (in months) amortized in each of the three years covered from date of grant to vesting date is reported in Table 13.2.

Our hypothesized amortization period is the vesting period, i.e. time from the date of grant to the date the ESOs are first exercisable. Two alternatives are: (1) time

Table 13.2 Amortization pattern (20 months) for 31 December year-ends

Grant date/year	1997	1998	1999
22 May 1997	7/20	12/20	1/20
19 October 1997	2.5/20	12/20	5.5/20
6 November 1997	2/20	12/20	6/20

to expiration – the period that begins on the date of grant and ends on the date the ESO expires; (2) service period – the time over which the employee performs services that are, at least in part, compensated with the ESO grant. Amortization period should equate with service period, which may be identified in the plan or inferred, in accordance with basic accrual accounting. As we lacked specific direction regarding service period, it is inferred as being the period from the date of grant to the date the options first become exercisable, which is the vesting date. With vesting date accounting, the ASB proposals require that some estimate of compensation expense for the ESOs be calculated and charged to the profit and loss (income) account for any financial years ending prior to vesting date. The three blocks of ESOs granted by ESAT Telecom Group plc in 1997 vested as follows:

Grant date	**Vesting date**
22 May 1997	22 January 1999
19 October 1997	19 June 1999
6 November 1997	6 July 1999

Under the vesting date measurement approach, the final cost of the options is determined at vesting date. For the intervening years, the ESOs are valued at year-end to estimate compensation expense for each intervening year. In respect of BS model inputs, option life is alternatively estimated at three (five) years while the risk-free interest rate was based on the yield on Irish government bonds and matched to the time to maturity of the options being measured. Our volatility metrics are based on 60-day historic, 60-day future, and three-year periods to provide a range of plausible measures of compensation expense. Under vesting date measurement, options forfeited may be excluded from the calculation of compensation expense at any measurement date following forfeiture. Any options forfeited after vesting date do not require any adjustment. Of the 994,613 options granted on 6 October 1997, 590,601 or approximately 60% were forfeited during 1997 as employees quit the company (Offering Memorandum, 1999), and the number of options outstanding was adjusted accordingly for each subsequent year-end. During 1998, options over a further 48,390 shares were forfeited, although it was not possible to relate these forfeitures to a specific option package. In consequence, for the purposes of computing options outstanding at 31 December 1998 and 31 December 1999, these forfeitures were evenly distributed across the three blocks of options granted by ESAT Telecom Group plc. We determine compensation expense materiality based on the Leslie (1985) metrics (5% of pre-tax income or 0.5% of total revenues), accepted accounting definitions which Pany and Wheeler (1989) argue are consistent with extant literature in the area.

13.4 Results

The ASB (2000) proposal requires measurement and allocation of options expense at any year-end that occurs prior to vesting date. Table 13.3 outlines the compensation expense for the years ending 31 December 1997, 1998, and 1999, with measurement at year-end. Coller and Higgs (1997) reported that choice of inputs can substantially affect measured compensation expense; for some firms in their sample, the expense differential was material for nondividend-paying firms. To control for this effect we calculate BS fair values based on a variety of justifiable inputs in respect of options life/duration and volatility. Materiality is assessed relative to intrinsic value, minimum and maximum BS values. Table 13.3 documents the resulting compensation expense for years ending 1997, 1998, and 1999, and the corresponding option values, based on measurement at vesting date, while Table 13.4 presents reported net losses and revenues for the ESAT Telecom Group for those years.

Table 13.5 summarizes the impact on net loss and revenue of measuring compensation expense under intrinsic and fair values, with vesting date measurement and fair value based on both minimum and maximum BS valuations.

For all measurement bases and recognition dates, our hypothesized ESO expense appears to be material with respect to revenue, even for measurement at intrinsic

Table 13.3 Summary of compensation expense for years ending 1997–1999: various option values, measurement finalized on vesting date

Year-end 31 December	1997 (IR£, thousand)	1998 (IR£, thousand)	1999 (IR£, thousand)
Intrinsic value	1516	18,197	13,811
BS minimum value	1868	17,885	14,111
BS maximum value	2223	18,379	14,352

Table 13.4 ESAT Telecom Group plc: reported net loss and revenue, 1997–1999

Year-end 31 December	1997 (IR£, thousand)	1998 (IR£, thousand)	1999 (IR£, thousand)
Net loss	(40,109)	(44,208)	(120,117)
Revenue	11,590	31,612	72,055

Source: Annual Report and Accounts (1997, 1998, 1999).

Table 13.5 Analysis of the materiality impact of different measurement methods, 1997–1999: vesting date measurement

	Intrinsic value		Minimum BS		Maximum BS	
	Net loss (%)	Revenue (%)	Net loss (%)	Revenue (%)	Net loss (%)	Revenue (%)
1997	−3.78	13.08	−4.66	16.12	−5.54	19.18
1998	−41.16	57.56	−40.46	56.58	−41.57	58.14
1999	−11.50	19.17	−11.75	19.58	−11.95	19.92

value. It is important to note, however, that revenues were consistently less than reported net loss throughout our study period, with a sharp increase in share price post-options grant, particularly during 1998, being a further contributing factor. It is also likely that the relatively short vesting period of 20 months, which necessitates recognition of total compensation expense over a short timespan, may impact on the materiality of the results we report. (The more usual vesting period for Irish and UK plans would be three to five years. Many technology companies which obtained initial quotations on the NASDAQ have a much more liberal approach to share option plans, which include very short exercise periods and lack specific performance criteria.) As a percentage of net loss and revenue, the 1998 compensation expense appears to substantially exceed materiality criteria, due to the rise in share prices and the need to charge over half the total compensation expense in that year due to the short vesting period. Even the most conservative option values, which exclude share options granted during 1998 (688,922) and 1999 (2,056,305) respectively and equate exercise price with market price at grant date (Annual Report, 1999), represent a material compensation expense relative to income/loss and revenue. For comparative purposes we document the likely impact on net loss and revenue based on grant date measurement, which reflects the likely compensation expense under FRS 20 reporting requirements, in Table 13.6. Applying Leslie's (1985) materiality criteria, compensation expense under any of the three different methods would have had a material effect on ESAT Telecom Group plc's net loss and revenue, based on *grant date* measurement.

These findings are consistent with those of Foster et al. (1991) that recognition of ESO expense is likely to have a material impact on income irrespective of the option valuation model and/or measurement date approach, for firms that do not pay dividends, although our analysis relates to a young firm in the high-technology sector and may not be representative of a broader spectrum of

Table 13.6 Analysis of the materiality impact of different measurement methods, 1997–1999: grant date measurement

	Intrinsic value		Minimum BS		Maximum BS	
	Net loss (%)	Revenue (%)	Net loss (%)	Revenue (%)	Net loss (%)	Revenue (%)
1997	−2.88	9.95	23.77	13.05	−4.55	15.76
1998	−5.70	7.97	−7.45	10.42	−8.99	12.58
1999	−4.50	0.76	−5.94	0.99	−7.67	1.28

reporting firms that include ESOs in total employee compensation. As is evident from Tables 13.5 and 13.6, the effect on income of expensing ESOs is relatively greater with vesting date measurement, an effect which we attribute to the significant share price increase between grant and vesting date. Minimum BS expense for the 1998 accounting year would have been −7.45% (−40.46%) of net loss under date of grant (vesting date) measurement. The difference between the minimum and maximum BS values is also worthy of note. Under grant date measurement the difference is −0.78% (−1.54%) of net loss for 1997 (1998) accounting years, with the corresponding revenue impact differentials being 2.71% (2.16%). Under vesting date measurement the relevant differentials are −0.88% (−1.11%) for net loss and 3.06% (1.56%) for revenue. Such material difference in imputed options expense is consistent with Coller and Higgs (1997), who analyzed the effect of expensing approach on ESO option values for their sample of US firms.

13.5 Discussion

Previous to the ASB (2000) development of the *Share-Based Payment* Discussion Paper (DP) there had been no UK standard prescribing the appropriate treatment of ESOs, despite frequent calls for comprehensive and authoritative guidance in the area, and this DP largely influenced development of FRS 20 on share-based payments that comes into effect for listed entities with reporting year-ends on or after 1 January 2005. The DP recommended that ESOs be recognized as an expense in the profit and loss account, based on vesting date recognition and measurement at fair value, the estimated expense to be amortized over the service period and finalized at vesting date, at the fair value of the ESOs on that

date. Approximately 100 responses were filed with the ASB in respect of the DP, split almost evenly between those that would endorse the proposals and those that would not. Of responses received from preparers and the investment community, a majority favored no charge to the profit and loss account, but if a charge should be mandated, their preference would be for fair value recognition at date of grant. A common concern of firms in the ASB jurisdiction is that they might be relatively disadvantaged should proposals be translated into an accounting standard that would be enforced unilaterally by the ASB and not by other standard setters, most notably the FASB. Thus, there seemed then and continues to be both compelling argument for, and momentum towards, developing global standards:

> 'The IASB has a unique opportunity to provide leadership on accounting for share-based payment, by developing a high quality accounting standard that will provide a basis for international convergence of standards in this area of accounting.'
>
> (Coulton and Taylor, 2002, p. 5)

In August 2001, the IASB initiated a 'high priority project' to consider the issues associated with recognition of share-based payments, and a decision was taken at the ASB to contribute to the debate in the international arena, rather than to proceed with developing an accounting standard of its own. International Financial Reporting Standard 2, which is identical to FRS 20 in respect of share-based payments, was the outcome of such debate. Over time there has been little shift in stakeholder preferences, a majority of users of financial statements agreeing with IASB proposals, a significant majority of preparers remaining opposed to expensing of ESOs, and those that would countenance expense recognition preferring measurement at intrinsic value in light of the perceived unreliability of option pricing models to estimate fair value[3]. While there appears to be some support for date of grant, vesting date, or exercise date recognition, the majority of preparers favor recognition at date of grant, with little support for measures based on service period. Interestingly, in recognition of noncompensation share-based payments, a fair value basis of measurement appears not to be considered problematic. Hill et al. (2002) examined the nature of US corporate lobbying of the FASB on the Exposure Draft that preceded SFAS 123, *Accounting for Stock-Based Compensation*, which was weighted against recognition of ESO expense in the financial statements. The ED proposed that stock-based compensation expense (related to all share option plans, for executives and employees) be calculated based on option fair values at date of grant and amortization over the vesting period. Of 262 responses analyzed, 56% of firms drawn from all US stock

exchanges opposed the ED proposals entirely, clearly favoring the existing practice of disclosure of employee stock option information in proxy statements. A further 31% opposed recognition in the income statement but supported disclosure by way of note to the accounts; only eight firm responses were supportive of recognition in the income statement of share-based payments. Broadly, the spirit of the responses to the FASB and ASB proposals is consistent in that preparers surveyed at the time of publication of the proposals were opposed to recognition of ESO expense and, if mandated, would favor minimal disclosure, suggesting that managers are sensitive to both venue (proxy statement versus financial statements) and format (footnote disclosure versus recognition on the income statement) of share-based payment disclosures.

Accounting for ESOs remains a highly emotive issue and self-interest-based lobbying has accompanied development of the international standard that is now in force. Ominously, when Coulton and Taylor (2002) analyzed the comments received by the IASB from the major accounting firms they concluded that these firms have lobbied for a position that is favorable to their clients, but is not necessarily either in the wider social interest or likely to result in an improvement to the financial reporting system. At its March 2002 meeting, the IASB discussed and offered some tentative conclusions in respect of the mechanics of option valuation, on the assumption that the eventual IFRS would mandate use of an options pricing model. Specifically, entities would be required to disclose the particular option pricing model used, the inputs to that model including expected dividend and risk-free rate metrics, measures of expected and historical volatility and an explanation of how these differ, and an explanation of how the risk-free interest rate should be, and in practice was, determined.

While there remain nuisances to address with respect to the calculation of fair values for ESOs, there appears to be no viable argument against measurement at fair value, which is conceptually superior to intrinsic value measures. In contrast, agreement on the appropriate recognition date has proven more controversial. FASB and IASB recommendations involve measurement at date of grant with amortization over the vesting period; the Australian Accounting Standards Board has opted for measurement (and total recognition) at vesting date. Interestingly, Brown and Yew (2002) claim that:

> 'Our tests confirm that ESOs are unequivocally value-relevant in Australia at the grant date, in the sense that share prices are significantly correlated with our ESO variables. Results for their value-relevance on the vesting date are, regrettably, less clear-cut.'
>
> (Brown and Yew, 2002, p. 36)

In essence, by taking accounting for ESOs into the international arena, the ASB effectively allowed a 'fudge' of the question of developing a standard that might reflect best practice but which preparers would find difficult to accept. In light of the recent FRS on *Retirement Benefits* in respect of employee pension benefits and the widely documented trend towards defined contribution schemes at the expense of defined benefit plans, which are less clearly employee friendly, it might be considered that the ASB has little appetite to be associated with a further standard that may be seen as detrimental to employees. From a political perspective, it was thought that unilateral implementation of the ASB (2000) proposals might plausibly place companies in that jurisdiction at a competitive disadvantage in attracting and retaining a highly skilled workforce. This might be particularly problematic in the area of information technology and comparable skills, where being in the vanguard is perceived to be of the utmost importance politically.

13.6 Conclusion

To recognize an expense for ESOs in excess of their intrinsic value has been the subject of much debate. The ASB (2000) Discussion Paper *Share-Based Payment* recommended that ESOs be recognized in financial statements at vesting date and measured at fair value using an option pricing model, while the subsequent IASB financial reporting standard (FRS 20/IFRS 2) requires measurement at fair value but with recognition at grant date. The application of these proposals to ESAT Telecom Group plc leads to a number of tentative conclusions. Initially, on the basis of the case study conducted here, application of the proposals in the DP would be likely to have a substantial effect on the financial statements of some companies, those in the high-tech sector perhaps disproportionately so. The choice of ESAT Telecom Group plc is significant in that this technology company had a combination of high return volatility and low dividend yield, coupled with significant share price changes in the run-up to vesting date, valuation features that were characteristic of many technology companies at the time. Both of these features increase the calculated value of share options and in consequence the cost to offering firms. Secondly, much of the extant literature in the area (e.g. Samuels and Lymer, 1996) has focused solely on share options granted to directors because of the lack of sufficient details on share options granted to employees who are not board members. The exclusion of some ESO plans results in consideration of a decision with potentially a much

smaller economic impact. At the end of 1997, directors of ESAT Telecom Group plc held only 25% of total employee options outstanding. Omitting options held by nonboard members has potential to distort the results, and in particular to bias downwards the estimate of true compensation expense. This effect would be amplified in the event that firms make other share-based, supply-related settlements, a practice that has been typical of startup and high-tech enterprises. Thirdly, regardless of the choice of method (intrinsic value or fair value) used to calculate option values, there is likely to be a material impact on income when measurement and recognition is at vesting date. Comparative option values based on grant date measurement (as required under FRS 20 and IFRS 2) were also calculated here, and would have had a *material, albeit smaller*, impact on income and revenue. However, the impact on the 1998 results using vesting date is approximately four times the compensation expense under grant date accounting for the case study firm.

An important dimension to the discussion generally is whether the benefits of incorporating compensation expense in the financial statements are greater than the possibility that firms might be constrained from using ESOs to attract and retain employees (especially for higher risk and emerging firms). This is a key issue worth addressing, the answer to which is likely to emerge only over time as reporting entities apply the recently published FRS 20/IFRS 2. As Zeff (1978, p. 31) notes in respect of the FASB:

> 'Although the decision should rest – and be seen to rest – chiefly on accounting considerations, it must also study – and be seen to study – the possible adverse economic and social consequences of its proposed actions.'

Measuring option values at intrinsic value does not reflect the true cost to firms of ESOs. Since there is no risk of loss to the employee and the potential for great gain, there is general agreement that these options possess value in excess of intrinsic value (Weygandt, 1977). Measurement at fair value is essential if an estimate of the true cost to companies of offering share-based compensation is sought in the context of optimizing the potential of financial statements for reflecting a true and fair view. Based on the results of this case study, and the conflicts of objective between preparers and users of financial statements in respect of expensing ESOs, perhaps the ultimate FRS 20 (and IFRS 2) recommendations constitute a feasible compromise approach that should lessen the income/revenue effect associated with expensing at vesting date and have a greater chance of becoming accepted accounting practice.

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Notes

1. FRS 20 requires measurement at fair value based on grant date of the options awarded. Values must be re-estimated at each reporting date and at settlement, and any change recognized in the profit and loss account at that reporting date. FRS 20 is equivalent to IFRS No. 2.
2. For more detail on the opposition faced by the Financial Accounting Standards Board, the interested reader is referred to Rouse and Barton (1993), Zeff (1997), Mozes (1998), and Hill et al. (2002).
3. Typically the BS option pricing model is utilized to value ESOs, and the ASB (2000) proposals implicitly assume its use. It has been argued that unusual characteristics specific to ESOs (possibility of early exercise, takeover, bankruptcy, liquidity considerations, etc.) render them sufficiently different to traded options to imply that a tailored pricing model is required for accurate valuation. For a discussion of one alternative, based on the binomial OPM and adapted to accommodate features of Australian firms, see Maller et al. (2002).

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14

Impairment of Fixed Assets: Perceived Implementation Problems Associated with International Accounting Standard No. 36

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14.1 Introduction

When a firm acquires fixed assets such as plant and equipment, it records them at cost according to the cost principle. These recorded costs usually represent fair values of the assets at the time of acquisition because the amounts agreed upon are determined based on arm's length transactions.

The general definition of an asset incorporates the notion that the asset has future benefits that tend to decrease over time because of normal usage, and accountants have devised the concept of depreciation to account for the effects of usage for reporting purposes. In that context, depreciation is viewed as a form of allocation of historical cost over the useful life of the asset. This allocation process is needed for income measurement and is usually implemented according to management preference on a systematic and consistent basis. However, a fixed asset or a group of fixed assets may be exposed to situations other than usage (e.g. technological changes) that result in potential decline in asset value (known as asset impairment). This issue of potential decline in asset value is not completely new. It has been acknowledged in Statement of Financial Accounting Standards No. 5, *Accounting for Contingencies* (FASB, 1975), and SFAS No. 19, *Financial Accounting and Reporting by Oil and Gas Producing Companies* (FASB, 1987). However, no such guidance has been provided to answer the question of when to recognize such potential decline in asset value (a timing issue) and the question of how much to report for asset write-downs (a measurement issue).

Before the mid 1990s, accounting rules generally did not address the measurement and reporting of asset impairments. As a result, management had much flexibility over measurement and reporting of asset impairments. However, as previous research reveals, writeoffs of long-lived assets are both large in magnitude and frequent in occurrence (e.g. Elliot and Shaw, 1988; Elliot and Hanna, 1996; Francis et al., 1996). This increased frequency of asset writeoffs motivated users of financial statements to call for improved reporting of asset impairments.

In 1995, the Financial Accounting Standards Board (FASB) responded to users' calls for improved reporting of asset impairment by issuing SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of*. The statement basically requires that long-lived assets and certain identifiable intangibles to be held and used by a firm be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. In performing such a review, the firm should estimate the future cash flows expected to result from the use of the asset and its eventually disposal. When the sum of the expected undiscounted future

cash flows (without interest charges) is less than the carrying amount of the asset, an impairment loss is recognized. Otherwise, an impairment loss is not recognized. Measurement of an impairment loss for long-lived assets and identifiable intangibles that a firm expects to hold and use should be based on the fair value of the asset.

SFAS 121 also requires that long-lived assets and certain identifiable intangibles to be disposed of be reported at the lower of carrying amount or fair value less cost to sell, except for assets that are covered by Accounting Principles Board (APB) Opinion No. 30, *Reporting the Results of Operations – Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions*.

In 2001, the FASB issued SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, which superseded FASB Statement No. 121. Since Statement 121 did not address the accounting for a segment of a business accounted for as discontinued operations under APB Opinion No. 30, two accounting models existed for long-lived assets to be disposed of. The Board decided to establish a single accounting model for long-lived assets to be disposed of by sale based on the framework established in Statement 121. The Board also decided to solve some implementation issues related to Statement 121.

For long-lived assets to be held and used, Statement 144 retained the requirements of Statement 121 to recognize an impairment loss only if the carrying amount is not recoverable from its undiscounted cash flows and measure an impairment loss as the difference between the carrying amount and fair value of the asset. However, Statement 144 resolved some implementation issues by removing goodwill from its scope, describing a probability-weighted cash-flow estimation approach to deal with situations in which alternative courses of action to recover carrying amounts of long-lived assets are under consideration or a range is estimated for the amount of possible future cash flows, and establishing a 'primary asset' approach to determine the cash-flow estimation period for a group of assets and liabilities that represents the unit of accounting for a long-lived asset to be held and used.

For long-lived assets to be disposed of by sale, Statement 144 retained the requirements of 121 to measure the asset at the lower of its carrying amount or fair value less cost to sell and cease depreciation. Therefore, discontinued operations are no longer measured on a net realizable value basis, and future operating losses are no longer recognized before they occur.

For long-lived assets to be disposed of other than by sale, Statement 144 requires the asset to be considered held and used until it is disposed of (by

abandonment, exchange for similar productive asset, or distribution to owners). To solve implementation issues, the Statement requires that the depreciable life of a long-lived asset to be abandoned be reviewed in accordance with APB Opinion No. 20, *Accounting Changes*. It also amended APB Opinion No. 29, *Accounting for Non-monetary Transactions*, to require that an impairment loss be recognized at the date a long-lived asset is exchanged for a similar productive asset or distributed to owners in a spinoff if the carrying amount of the asset exceeds its fair value.

At international level, there was very limited guidance available on how to deal with impairment of long-lived assets until 1998. In that year, the International Accounting Standards Committee (IASC) issued its International Accounting Standards (IAS) No. 36, *Impairment of Assets*. The standard basically requires that the recoverable amount of a long-lived asset (or a group of assets) be estimated to identify and measure impairments, whenever there are indications that asset impairment exists. Thus, the main objective of IAS No. 36 is to ensure that an asset (or a group of assets) is not carried at an amount greater than its recoverable amount. When the carrying amount of an asset becomes higher than the estimated amount to be recovered by use of the asset or from its sale, the firm should recognize an impairment loss.

Although IAS No. 36 was originally issued in 1998, it was revised in 2003. The standard was also subject to different amendments in 2004 because of scope changes (e.g. inclusion of business combinations) and improvements to existing standards (e.g. issuance of Statement No. 38 dealing with intangible assets).

Although the standard has a general application to all assets, some assets are considered outside its scope because they are subject to specific recognition and measurement rules. The effect of these exclusions is a considerable reduction in its scope. Examples of assets excluded from the scope of the standard include inventories, assets arising from construction contracts, deferred tax assets, assets arising from employee's benefits, financial assets that are included in the scope of IAS No. 39, and investment properties that are measured at fair values.

This direction toward fair value accounting (by the FASB and the IASC) raises three basic questions when dealing with long-lived assets. The first is how a firm will know whether it will recover the book values of its assets (carrying amounts) by using them or selling them. Second, how a firm should measure any impairment loss. Third, when a firm should account for any impairment loss identified by an assessment process.

14.1.1 Indications of impairment

According to the standard, at each financial reporting date the firm should determine whether there are conditions or circumstances that would indicate that impairments may have occurred. Identifying circumstances or indications of impairment of tangible long-lived assets is the first crucial step in the implementation process. The standard, however, lists some examples representing the minimum indications that a firm should consider for determining whether an impairment test is needed or not. These indications are divided into external and internal based on the sources of information. *External and internal sources of information* can include the following:

1. A decline in an asset's market value during the period that is significantly more than what the firm expects as a result of normal use of the asset.
2. Significant changes that have taken place in the period in the technological, market, economic, or legal environment in which the firm operates, or the specific market to which an asset is dedicated.
3. Increases in the market interest rate or other market-oriented rate of return on investments such that increases in the discount rate to be employed in determining value in use can be anticipated, with a resultant enhanced likelihood that impairments will exist.
4. The aggregate carrying value of the firm's assets exceeds the perceived value of its market capitalization.
5. Evidence of obsolescence or physical damage to an asset or a group of assets.
6. Significant internal changes to the organization or its operations, such as restructuring, to the extent that the expected useful life or benefits of the asset have been reduced.
7. Reported internal data suggesting that the economic performance of the asset or group of assets is, or will become, worse than previously anticipated.

The standard also lists some indicators that are derived from internally generated information and considered as relevant evidence for asset impairment. These indicators include:

1. Cash flows generated by an asset or group of assets, or subsequent cash needs for operating or maintaining the asset, are significantly higher than originally budgeted or forecasted.
2. Operating profits or losses or actual net cash flows are significantly worse than those budgeted or forecasted.

3. A significant increase in budgeted loss, or a significant decline in budgeted net cash flows or operating profits.
4. Operating losses or net cash outflows for the asset when aggregating current period amounts with budgeted amounts for the future.

14.1.2 The impairment test

Normally, the presence of any of the impairment indicators would require the firm to perform an impairment test (the second stage in the implementation process), which requires the firm to calculate the recoverable amount of the asset and compare it with the asset's carrying value. The recoverable amount is the higher of the asset's value in use and its fair value less costs to sell. The underlying idea is that an asset should not be carried at more than the amount it will generate, either from selling it now or from using it in the future. However, when previous impairment reviews show that an asset's recoverable amount was significantly greater than its carrying amount and subsequent events are not sufficient to eliminate that gap, or when previous reviews show that the asset's recoverable amount is not sensitive to one or more of the impairment indicators, the presence of any of the indicators does not necessitate performing the impairment test.

Some of the main problems in performing the impairment test lie with estimating the asset's value in use and its fair value. Estimating the asset's value in use involves estimating cash inflows and outflows that will be derived from the use of the asset and from its ultimate disposal and discounting them at an appropriate rate that is reasonable for the type of business and risks involved. Estimating fair value is based on the sale price of the asset in an active market. However, it may be possible to estimate the selling price even in the absence of an active market for the asset. On the practical side, whenever the fair value of the asset is greater than the asset's carrying amount, there is no need to perform the calculations for the asset's value in use. Furthermore, if the fair value of the asset cannot satisfactorily be estimated, the recoverable amount must be based on the asset's value in use. If either of the fair value of the asset or its value in use is higher than the carrying amount of the asset, the asset is considered not impaired and no further action is required.

14.1.3 Accounting for impairment

When the results of the impairment test indicate that the asset or group of assets (cash-generating unit) is impaired, the firm must account for such impairment

losses to be reflected on the financial statements. For individual assets, the standard requires immediate recognition of impairment losses for assets that are not carried at revalued amounts according to another standard. An impairment loss on a revalued asset is first used to reduce the revaluation surplus for that asset, and any further impairment loss should be recognized in the profit and loss. The standard, however, does not take a particular position on how to show impairment losses on financial statements.

For a group of assets, the standard calls for the recognition of an impairment loss in a way that reduces the carrying amount of the assets of the group(s) at a pro-rata rate of their carrying amounts after reducing the carrying amount of any goodwill allocated to the group. If there are different cash-generating units in the group of assets, a further pro rating of the impairment loss among the individual assets of the cash-generating unit is performed.

The main objectives of this chapter are to survey the perceived implementation problems associated with the standard among a sample of practicing accountants in the United Arab Emirates and their preferences for following the international standard or the American standard. The remainder of the chapter is organized as follows. The next section reviews some relevant previous studies on writeoffs of long-lived, home-based assets and the factors affecting their reporting. Section 14.3 describes the research method used to carry out the empirical work and the development of the research hypotheses. Section 14.4 reports the results and section 14.5 provides conclusions and recommendations.

14.2 Previous studies

This section of the chapter reviews some relevant previous studies. The review reveals that different approaches have been used to study write-downs. Some studies used a descriptive approach while others used an empirical approach. The studies by Schiff (1985), Schuetze (1987), Smith (1994), and Meeting and Luecke (2002) are mostly descriptive in nature and do not deal with a theoretical framework or empirical findings that explain or predict the occurrence of asset impairments. These studies are primarily concerned with how and when the impairment should be reported or discussing guidelines based on the standards or professional practices. Empirical studies, on the other hand, such as those by Strong and Meyer (1987), Elliot and Shaw (1988), Zucca and Campbell (1992), Francis et al. (1996), Riedl (2004), and Chen et al. (2004), examined the impact of write-downs. The following paragraphs provide a review of selected studies, emphasizing the empirical approach to asset impairment.

Strong and Meyer (1987) examined a sample of 120 firms reporting writeoffs between 1 January 1981 and 31 December 1985, and concluded that firms with writeoffs were neither the strongest nor the weakest in the industry. They found that write-downs occurred when business was improving and the market value of equity base was growing, detecting a slight positive market reaction in the first days after the write-downs. They also identified a change in senior management as the primary reason for write-down decisions and documented a positive stock price effect that signals future events.

Smith (1994) discussed the issue of potential disclosures associated with accounting for impairment of long-lived assets. She mentioned that although the reporting practices for unrealized asset impairments before the issuance of SFAS 121 were inconsistent, the argument that disclosure benefits of implementing such a standard might not outweigh the costs is plausible, since reporting on write-downs is not an independent process where impairment cannot be considered in isolation. She indicated that a substantial amount of the related analysis to impairment is already performed routinely by many large companies in connection with their capital expenditures. Large companies usually perform project post-audits where individual assets or groups of assets are evaluated on a regular basis to decide whether to keep or abandon them. Such post-audit systems are more likely to evaluate projects based on cash flows (and not accounting numbers) and have a formal abandonment process that bases decisions on discounted cash-flow analysis.

Smith (1994) concluded that required disclosures of a standard on accounting for impairment of long-lived assets would be considered beneficial. For companies that are already post-auditing, the costs of increased impairment disclosures may be relatively small. But they will have to increase the scale and possibly the sophistication of their post-audit systems. By doing so, companies will benefit in the long run through increased efficiency of capital allocation. In the short run, however, she argued, increased post-auditing will provide high-quality performance evaluation information.

Rees et al. (1996) investigated the occurrence of abnormal accruals of firms recognizing permanent asset impairments in their financial statements to assess whether such firms systematically managed earnings in the year of write-downs. They used a keyword search of the 1987–1992 annual reports contained in the National Automated Accounting Research System (NAARS) database to obtain a list of potential sample firms. This initial search produced 1268 firms reporting. The firms' financial statements were then examined to verify the existence of discretionary write-downs due to impairments of values. Write-downs of current

assets and oil and gas properties were excluded because of little discretion over these types of write-downs. This procedure reduced the initial sample to 529 firms. The sample was further reduced to 277 firms because of eliminating write-downs judged to be immaterial (less than 0.5% of beginning-of-year book value of total assets) and Compustat data availability.

Using regression analysis and matched sample design, these authors tested for earnings management, which was hypothesized to be zero. The initial results indicated that managers recognized additional income-decreasing discretionary accruals that accentuated the negative effect of the asset write-down on earnings. Alternatively, the abnormal accruals may have been a reflection of changes in the write-down firms' accrual balances and/or accruals-generating process. To discriminate between the two competing explanations, the authors assessed the tendency of the abnormal accruals in the write-down year to reverse by examining abnormal accruals in years 1–3 relative to the firm's last write-down.

The results showed no evidence that the abnormal accruals reverse in post-write-down years. However, the results did not completely eliminate the possibility that the abnormal accruals in the write-down year are opportunistic, since the timing of accrual reversals could be delayed for several years.

Nurnberg and Dittmar (1996) discussed auditing considerations of the accounting standard for impairment of long-lived assets. The authors indicated that while companies have to deal with the implementation issues, auditors have to deal with how to evaluate compliance with the standard provisions.

These authors indicated that auditors need to review management policies and procedures to identify possible impairment indicators. In the absence of such indicators, impairment testing is not required and audit testing need not be extensive.

Zabihollah et al. (1996) provided some empirical evidence regarding the financial impact of write-downs of long-lived assets and the dominant factors in companies' decisions for measurement, recognition, and reporting of asset impairments. They used the Disclosure SEC Database, which includes financial and management information about public companies, to collect their data. An initial search of the database identified 5092 companies that referenced impairments, writeoffs and write-downs in their annual reports. The annual reports were then examined for reported impairments of long-lived assets for the fiscal years ending in 1989–1993 (a five-year period) using three criteria. These criteria were: (1) the firm wrote off one or more impaired long-lived asset used in production (intangibles were excluded); (2) no indication was given in the annual report that the firm was not continuing to depreciate or amortize the

asset; and (3) financial statements were publicly available during the five-year investigation period. The resultant sample included 935 reported impairments of 670 companies distributed among the nine general industry classifications used in the study.

These authors used six independent variables and five dependent variables. The independent variables are industry classification (the nine general industry classification), form of disclosure (in footnotes or in management discussion and analysis), impairment recognition criteria (permanent decline or economic impairment), reasons for impairment (decline in market value, lack of long-term profitability, or other reasons), level of asset grouping (business segment, other business unit, or individual assets), and measurement of impairment (fair value, recoverable value, or replacement cost). The five dependent variables are average net sales, average amount of long-lived assets after write-downs, average reported impairment amounts of long-lived assets, ratio of write-downs to net sales, and ratio of write-downs to long-lived assets.

Zabihollah et al. used multivariate analysis of variance (MANOVA) to simultaneously assess the relationship between the six independent variables and the five dependent variables. The results indicated significant differences in average net sales, average long-lived assets, average impairments, and the ratio of impairment to net sales across industry classification.

Chen et al. (2004) studied incentives for and consequences of initial voluntary asset write-downs in the emerging Chinese market. In 1998, a Chinese accounting regulation allowed listed companies to voluntarily write down assets through their income statements. The regulation was amended in 1999 to require all companies to write down assets that were subject to impairment with a retroactive adjustment of pre-1998 asset impairment to the initial equity. This setting allowed the authors to use a sample test and a control sample from the two years. The total number of firms included in the sample was 537.

These authors used the TEJ CD-ROM database and 1999 published annual reports to collect their data. They also used a return model and a price model to examine the market value effect. The return model provides information about whether the write-down is reflected in changes in value over a one-year return period. The price model provides information about whether the write-down is value relevant with respect to its association with firm value.

The results indicated that voluntary write-downs have a positive valuation effect. In addition, firms with CEO changes or big losses are more likely to write down assets and tend to write down assets in large amounts. Furthermore, the authors documented an *ex post* association between the voluntary asset write-down and

subsequent performance improvement in terms of return on assets, but not in terms of cash flows. Taken together, these authors believe, while recognizing the possibility of alternative explanations, that their results taken as a whole are more consistent with the voluntary write-downs being a signal of the potential for performance improvement.

Riedl (2004) examined the characteristics of writeoffs reported prior to the issuance of SFAS 121 as compared to those of writeoffs subsequent to the issuance of the statement. The debate about the extent of available guidance and the inherently subjective estimates needed to implement the standard made it unclear how the association between reported writeoffs and economic factors/reporting incentives changed (if at all) upon the adoption of SFAS 121.

Riedl used reported net of tax long-lived writeoff for period t as a percentage of total assets at the end of $t - 1$ as the dependent variable. Independent variables included percentage change in US Gross Domestic Product from period $t - 1$ to t, the median change in firm i's industry return on assets from period $t - 1$ to t, the percentage change in sales for firm i from period $t - 1$ to t, firm i's change in operating cash flows from period $t - 1$ to t as a percentage of total assets at the end of $t - 1$, a proxy for 'big bath' reporting equal to the change in firm i's pre-writeoff earnings from period $t - 1$ to t as a percentage of total assets at the end of $t - 1$ (when below the median of nonzero negative values of this variable), and a proxy for 'earnings smoothing' reporting equal to the change in firm i's pre-writeoff earnings from period $t - 1$ to t as a percentage of total assets at the end of $t - 1$ (when above the median of nonzero positive values of this variable). Indicator variables (coded one or zero) were used for a firm's private debt (not publicly rated) and writeoff observations occurring before and after the standard.

The above variables were specified in a Tobit regression model that included the stacking of two regressions. The first represented the observations from the pre-SFAS 121 period. The second represented the observations from the post-SFAS 121 period.

Data for the study were collected for the period 1992–1998 from the Compustat/Execucomp database and Disclosure Global Access for firms outside the banking or financial services industries. A total of 1249 randomly selected firms were included.

The results indicated that economic factors have weaker association with writeoffs reported after the issuance of the standard. This result is consistent across macro, industry, and firm-specific variables. The results also showed a higher association between writeoffs and 'big bath' reporting behavior after the

standard's implementation, and that this 'big bath' behavior more likely reflects opportunistic reporting by managers rather than the provision of their private information. These inferences are robust to a number of alternative specifications and variable definitions. The author indicated that the overall results are consistent with the criticism of the standard that the reporting of writeoffs under SFAS 121 has decreased in quality.

Reinstein and Lander (2004) examined the views of users and preparers of financial statements regarding SFAS 144. They used a mail questionnaire to obtain the respondents' perceptions regarding the new requirements, their guidance, and implementation costs. The results indicated significant differences in perceptions of the two groups regarding requirements and implementations. In addition, a majority of responses indicated that the new standard provided improved guidance for many complex situations. However, many respondents did not believe that the standard is cost justified.

14.3 Methods

14.3.1 Sample

The sample consisted of accountants employed by public accounting firms and for-profit organizations. The sample can be described as a convenient sample since it was not selected randomly. Rather, the researcher has contacted accountants at selected public accounting firms and organizations and asked for their participation in the study. A total of 109 accountants agreed to participate and were included in the sample.

14.3.1.1 Questionnaire

The study questionnaire was designed to capture accountants' perceptions regarding implementation problems encountered when dealing with accounting for impairment of fixed assets. The questionnaire had two parts. The first part was designed to collect general information (e.g. educational levels, marital status, gender, and the like). The second part contained the elements of the basic areas for implementation problems. These areas included impairment indications, impairment indicators, estimation of fair value and value in use, and implementation costs. Each participant was asked to indicate the extent to which he/she has experienced (or perceived to experience) difficulty in implementing the standard using a five-point numerical scale. The scale ranged from 1 (no difficulty at all) to

5 (a great deal of difficulty). The questionnaire also asked each participant to indicate his/her preference for implementing the International Accounting Standard or the American Standard dealing with long-lived asset impairment.

All information regarding areas of implementation problems, which were included in the second part of the questionnaire, was based on the requirements of the International Accounting Standard, review of the literature, and the feedback obtained from pilot testing the questionnaire.

The questionnaires were distributed in person to the subjects, who were requested to respond within two weeks. A second distribution was made to non-responding subjects, who were requested to respond within a two-week period.

14.3.1.2 Research hypotheses

This chapter has two research hypotheses. The first deals with accountants' perceived or experienced difficulties in implementing the International Accounting Standard of asset impairment. This hypothesis is stated in null form as follows:

> **H_{01}:** *There are no significant differences in the mean scores of perceived or experienced difficulty in implementing the International Accounting Standard between accountants who are in public practice and those who are employed in private organizations.*

The second research hypothesis deals with possible differences in accountants' preferences for implementing the International Accounting Standard over the American Accounting Standard for asset impairment because of being in public practice or in private practice. The general expectation is of no difference in preference for implementing the standard between the two groups of accountants. Accordingly, this hypothesis is stated in null form as follows:

> **H_{02}:** *There are no significant differences in preferences of accountants who are in public practice and those who are employed in private firms regarding implementation of the International Accounting Standard over the American Accounting Standard for asset impairments.*

14.3.1.3 Data analysis

Collected data were analyzed using descriptive statistics. To test the above two hypotheses, the data were subjected to independent samples *t*-tests. The results obtained from the analysis are reported in the next section.

14.4 Results

14.4.1 Sample profile

The researcher received 96 completed responses. This represents about a 88% response rate. Table 14.1 shows the distribution of responses between accountants in public practice and those who are in private practice.

Table 14.2 shows the distribution of the sample according to four demographic variables. The table shows that female responses are significantly less than male responses. However, the percentage is perhaps better than might be expected given that the profession has been perceived to be male dominated.

Table 14.1 Distribution of sample responses

Type of practice	Number distributed	Number of responses	Percentage
Public practice	45	37	82.2
Private practice	64	59	92.2
Total	109	96	88.1

Table 14.2 Frequency distribution of demographic variables

	Frequency	Percentage
Gender of respondents		
Male	65	67.7
Female	31	32.3
Marital status		
Single	38	39.6
Married	45	46.9
Divorced	9	09.3
Widow	4	04.2
Nationality		
UAE	32	33.3
Non-UAE	64	66.7
Educational level		
Bachelor degree	84	87.5
Master's degree	11	11.5
Doctoral degree	1	1.0

14.4.2 Implementation problems

Table 14.3 reports some descriptive statistics (mean and standard deviation) of experienced or perceived difficulty in implementing the standard using a five-point numerical scale that ranged from 1 (no difficulty at all) to 5 (a great deal of difficulty).

Table 14.3 shows that accountants do not encounter serious difficulties when assessing impairment indications (average score is less than 2 out of 5), except changes in technological, market, or legal environment (average score is about 3.5 out of 5). For impairment indicators, the table shows that averages of the four items are close to each other and they are at levels that reveal some difficulty when assessing them. For measuring market values, it seems that estimating market prices is somewhat difficult but not different from the impairment indicators.

Table 14.3 also shows that measuring value in use is generally more difficult than measuring fair values. In addition, the cost of implementing the system may not be easy to assess.

14.4.2.1 Differences in perceived or experienced implementation difficulties

Table 14.4 shows the results of testing for possible differences in perceived or experienced implementation difficulties between the two groups of accountants (those who are in public accounting practice and those who are employed in private organizations).

Table 14.4 shows some significant differences in assessed levels of difficulty between accountants in public practice and accountants employed in private organizations. These differences are in the areas of assessing impairment indications and impairment indicators. The negative sign indicates that accountants in public practice experience or perceive less difficulty than accountants employed in private organizations. One possible explanation for such results is that accountants in public practice have opportunities for diversified experience and the availability of additional human resources. Thus, the results reject the first null hypothesis with respect to the difficulties encountered when assessment of impairment indications and indicators.

Table 14.4 also shows no significant differences in assessed levels of difficulty between accountants in public practice and accountants employed in private organizations with regard to measurement of fair value or value in use for the impairment test. Thus, the results fail to reject the first null hypothesis with respect to the difficulties encountered when measuring fair values or value in use.

Table 14.3 Descriptive statistics of experienced or perceived difficulties in implementing IAS 36

Element	Mean score	Standard deviation
Impairment indications		
Decline in asset's market value	1.65	0.60
Changes in technological, market, economic, or legal environment	3.47	0.68
Increased market interest rate	1.54	0.58
Aggregate carrying value of the firm's assets exceeds market capitalization	1.48	0.52
Evidence of obsolescence or physical damage to an asset or a group of assets	1.66	0.52
Internal changes to the organization or its operations	1.31	0.47
Reported internal data suggesting that the economic performance of the asset or group of assets is, or will become, worse than previously anticipated	1.17	0.37
Impairment indicators		
Cash needs to operate or maintain the asset are significantly higher than originally budgeted or forecasted	2.35	1.06
Operating profits or losses or actual net cash flows are significantly worse than those budgeted or forecasted	2.05	0.69
A significant increase in budgeted loss, or decline in budgeted net cash flows or operating profits	2.44	0.99
Operating loss or net cash outflows for the asset when aggregating current period amounts with budgeted amounts for the future	2.83	0.93
Measuring fair value		
Existence of active market	1.54	0.66
Estimates of market prices	2.30	0.80
Estimates of disposal costs	2.01	0.75
Measuring value in use		
Estimates of future cash flows expected from the asset	3.11	0.88
Possible variations in amount or timing of estimated future cash flows	3.16	0.76
Selection of a discount rate	1.55	0.58
Estimates of uncertainty inherent in the asset	3.00	0.75
Other factors (e.g. degree of illiquidity) that affect future cash flows	2.84	0.76
Cost of implementation		
Cost to modify existing system, if any, to handle the new requirements	3.05	0.72
Cost to perform impairment review	2.68	0.62

Table 14.4 Test results for differences in preferences and implementation difficulties

Area of possible difficulty	*t*-statistic	Significance level
Impairment indications	−8.509	0.000
Impairment indicators	−4.617	0.000
Measuring fair values	−1.637	0.106
Measuring value in use	−1.458	0.148
Cost of implementation	−1.953	0.054
Preferences for IAS 36	−2.983	0.004

Regarding the cost of implementation, the table shows marginal differences between the two groups of accountants ($p > 0.54$). Thus, the results fail to reject the first null hypothesis with respect to the difficulties encountered when measuring the cost of implementing the standard.

Table 14.4 also shows significant differences in preferences of the two accounting groups for implementing the International Accounting Standard ($p < 0.004$). The negative sign indicates that accountants in public practice prefer the International Accounting Standard over the American Accounting Standard. Thus, the results reject the second null hypothesis. This result is consistent with the fact that some business sectors in the UAE (e.g. banks, which are audited by public accounting firms) are required to use the International Accounting Standards.

14.5 Conclusion

This chapter examined empirically some of the implementation problems of the International Accounting Standard for long-lived asset impairment accounting using a sample of accountants practicing (in private organizations and in public accounting firms) in the UAE, as well as accountants' preferences for the international standard over the American standard. A questionnaire-based design was used to collect the data. Descriptive analysis and independent sample *t*-tests were employed to test for differences of experienced or perceived difficulties related to implementation of the standard in five areas. These areas included assessment of impairment indications, assessment of impairment indicators, measurement of fair values and values in use, and cost of implementation.

The results show that accountants in private organizations experience more difficulties than accountants in public practice when assessing impairment

indications and indicators. However, both groups of accountants experience almost the same level of difficulty when measuring fair values and/or values in use for the impairment test.

The results also show significant differences in preferences of the two accounting groups for implementing the International Accounting Standard. Accountants in public practice prefer the International Accounting Standard over the American Accounting Standard.

The results of this study are subject to some limitations. First, like any questionnaire-based study, there is no simple way to ensure the accuracy of the responses. However, the general assumption is that people are honest and they provide accurate data. Second, no attempt was made to measure the effect of the nonresponse bias. However, the high response rate may reduce such possible bias.

One possible avenue for future research is to examine audit considerations when dealing with asset impairment and how the difficulty encountered in the assessment phase would impact on audit procedures.

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15

The Rise and Impact of Hybrid Securities in Australian Listed Corporations

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15.1 Introduction

In the wake of a global epidemic of revelations of corporate misbehavior in the first years of this decade came a resurgence in interest in and attentiveness towards the objective of improving corporate governance (Carlin and Ford, 2004). A major element of that wave of consciousness was manifested in a heightened focus on the need for improvements in the transparency, consistency, comparability, and decision usefulness of corporate financial reports. Failures on one or more of these dimensions more often than not lay at the heart of high-profile corporate scandals and collapses such as those epitomized by Enron, WorldCom, Global Crossing (these three being in the USA), HIH (an Australian example), and Parmalat (an Italian example).

From the time the global wave of governance crises reached its tumult until the present, the Australian market for hybrid financial instruments has burgeoned in size. According to estimates compiled by the Reserve Bank of Australia, the value of outstanding hybrid financial instruments more than doubled between 2001 and 2004, while hybrid issuance as a proportion of nonintermediated corporate debt issuance more than tripled over the same period[1]. Yet there are persistent questions as to the legitimacy of hybrid financial instruments, some commentators suggesting that their entire existence rests upon a foundation of regulatory arbitrage and that in consequence they are to be seen as another example of a classic financial reporting mirage. At first glance they appear equity like, but closer inspection reveals a lineage far more dominated by the hallmarks of debt[2] (Williams, 2005).

Such views are not without foundation. The mandatory requirement for adoption of International Accounting Standards by listed Australian companies with reporting periods beginning on or after 1 January 2005 has already caused shockwaves. The key reason for this is that IAS 32 (and thus its Australian corollary – AASB 132, *Financial Instruments: Disclosure and Presentation*) has shifted the basis for classification of financial instruments as falling into the categories of debt or equity by requiring that this task be dominated by considerations related to the economic substance, not the legal form, or the instrument. The thin veneer sufficient to imbue instruments with an equity-like character under the previous regulatory regime appears unlikely to suffice in a changed reporting environment and in consequence corporate Australia has responded with a raft of pre-emptive buybacks[3], covenant modifications for pre-existing instruments[4], and continued innovation[5] in the design and packaging of new security offerings.

This tension between the objectives of greater transparency and accuracy in financial reporting and the regulatory arbitrage-laced current which underpins the existence of hybrid securities provides an interesting backdrop for empirical research, of which surprisingly little has been undertaken in the Australian context, though some influential research relating to hybrids has been published internationally (e.g. Hopkins, 1996; Engel et al., 1999; Laurent, 2000). Consequently, a key motivation of this chapter is to provide evidence and analysis to fill that gap. In particular, this chapter demonstrates the potentially distorting impacts of the use of hybrid securities as an element of firm capital structure under both historical and forward-looking financial reporting regimes.

It is argued that despite the advances in the quality of the financial reporting architecture associated with Australia's adoption of International Financial Reporting Standards, the risks of these distortions remain essentially undiminished. As a result, further development of the reporting framework is argued to be necessary if the goal of greater transparency and accuracy in financial reporting is to be achieved. In supporting these arguments, the chapter proceeds as follows.

Section 15.2 provides background context by describing the nature and size of the Australian market for hybrid securities. Section 15.3 sets out details of the methodology we employed to measure the impact of hybrids on key measures of financial performance, risk, and firm value. We set out our results in section 15.4, while in section 15.5 we briefly outline our conclusions and some suggestions for future research.

15.2 The Australian hybrids market

Even as recently as the late 1990s bank lending dominated corporate debt raising in Australia. The Reserve Bank of Australia estimates that, as at June 1999, only 18% of total corporate debt raising was nonintermediated, with hybrids comprising a paltry 1% of total debt raised[6]. By June 2004, Australian debt capital markets had changed significantly, with 40% of debt raised in nonintermediated form. By this time, hybrid issuance represented 7% of total debt raisings in Australia (RBA, 2005a, p. 54).

Thus, not only had Australian corporations increasingly moved towards the creation and issue of their own debt securities rather than relying on traditional bank loan products, the type of instruments used by these organizations to facilitate the raising of capital had also substantially altered. Hybrids, in particular, became far more popular than they had been even a short period

Table 15.1 Gross issuance in Australia by market type ($bn)

Year of issuance	Domestic market	Offshore market	Total market
1998	1.461	2.203	3.664
1999	6.963	0.490	7.453
2000	1.200	1.002	2.202
2001	3.328	2.112	5.440
2002	5.004	0.787	5.792
2003	4.539	5.345	9.884
2004	4.362	2.993	7.355
2005	1.660	1.640	3.300
Total	28.518	16.571	45.089

Source: Reserve Bank of Australia (2005 data to May 2005 only).

earlier. This rise in popularity is captured in the data set out in Table 15.1, which sets out the gross value of hybrid issuance of hybrids by Australian corporations in both domestic and offshore capital markets between 1998 and 2005.

Although the domestic market has been the principal destination for hybrid capital raisings by Australian corporations, the data also reveals a strong capacity on the part of Australian corporations to raise capital by issuing hybrid securities into offshore capital markets. Further, as the data in Table 15.2 demonstrates, both financial and nonfinancial issuers have actively participated in hybrid issuance, with nonfinancial corporations playing an increasingly important role in more recent years as Australian financial institutions reached their Tier 1 capital limits for hybrid securities after several years of substantial issuance activity (RBA, 2005b, p. 55).

The Australian market for hybrid securities has also been characterized by rapid innovation in instrument design. This echoes experience with hybrid securities in international contexts (Smithson and Chew, 1993). In the Australian context, a number of factors combine to explain innovation. First, hybrid securities have been targeted far more to a retail investor audience than traditional corporate bond offerings. This has biased the design of many instruments towards the provision of higher yields[7] than those available on alternative asset classes, or on access to streams of tax credits not normally associated with distributions paid on traditional debt instruments (Moody's Investors Service, 2001, p. 5).

Changes to financial reporting requirements have also been a strong driver of variations in instrument design. The data set out in Table 15.3 shows clear

Table 15.2 Gross issuance in Australia by issuer type ($bn)

Year of issuance	Financial	Nonfinancial	Total issuers
1998	2.444	1.220	3.664
1999	5.295	2.158	7.453
2000	0.295	1.907	2.202
2001	1.035	4.405	5.440
2002	3.464	2.327	5.792
2003	6.470	3.414	9.884
2004	4.489	2.866	7.355
2005	1.375	1.925	3.300
Total	24.867	20.222	45.089

Source: Reserve Bank of Australia (2005 data to May 2005 only).

patterns associated with this phenomenon. It is particularly noteworthy, for example, that over recent periods, the single most dominant form of hybrid security issued by Australian corporations falls into a category known as perpetual step-up preference shares, while issuance activity of more traditional hybrid forms such as income securities has ceased altogether. As discussed below, step-up securities have been designed to satisfy the requirements for classification as equity under International Accounting Standards, something not possible in relation to traditional income securities given their particular design features.

The degree of security design innovation inherent in the Australian hybrid security market has resulted in considerable fragmentation. Many issues are small in terms of absolute dollars raised and are often unrated. Compared to vanilla debt security offerings they are complex, yet ironically have been most often pitched at a retail investor base which may not fully appreciate the magnitude and nature of risks associated with exposure to them (Smith, 2003).

Despite the high degree of variation in instrument design which we have noted characterizes the Australian market for hybrid instruments, it is possible to capture the broad parameters of the most important subclasses of securities which exist within the marketplace. As the data in Table 15.3 makes clear, the three most significant of these subclasses are hybrids that can be generally described as income securities, reset convertible preference shares, and, more recently, perpetual step-up preference shares. The essential features of these security subclasses are summarized in Table 15.4.

Table 15.3 Gross issuance in Australia by security type ($bn)

Year of issuance	Income security	Convertible preference share	Convertible note	Reset convertible preference share	Reset convertible note	Perpetual step-up preference share	Other	Total
1998	0.261	0.455	2.185	–	–	0.075	0.688	3.664
1999	5.640	0.726	0.586	0.490	–	–	0.011	7.453
2000	–	0.440	1.012	0.740	–	–	0.010	2.202
2001	0.065	0.315	0.978	2.070	0.400	–	1.612	5.440
2002	–	0.016	0.718	4.060	0.210	–	0.787	5.792
2003	–	0.029	0.950	4.394	1.540	2.970	–	9.884
2004	–	–	0.115	0.956	0.851	3.957	1.476	7.355
2005	–	–	–	0.110	–	2.425	0.765	3.300
Total	5.966	1.981	6.544	12.821	3.001	9.427	5.350	45.089

Source: Reserve Bank of Australia (2005 data to May 2005 only).

Table 15.4 Features of key hybrid security subclasses issued in Australia

Type	Key features
Income securities	Perpetual securities with regular interest or coupon payments. They are only redeemable at the option of the issuer.
Perpetual step-up securities	Similar to income securities, except that the interest payment on the security increases if the issuer does not redeem the security on a certain date.
Reset convertible preference shares/notes	The issuer has the option to change the terms or redeem the securities on a predetermined date. The investor has the option to accept the new terms of the security or to request an exchange. If an exchange is requested, the issuer decides whether it is for ordinary shares or cash.

While income securities dominated the Australian market for hybrid securities in the late 1990s, by far the most common form of hybrid found in this jurisdiction at present is the reset convertible instrument. Both are highly vulnerable to reclassification as debt under IFRS, the former because they are essentially indistinguishable from subordinated debt[8] and the latter because reset convertibles typically gave investors the right to convert their securities into a variable number of ordinary shares on defined dates or in response to certain defined events[9].

Perpetual step-up securities have become the most significant form of hybrid issued in Australia since the Australian Accounting Standards Board announced (in December 2003) pending Australian Accounting Standard 132, *Financial Instruments: Disclosure and Presentation*, pursuant to which most pre-existing forms of hybrid securities would be vulnerable to reclassification from equity to debt for financial reporting purposes. Their popularity is not coincidental, but rather is based upon the fact that step-up securities issued since December 2003 have been designed specifically to avoid being classified as debt for financial reporting purposes. They therefore represent a continuation of the tendency of issuers to design hybrid instruments with a view to achieving regulatory arbitrage – classification as equity while not far beneath the surface lie many of the characteristics of debt.

Thus, far from destroying the inertia of the Australian market for hybrid securities, the introduction of IFRS[10] has merely stimulated further design innovation and greater instrument design complexity[11]. Hybrid issuance continues apace, but it is not at all clear that the objectives of greater transparency and accuracy

will in fact be engendered by the arrival of a new set of financial reporting rules from 2005 onwards. Thus, IFRS or not, an investigation of the potential impact of hybrids on the quality and accuracy of financial disclosures appears warranted. Section 15.3 describes our methodology for investigating the nature and magnitude of the problem.

15.3 Measuring the impact of hybrids

A central contention of this chapter is that the regulatory arbitrage upon which the construction of hybrid securities is founded results in the systemic treatment of these instruments as equity for financial reporting purposes. It is in turn posited that this has the potential to distort reported financial aggregates such that common measures of financial performance and risk calculated on the basis of those aggregates fail to convey an appropriate image of the underlying organic financial reality of the reporting entity.

Testing these propositions requires the implementation of a two-stage methodology. The first component of this methodology goes to acquiring evidence relating to the first contention, that those organizations which use hybrids as an element of their capital structure systemically misclassify them as equity when categorization as debt would represent a more appropriate treatment. The second component relates to acquisition of evidence of the distorting impact (if any) resulting from any detected misclassification. Jointly, this body of evidence provides a composite picture of the impact of the use of hybrid securities by Australian corporations, and by extension, the likely impact in other jurisdictions with similar regulatory structures, an obvious example being other jurisdictions which have adopted or which are moving towards the adoption of IFRS.

We test our first contention by applying a debt/equity characteristic matrix technique against a sample of hybrid securities currently outstanding in Australian capital markets. Specifically, our sample includes one randomly selected example of each of the three main classes of hybrid securities in existence in Australia: income notes[12], reset convertible preference shares[13], and perpetual step-up securities[14]. In order to determine the appropriate classification of each security we examine, we compare its essential characteristics against a six-point debt/equity characteristic matrix, and determine, on balance, whether the inherent characteristics of the instrument suggest that the instrument lies closer to ‘pure debt’ or ‘pure equity’.

In undertaking this analysis, we classify pure debt as having the following characteristics. First, it enjoys contractually defined cash flows. Second, debt enjoys

priority claims to the cash flows of the debtor entity while that entity remains a going concern, and to distributions flowing from disposal of assets in the case of liquidation. Finally, pure debt instruments are structured to have a finite, known maturity. By way of contrast, pure equity instruments do not enjoy contractually defined cash flows, have only residual claims to cash flows (both while the business remains a going concern and in the context of liquidation), and have an indefinite maturity[15]. We discuss the results of this analysis in section 15.4.

Where we determined that an instrument we reviewed had been misclassified, we undertook the task of recasting selected elements of the raw financial statements released by the organizations which issued the misclassified hybrids we detected in our sample. The most obvious impact of misclassifying a debt instrument as equity is to reduce the apparent leverage of the issuing organization. Therefore, where necessary, we recast the balance sheet by removing inappropriately classified hybrids from outstanding equity and adding them to the issuing entity's own balance sheet liabilities. We capture any differences by measuring changes in both the debt/equity ratio and the leverage ratio. The results of this analysis are discussed in section 15.4.

In addition to the obvious balance sheet impact, however, there remains the possibility of a material profit and loss impact, since cash distributions paid to holders of misclassified hybrid instruments are typically accounted for as distributions of retained earnings rather than treated as expenses (i.e. interest expense). We make relevant adjustments and measure the impact on earnings per share, return on assets, and return on equity. We also test for any impact on reported cash flows from operating activities, since it is normal to classify interest payments as cash outflows from operating activities, but distributions to equity instruments as cash outflows from financing activities.

Finally, by holding the price/earnings ratio of the issuing entity's ordinary equity securities constant, we estimate the potential impact on market capitalization which would result from a restatement of earnings per share flowing from a recasting of the profit and loss statement to reflect the status of outstanding hybrid securities as debt rather than equity[16].

15.4 Results

As briefly noted in section 15.3, for the purposes of this study we examined a randomly selected income note, reset convertible preference share, and perpetual step-up security. The income note security we examined for the purposes of

this study was the so-called Woolworths Income Note (or WINs), issued by Woolworths Limited (ASX Stock Ticker Code WOW) in November 1999.

With a face value of $100, the WINs securities were officially quoted on the Australian Stock Exchange on 9 December 1999 (they carry the ASX Ticker Code WOWHA). The instruments are structured so that their holders have no voting rights and rank ahead of preference and ordinary shares for a return of capital in the event of winding up. However, they are subordinated to all creditors of Woolworths. Interest payments on WINs are made quarterly in arrears, and were initially set at a rate of 2% per annum above the 90-day bank bill rate (BBR) or a minimum rate of 7.25% per annum in each quarter until 15 December 2000, whichever was the greater.

Subsequently, the floating interest rate has been adjusted every quarter (a process that will continue throughout the life of the instruments) at 2% per annum above the BBR. These payments do not attract franking credits. WINs are perpetual securities and have no maturity; however, Woolworths can redeem each security for $100 cash at any date on the occurrence of a 'tax event' (i.e. where there is an unfavorable change in the taxation status of WINs to the detriment of Woolworths), and Woolworths has the option to redeem any outstanding WINs securities on or after 15 December 2004 for $100 cash.

In light of these characteristics, and applying the methodology we describe in section 15.3, we take the view that despite being treated as equity by Woolworths Limited, these instruments are most appropriately classified as debt. The principal equity-like feature they carry is their perpetual maturity, but this is more than offset by the contractual nature of the cash flows enjoyed by the holders of the securities and the prioritization of the claims enjoyed by holders of WINs over both ordinary and preference equity holders. Essentially, we contend that, in substance, these instruments are more akin to subordinated debt than to equity, and ought properly be treated as such in the financial statements of the issuing organization.

The reset convertible preference share security which we examined for the purposes of this study was the RePS security issued by David Jones Limited (ASX Stock Ticker Code DJS) in May 2002, raising $65 million. With a face value of $100, these RePS were officially quoted on the Australian Stock Exchange on 2 July 2002 under the Ticker Code DJSPA. Holders of RePS have no voting rights and though RePS are subordinated to all creditors of David Jones, they rank ahead of ordinary shares for a return of capital in the event of winding up and dividends on RePS are paid in priority to any dividends declared on ordinary shares.

The preferential noncumulative dividends on RePS are paid six-monthly in arrears and are fixed until the first reset date of 1 August 2007 at the greater of 8% per annum and the swap rate (on allotment) plus 2%. The dividend rate assumes full franking, so in the event that a dividend is unfranked or partially franked, the dividends on the RePS will be increased to compensate for any unfranked amount. The holder may elect to convert the RePS to ordinary shares at any time up until the reset date at a fixed rate of conversion (70.1754 ordinary shares per RePS). David Jones may elect to convert at any date in certain circumstances, including a takeover or scheme of arrangement, or proposed changes to taxation regulation.

On the reset date, either David Jones or the holder may elect to convert the RePS to ordinary shares using a conversion factor comprising two elements: (a) the average of the daily volume weighted average price of the David Jones ordinary shares over the 20 days prior to the conversion day; and (b) adjusting that price for a conversion discount of 5%. Notwithstanding, a maximum and minimum conversion rate applies of not less than 70.1754 ordinary shares per RePS and not more than 1052.6316 ordinary shares per RePS.

At the first reset date (1 August 2007), David Jones will reset the dividend rate for the RePS, as well as the next reset date, the conversion discount rate, and the maximum and minimum number of ordinary shares on conversion. Those holders who have not already converted are therefore accepting the new terms for RePS.

Having regard to the overall characteristics of these securities by applying our debt/equity classification methodology, we take the view that these securities would be more appropriately classified as debt than equity, though they are classified as equity by David Jones Limited. In forming this judgment, we have had particular regard to the priority claims conferred on the holders of these securities, as well as the strongly contractual features of the designated cash flows associated with the instruments.

The step-up security we examined for the purposes of this study are known as FUELS (Franked Unsecured Equity Linked Securities), and were issued by Australian listed oil and gas producer Santos Limited (ASX Stock Ticker Code STO) in September 2004, raising $500 million. With a face value of $100, FUELS were officially quoted on the Australian Stock Exchange on 5 October 2004 (under the Ticker Code STOPB).

The FUELS securities carry no voting rights except in relation to a limited set of circumstances, including proposals that affect the rights attached to FUELS or that reduce the share capital of the company. FUELS rank ahead of ordinary shares for a return of capital in the event of winding up and are subordinated to all creditors of Santos.

The securities are designed such that preferential noncumulative floating-rate dividends are paid six-monthly in arrears until 30 September 2009 and calculated by adding a 1.55% margin to the bank bill swap rate (BBSW) for 180-day bills as at the first business day of each dividend period. For the period on or after 30 September 2009, the dividend calculation is increased by a oneoff step-up in the margin by 2.25% (i.e. 1.55% margin + 2.25% step-up + BBSW). The dividend rate assumes full franking, so in the event that a dividend is unfranked or partially franked, the dividends on the FUELS will be increased to compensate for any unfranked amount.

FUELS are perpetual securities and have no maturity; however, Santos may convert or exchange some or all of the FUELS for ordinary shares or $100 cash on 30 September 2009 and each dividend payment date thereafter. Santos may elect to convert at any date in certain circumstances, including a takeover or scheme of arrangement, or proposed changes to taxation regulation or accounting standards.

The ratio at which FUELS will convert to ordinary shares is calculated by reference to the market price of the ordinary shares during the 20 business days immediately preceding, but not including, the conversion date, less a conversion discount of 2.5%. Notwithstanding, the conversion ratio will not be greater than 400 ordinary shares for each FUELS security. Again, having regard to the inherent characteristics of the FUELS securities, particularly the contractual nature of the cash flows associated with the instruments and the level of priority afforded to the holders of the securities, we take the view that despite Santos's classification of the instruments as equity, they would be more appropriately treated as debt. We summarize our findings in Table 15.5.

The above analysis demonstrates the empirical reality of the phenomenon about which we conjectured in our introductory remarks – namely that the design of hybrid securities is configured to allow issuers of such securities to adopt equity-like accounting treatment even though the economic substance of the instruments tends more closely towards the characteristics of debt. This gives rise to questions

Table 15.5 Characteristics of sample of hybrid securities issued in Australia

Security	Cash flow	Claims	Maturity	*Our* vs issuer classification
STOPB	Contractual	Priority	Indefinite	*Debt*/equity
DJSPA	Contractual	Priority	Definite	*Debt*/equity
WOWHA	Contractual	Priority	Indefinite	*Debt*/equity

Table 15.6 Hybrid issuers balance sheet analysis

Balance sheet	STO	DJS	WOW
Reported debt/equity ratio	0.70	0.72	1.99
Adjusted debt/equity ratio	1.04	0.99	3.18
Difference (%)	**48**	**37**	**60**
Reported gearing	1.70	1.72	2.99
Adjusted gearing	2.04	1.99	4.18
Difference (%)	**20**	**16**	**40**

as to the potential impact on key measures of financial performance and position caused by the misclassification problem we identify and discuss above.

Our methodology for undertaking this investigation is discussed in section 15.3. We first tested for impact on key balance sheet-based measures of financial position, particularly leverage. Our results are presented in Table 15.6.

The data demonstrates that the reclassification of hybrid instruments from that adopted by their issuers (equity) to our suggested treatment as debt would have materially impacted both the debt/equity and leverage ratios of each of the organizations we studied.

Were a reclassification to occur, this could have potentially significant impacts on both investor perceptions of the degree of risk associated with providing debt or equity capital to the organizations in question, and could also place the organizations studied at greater risk of breaching predefined debt covenants and other similar contractual obligations.

This may explain the increase in buyback and instrument redesign behavior we noted previously, in the wake of the Australian Accounting Standards Board's release of draft Australian Accounting Standard 132[17].

For reasons we set out in the discussion of our methodology, the misclassification of hybrid instruments as equity also has implications for key corporate performance measures, by reason of the treatment of cash flows to security holders as distributions of retained equity rather than as interest expense. We therefore measured reported earnings per share, return on assets, and return on equity for our sample and subsequently adjusted these measures to our estimate of the values they would have taken on had the cash flows been treated as interest costs (consistent with balance sheet classification of debt). We present our results in Table 15.7.

Table 15.7 Hybrid issuers profit and loss analysis

Profit and loss	STO	DJS	WOW
Reported EPS ($)	0.65	0.16	0.71
Adjusted EPS ($)	0.60	0.15	0.68
Difference (%)	**−7**	**−6**	**−4**
Reported ROA (%)	0.063	0.082	0.12
Adjusted ROA (%)	0.06	0.08	0.11
Difference (%)	**−7**	**−6**	**−4**
Reported ROE (%)	0.11	0.15	0.36
Adjusted ROE (%)	0.12	0.16	0.48
Difference (%)	**10**	**8**	**25**

Across our sample, both earnings per share (EPS) and return on assets (ROA) fall when adjusted for hybrid misclassification, the magnitude of the change being of the order of 5%. Conversely, adjusted return on equity (ROE) increases for each of the organizations we study, a result driven primarily by the significant increases in adjusted leverage we set out in Table 15.6.

We also tested the cash-flow data disclosed by our sample of organizations to determine the extent to which the misclassification of hybrids as equity impacted on the presentation of organizational cash-flow data. The impetus for this investigation is the realization that while cash distributions to equity holders are typically classified as cash outflows arising from financing activities, interest payments to debt holders are, by convention, classified as cash outflows arising from operating activities.

Since cash flow from operating activities is generally accepted to be a vital metric pertaining to organizational financial health and value generation intensity (e.g. see Nasser, 1993; Mulford and Comiskey, 2002), we test for the degree of impact on cash-flow presentation brought about by hybrid misclassification. We set out our results in Table 15.8.

Though not highly material as a proportion of total reported operating cash flows in our sample, each organization we studied did nonetheless adopt the convention of treating their cash distributions to hybrid security holders as cash flows from financing activities, even in cases where the documentation describing the structure of their hybrid securities clearly labels such distributions as ‘interest’.

Finally, having regard to our revised estimates of earnings per share (as set out in Table 15.7), we estimated the potential impact on market capitalization of the sample of organizations we reviewed in the event that they reclassified their hybrid instruments as debt and altered all profit and loss reporting commensurately with that transformation. As discussed in the description of our methodology, for the sake of conservatism and consistency, we elected not to alter the observed price/earnings ratios exhibited by our sample organizations in carrying out this exercise.

As the data in Table 15.9 indicates, the estimated impact on market capitalization for each organization appears material, a matter of concern for ordinary equity holders as well as those with considerable wealth contingently tied to the value of the firm's ordinary equity – for example, option holders.

Table 15.8 Hybrid issuers cash-flow analysis

Cash flow	STO	DJS	WOW
Reported operating cash flow ($m)	565.3	167.0	1262.3
Hybrid distribution paid ($m)	14.7	5.3	42.9
Adjusted operating cash flow ($m)	550.6	161.7	1219.4
Difference in operating cash flow (%)	**−2.60**	**−3.15**	**−3.40**

Table 15.9 Hybrid issuers market analysis

Profit and loss	STO	DJS	WOW
Reported EPS ($)	0.65	0.16	0.71
Share price ($)	8.48	1.89	11.40
Price/earnings ratio (times)	13.1	11.9	16.1
Market capitalization ($m)	4960.2	778.1	11,768.2
Adjusted EPS	0.60	0.15	0.68
Adjusted share price ($)	7.90	1.78	10.92
Adjusted market cap. ($m)	4618.0	734.7	11,272.2
Difference in market cap. ($m)	**−342.1**	**−43.4**	**−496.0**
Difference in market cap. (%)	**−7**	**−6**	**−4**

15.5 Conclusion

The essential premise which motivated this chapter was that despite a growing focus on improved transparency, accuracy, and consistency in financial reporting evident in the wake of a raft of high-profile corporate scandals which broke in the beginning years of the new millennium, significant threats to such ideas still remained unchecked. We examined hybrid securities as an example of a construct which, as the evidence we have discussed above clearly suggests, demonstrates that this threat is not merely conjectural, despite high-profile 'reform' to financial reporting rules in Australia in the form of the adoption of International Financial Reporting Standards.

In our view, this only adds weight to the calls made by other scholars (e.g. McBarnet and Whelan, 1999; Anthony, 2004; Brilof, 2004) for continued revisions to be made to financial reporting frameworks with a view to further engendering a reporting philosophy and culture founded on the principle that financial statements should reflect economic substance rather than being trapped as the slaves of form.

Our study provides evidence that much territory remains to be covered before such a state of affairs is likely to be reached. In particular, our study reinforces the dynamic nature of regulatory arbitrage, as evidenced by the redesign of hybrid financial instruments to a form amenable to survival under forthcoming financial reporting regulatory regimes before the commencement date of those regimes. In effect, by designing financial reporting standards with a highly technical and detail-based bent, regulators appear to have stoked the fires of instrument design creativity and ensured the continued viability of financial reporting practices which, even at best, must be viewed as questionable.

While the case of hybrid financial instruments is of interest treated alone, as we have done here, the better view is that hybrid instruments represent only one of a matrix of phenomena which continue to derogate from the quality of external financial reporting, including, in particular, off balance sheet financing vehicles, certain forms of lease financing structures, and equity-linked compensation instruments, including options.

While this may seem an eclectic list, the difficulty inherent in each of its constituent elements is the failure of current financial reporting practices to adhere to a substance-based approach. The data we present and discuss in relation to hybrids adds to the understanding of the magnitude of the danger inherent with continued adherence to financial reporting rules not firmly

embedded in the philosophy of giving precedence to highlighting the underlying economic substance of transactions or positions, above all other objectives. Much room remains for further empirical and theoretical work aimed at providing further illumination in relation to this critical point.

Notes

1. For the purposes of compiling its statistics, the Reserve Bank of Australia categorizes hybrid instruments as debt, irrespective of the accounting or taxation treatment accorded to them.
2. This has led one influential Australian commentator, Tom Ravlic, the policy advisor to the Australian National Institute of Accountants, to dub hybrids 'the transvestites of the accounting world'. In Ravlic's view, hybrids are made up to look like equity 'but once you strip away the lipstick and mini-skirt, you end up with debt' (quote drawn from Williams, 2005, p. 71).
3. For example, the ReCAPS hybrids issued by large Australian retailer Coles Myer. These instruments, through which Coles Myer raised approximately $700 million, were originally issued in December 2000. All were bought back by the company in July 2005. The company explained that its motivation in engaging in the buyback was to 'provide a simpler, more efficient capital structure that will benefit the company and shareholders over time'. Given that these were perpetual instruments of no fixed maturity, their survival for so limited a period speaks volumes as to the fragility of the desirability and usefulness of hybrid instruments in the face of regulatory change.
4. For example, the 'WINs' hybrids issued by Woolworths Limited, another large Australian retailer. Note 24 of the company's 2004 annual report states that the trust deed governing these instruments was altered post balance date, in preparation for the changed reporting environment ushered in by the adoption of International Financial Reporting Standards.
5. An important example of this is the arrival of so-called 'step-up' securities into the Australian hybrids market. These are of recent invention and should continue to allow classification as equity for financial reporting purposes. These are discussed in greater detail later in the chapter.
6. For the purposes of compiling its statistics, the Reserve Bank of Australia's standard protocol is to classify hybrids as debt irrespective of accounting or taxation treatment.
7. One indication of this is evident in the Reserve Bank of Australia's recent estimate that hybrid securities typically cost their issuers between 70 and 100 basis points more than equivalently rated traditional debt instruments (RBA, 2005a, p. 58).
8. Though they managed to be classified as equity due to their perpetual maturity and the existence of some degree of conditionality in relation to the right on the part of investors to receive promised cash-flow streams.
9. As noted in the introduction to this chapter, many organizations have responded to this likely change in classification by engaging in pre-emptive buybacks of these instruments. As a further example, in August 2004, Computershare Limited notified holders of its reset preference shares that it had opted to invoke an early conversion of the instruments to ordinary equity, in accordance with the terms of issue of the reset preference shares. Its explanation for its decision to do this was that: 'The board has made this decision following the release in December 2003 by the Australian Accounting Standards Board with effect from 1 January 2005 of pending Australian Accounting Standard 132, Financial Instruments: Disclosure and Presentation (AASB 132).

AASB 132 will have the effect of requiring the RPS (currently treated as equity) to be treated as debt for accounting purposes.'

10. Together with changes in prudential regulatory rules relating to the classification of securities as tier 1 capital of financial institutions announced by APRA in April 2004.
11. This applies not only to the actual design features of the instruments, but to the nomenclature of the instruments. A sample of the acronyms used to describe hybrid securities currently outstanding in Australian capital markets includes: CARES, CARS, FIRsTS, FUELS, PARS, PAVERS, PERLS, PINES, POWERS, PRESSES, RENTS, RePS, SAINTS, SHEDS, SITES, TELYS, TICkETS, WINES, and WINs. In many cases, the acronyms are designed to in some way reflect the nature of the underlying business of the issuing entity. Thus, FUELS (Franked Unsecured Equity Linked Securities) were issued by energy company Santos, PRESSES (Preferred Reset Securities Exchangeable for Shares) were issued by newspaper and media company Fairfax Limited, and so on.
12. We use the WINs securities issued by large listed retailer Woolworths Limited as our example of this class of security.
13. We use the reset convertible preference shares (RePS) issued by listed specialty retailer David Jones Limited as our example of this class of security.
14. We use the FUELS securities issued by listed oil and gas producer Santos Limited as our example of this class of security.
15. Albeit with slight modifications to terminology, each of Moody's, Standard & Poor's, and Fitch Ratings use essentially the same approach that we describe above to differentiate between debt and equity securities for the purposes of undertaking credit analysis.
16. We assume in doing so that capital markets have priced the ordinary equity securities issued by the firm without impounding the potentially dilutive impact on EPS of a reclassification of that firm's hybrid securities to debt, from equity. Further, for the sake of conservatism, we hold the price/earnings multiple applied to EPS constant for the purposes of deriving an estimate of the impact on market capitalization.
17. Refer to sections 15.1 and 15.2 of this chapter for a review of this discussion. In this vein, it is particularly interesting to note the circumstances under which the perpetual step-up security we examined for the purposes of this chapter – the Santos Limited 'FUELS' – came into existence. Santos issued the FUELS securities in 2004 in part to fund the buyback of $350 million worth of previously issued reset convertible preference shares (RePS). These securities were vulnerable to reclassification from equity to debt as a result of the changed accounting rules embodied in AASB 132. The new rules took effect for all accounting periods commencing on or after 1 January 2005, so from this point of view, the buyback of the pre-existing RePS securities prior to the conclusion of 2004 was distinctly advantageous.

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16

Empirical Evidence on the Use, Size, Concentration, and Cost of Executive Options Schemes in Australia

Tyrone M. Carlin and Guy Ford

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16.1 Introduction

By the early years of the new millennium, debate about the role, legitimacy, and impact of executive options was endemic. Although academic literature had begun to produce troubling results in relation to links between the existence and magnitude of executive options schemes and opportunistic behavior on the part of recipient executives (e.g. Aboody and Kasnik, 2000; Ali and Stapledon, 2000; Chen, 2002), the issue which dominated public debate related to desirability of revising financial reporting rules to require that the cost of executive options be counted in the determination of the annual reported profitability of corporations granting options to their executives.

These debates reached and engulfed the actors entrenched at the commanding heights of the regulatory, political, and financial institutions of the United States. Faced by a recalcitrant corporate sector largely unwilling to embrace the principle of recognizing the cost of options in the process of calculating profits (despite the capacity to do so under the precepts of SFAS 123), apparently for fear of the negative impact this would have on reported profits, a number of high-profile US figures made their views very plain indeed. In a speech delivered at New York University, US Federal Reserve Chairman Alan Greenspan is reported to have said:

> 'If investors are dissuaded by lower reported earnings as a result of expensing, it means that they were less informed than they should have been. Capital employed on the basis of misinformation is likely to be capital misused.'
>
> (*Wall Street Journal*, 27 March 2002)

Warren Buffet was even more direct, asking:

> 'If options aren't a form of compensation, what are they? If compensation isn't an expense, what is it? And if expenses shouldn't go into calculations of earnings, where in the world should they go?'
>
> (Merrill Lynch, Global Industry Research Note, *Accounting for Options*, 7 May 2002)

In the United States Senate, Senators Levin and McCain introduced a bill which, if enacted, would have forced corporations either to expense options or to pay tax on them (the bill was introduced to the US Senate on 12 February 2002; it was not passed into law). Inevitably, the repercussions of these debates were felt in other advanced market economies such as Australia, where the key issues

were rendered even more tangible by the lack of even basic mandatory accounting rules on the subject of executive options (Carlin and Ford, 2003).

There, the announcement that an accounting standard requiring that the cost of options be recognized as an expense in the calculation of corporate profit would be operative by 2005[1] appears to have been taken as a signal for a return of collective calm and disinterest[2] in what, before the announcement of an impending standard, had been a contentious issue. Remarkably, in our view, the debate in Australia receded without any systematic airing of key empirical issues relating to the magnitude and impact of options usage or the possible policy consequences flowing therefrom. Thus, in this chapter, we contribute to the literature by providing an overview of a number of key parameters relating to the use of executive options in Australia. The chapter proceeds as follows.

In section 16.2, we describe our sample and the time period over which we conducted our research, and set out evidence on the frequency with which large listed Australian corporations used options schemes in the context of the remuneration of their employees during that period. In section 16.3, we review the scale of these schemes by examining the number of options issued, the number of options outstanding, and the number of options exercised by our sample of corporations during the period we studied. We also provide data relating to options holding concentration and present some preliminary thoughts on the implications of this data.

In section 16.4 we present some estimates of the impact the options schemes we observed would have had on the operating profit before taxation reported by our sample of corporations had they been under an obligation to factor costs associated with their options schemes into their annual earnings calculations. Finally, in section 16.5 we set out some conclusions and prognostications for future research.

16.2 How prevalent are executive options plans in Australia?

In order to develop insights into the scope of use of executive options plans in Australia, we selected a sample consisting of the top 100 Australian listed corporations (as measured by market capitalization) as at the conclusion of 1996. We then gathered data relating to the use of executive options plans by these organizations from 1997 through to 2004, inclusive. We initially set the commencement year for our study as 1996, but found that financial statement

disclosures relating to options were so fragmented and inconsistent in that year that it was necessary to select a later year as the commencing period for the study.

We classified corporations within our sample as falling into one of three classes in each of the years we reviewed. The first group is labeled 'no plan'. Corporations fell into this category in a particular year if their annual report for that period contained no reference to options plans. The second group is labeled 'has plan'. These corporations did include references to the existence of options plans within their annual financial reports.

The final group is labeled 'exit'. These firms either merged or were delisted during the period under review, making it impossible to gather data in relation to their options schemes for the entire period under review. However, for the sake of completeness, these companies are also tracked in our dataset, allowing the calculation of the proportion of surviving firms within the sample which maintained an executive options plan in each year we studied.

Slightly more than half of the sample of large firms we examined had options plans in 1997. This grew rapidly to approximately 80% of our surviving firms by 2000, and stabilized thereafter. However, the data displays no convincing evidence that the turn of the millennium controversies surrounding the use and impact of options referred to above has resulted in any measurable dampening in the enthusiasm of Australian corporations for the use of options schemes as an element of executive compensation. This data is set out in Table 16.1.

While this data clearly shows a pattern of growth in the application of executive options schemes in the first half of the period reviewed, followed by a period of stabilization, it does not permit direct insight into the size and level of activity (both in terms of fresh grants and exercises of options) of these schemes. This is discussed in section 16.3.

Table 16.1 Proportion of sample organizations with executive options plans

	1997	1998	1999	2000	2001	2002	2003	2004
No plan	47	32	29	22	20	17	17	17
Has plan	53	68	71	78	77	75	62	62
Exit	0	0	0	0	3	8	21	21
Sample total	100	100	100	100	100	100	100	100
Survivors with plan (%)	53	68	71	78	79	82	78	78

16.3 Size, activity, and concentration of the observed options schemes

In order to gauge the scale of options schemes and the degree of activity of those schemes, we measured three variables. These were: the volume of new option grants each year, the volume of option exercises each year, and the volume of outstanding options at the end of each year. We also examined the degree of holdings concentration evident in Australian executive options schemes. This provides a higher resolution view of the nature of these schemes than would otherwise be available, and provides data on a variable which has been relatively little researched but which, as we explain later in this section, may be of significance in influencing the impact of executive options schemes.

To take account of variations in the size of the organizations we studied and the changes in the total number of organizations which had active options plans in each of the years we studied, we express the data relating to each variable as a percentage of outstanding ordinary equity at the conclusion of each year studied. The first two variables, 'grants' and 'exercises', measure the level of activity in the options plans we examined[3], while the third variable, 'volume outstanding', provides a scale measure. Our findings are presented in Table 16.2.

Two features of the data in particular are worth noting. First, between 1997 and 2000, there was much higher growth in the scale of the options plans we observed than in the propensity of corporations within our sample to employ options plans. Recall that 53% of our sample had options plans in 1997, versus 78% by 2000. This represents growth of approximately 50% across that period. However, over the same timeframe, the volume of options on issue as a proportion of outstanding ordinary equity capital rose from 1.56% to 6.27%, a fourfold increase in scale. Thus, on average, not only did more corporations choose to use options schemes, but the scale of those schemes grew significantly.

Second, it would appear that corporations using options schemes significantly changed their behavior from 2001 onwards. Observe, for example, how the

Table 16.2 Option grants, exercises, and volumes outstanding

	1997	1998	1999	2000	2001	2002	2003	2004
Grants (%)	0.65	1.43	3.73	2.15	0.52	0.78	0.39	0.44
Exercises (%)	0.0004	0.014	0.058	0.20	0.76	0.56	2.67	1.01
Volume outstanding (%)	1.56	1.80	4.61	6.27	5.25	5.61	2.56	2.07

volume of options grants recorded in 2001 fell to approximately a quarter of the level observed in 2000. This was not a transient event. The level of grant activity for the remainder of the time period reviewed also remained within a tight range of the 2001 grant volume level.

Balanced against this, there was no material fall in the proportion of our sample which continued to operate executive options plans, and in consequence, taking account of the lagged effect associated with exercises, the average scale of options plans (as measured by options outstanding as a proportion of outstanding ordinary equity capital) declined during the final years we studied, settling in a range closer to what it had been in the first two years for which we collected data.

We cannot draw firm conclusions as to the cause of this material change in grant volume and scheme size. Market factors may account for part of these occurrences: the five-year period leading up to 2000 had been one of steady growth in the Australian All-Ordinaries Share Price Index, but the two-year period 2000–2001 was one characterized by little growth and high volatility. The Index then showed substantial decline over the year 2002 and the first quarter of 2003. These patterns could be linked to options schemes becoming less attractive in the remuneration packages of executives over these periods in time.

Further, it does not seem too far fetched to suggest that the level of political and media attention focused on executive options during 2001 and 2002[4], together with the looming likelihood that in the not too distant future the financial reporting rules would evolve to require expensing of options, saw companies retreating from the expansive use of options schemes which they had adopted by 1999 and 2000. In this regard, Table 16.3 shows the number of articles in major Australian newspapers, on a year-by-year basis, between 1996 and 2004.

Following virtually no media interest in the period to 1996–2001, a substantial number of articles appear in 2002. From 2003, media articles decline almost as significantly as they rose in the preceding period[5]. Though not comprehensive, this does provide at least some evidence which appears consistent with our thoughts on the possible drivers of the marked reduction in option grants which transpired in 2001 and later periods compared with grant activity in 1999 and 2000.

Table 16.3 Newspaper articles on executive options

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Number of articles	1	2	11	6	19	14	251	121	51

In addition to our investigation of the size and activity parameters we discuss above, we also gathered data on the holdings concentration of the option plans put in place by the organizations we studied.

The term 'holding concentration' refers to a measurement of the degree to which the ownership of options issued pursuant to an organization's executive options scheme is concentrated in the hands of a select group of senior actors, defined in this study to include the board (including executive and nonexecutive members), the chief executive officer, and the five highest remunerated nondirector executives employed by the firm. Thus, holdings concentration represents the percentage of outstanding options issued by an organization held by the group of senior actors defined above[6].

We set out our data on this variable in Table 16.4. Even on cursory inspection, a number of matters are clearly apparent. The first such issue is the high proportion of executive options which are held (on average) by the chief executive officer. In our sample, CEOs on average held approximately one-fifth of all outstanding options. This suggests a strong nexus between the total wealth of these individuals and the share prices of the organizations they lead.

It requires the aggregation of the option holdings of all the remaining board members and the next five nonboard executives to match the volume of

Table 16.4 Concentration of option holdings among senior management (average holdings by company), 1997–2004

Year	Chairman	CEO	Executive director	Non-executive director	Board senior executive	Nonboard senior executive	Total senior executives[a]
1997	14%	31%	15%	12%	40%	7%	40%
1998	14%	26%	15%	10%	34%	12%	42%
1999	10%	20%	11%	8%	26%	11%	38%
2000	14%	19%	15%	11%	27%	10%	40%
2001	11%	20%	12%	9%	28%	12%	38%
2002	9%	17%	14%	10%	24%	17%	40%
2003	11%	21%	13%	7%	27%	18%	42%
2004	12%	18%	15%	6%	26%	19%	43%

[a] This is the sum of all board option holdings (irrespective of position on board, executive or nonexecutive status), as well as the holdings of the top five nonboard executives employed by the firm. Because of the averaging technique used in deriving the data, it is not possible to sum the columns in any row on the table to reach this aggregate figure.

options placed in the hands of the CEO alone. Nonetheless, a second important observation from the data is that board holdings dominate those by nonboard executives (though not to an enormous extent) and that, together, the very elite of the executive ranks of the organizations we studied controlled a very significant proportion of the total number of options outstanding pursuant to their organization's executive options plan.

Therefore, on the basis of our data we argue that the executive options plans of large Australian corporations are characterized by a significant degree of holdings concentration. In the only other published research of which we are aware which touches on this issue, Blasi et al. (2003, p. 190) suggest senior executive holding concentration in top 100 US-based firms at around 33%. It would therefore seem that, at least in aggregate, the Australian experience is similar to that of the United States.

To the extent that concentration has been associated with a greater tendency for firms to display shareholder value reducing (but option holder value increasing) behavior[7], the apparent similarity in concentration levels between the USA and Australia might also assist in the interpretation of the applicability of US empirical research results for Australian conditions.

Our rationale for gathering the data reported within this chapter in relation to options holding concentration is based on a logical deduction rather than empirical analysis. We begin with the premise that the existence of options schemes as an element of executive remuneration brings with it the possibility of inducing incentives for behavior which, while enriching the holder of the option, does nothing for or actually degrades shareholder wealth (Ellis, 1998; Core and Guay, 2001; Yermack, 2001; Chen, 2002; Monks, 2003). Upon examining the literature which examines this possibility, it became clear to us that most of the mechanisms for achieving these unfortunate wealth transfers were within the grasp of only a very select group of actors within an organization.

Altering capital structure mix, systematic alteration of firm risk profile, the management of information flows between the firm and capital markets, the timing of options issue and vesting, and the execution of decisions to engage in reloads are all initiated by a very narrow but powerful constituency within a firm (Carlin and Ford, 2004). Yet our data demonstrates that this same constituency stands to gain disproportionately from an inflation of option value. Our basic intuition may therefore be put as simply as suggesting that the narrow decision-making constituency holding a disproportionate exposure to outstanding options has both the means and the motive necessary to give effect to actions which endanger shareholder wealth creation and therefore represent poor governance outcomes.

This capacity for action is brought into even sharper relief when considering our surprising findings about the extent to which even nonexecutive directors participate in options schemes in some of the organizations in our sample. Whether or not this capacity has been brought to bear is an empirical question with which we propose to engage in future research. However, irrespective of additional empirical enquiry, the results reported in this chapter stand alone, and serve as a reminder that while the careful design of incentive contracts (for example, options packages) represents an important element of governance oversight, so too does the maintenance of a careful watch on the dispersion or concentration of ownership of options issued by firms as part of overall remuneration policy.

Having considered the question of options holding concentration, we turn to the question of the cost of the executive option schemes we studied. This is set out in section 16.4.

16.4 Estimated cost of executive options schemes

At no time during the period we studied was there any requirement that Australian corporations with executive options schemes reflect the cost of these schemes in their annual profit calculations, and none of the companies we studied did so voluntarily. However, from the late 1990s onwards, the organizations we studied typically made reasonably detailed disclosures relating to their options plans in the notes to their accounts.

Coupled with disclosures (not forming part of their annual financial reports) about their options plans these companies were required to make to the Australian Stock Exchange, we were able to gather sufficient data to support the estimation of the expense associated with the options schemes employed by our sample of companies, but not recognized in the calculation of their reported profits.

The question of how best to estimate expenses associated with options schemes and reflect these expenses within corporate financial statements remains controversial and contested (Coulton and Taylor, 2002). In particular, though most approaches accept the use of techniques such as the Black–Scholes model to estimate the fair value of options at the date of grant[8], the question of how such values might be recognized in financial statements and subsequently modified in light of changing circumstances (for example, changing market prices for the underlying equity securities, options failing to vest) is highly controversial.

It is not our objective to engage with the financial reporting debate in this chapter. However, because we report data in Table 16.5 that represents our estimate of the degree to which the reported operating profit before tax of our sample of companies would have been reduced had the cost of options been factored into the calculation of that number, it is necessary to briefly explain the valuation and reporting methodology we employed in constructing our expense estimates.

We began by using a Black–Scholes model to estimate the fair value of options granted in any given year. We then treated that entire amount as an expense of the period during which the grant occurred. At each subsequent balance date, we marked outstanding options to market, again using the Black–Scholes model as our basis for estimating fair value.

Any resulting valuation increments (or decrements) were taken to each period's profit and loss calculation as expenses (or expense reversals). Any lapses of options were accounted for as expense reversals in the period during which the lapse occurred. The net effect of this mark-to-market-based approach to accounting for executive options is that, over the life of the option, the expense which is distributed through the profit and loss statement of the granting entity will equal the intrinsic value of the option at the point in time when it is exercised.

Thus, in net terms, expenses will only be recognized over time when a transfer of intrinsic economic value between employer and employee actually does transpire. Consequently, the expense to shareholders is exactly the same as the opportunity cost of the foregone cash flows which they could have enjoyed as a result of the issue of equity at market prices, but did not because equity was issued to employees at below market prices.

The chief objection to this approach to the financial reporting of the impact of executive options schemes is that its reliance on the mark-to-market process may result in substantial increases in the volatility of reported earnings (Berger et al., 1991; Jones, 1993; Robertson, 1995). However, in other Australian settings where a mark-to-market accounting approach has long been the norm, its application is

Table 16.5 Estimated expense associated with options plans

	1997	1998	1999	2000	2001	2002	2003	2004
Exp. ($m)	342.5	2780	279	3008	102.6	(753.3)	(52.3)	580.2
Total OPBT ($m)	14,550	18,644	16,756	27,550	23,707	8206	27,139	30,389
Exp. OPBT (%)	2.35	14.91	1.66	10.92	0.43	(9.18)	(0.19%)	1.91

no longer seen as contentious nor has its application caused observable havoc (Carlin, 2002).

We provide three basic data items in Table 16.5. The first of these is our estimate, expressed in millions of Australian dollars, of the per-period expense associated with the options schemes operated by our sample of listed corporations. The second item is the sum of the before-tax operating profits reported by the subset of companies in our sample which had executive options schemes in each particular period. The final item expresses our estimate of the expense of the executive options schemes we identified in each period as a proportion of the reported before-tax profits of the companies we identified as having executive options schemes in those periods.

Though, as discussed, the application of a mark-to-market approach to the estimation of option expenses has resulted in noticeable between-period volatility, the more important consideration is that the average impact of options-related expenses across all companies and years we reviewed was of the order of 3% of the before-tax profits reported by companies using options schemes. While this is lower than some published estimates of the average impact of expensing the options schemes of samples of US listed companies[9], the effect is material nonetheless[10].

16.5 Conclusion

Our data provides a preliminary overview of the frequency of use, size, concentration, and potential cost impact of executive options schemes used by large listed Australian corporations. Though in this chapter we do not provide directly measured evidence relating to impact on corporate performance, governance quality, and risk behavior associated with these schemes, our data makes it plain that, in an Australian context, executive options schemes have been and remain economically significant and an important subject for continuing research.

This is particularly the case for options' holding concentration, which has been an under-researched variable, though one which may hold the key to a more detailed and meaningful understanding of the nature of executive options plans and thus a greater capacity to predict their impact on corporate performance, governance standards, and risk behavior.

Notes

1. This did eventuate, in the form of Australian Accounting Standard AASB 2, Share-Based Payment. Knowledge of the impending standard was widespread by early 2003.

2. As to which, see the data we set out on the frequency of newspaper articles in major Australian newspapers devoted to executive options in Table 16.3.
3. One other form of event, lapses, also provides a measure of turnover activity in corporate options plans. However, in the context of our sample of companies and the timeframe of our analysis, lapses represented only a minor phenomenon, dominated by grants and exercises. Bearing this in mind, and for reasons of space, we do not discuss lapses in this chapter.
4. We have discussed these issues in greater detail elsewhere (see Carlin and Ford, 2004).
5. Data extracted from the Factiva database, set to 'all dates', 'Australia and New Zealand', 'major Australian newspapers', 'executive options'.
6. On the basis of disclosures contained within the annual financial statements of listed public corporations, it is possible to gather data on options issuance and holdings to this level of detail.
7. This suggestion is a key tenet of the arguments advanced by Blasi et al. in relation to problematical design aspects of executive options plans (see Blasi et al., 2003, p. 190).
8. A representative example is Australian Accounting Standard AASB 2, Share-Based Payment, which specifically recognizes the use of the Black–Scholes and binomial approaches to the estimation of the fair value of options as at the date of grant. In the United States, FAS 123 also recognizes the use of models such as Black–Scholes to assist with the initial process of estimating the fair value of options granted pursuant to executive options plans.
9. Merrill Lynch published a study in 2002 in which they estimated the impact of expensing the options schemes of all companies in the Dow Jones Industrial Index. They concluded that the average impact on the 2001 earnings of that group of companies would have been 7% (Merrill Lynch, 2002).
10. The sum of our expense (and expense reversal) estimates for our sample of companies between 1997 and 2004 is approximately $6.3 billion.

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17

The Introduction of Fair Value in Italy: Economic and Financial Reporting Issues

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17.1 Introduction

Starting in 2005, the European Union requires the adoption of the International Financial Reporting Standards (IFRS[1]) by its Member States, as well as by the members of the European Economic Block (EU directive 65/2001; EU law 1606/2002). This regulation has given a great impetus to the adoption of IFRS in Europe and has significantly fostered the accounting harmonization process in the European Union (e.g. Alexander and Nobes, 1994; Nobes and Parker, 2002; Whittington, 2005). Accordingly, there is a need for senior management, investors, and policymakers to understand the implications of IFRS adoption on financial reporting (e.g. Schipper, 2005), as it seems likely to have a profound effect on corporate financial statements, especially in countries, such as Italy, whose accounting system was traditionally more stakeholder oriented rather than shareholder oriented.

Generally accepted accounting principles are not to be considered as 'universal' principles, rather they are standards that derive from the influence of several 'environmental' factors (e.g. Choi and Mueller, 1992; Belkaoui, 1995; Onesti, 1995; Nobes, 1998).

The purpose of this chapter is to analyze the economic and financial reporting issues concerning the introduction of fair value measurements for the individual financial statements (nonconsolidated financial statements) of Italian nonfinancial listed companies. Measurement techniques are beyond its scope.

European Union mandatory adoption of IFRS is only related to consolidated financial statements. Any distributable profits are calculated using the individual accounts of a corporate entity and not the consolidated accounts of the group. Accordingly, any corporate group that has to adopt IFRS, but whose individual accounts of companies in the group remain under national generally accepted accounting principles (GAAP), will not have its distributable profits subject to IFRS. However, since the Italian policymakers require Italian listed companies to prepare and disclose their separate and individual financial statements in accordance with IFRS starting in 2006, the key economic issues related to such a requirement will be discussed.

The remainder of this chapter is organized as follows. Section 17.2 will describe the general framework regarding the adoption of IFRS in Italy, as well as the decision of Italian policymakers regarding the distributability of gains that may be driven from using fair value measurements.

Section 17.3 will provide a comparison between Italian GAAP, IFRS, and the US GAAP with regard to the application of fair value measurements, which represents one of the most important innovations, if not the key one, in corporate financial statement preparation and disclosure based on IFRS.

Section 17.4 will analyze the effects of the introduction of fair value on the financial statements of nonfinancial listed companies in Italy. It will provide two examples of what might happen to corporate capital if there were no limits imposed by the law and if shareholders, in their general meeting, decide to distribute fair value gains as dividends.

In section 17.5 we will compare and contrast the importance of the accrual basis and prudence (conservatism)[2] principles in the Italian GAAP, IFRS, and the US GAAP. Differences in the relative importance of the conservatism principle over the accrual basis principle in the Italian GAAP seem to explain differences in the application of fair value measurements in Italian financial statements, especially with regard to the limits of the distribution of fair value gains to shareholders as dividends.

Section 17.6 will provide some explanations regarding the origins of the importance of the conservatism principle in the Italian GAAP and commercial law, by examining the specific corporate governance features that characterize the social and economic context in which Italian listed companies operate.

Section 17.7 will recommend the adoption of a detailed comprehensive income statement, in which all nondistributable fair value gains and losses are disclosed. Such disclosure will increase the quality of information to investors for their economic decision-making, as well as satisfy the Italian law requirements concerning capital maintenance. Furthermore, such disclosure may overcome the potential tradeoff between the accrual basis and the prudence accounting principles. Finally, section 17.8 concludes.

17.2 The adoption of the International Financial Reporting Standards in Italy

Since 2005, the European Union (EU directive 65/2001; EU law 1606/2002) has required its Member States to adopt IFRS for the preparation and presentation of consolidated financial statements for their financial companies (e.g. banks and insurance companies), either listed or nonlisted, as well as for their nonfinancial listed companies. The European Union requirement covers only consolidated financial statements. EU mandatory regulation does not refer to separate and individual financial statements, as Member States were given discretion regarding this type of financial statement.

The exact effects of any EU directive on a particular country clearly depend on the laws passed by each Member State's legislature. In accordance with EU

options, the Italian policymakers have decided to make an additional step toward accounting harmonization with EU companies, by requiring Italian financial listed and unlisted companies and nonfinancial listed companies to prepare separate and individual financial statements (nonconsolidated) in accordance with the recommendations of IFRS effective 2006 (see Decree no. 38, 28 February 2005, paragraph 4). Corporate entities that do not adopt IFRS are required to apply the existing national GAAP.

While the adoption of IFRS for preparing and disclosing consolidated financial statements does not have any influence on the distribution of dividends, as distributable profits are calculated using the individual accounts of each company within the group, the adoption of IFRS for separate and individual financial statements significantly affects the distributable profits.

The key difference related to distribution of profits is the use of fair value measurements[3] by the IFRS, while it is not allowed under the Italian GAAP (see section 17.3). Italian law (Decree no. 38, 28 February 2005) limits the freedom of shareholders in distributing most of the gains derived from using fair value measurements.

Italian law explicitly mentions only the following fair value gains as freely distributable to shareholders:

- Held for trading financial assets
- Fair value hedge financial instruments
- Operations in foreign currency exchange markets[4].

Italian law implies that all the other fair value gains, either recognized in the profit and loss or credited to equity, are to be considered as 'unrealized' (see section 17.5), and should be credited to a nondistributable reserve, named 'fair value reserve'.

This reserve can be used for settling losses only when there are no other reserves of equity. When profit is not adequate to form a fair value reserve, profits reported in the subsequent periods are to be credited to it, until the reserve is equal to the revaluation amount, i.e. fair value minus historical cost.

The 'fair value reserve' can be transferred either to a distributable reserve or to retained earnings only when the related asset is either:

- Disposed of
- Indirectly realized via its depreciation
- Impaired
- Decreased because of revaluation.

17.3 Accounting for fair value changes: a comparative analysis of IFRS, US GAAP, and Italian GAAP

Table 17.1 reports a brief comparison of fair value measurements between IFRS, Italian GAAP, US GAAP, and the IFRS version adopted by Italy with the provisions of Italian law (Decree no. 38, 28 February 2005). The table is structured as follows. The 'Profit or loss' column refers to traditional profit or loss, where the realized and distributable economic values are reported. The 'Equity' column indicates specific nondistributable reserves of equity. For the United States, which already adopts comprehensive income, this column highlights the comprehensive income's section called 'Other comprehensive income' that includes unrealized economic items (SFAS 130, 1997, paragraph 17). The 'Profit or loss' column points out the sections of the comprehensive income that report the realized and distributable economic items.

It is evident from Table 17.1 that IFRS' use of fair value as the basis of measurement, applied to financial assets and financial liabilities, is more than its use in the Italian and US GAAPs. The Italian policymakers are particularly concerned about the fair value measurements that are recognized through profit or loss (in bold type in Table 17.1) since IFRS consider them as realized and thus distributable.

17.3.1 Intangibles and fixed assets

IFRS (IAS 16, 2004; IAS 38, 2004) require the measurement of fixed assets and intangibles at their cost or, if an active market exists, at fair value minus any subsequent accumulated amortization or accumulated impairment losses (*revaluation model*).

Revaluations are applied to all fixed assets, in order to limit discretion in the choice of the assets to measure at fair value and limit the presence of different values (i.e. historical cost and fair value) in the same class of assets. Fair value gains are credited directly to a revaluation reserve of equity. However, they are recognized in profit or loss if a revaluation decrease of the same asset has been previously recognized in profit or loss. The amounts in excess are credited to equity (IAS 16, 2004, paragraph 39; IAS 38, 2004, paragraph 72). In contrast, decreases are recognized in profit or loss, but they are debited directly to equity if a revaluation of the same asset has been previously recognized in equity. The excess amounts are recognized in profit or loss. The revaluation reserve may be transferred directly to retained earnings when an asset is either: (a) derecognized,

Table 17.1 Fair value accounting differences

Item of financial statement	Italian GAAP	US GAAP		IFRS		Italian version of IFRS and the requirements of law	
Accounting of changes in carrying amounts	–	Profit or loss	Equity	Profit or loss	Equity	Profit or loss	Equity
Intangibles and fixed assets.	Historical cost.	Historical cost.			Fair value (or historical cost).		Fair value. Gains shall be credited directly to a nondistributable reserve.
Investment properties	Historical cost – not depreciated	Historical cost		**Fair value (historical cost)**		Fair value. Gains shall be credited to a non-distributable reserve	
Changes of fair value of	Not allowed	Not allowed		**Exchange rates at the date of**	Exchange rates at the	Exchange rates at the	Exchange rates at the

(Continued)

Table 17.1 (*Continued*)

Item of financial statement	Italian GAAP	US GAAP		IFRS		Italian version of IFRS and the requirements of law	
Accounting of changes in carrying amounts	**–**	**Profit or loss**	**Equity**	**Profit or loss**	**Equity**	**Profit or loss**	**Equity**
nonmonetary items that are measured at fair value in a foreign currency.				**fair value when a gain or loss on a non-monetary item is recognized directly in profit or loss.**	date of fair value when a gain or loss on a non-monetary item is recognized directly in equity.	date of fair value when a gain or loss on a non-monetary item is recognized directly in profit or loss. Gains shall be credited to a nondistributable reserve.	date of fair value when a gain or loss on a nonmonetary item is recognized directly in equity. Fair value. Gains shall be credited directly to a non-distributable reserve.
Exchange differences arising on	*Foreign entity*: exchanges are credited to		Exchanges are credited to equity or		Exchanges are credited to equity		Exchanges are credited to equity

translation of foreign operations in the consolidated financial statement.	equity *Foreign operations integral to the operations of the reporting entity:* exchanges are recognized in profit or loss.	recognized in the comprehensive income.	and recognized in profit or loss on disposal.		and recognized in profit or loss on disposal.
Actuarial gains and losses on defined benefit plans.	Not allowed.	*Corridor approach.*	***Corridor approach* and *immediate recognition approach*.**	*Corridor approach and immediate recognition approach*. Gains shall be credited to a non-distributable reserve.	
Investments in subsidiaries, jointly controlled entities,	If classified as *non current assets*: equity method	Equity method or cost joint venture:	**Fair value**. **Held for sale – IFRS 5**	Fair value. Gains shall be credited to a nondis-	

(Continued)

Table 17.1 (*Continued*)

Item of financial statement	Italian GAAP	US GAAP		IFRS		Italian version of IFRS and the requirements of law	
Accounting of changes in carrying amounts	**–**	**Profit or loss**	**Equity**	**Profit or loss**	**Equity**	**Profit or loss**	**Equity**
and associates in separate financial statement.	or cost. The revaluations shall be credited to a nondistributable reserve. If classified as *current assets*: at the lower of cost and net realizable value.	proportionate consolidation.				tributable reserve. Held for sale – IFRS 5. Gains shall be credited to a nondistributable reserve.	
Other equity instruments.	If classified as *noncurrent assets*: cost. If classified as *current assets*: at the lower of cost and net realizable value.	Fair value (see: *held for trading* or *available for sale*).		**Fair value (see: *held for trading* or *available for sale*).**		Fair value (see: *held for trading* or *available for sale*).	

Financial assets held for trading.	If classified as *current assets*: At the lower of cost and net realizable value.	Fair value		Fair value		Fair value Gains could be distributed to shareholders.			
Financial assets held to maturity.	Similar to amortized cost.	Amortized cost.		Amortized cost.		Amortized cost.			
Loans and receivables.	Net realizable value.	Amortized cost.		Amortized cost.		Amortized cost.			
Financial assets available for sale.	If classified as *current assets*: at the lower of cost and net realizable value.		Fair value.		Fair value.		Fair value. Gains shall be credited directly to a nondistri-butable reserve.		
Financial assets at fair value option.	Not allowed.	Not allowed.		**Fair value.**		Fair value. Gains shall be credited to a nondistri-butable reserve.			
Fair value hedges.	Not allowed.	Fair value.		Fair value.		Fair value. Gains could be distributed to shareholders.			

(Continued)

Table 17.1 (*Continued*)

Item of financial statement	Italian GAAP	US GAAP		IFRS		Italian version of IFRS and the requirements of law	
	–	Profit or loss	Equity	Profit or loss	Equity	Profit or loss	Equity
Accounting of changes in carrying amounts							
Hedges of a net investment and cash-flow hedges.	Not allowed.		Fair value.		Fair value. reserve.		Fair value. Gains shall be credited directly to a nondistributable
Financial liabilities held for trading.	Settlement value.	Derivative: fair value Other: amortized cost.		Fair value.		Fair value. Gains could be distributed to shareholders.	

Other liabilities.	Similar to amortized cost/settlement value.	Amortized cost.		Amortized cost.	Amortized cost.	
Financial liabilities at fair value option.	Not allowed.		Not allowed.	**Fair value.**		Not allowed.
Biological assets and agricultural produce.	At the lower of cost and net realizable value.	At the lower of cost and net realizable value.		**Fair value.**	Fair value. Gains shall be credited to a non-distributable reserve.	

(b) disposed of, (c) impaired, or (d) depreciated. It is transferred for an amount equal to the difference between depreciation based on the revalued carrying amount of the asset and depreciation based on the asset's original cost (IAS 16, 2004, paragraph 41; IAS 38, 2004, paragraph 87).

IAS 36 (2004) also requires that the assets' carrying amounts, including those measured at fair value, have to be reduced if their recoverable amounts are less than their carrying amounts (so-called 'impairment test'). The recoverable amount is the higher of the amount of an asset's fair value less costs to sell and its value in use[5]. The impairment losses are recognized in profit or loss, unless the asset is carried at revalued value and there is a revaluation reserve. In this case, they are recognized directly against any revaluation reserve. The amounts in excess are recognized in profit or loss. If impairment losses, recognized in prior periods, no longer exist or have decreased, the corporate entity has to reverse them (IAS 36, 2004, paragraph 117).

Last but not least, IFRS 3 (2004, paragraph 55) considers goodwill as an intangible asset with an indefinite useful life. Therefore, it has not to be depreciated but impaired annually. Contrary to other impaired assets, IAS 36 (2004) does not allow the reversal of goodwill impairment loss. IAS 38 (2004) prohibits the recognition of internally generated goodwill. Otherwise, a reversal of impairment loss might have been confused with an increase in internally generated goodwill.

Italian law and GAAP[6] OIC 24 (2005) on Intangible Assets and OIC 16 (2005) on Fixed Assets require measurement of these assets at their cost. Their carrying amounts are allocated on a systematic basis over their useful life. The revaluations are allowed only either if specific revaluation laws are issued or in the exceptional circumstances provided by article 2423 of the Italian Civil Code (Roberto, 2004). In this case, the revaluated carrying amount of an asset shall not be increased above its recoverable amount, which is equal to the higher of its net selling price and its value in use. Revaluation gains are always credited to a nondistributable reserve of equity (OIC 16, 2005, paragraph D.VIII). Moreover, Italian law requires an impairment test. An asset is impaired when its carrying amount exceeds its recoverable amount. Impairment losses are always recognized in profit or loss of the period (OIC 16, 2005, paragraph D.XIII). If the impairment loss, recognized in prior periods, no longer exists or has decreased, the entity increases the asset's carrying amount to its recoverable amount and recognizes a gain in the profit and loss statement.

Goodwill can only be recognized when it is acquired in a business combination. It is to be depreciated over a period of five years or, in exceptional circumstances, over a period not exceeding 10 years (OIC 24, 2005).

The US GAAP (APB No. 6, 1965; APB Opinion No. 17, 1970; SFAS 144, 2001) recommend the historical cost as the basis of accounting for a fixed and/or intangible asset. Revaluations are not allowed, except for a discovery of a natural resource in its own properties. Moreover, these assets have to be impaired if the undiscounted estimated cash flows from using them are less than the assets' carrying amount (SFAS 144, 2001, paragraph 7). In these cases, the assets are impaired and recognized at their fair value. Losses, calculated as the excess of the assets' value over their fair value, are recognized in the profit and loss statement. The US GAAP does not allow the reversal of assets' impairment loss. Finally, SFAS 142 (2001, paragraphs 18, 19) does not allow depreciation of goodwill; however, a test of impairment must be done annually.

17.3.2 Investment properties

Investment properties are accounted for under IAS 40 (2004). The IASB allows senior management to adopt the measurement either at cost or at fair value. The measurement at fair value is compulsory 'when a property interest held by a lessee under an operating lease is classified as an investment property' (IAS 40, 2004, paragraph 35). However, once one method has been adopted, it has to be adopted for all corporate properties.

The 'fair value model' is recommended by the IASB for the disclosure of the substance and economic reality of the investment. Its fair value reflects the rental income from current leases and any cash outflows that could be expected in respect of the property (IAS 40, 2004, paragraph 40). Differently from the other fixed assets, the investment properties measured at fair value are not depreciated. Fair value gains (or losses) are recognized in the profit and loss statement. The impairment test is not applied (IAS 36, 2004, paragraph 2).

Neither the US SFAS nor the Italian GAAP has issued a specific standard concerning investment properties. Italian GAAP allows cost as the only measurement basis. OIC 16 (2005, paragraph D.XI.5) underlines that investment properties are not to be depreciated. The US SFAS refer to SFAS 144 (2001).

17.3.3 Assets and liabilities in foreign currency

IAS 21 (2004) regulates the accounting for the assets and liabilities in foreign currency and the recognition of exchange differences that may arise. Any foreign currency transaction has to be recorded at the spot exchange rate between the functional currency (i.e. the currency of the primary economic environment in

which the entity operates) and the foreign currency at the date of the transaction (IAS 21, 2004, paragraph 21). At the end of the period, if the transaction is not yet settled, the transaction in progress will have to be measured.

Foreign currency transactions may be divided into three categories:

- *Foreign currency monetary items* are translated at the closing exchange rate. The exchange gains or losses are directly recognized in the profit and loss statement in the same period which they arise (IAS 21, 2004, paragraph 28).
- *Nonmonetary items measured in terms of historical cost in a foreign currency* (e.g. fixed assets based abroad, foreign license fees or royalties, etc.). They are translated using the exchange rate at the date of the transaction (IAS 21, 2004, paragraph 23).
- *Nonmonetary items measured at fair value in a foreign currency* (e.g. investment properties based abroad measured at fair value). They are translated using the exchange rates at the date when the fair value was determined (e.g. at the end of the period) (IAS 21, 2004, paragraph 23). The exchange gains or losses are credited to equity if fair value changes are credited directly to equity too (e.g. fixed assets based abroad measured at fair value). On the other hand, the exchange gains or losses are recognized in the profit and loss statement if fair value changes are recognized in profit or loss too (e.g. investment properties based abroad measured at fair value) (IAS 21, 2004, paragraph 28).

If a foreign operation has to be translated, assets and liabilities are translated at the closing rate at that date, whereas the income and expenses are translated at exchange rates at the dates of each transaction. Exchange differences are credited to equity. Monetary items that form part of a reporting entity's net investment in a foreign entity are recognized either in the profit and loss statement in the separate financial statements (nonconsolidated), or in the individual financial statements of the foreign operation. In a consolidated financial statement, such exchange differences are initially recognized in a reserve account under equity, then on disposal of the net investment in profit or loss (IAS 21, 2004, paragraph 32).

IAS 21 is not to be applied in the accounting of derivative transactions, balances, and hedge accounting that are within the scope of IAS 39 (2004). In Italy, the article 2426-bis of the Italian Civil Code and OIC 26 (2005) requires translation of monetary items using the closing exchange rate. Foreign monetary items can be carried as current or noncurrent assets. These exchange differences are recognized in the profit and loss statement. If the net result is a gain, it has to be credited to a reserve under equity, nondistributable until the transition is settled.

Nonmonetary items measured at cost in foreign currency (e.g. fixed assets, intangibles, investments in subsidiaries, jointly controlled entities and associates, and other equity instruments) are translated using the exchange rate at the date of the transaction. If their closing rate is impaired, nonmonetary items are translated using this exchange rate. When investments in subsidiaries or in associates are accounted for using the equity method, income, assets, and liabilities of a foreign operation are translated into a financial statement's reporting currency so that the foreign operation can be included in the financial statements of the reporting entity by the equity method. Italian Standard CNDC-CNR No. 17 (1996) classifies foreign operations as follows:

- *Foreign entities which are relatively self-contained within the operations of the reporting entity*. In this case, all balance sheet items are translated using the closing exchange rate, whereas the income statement's items are translated using the exchange rate at the date of the transaction. Exchange differences are credited to a nondistributable reserve under equity (CNDC-CNR No. 17, 1996, paragraph 7.4).
- *Foreign operations which are integral to the operations of the reporting entity*. Monetary items and current nonmonetary items are translated using the closing rate, whereas the other nonmonetary items are translated using the exchange rate at the date of the transaction. The income statement's items are translated using the exchange rate at the date of the transaction, but historical exchange rate will be used if they result from assets or liability translated at this exchange rate (e.g. the cost and the depreciation of fixed assets are translated using the exchange rate at the date of purchase of the asset). Exchanges differences are recognized directly in the consolidated profit and loss statement (CNDC-CNR No. 17, 1996, paragraph 7.5).

A recent OIC 17 exposure draft (2005, paragraph 7.3), which is likely to replace CNDC-CNR No. 17 (1996), is consistent with IAS 21 (2004).

The US SFAS 52 (1981) requires translation of foreign currency transactions at the closing rate (*monetary items*). Exchange differences are recognized in the profit and loss statement for the period in which the rate changes. Fair value cannot be used for nonmonetary items.

In translating foreign currency financial statements, all assets and liabilities are translated using the exchange rate at the balance sheet date. Revenues, expenses, gains, and losses are translated at the exchange rate at the dates in which those elements are recognized. If an entity's functional currency is a foreign currency, translation adjustments will result from translating that entity's financial statements

into the reporting currency. These translation adjustments are not recognized in the profit and loss statement but are reported as a component of equity or in the comprehensive income's section, called 'Other gains and losses' (SFAS 52, 1981, paragraphs 112–115).

17.3.4 Actuarial gains and losses on defined benefit plans

Actuarial gains and losses are related to defined benefit plans. Under a defined benefit plan, the entity provides the agreed upon benefits to current and former employees. Actuarial and investment risks are the responsibility of the entity. Periodically, the entity must compare its own pension obligation with the current value (fair value) of the investments out of which the obligations are to be settled directly (*plan assets*). The entity determines the present value of defined benefit obligations and compares it to the fair value of the plan assets to determine the actuarial gains or losses.

Actuarial gains or losses are recognized in the current period financial statement if the net cumulative unrecognized actuarial gains and losses of the previous reporting period exceed the greater of 10% of the present value of the pension obligation at the end of the previous period or 10% of the fair value of the plan assets at that date (IAS 19, 2004, paragraphs 92–94). The excess value is allocated over the expected average remaining working lives of the employees participating in the plan (*corridor approach*). If there is no excess, no gains or losses are recognized. However, the IASB permits the accounting of actuarial gains and losses that fall within that range[7].

In Italy, OIC 19 (2005) requires that the entity's pension obligation at the end of an accounting period (called *TFR*) has to be equal to the sum of the amounts of benefits that employees have earned during their work period. Actuarial assumptions are not adopted to measure the obligation as they are considered too volatile and uncertain (OIC 19, 2005, paragraph G).

If an insurance contract is entered into to settle the pension obligation, the premiums paid are disclosed in a separate line item within noncurrent financial assets named *receivables* (balance sheet's item B.III.2). If the insurance repaid amount is higher than the entity's pension obligation, the difference is considered as a gain and is recognized in the profit or loss statement (OIC 19, 2005, paragraph G). The measurement and treatment of gain or loss under the Italian GAAP is quite different from IFRS and IAS 19.

In the USA, SFAS 87 (1985) treats the actuarial gains and losses in a way similar to the IFRS' *corridor approach*. The *immediate recognition approach* is not

allowed. SFAS 87 also demands the recognition of an *additional minimum pension liability* when minimum liability exceeds the obligation measured on the normal projected salary basis (with deferred recognition of certain incomes and expenses). The excess value is recognized as an intangible asset (not exceeding the amount of any unamortized past service cost) and as an additional minimum liability (SFAS 87, 1985, paragraphs 35–38). The IASB believes that such additional measures of liability are potentially confusing and do not provide relevant information.

17.3.5 Financial assets and liabilities

The IASB classifies financial items in the following categories: investments in subsidiaries, jointly controlled entities and associates, other equity instruments, financial instruments, and other financial assets or liabilities. IAS 27 (2004) contrasts the separate financial statements with the individual financial statements. Separate financial statements must be prepared for each entity in the group in addition to the parent entity financial statement, while individual financial statements are prepared by an entity that does not present a consolidated financial statement.

When separate financial statements are prepared, *investments in subsidiaries, jointly controlled entities, and associates* are accounted either at their cost or at their fair value. The chosen method of measurement has to be applied for all investments in a category (IAS 27, 2004, paragraph 37). IAS 27 (2004) does not allow the use of the equity method for these investments. The equity method may be used only in the consolidated financial statement. A gain (or loss) arising from a change in the fair value of investments in subsidiaries, jointly controlled entities, and associates is directly recognized in the profit and loss statement (IAS 39, 2004, paragraph 55a). *Other equity instruments* (i.e. not investments in subsidiaries, jointly controlled entities, and associates) are subject to the rules under IAS 39 using fair value or in some cases using cost[8].

Investments in subsidiaries, jointly controlled entities, and associates are subject to the impairment test under the requirements of IAS 36 (2004). For this reason, in case of their impairment, the same recommendations regarding fixed assets are to be applied. In contrast, the impairment of the *other investments* is subject to the rules under IAS 39, which demands that the amounts of the impairment losses, incurred on an unlisted equity instrument carried at cost, are recognized in the profit and loss statement. Such impairment losses are not reversed (IAS 39, 2004, paragraph 66).

On individual financial statements, the entity measures the investments in associates using the equity method (IAS 28, 2004, paragraph 30). Under the equity method, the investor's share of the profit or loss of the investee is recognized in the profit and loss statement, and increases (or decreases) the carrying value of the investments in associates. In contrast, distributions received from an investee reduce the carrying value of the investments. Moreover, on the individual financial statements, the entity recognizes the investments in jointly controlled entities by using the proportionate consolidation or the equity method (IAS 31, 2004, paragraphs 30–41). Fair value or cost are used to account for *other equity instruments* under IAS 39 (2004).

The entity that presents its separate or individual financial statement classifies its investments in subsidiaries, jointly controlled entities, and associates or other equity instruments as *held for sale investments*, if its carrying amount will be recovered through a sale transaction rather than through its continuing use. *Held for sale investments* are measured at the lower of their carrying amount and fair value less costs to sell (IFRS 5, 2004, paragraph 15). If their fair value (less costs to sell) is lower than their carrying amount, the entity recognizes an impairment loss in the profit and loss statement. It recognizes a gain for any subsequent increase in fair value less costs to sell off an asset, but never in excess of the cumulative impairment loss that has been previously recognized (IFRS 5, 2004, paragraphs 20, 21).

For the *other financial asset instruments*[9] that are not equity instruments, IAS 39 (2004) identifies four categories:

1. *Held for trading investments*. These are assets principally acquired to sell in the near term, or financial instruments managed for a pattern of short-term profit taking, or derivatives that are not designated as hedging instruments. They are measured at fair value. Fair value gains or losses are recognized in the profit and loss statement (IAS 39, 2004, paragraph 55). They are not impaired because they are short term and fair value changes have already been recognized in the profit and loss statement.
2. *Held to maturity Investments*. These are nonderivative financial assets with fixed or determinable payments and fixed maturity that an entity has the intention and ability to hold to maturity (IAS 39, 2004, paragraph 9). They are measured at amortized cost using the effective interest method[10]. Gains or losses of such financial assets are recognized in the profit or loss statement.

3. *Loans and receivable*. These are nonderivative financial assets with fixed or determinable payments that are not quoted on an active market. They are measured at amortized cost too (IAS 39, 2004, paragraph 46). The impairment test is similar to held to maturity investments.
4. *Available for sale investments*. These are defined as those nonderivative financial assets that are designated by entity as available for sale or are not classified into the other categories[11]. They are measured at fair value but gains and losses are credited directly to a reserve under equity, until they are derecognized. In contrast, impairment losses and their reversal are recognized in the profit and loss statement, except the impairment losses of an equity instrument classified as available for sale that is not reversed (IAS 39, 2004, paragraph 69).

Moreover, IAS 39 (2004) provides that any financial asset[12] (or liability) may be initially recognized as a financial asset (or liability) at *fair value through profit or loss* (i.e. fair value option – FVO; the Italian adoption of IFRS has only allowed the application of the FVO for financial assets and has prohibited it for financial liabilities). In this case, fair value gains or losses are recognized only in the profit and loss statement.

IAS 39 (2004) identifies two categories of financial liabilities:

1. *Held for trading* are incurred for repurchasing them in the near term or are derivatives that are not designated as hedging instruments. They are measured at fair value and gains or losses are recognized in the profit and loss statement (see *Held for trading* financial assets).
2. *Other liabilities* are measured at amortized cost using the effective interest method. Gains or losses of such financial liabilities are recognized in the profit and loss statement when they are either derecognized or impaired, or amortized for the difference between the initial value and the maturity value.

IAS 39 (2004) addresses the measurement of the assets or liabilities designated as hedging instruments (*hedge accounting*). A hedging instrument is a designated derivative or nonderivative financial asset or liability (in this case, the nonderivative instrument can hedge only the risk of changes in foreign currency exchange rates) whose fair value (or cash flow) is expected to offset changes in the fair value (or cash flow) of a designated hedged item (IAS 39, 2004, paragraph 9). The fair value (or cash flow) changes of such financial instruments would

neutralize (or lessen) the effects of the fair value (or cash flow) changes of the hedged item. Three types of hedging instruments are identified:

1. *Fair value hedge*. The fair value change of a designated hedging instrument would hedge the fair value change of a recognized asset or liability that could affect profit or loss (for example, if an entity took out a fixed rate mortgage loan, it could hedge the exposure to changes in the fair value of a fixed rate by designating a floating hedging rate instrument). The fair value gains (or losses) of the hedging instrument and of the hedged item attributable to the hedged risk are recognized in the profit and loss statement. This accounting is applied if the hedged item is measured at cost (see IAS 39, 2004, paragraph 89).
2. *Cash-flow hedge*. The hedging instrument would hedge the entity's exposure to variability in cash flows of a recognized asset (or liability) and that could affect profit or loss (for example, the use of a swap to change floating rate debt to fixed rate debt). The hedging instrument gains or losses that are determined to be an effective hedge (a hedge is regarded as highly effective if the actual results of the hedge are within a range of 80–125% – see IAS 39, 2004, Appendix A, AG 105–113) are credited directly to reserve under equity. On the other hand, the ineffective portion is recognized in the profit and loss statement. The reserve is recognized in profit or loss in the same period during which the hedged transaction affects profit or loss. In this way, gains or losses of the hedging items and of the hedged items affect profit or loss in the same period. In contrast, the gains or losses of the ineffective hedge portion immediately affect profit or loss.
3. *Hedges of a net investment in a foreign operation* are accounted for similarly to cash-flow hedges (IAS 39, 2004, paragraph 102). The net investments in a foreign operation are receivable from or payable to another entity (subsidiary, associate, joint venture, or branch of a reporting entity, the activities of which are based or conducted in a country or currency other than those of the reporting entity), for which settlement is neither planned nor likely to occur in the near future (see IAS 21, 2004, paragraph 15).

Italian law as well as the GAAP do not provide a taxonomy of equity instruments and other financial assets or liabilities as detailed in the IFRS. The law identifies *investments in subsidiaries, associates and parents*, *other equity instruments, and other financial instruments*. An entity may classify all financial instruments as *noncurrent* or *current assets* based on the assessment of the function of such assets within the entity. If it is expected that they will be held long

term, the entity should classify them as noncurrent assets. Otherwise they should be classified as current assets.

Investments in subsidiaries and associates are measured either at cost or using the equity method under the requirements of Italian Standard CNDC-CNR No. 21 (1996), if they are classified as noncurrent assets. Under the equity method, the investor's share of the profit or loss of the investee increases or decreases the carrying amount of such investments, and is recognized in the investor's profit and loss statement (*benchmark treatment*) (CNDC-CNR No. 21, 1996, paragraphs 3.3f and f′). Increases are credited to a nondistributable reserve under equity. In contrast, the *allowed alternative treatment* is to credit them directly to a nondistributable reserve. The distributions received from an investee reduce the investment's carrying amount. If the investments in subsidiaries and associates are impaired, the impairment losses are recognized in the profit and loss statement. The reversal is also recognized in the profit and loss statement; however, the increased carrying amount of the financial asset cannot exceed what the cost would have been had the impairment not been recognized (CNDC-CNR No. 20, 1996, paragraph II.3.7). *Other equity instruments* classified as noncurrent may only be measured at their cost and eventually impaired.

For *other noncurrent financial instruments* the Italian GAAP takes a similar approach as the amortized cost under IAS 39. It is necessary to allocate any difference between the initial amount and the maturity amount or implicit interest rates over the relevant period[13]. The revaluations of the financial assets are allowed only if specific revaluation laws have been issued or in the exceptional circumstances set out in article 2423 of the Italian Civil Code. All financial instruments classified as *current assets* (i.e. equity instruments and other financial instruments) are measured at the lower of cost or net realizable value.

In summary, Italian law never allows measurements at fair value and the recognition of fair value gains and losses in the income statement or in reserve under equity. Article 2427-bis of the Italian Civil Code regulates that the amount of fair value has to be disclosed in the notes, when the carrying amounts of derivatives or financial assets held as fixed assets are higher than their fair value. If their fair value is lower than the carrying amount, the entity must disclose in a note the reason for not impairing them.

Fair value is not regarded by Italian law as a method of measurement as yet, rather it is only considered as a basis to assess the probability of losses arising in the future.

Loans and receivables are measured at net realizable value, and *creditors* at their settlement value. Debenture loans and bills of exchange payable (e.g.

bonds, notes and similar items) are disclosed at their nominal amount. Any difference between that initial amount and the maturity amount is credited to a prepayments and accrued income asset (*discount*) or liability (*premium*) and allocated over the relevant period (see note 13). Italian GAAP does not cover accounting of hedging instruments.

In the USA, SFAS do not allow fair value measurement of *investments in subsidiaries, jointly controlled entities, and associates*. They require the use of the cost and equity method. Regarding *investments in joint venture*, the proportionate consolidation method is mandatory (see APB Opinion No. 18, 1971; SFAS 115, 1993; SFAS 124, 1995). For *other equity instruments*, the measurement will depend on their classification as *held for trading* or *available for sale*, similar to the IFRS. The only difference is in the recognition of fair value gains and losses of assets held for sale in the comprehensive income as unrealized gain or loss, rather than credited to reserve under equity. In the consolidated financial statement, the equity instruments of those entities that are not consolidated are measured using the equity method when the investor has a significant influence. In all other circumstances, these instruments are measured at their market value or at cost, if a market value cannot be reliably measured. For *other financial instruments*, SFAS 115 (1993) provides the same classifications and methods of measurement as in IAS 39.

Trading securities and *available for sale securities* may be measured at fair value. Fair value gains and losses for trading securities are recognized in the profit and loss statement, while gains and losses for available for sale securities are recognized in comprehensive income as unrealized items. Cost is mandatory for *held to maturity securities*. The *fair value option* (FVO) is not allowed by SFAS in the USA.

Loans and receivables are measured at net realizable value, and *debenture loans and bills of exchange payable* at amortized cost. *Other creditors* are disclosed at their settlement value. Fair value measurement is now allowed, except for *derivatives* (asset or liability) that are measured at fair value, and its changes are recognized in the profit and loss statement (SFAS 133, 1998, paragraphs 17, 18). The measurements of hedging instruments (*fair value hedge, cash-flow hedge, foreign currency hedge*) are similar to IAS 39. The IASB requires hedge gain (or loss) to be credited as a reserve, while US GAAP recognizes them in the unrealized section of comprehensive income.

17.3.6 Biological assets

IAS 41 (2004) regulates the biological transformation of living animals or plants (*biological assets*) for sale, into *agricultural produce*, or into *additional biological*

assets. A biological asset is measured at its fair value less estimated point-of-sale costs. *Agricultural produce* is measured at its fair value minus the estimated point-of-sale costs at the point of harvest (IAS 41, 2004, paragraphs 12, 13). Fair value changes are recognized in the profit and loss statement for the period in which they arise. Biological assets are measured at cost, if their fair value cannot be measured reliably. Fair value measurement cannot be applied once the biological asset is harvested. They become inventories and should be accounted for according to IAS 2 (2004), i.e. at the lower of their cost or net realizable value.

Italian GAAP have not issued a specific standard for *biological assets* and *agricultural produce*. They are identified as inventories; thus, they are measured at the lower of cost or net realizable value (OIC 13, 2005). In the USA, the FASB (1974) prescribes the measurement at the lower of cost or market value.

17.4 The entity's capital maintenance

Under the IASB Framework, a corporate entity maintains its capital 'if it has as much capital at the end of the period as it had at the beginning of the period' (IASB, 2004a, paragraph 107). Any excess is to be considered as a profit. In particular, IASB (2004a) identifies two concepts of capital maintenance:

- *Financial capital maintenance*. Under this concept, a profit is earned only if the amount of the net assets at the end of the period exceeds the amount of net assets at the beginning of the period. Financial capital maintenance may be measured in either *nominal monetary units* or *units of constant purchasing power*. In the first case, increases in the prices of assets held over the period are considered unrealized. Accordingly, they are considered profits only when the assets are disposed of in an exchange transaction. In the second case, increases in the prices of assets that exceed the increase in the general level of prices are considered realized and thus profit.
- *Physical capital maintenance*. Under this concept, a profit is earned only if the physical productive capacity of the entity at the end of the period exceeds its own at the beginning of the period. In this case, profits represent the increase in that capital over the period. All price changes affecting the assets and liabilities are viewed as changes in the measurement of the physical productive capacity of the entity. Hence, they are considered as part of equity (*capital maintenance adjustments*), not as a profit (IASB, 2004a, paragraph 104).

This seems to imply that any fair value gain that is recognized by the IASB in the income statement is to be considered as realized. If a gain is credited to a reserve under equity, it is considered as unrealized.

In the USA, SFAS on the one hand recognize the same concepts of capital maintenance (SFAC No. 6, 1985, paragraph 71); on the other, they do not allow the same use of fair value measurement, in contrast with IFRS. Italian GAAP do not provide any definition of the concept of capital maintenance. However, content analysis shows that capital maintenance is considered as nominal maintenance. Accounting measurements are based on historical cost and increases in the prices or changes in the technological, market, economic, or legal environment that could have increased the entity's assets (or decreased their liabilities) are considered profits only when the assets are disposed of in an exchange transaction or the liabilities are settled. The prudence principle recognizes only the decreases of the assets or the increases of the liabilities in the profit and loss statement when they arise. The purpose is to avoid the distribution of profits that are considered as unrealized. There is an asymmetry between the prudence principle and the accrual basis principle, with the former considered as more important than the latter (see section 17.5).

This section will provide two examples of items at fair value for which fair value gains are considered either realized and distributable profits (IFRS view) or are reported in the periods to which they relate but are considered as unrealized and nondistributable items (Italian law view). The possible effects of the two approaches on the entity's capital maintenance are illustrated.

17.4.1 Example 1 (investment property)

The first example is an investment property where fair value changes (transactions in progress) are recognized by IFRS directly in the profit or loss statement and are considered realized and distributable profit[14]. IFRS neither require a credit of fair value gains to a reserve nor limit their distribution to shareholders.

Assume a corporate entity owns investment properties, listed in an active market. Their initial amount is €1,000,000. The entity decides to account all of its investment properties at fair value in accordance with IAS 40. Table 17.2 shows fair value changes at the end of periods 1 and 2 and the disposal value in period 3.

Italian GAAP and US GAAP do not allow valuation of investment properties at fair value. The measurement is at cost. Only in period 3, when the properties are disposed of, is the realized gain (€50,000), which is the difference between disposal value (€1,050,000) and original cost of the asset (€1,000,000), reported in profit or loss.

The fair value model is recommended by the IASB for the disclosure of investment properties. In periods 1 and 2, fair value changes are recognized in profit or loss (€100,000 + 60,000). These gains are reported in the profit of the period in which they arise. In period 3 a loss (€110,000), which is the difference between the net disposal proceeds (€1,050,000) and the carrying amount of the revaluated item (€1,160,000), is recognized in profit or loss.

In Table 17.3, we added information regarding share capital and operating income to show the effects of different treatment of gains and losses under different measurement practices in each of the three periods. The effect of changes in fair value is reported in each period under IFRS, while only the third period shows the effect of disposal of the asset under both Italian and US GAAP.

Table 17.4 compares and contrasts the effects of the different approaches on the entity's capital maintenance. It shows the different statements of changes in equity. Column 1 (*Italy before IFRS – US GAAP*) reports the current Italian and US approaches, column 2 (*Italy – IFRSs*) the Italian application of IFRS, and column 3 (*IFRS*) the current IASB approach. It is assumed that the distributable

Table 17.2 Fair value changes

	Acquisition	Period 1	Period 2	Disposal
Fair value (€)	1,000,000	1,100,000	1,160,000	1,050,000
Revaluation from fair value recognized in profit and loss (€)		100,000	60,000	
Loss for IFRS (€)				110,000
Gains for Italian and US GAAP (€)				50,000

Table 17.3 Share capital and incomes of the periods

	Period 1	Period 2	Period 3
Share capital (€)	1,000,000	1,000,000	1,000,000
Operating income (€)	**60,000**	**30,000**	–
Financing and treasury income (Italian and US GAAP) (€)	–	–	50,000
Financing and treasury income (IFRS) (€)	**100,000**	**60,000**	(110,000)
Income of the period (Italian and US GAAP) (€)	60,000	30,000	50,000
Income of the period (IFRS) (€)	**160,000**	**90,000**	(110,000)

Table 17.4 Statement of changes in equity

	Italy before IFRSs – US GAAP	IFRS – Italy	IFRS	Italy before IFRS – US GAAP	IFRS – Italy	IFRS	Italy before IFRS – US GAAP	IFRS – Italy	IFRS
		Period 1			Period 2			Period 3	
Equity (€)									
Share capital	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Nondistributable fair value reserve	–	**100,000**	–	–	–	**160,000**	–	–	–
Distributable reserve (or retained earnings)	–	–	–	–	–	–	–	**160,000**	–
Distributable income	60,000	60,000	160,000	30,000	30,000	90,000	50,000	(110,000)	(110,000)
Total	**1,060,000**	**1,160,000**	**1,160,000**	**1,030,000**	**1,090,000**	**1,090,000**	**1,050,000**	**1,050,000**	**890,000**

Table 17.5 Changes in distributable equity

	Italy before IFRSs – US GAAP	IFRS – Italy	IFRS	Italy before IFRS – US GAAP	IFRS – Italy	IFRS	Italy before IFRS – US GAAP	IFRS – Italy	IFRS
		Period 1			Period 2			Period 3	
Changes of distributable equity (€)	60,000	60,000	160,000	30,000	30,000	90,000	50,000	50,000	(110,000)

income and the distributable reserve in a period will be distributed to shareholders in the course of the next period (see Table 17.4).

Taking a 'prudent' approach to the entity's capital maintenance, the differences between various approaches are significant, as reported in Table 17.5.

The IASB's approach is less prudent than the Italian and FASB approaches. By taking into account fair value gains as realized (thus distributable) income, IFRS allow their distribution to shareholders as dividends in the same period. In period 1, the 'shareholders of IASB's statement' might receive dividends for an amount of €160,000 (60,000 from operating profits and 100,000 from unrealized gains). In period 2, shareholders might receive dividends for an amount of €90,000 (30,000 from operating profits and 60,000 from unrealized gains). However, in period 3 they will see the 'impairment' of the corporate share capital (€110,000) because the gain has not been fully realized (disposal value in period 3 is lower than fair value at the end of period 2).

Under the Italian version of IFRS and Italian law, fair value gains are credited to a nondistributable reserve. In doing so, unrealized gains for the period as well as the fair value of the entity's assets and liabilities are disclosed. Investors and all other stakeholders are able to evaluate the corporate ability to generate cash flows and able to make an assessment of the timing and uncertainty of such cash flows. Moreover, its capital maintenance is not impaired due to the fact that unrealized income is not available for distribution. In fact, fair value gains are credited to a nondistributable reserve under equity (€100,000 in period 1 and €60,000 in period 2). Any restriction on the distribution of the fair value reserve is removed only when the investments are disposed of in an exchange transaction (period 3). However, investors receive timely and relevant information that helps them in their decision-making process. At the same time, other stakeholders have their interests in corporate capital safeguarded.

Italian GAAP and US GAAP do not allow fair value measurements. Such an approach is more prudent than the IASB's and has the advantage of prohibiting the distribution of unrealized gains. On the other hand, it results in both a lack of adequate reported information (income arisen in the period and corporate ability to generate cash) and a lack of representational faithfulness of the economic substance of these investments. Such information is fundamental if the financial statements have to 'provide information about the financial position, performance, and changes in financial position of an entity that is useful to a wide range of users in making economic decisions' (IASB, 2004a, paragraph 12).

17.4.2 Example 2 (financial liability)

Assume entity A writes a put option on entity C's shares (€10,000). Accordingly, entity A enters into a contract with entity B in period 1. The put option is purchased by entity B for an amount of €1000. The exercise right (in period 3) is held by entity B. The contract gives entity B the right to receive the fair value of entity C's outstanding ordinary shares (traded in a public market) as of the beginning of period 3. Entity A is given the right to receive the fixed option exercise price (i.e. €18.5 per share) at the same time, if entity B exercises its right. The contract will be settled net in cash. If entity B does not exercise its right, no payment will be due. The put option assumptions are reported in Table 17.6.

IAS 32 (2004, paragraph AG-17) maintains that: 'the writer of an option assumes an obligation to forgo potential future economic benefits or bear potential losses of economic benefits associated with changes in the fair value of the underlying financial instrument'. The contractual obligation of the writer (entity A) meets the definition of a *derivative* (IAS 39, 2004, paragraph 9), which is a financial liability. IAS 39 (2004, paragraph 47) and the US SFAS 133 (1998, paragraphs 17, 18) require the evaluation of derivatives at fair value and recognize gains or losses in profit or loss. Italian GAAP do not demand specific measurements of derivatives. The Bank of Italy (2002) has enacted the measurement and disclosure of derivatives in the financial statements of banks, which is also a generally accepted practice in nonfinancial companies.

Table 17.6 Put option assumptions

	Written	**Period 1**	**Period 2**	**Period 3**
Exercise price (€)	**18,000**	**17,500**	**17,200**	**18,500**
Number of shares under option contract				10,000
Fair value of entity C's share (€)	19,000	18,000	17,600	19,600
Fair value of option (€)	**1000**	**500**	**400**	**1100**
Fair value gain of option (IFRS and US GAAP) (€)		**500**	**100**	
Fair value loss of option (IFRS and US GAAP) (€)				**700**
Loss of option (Italian GAAP) (€)				**100**
Entity A's obligation (€)				19,600
Entity B's obligation (€)				18,500
Entity A's net obligation (€)				**1100**

Derivatives are measured at their settlement value, not at their fair value. Gains or losses of such liability are recognized in profit or loss only in the period in which the option is exercised.

In accord with the IFRS and the US GAAP, in periods 1–3 entity A will have to recognize any fair value changes of the put option arising when the fair value of entity C's shares are changed. In periods 1 and 2, the fair value of entity C's shares decreases (€18,000 and €17,600), with a resulting decrease in the fair value of the exercise price and of the put option (€500 and €400). In this way, entity A has to recognize fair value gains[15] in periods 1 and 2 (€500 and €100), determined as the difference between the change in fair value of the two periods. In period 3 the fair value of entity C's share increases (€19,600), with a resulting increase in the fair value of the put option (€1100). Entity A recognizes a fair value loss (€700), as its obligation has increased. If entity B decided to exercise the put option, it will receive the fair value of entity C's shares (€19,600) in exchange for the fixed exercise price (€18.5 per share) that has to be paid to entity A. For entity A, the put option has generated altogether a financial loss for an amount of €100 (500 + 100 − 700).

According to the Italian GAAP, the net realized loss (€100[16]) of the put option should be recognized only in period 3. Only entity A's gains in the financing and treasury section are the fair value changes of the put option. Operating income and share capital are given. The profit or loss for the period is equal to the sum of operating income and financing and treasury income (see Table 17.7).

Table 17.8 compares and contrasts the effects of different approaches on the entity's capital maintenance. We assume that the distributable income and the distributable reserve of a period will be distributed to shareholders in the course of the next period.

Table 17.7 Share capital and incomes of the periods

	Period 1	**Period 2**	**Period 3**
Share capital (€)	500,000	500,000	500,000
Operating income (€)	**500**	**500**	**500**
Financing and treasury income (Italian GAAP) (€)	–	–	(100)
Financing and treasury income (IFRSs and US GAAP) (€)	**500**	**100**	(700)
Income of the period (Italian GAAP) (€)	500	500	**400**
Income of the period (IFRSs and US GAAP) (€)	**1000**	**600**	(200)

Table 17.8 Statement of changes in equity

	Italy before IFRS	IFRS – Italy	IFRS US GAAP	Italy before IFRS	IFRS – Italy	IFRS US GAAP	Italy before IFRS	IFRS – Italy	IFRS US GAAP
		Period 1			Period 2			Period 3	
Equity (€)									
Share capital	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Nondistributable fair value reserve	–	**500**	–	–	**100**	–	–	–	–
Distributable reserve (or retained earnings)	–	–	–		–	–	–	**600**	–
Distributable income	500	500	1000	500	500	600	400	(200)	(200)
Total	**500,500**	**501,000**	**501,000**	**500,500**	**500,600**	**500,600**	**500,400**	**500,400**	**499,800**

Table 17.9 Changes in distributable equity

	Italy before IFRS	IFRS – Italy	IFRS – US GAAP	Italy before IFRS	IFRS – Italy	IFRS – US GAAP	Italy before IFRS	IFRS – Italy	IFRS – US GAAP
		Period 1			Period 2			Period 3	
Changes of distributable equity (**€**)	500	500	1000	500	500	600	400	400	(200)

The differences between various approaches are significant. Table 17.9 reports the changes in distributable equity of the period.

The conclusion from the above example seems to confirm the argument that the IASB's approach is less prudent than the Italian version of IFRS. By allowing the distribution of unrealized items, the IASB could undermine the entity's capital maintenance in the long term.

The Italian version of IFRS and Italian law require that fair value gains be credited to a nondistributable reserve, and as a result freeze their distribution until the liability (i.e. the put option obligation) is settled (an exchange transaction has occurred). In period 3 any restriction on the distribution of the fair value reserve is removed. The entity's capital maintenance is not impaired. At the same time, the gains or losses from the liability measurement are recognized when they arise.

17.5 Accrual basis vs prudence: a comparative analysis of IFRS, Italian, and US GAAP

The IASB (2004a, paragraph 15) states that the objective of financial statements is to provide information about the financial position, performance, and changes in financial position of a corporate entity. This information is to be useful to a wide range of users in making their economic decisions, in particular about 'the ability of an entity to generate cash and cash equivalents and of the timing and certainty of their generation'.

Thus, the IASB Framework distinguishes between *underlying assumptions* (accrual basis and going concern) and *qualitative characteristics* of a financial statement. The IASB (2004a) provides a hierarchy of qualities, with usefulness for decision-making at the top, but does not assign priorities among qualities. The hierarchy should be seen as an explanatory device to clarify relationships among qualitative characteristics, rather than assign relative weights to them. Indeed, the IASB (2004a, paragraph 45) itself acknowledges that 'a balancing, or tradeoff, between qualitative characteristics is often necessary'.

Going concern assumes that the entity will continue in operation for the near future and has neither the intention nor the need to liquidate its operation (IASB, 2004a, paragraph 23). With regard to the accrual basis, the IASB (2004a, paragraph 22) states that 'the effects of transactions and other events are recognized when they occur (and not as cash or its equivalent is received or paid) and they are recorded in the accounting records and reported in the financial statements for the periods to which they relate'.

The qualitative characteristics of financial statements are:

- *Understandability*. The accounting information has this quality if its significance can be understood by financial statement users (IASB, 2004a, paragraph 25).
- *Relevance*. Information is relevant if it makes a difference in a decision by helping users to form predictions about the outcomes of past, present, and future events or to confirm or correct prior expectations (IASB, 2004a, paragraph 26). A subcondition of relevance is the *materiality* of the information. An information is material only if its omission (or misstatement) may affect the economic decisions of users (IASB, 2004a, paragraph 29).
- *Reliability*. Information is reliable when it is reasonably free from error and bias and faithfully represents what it purports to represent (IASB, 2004a, paragraph 31). To be reliable, information must have the following qualitative characteristics:
  (a) *Faithful representation*, i.e. there should be a correspondence between a measure or description and the event that it purports to represent (IASB, 2004a, paragraph 33).
  (b) *Substance over form*, i.e. information is to be accounted and presented in accordance with its substance and economic reality and not merely their legal form (IASB, 2004a, paragraph 35).
  (c) *Neutrality.* Information is neutral in the absence of biases in order to attain a predetermined result or to induce a particular outcome (IASB, 2004a, paragraph 36).
  (d) *Prudence*. Prudence is defined as 'the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated' (IASB, 2004a, paragraph 37). However, the exercise of prudence does not allow the creation of hidden reserves or excessive provisions, or the deliberate understatement (overstatement) of assets and/or income (liabilities and/or expenses) (IASB, 2004a, paragraph 37).
  (e) *Completeness*. Reliable information includes any material information that is necessary for faithful representation of the relevant event (IASB, 2004a, paragraph 38).
- *Comparability*. Information that is comparable enables users to identify similarities in and differences between two sets of economic events and to

identify trends of the entity's financial position and performance (IASB, 2004a, paragraph 38).

A constraint on relevant and reliable information is its *timeliness.* Information is to be reported in a timely manner, i.e. it is to be available to users before it loses its capacity to influence their economic decision-making (IASB, 2004a, paragraph 43). The FASB Framework underlines the same objectives of financial reporting as the IASB's (SFAC No. 1, 1978, paragraph 31ff) and recognizes a hierarchy of accounting qualities, which are substantially similar to the IASB's (SFAC No. 2, 1980). An important difference is that the FASB does not consider prudence as a quality of accounting information. Prudence, expressed by the old admonition as 'anticipate no profits but anticipate all losses' (SFAC No. 2, 1980, paragraph 93), can be regarded as a countermeasure against the uncertainty of economic activities[17]. However, the preference of understatement rather than overstatement of net income and net assets is to be applied with care, because it may conflict with the significance of some qualitative characteristics, such as representational faithfulness, neutrality, and comparability (SFAC No. 2, 1980, paragraph 92). On the one hand, understated results are not consistent with the qualities of accounting characteristics. On the other, imprudent reporting with optimistic estimates of realization is not particularly consistent with those characteristics. The best way to avoid this tradeoff is to insure that the reported accounting information has all the qualities previously analyzed. Unlike the IASB, the FASB (see SFAC No. 6, 1985, paragraph 44ff) does not regard accrual basis as an underlying assumption, but it considers the accrual basis principle as a procedure to account for the elements of financial statements and that meet criteria for recognition and measurement.

In Italy, the law (see Civil Code article 2423) regulates the objective of financial statements. Financial statements are to give a true and fair view of the entity's assets, liabilities, financial position, and profit or loss. Neither Italian law (article 2423-bis Civil Code) nor Italian GAAP (OIC 11, 2005) prescribe a specific hierarchy for the principles under which financial statements are prepared. The law identifies the following principles: *prudence*; *substance over form*[18]; *going concern*; *accrual basis*; and *consistency.* Italian GAAP (OIC 11, 2005) add the following principles: usefulness and completeness; understandability; neutrality; comparability; relevance; historical cost as the basic measurement; verifiability; homogeneity; compliance with GAAP; completeness of notes; and recurring measurement of an entity's income and equity. These qualities are similar in their meanings to the IASB's.

There is no detailed definition of prudence in Italian law or in Italian GAAP. Prudence is generally considered as 'anticipate no unrealized profit, but anticipate all potential losses'. The widespread use of historical cost in Italian GAAP is functional with the importance of prudence. Information based on historical cost is likely to be more reliable (as it tends to be less volatile) and conservative in comparison to information based on fair value. Furthermore, prudence tends to override the use of cost in the cases when the two principles are in contrast (the 'lower of cost or net realizable value' accounting practice).

Italian law (see article 2423-bis Civil Code) adds the following further requirements, which are aimed to be instrumental to the prudence principle:

- Separate measurement of heterogeneous items
- Recognition of risks and losses after the balance sheet closing date
- Only incomes realized at the closing date can be recognized in financial statements.

The purpose of *separate measurement of heterogeneous items* is to avoid offsetting unrealized losses and gains. There seems to be evidence of a waning of importance in the IFRS and SFAS of the prudence concept. For instance, while the 1997 version of IAS 1 stated that prudence was one of the necessary conditions of reliable information, an analysis of the content of the revised IAS 1 (2004) shows that prudence is no longer mentioned.

Prudence is at least as important as the accrual basis in Italian GAAP. In fact, although Italian GAAP and law do not explicitly establish a hierarchy between accrual basis assumption and the prudence principle, content analysis of Italian GAAP shows that prudence tends to prevail over the accrual basis assumption. Under the prudence principle, the recognition of risks and losses after balance sheet date and the requirement that only incomes realized at the closing date can be recognized are considered more relevant than accrual basis to meet the objective of financial statements.

Indeed, in Italy the accrual basis principle is significantly affected by the prudence principle, as well as the Italian law requirements previously outlined. Thus, the definition of realized income given by Italian GAAP significantly differs from IFRS. The IASB (2004a, paragraph 70) defines income as 'increases in economic benefits during the accounting period in the form of inflows or enhancements of assets or decreases of liabilities that result in increases in equity'. The definition of income encompasses both revenue and gains. An income is considered realized by IFRS when 'an increase in future economic benefits related to an increase in an asset or a decrease of a liability' can be

measured reliably and have a sufficient degree of certainty (IASB, 2004a, paragraph 92).

This concept of income results in the adoption of fair value as a measurement method of assets and liabilities. However, the IASB (2004a, paragraph 81) demands that certain increases or decreases (e.g. some fair value changes) that meet the definition of income cannot be included in the income statement under certain concepts of capital maintenance (see Table 17.1 and section 17.4). Nevertheless, the IASB does not prescribe any particular model, except for exceptional circumstances such as hyperinflationary economy.

The US GAAP do not define the concept of income, rather they adopt the concept of comprehensive income (SFAC No. 3, 1980, paragraph 58). Comprehensive income's definition (SFAC No. 5, 1984, paragraph 39) is substantially consistent with the IASB's definition of income. Comprehensive income may result from (a) exchange transactions and other transfers between the enterprise and other entities, (b) the enterprise's productive efforts, and (c) price changes, casualties, and other effects of interactions between the enterprise and the economic, legal, social, political, and physical environment of which it is part (SFAC No. 6, 1985, paragraph 74).

Comprehensive income is distinguished from the concept of earnings. The latter is similar to net income and measures 'the extent to which asset inflows (revenues and gains) associated with substantially completed cash-to-cash cycles exceed asset outflows (expenses and losses) associated, directly or indirectly, with the same cycles' (SFAC No. 5, 1984, paragraph 36). In addition, earnings are considered as a primary measure of the entity's performance for a given period.

Corporate performance includes 'the recognized effects upon the entity of events and circumstances both within and beyond the control of the entity and its management' (SFAC No. 5, 1984, paragraph 50). To contrast the uncertainty of their business, entities should emphasize completed transactions, applying conservative procedures in accounting recognition of earnings. Certain changes in net assets are recognized in comprehensive income if they meet the four recognition criteria (i.e. definitions, measurability, relevance, reliability), but are recognized as components of earnings only when they are considered (a) realized or realizable and (b) earned (SFAC No. 5, 1984, paragraph 83).

Revenues and gains are considered realized when products, merchandise, or other assets are exchanged for cash or claims to cash, and realizable when related assets received or held are 'readily convertible' (SFAC No. 5, 1984, paragraph 83a) to known amounts of cash (or claims to cash). Revenues are counted as earned when the entity has substantially accomplished what it must do to be

entitled to their revenues, i.e. when the transition is completed. Thus, fair value measurements are not as widely applied by US GAAP as by IFRS.

Italian law and GAAP do not provide a definition of the concept of realization, nor a distinction between revenues and gains. Italian GAAP implicitly consider an income as 'realized' only when the following criteria are met: (a) the completion of production and (b) the transfer of the legal title (OIC 11, 2005). That is, revenues are considered realized when they are finally measured based on their sale price. Other than in exceptional circumstances[19], income cannot be recognized if no market exchange has been completed.

The analysis of the IASB and FASB Frameworks and Italian GAAP has revealed significant differences with regard to the importance of prudence and accrual basis principles. The relative importance of prudence in Italy seems to explain the Italian choice to consider most of the fair value gains as unrealized.

'Prudent' financial statements are aimed to safeguard capital maintenance in the interests of corporate stakeholders that do not have a 'voice' on the distribution of profit to shareholders. The preference of fair value vs historical cost in the IFRS is indeed to be based on the assumption that the information based on the 'fair market value' is likely to be more relevant to decision-making, because it is expected to incorporate the effects of economic events in a more timely (but volatile) manner in the financial statements, and better reflects financial risk management practice than information based on the historical cost.

The Italian policymakers seem to be aware that IFRS are able to provide information which is likely to be more 'relevant' (i.e. more useful to the decision-makers) to investors; thus, it has required their adoption even for separate and only financial statements of nonfinancial listed companies. However, Italy has tried to maintain a 'conservative' approach to fair value, by balancing the potential tradeoff between the 'relevance' and 'prudence' principles. Italian companies that adopt IFRS can meet the 'relevance' principle in their financial statements as recommended by the IASB, by disclosing the information at the fair value; at the same time they are not allowed to distribute most of these gains.

17.6 The underlying reasons for the importance of the prudence principle in Italy

The choice of the Italian policymakers to balance the relevance and prudence principles is based on the importance of the 'prudence' principle in the Italian legal system and GAAP framework, which is currently a modified version of

IFRS. Accounting has indeed integrated social, cultural, and economic factors in each country (Hopwood, 1983). In particular, the importance of the prudence principle seems to find its roots in broadly defined corporate governance characteristics in Italy. In particular, we refer to:

- The ownership, capital, and control structures of Italian nonfinancial listed companies
- The generally accepted concept of corporate entity and the role and interests of corporate stakeholders
- Cultural issues concerning prudence and risk avoidance.

17.6.1 Ownership, capital, and control structures of Italian nonfinancial listed companies

Previous empirical studies found that ownership structure does influence financial reporting outcomes (e.g. Fan and Wong, 2002; Francis et al., 2005). The IASB states that its accounting standards are for the benefit of a wide range of organizations (see IAS 1, 2004). However, its Framework as well as many of its accounting standards seem to take for granted a corporate entity in which several small investors provide equity capital to a large listed company, which is under the control of its senior management. In this perspective, the financial reporting system is de facto required to provide adequate information to investors, i.e. corporate shareholders and potential ones, in order to make them able to take informed decisions as well as to hold senior management accountable.

However, recent empirical research (e.g. La Porta et al., 1999; Faccio and Lang, 2002; Laeven and Levine, 2004) indicated that corporate ownership around the world is not widespread; rather it is usually concentrated in the hands of a small number of large shareholders. In Europe, with the only exception of the UK, the presence of multiple large shareholders who own relevant blocks of shares is extremely common (Barca and Becht, 2001).

The Italian corporate governance system is characterized by:

- A relatively high concentrated ownership and control structure (La Porta et al., 1999; Melis, 1999, 2000)
- A relatively poor capital market orientation (e.g. Pagano et al., 1998)
- A limited role played by the market for corporate control, which significantly reduces the need for aggressive reported earnings to boost share price and avoid hostile takeovers.

Furthermore, the control structure of Italian nonfinancial listed companies is characterized by the presence of controlling shareholders, who are 'active' investors, willing and able to monitor the senior management effectively (e.g. Molteni, 1997; Melis, 1999; Bianchi et al., 2001). The controlling shareholders are likely to exercise an influence on the preparation of financial statements. Their presence lessens the incentive for senior management to use 'aggressive' reported earnings, since the controlling shareholder is a corporate insider and does not need financial statements to gain information about corporate performance. Furthermore, Italian nonfinancial companies are characterized by a capital structure that differs significantly from their European counterparts.

For example, McClure et al. (1999) reported that, among the G7 countries, Italy is the country in which nonfinancial listed companies tend to use a higher proportion of total debt vs equity. In Europe only French companies have a similar capital structure. Such a leveraged capital structure gives rise to the important role of creditors among the users of financial statements.

Creditors have different informational and economic needs than investors. They are less interested in corporate entity reports of 'potential' profits, i.e. profits that are not realized (generated from using fair value measurements). Rather, creditors have an interest that fair value gains are kept inside the company in a reserve account and not distributed to shareholders.

By limiting the distribution of fair value gains, Italian law clearly safeguards the creditors' interests (Dezzani, 2005).

17.6.2 Generally accepted concept of the corporate entity: IASB vs Italy

It is generally accepted that accounting standards are aimed to regulate the financial reporting process primarily for the benefit of the users of financial statements. The IASB identifies several 'users of financial statements' (IASB, 2004a, paragraph 9), such as investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies, and the public. However, the IASB seems to assume that the regulation (and consequent information) that is able to meet the needs of investors will also meet the needs of other users as well (IASB, 2004a, paragraph 10). This argument resembles the so-called 'enlightened shareholder theory' (Jensen, 2001), which is based on the primacy of the shareholder value. Shareholder value is the dominant paradigm in the Anglo-American corporate governance systems, in which corporate entities tend to be regarded as 'commodities' (Charkham, 1990)[20], but is not in Europe, with the only exception of the UK.

In this perspective, a corporate entity is merely a 'legal fiction' which serves 'as a nexus for a set of contracting relationships among individuals' (Jensen and Meckling, 1976, p. 310ff). This concept is clearly based on the well-known arguments of Friedman (1970).

The prevailing concept of the corporation in Italy significantly differs from such arguments. In Italy, a corporate entity is considered as an enduring social and economic institution (e.g. Zappa, 1927; Onida, 1968; Viganò, 1998). In particular, large companies are considered as social organizations, which are demanded by the State to act taking into account the interests of a wide range of stakeholders, not just their shareholders. Constituencies of a large company include:

- Its employees, who may find it difficult to relocate to other employment if the company closes
- Its creditors (including suppliers and trade creditors) whose claims will not be met in full if the company enters insolvency
- The State itself, which has a stake concerning taxes to be paid by the corporation as well as the socio-economic development of the country.

Similar to German GAAP and law (see, *inter alia*, Harris et al., 1994; Leuz, 2003), Italian law and GAAP encourage a 'prudent' approach to asset valuation and liability recognition in order to facilitate contracting with corporate stakeholders. In particular, if compared to estimates based on historical cost, fair value estimates are more likely to be subject to managerial discretion. As Italian senior managers are usually accountable to the controlling shareholder(s), the difficulty of verifiability of many valuation estimates is likely to give the controlling shareholder(s) an incentive to introduce bias into value estimates.

Taking this issue into account, the Italian standard setter has recognized the importance of taking a 'prudent' approach to the distribution of fair value gains in order to safeguard capital maintenance. By protecting the capital of the company, Italian law seeks to safeguard the interests of the other corporate stakeholders, which might otherwise be 'victims' of the power of the controlling shareholder(s).

17.6.3 Cultural issues concerning prudence and risk avoidance

Cultural issues concerning prudence and risk avoidance may be measured by the Uncertainty Avoidance Index developed by Hofstede (1980). This index focuses on the level of tolerance for uncertainty, ambiguity, and risk within a society. On the one hand, a high Uncertainty Avoidance Index ranking indicates that a country has

a low tolerance for uncertainty and ambiguity. This is reflected in a country that is a rule-oriented society that institutes laws, rules, regulations, and controls in order to reduce the amount of uncertainty and risks. On the other hand, a low Uncertainty Avoidance Index ranking indicates the country has less concern about ambiguity and uncertainty. This is reflected in a society that is less rule oriented and takes more and greater risks.

The Uncertainty Avoidance Index rank seems to explain (at least partly) the decision of the Italian regulators to issue a law that explicitly prohibits the distribution of the gains resulting from fair value measurements.

According to Hofstede's study, Italy scored a relatively high level on this index (75 out of 100), especially compared to Anglo-Saxon countries (see Table 17.10).

The evidence from the Uncertainty Avoidance Index seems to support the importance of prudence within the Italian legal framework and GAAP, and is coherent with the decision of limiting the distribution of fair value gains. A counterpart example is provided by the UK, which scored less (35 out of 100) on the Uncertainty Avoidance Index. The waning importance of prudence in the UK is consistent with the argument of Evans and Nobes (1996), concerning the lack of 'the supremacy of prudence' over the other accounting principles in the English version of the European Community Fourth Directive.

Furthermore, differences in the Uncertainty Avoidance Index seem to explain why, in contrast with Italy, UK policymakers have not clearly defined which fair value gains are to be considered as 'unrealized'. It is left to the judgment of professional accountants (we are indebted for this argument to Professor David Alexander, University of Birmingham, UK).

Table 17.10 Uncertainty Avoidance Index (UAI)

Country	UAI
Italy	75
Australia	51
New Zealand	49
Canada	48
USA	46
Ireland	35
UK	35

Source: Hofstede (1980) database.

17.7 The adoption of the comprehensive income statement in Italy

The adoption of a comprehensive income statement is recommended by the European Union (EU directive 51/2003, paragraph 8). In Italy, the law requires disclosure of fair value gains or losses in the nondistributable reserve.

The IASB's statement is divided into three sections: *operating*; *financing and treasury*; and *discontinued operation*. We recommend adding a new section called 'unrealized gains or losses', where fair value gains or losses, credited directly in equity or recognized in the profit and loss statement by IFRS, are disclosed jointly. We define this income statement as the comprehensive income statement (CIS).

When gains are realized – directly through disposal or indirectly through impairment, for example – they should be included in the appropriate section of the income statement. At the same time, the equivalent amounts of realized gains are transferred from the nondistributable reserve to a distributable reserve (or retained earnings)[21].

There are four sections in the comprehensive income:

- *Operating*, where any revenues generated from the entity's sale of its own products and services and any costs that directly or indirectly take part in the production and distribution are included. This section also reports the extraordinary items other than the ones that are disclosed in other sections. Taxes relating to operating income are also included in this section.
- *Financing and treasury*, where any financing and treasury gains or losses are reported. The financing and treasury profit (or loss) for the period is reported, net of taxes.
- *Discontinued operation* (see IFRS 5, 2004, paragraph 32).
- *Unrealized gains and losses*. Table 17.11 shows items subject to fair value measurement and shows unrealized gains and losses as well as related taxes.

The *component approach* elected by the IASB does not appear to meet the requirements of Italian law, as it discloses gains or losses once whether realized or unrealized (i.e. when they arise). Such choice does not seem to emphasize adequately the 'traps' of the unrealized items. The information regarding whether gains are distributable or not is of primary importance to Italian policy-makers. By referring to the previous examples (see section 17.4), we will explain how the fair value unrealized items are disclosed in the CIS, taking into account the requirements of Italian law.

Table 17.11 Face of adoptable Italian comprehensive income statements

	Total *t* + 1	Total *t*
OPERATING		
Revenues		
Expenses		
Operating income before taxation		
Taxation		
Operating income		
FINANCING AND TREASURY		
Financial gains and losses		
Treasury gains and losses		
Financing and treasury before taxation		
Taxation		
Financing and treasury income		
DISCONTINUED OPERATION		
Distributable income of the period		
UNREALIZED GAINS AND LOSSES		
• Revaluations or revaluation decreases of fixed, intangible assets and investment recognized at fair value		
• Revaluations or revaluation decreases of investments in subsidiaries, jointly controlled entities and associates and other equity instruments recognized at fair value or accounted for using the equity method		
• Revaluations or revaluation decreases of the financial instruments at fair value		
• Changes of fair value of nonmonetary items that are measured at fair value in a foreign currency		
• Revaluations or revaluation decreases of biological assets or agricultural produce recognized at fair value		
• Hedges of a net investment and cash-flow hedge		
• Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation		
• Actuarial gains and losses on defined benefit plans		
Unrealized gains and losses income before taxation		
Taxation		
Unrealized gains and losses income		
Comprehensive income		

17.7.1 Example 1 (investment property)

We assume that operating income is given and the entity's only gains from the financing and treasury section are the fair value changes of investment properties.

In period 1, Italian and US GAAP do not require reporting of fair value changes (see Table 17.12). The comprehensive incomes of the period are equal to operating income (€60,000). IFRS, which measure this type of investment at fair value, report fair value changes in the financing and treasury section (€100,000), considering them as realized items. The comprehensive income of the period is the sum of operating and treasury incomes (€160,000). The Italian application of CIS reports fair value changes in the unrealized gains and losses section (€100,000). On decisions about dividends, fair value changes are credited to a nondistributable reserve of equity. The comprehensive income of the period is equal to that of IFRS (i.e. €160,000).

In period 2, the presentations and disclosures have substantially the same characteristics. Italian and US GAAP do not report fair value gains. Italian CIS recognizes them in the financing and treasury section (€60,000) and then credits them to a nondistributable reserve. IFRS account for them in the financing and treasury section.

In period 3 the properties are disposed. Italian and US GAAP report the realized gain (€50,000), equal to the amount determined as the difference between their disposal value (€1,050,000) and their historical cost (€1,000,000), in the financing and treasury section. The comprehensive income (€50,000) for the period is equal to treasury income because there is no income in the other sections. IFRS account for a treasury loss (€110,000), determined as the difference between their net disposal proceeds (€1,050,000) and their carrying amount of the revaluated item (€1,160,000). CIS reports a comprehensive loss (€110,000). Italian CIS includes the realized gain of the treasury transaction (€50,000), calculated in accordance with Italian GAAP requirements, in the financing and treasury section. The amounts credited to reserve (€160,000 = 100,000 + 60,000) are recycled in the unrealized gains and losses section. Accordingly, any restriction on the distribution of the fair value reserve is removed. In this way, the CIS includes both realized gain of the treasury transaction and the income arisen in the different periods.

17.7.2 Example 2 (financial liability)

Using the previous example, Italian GAAP do not allow fair value measurement and accordingly do not report any fair value changes in the first two periods (see Table 17.13). Only in period 3 do they account for realized financial loss (€100;

Table 17.12 Comprehensive income statement (CIS): example 1

	Italy before IFRS – US GAAP	CIS – Italy	IFRS	Italy before IFRS – US GAAP	CIS – Italy	IFRS	Italy before IFRS – US GAAP	CIS – Italy	IFRS
	Period 1			Period 2			Period 3		
OPERATING									
Revenues	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Expenses	(1,400,000)	(1,400,000)	(1,400,000)	(1,430,000)	(1,430,000)	(1,430,000)	(1,460,000)	(1,460,000)	(1,460,000)
Operating income before taxation	*100,000*	*100,000*	*100,000*	*70,000*	*70,000*	*70,000*	*40,000*	*40,000*	*40,000*
Taxation	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)	(40,000)
Operating income	**60,000**	**60,000**	**60,000**	**30,000**	**30,000**	**30,000**	**–**	**–**	**–**
FINANCING AND TREASURY									
Financing gains and losses	–	–	100,000	–	–	60,000	50,000	50,000	(110,000)
Financing and treasury before taxation	–	–	100,000	–	–	60,000	50,000	50,000	(110,000)
Taxation	–	–	–	–	–	–	–	–	–

Financing and treasury	–	–	**100,000**	–	–	**60,000**	**50,000**	**50,000**	(110,000)
Income of the period	**60,000**	**60,000**	**160,000**	**30,000**	**30,000**	**90,000**	**50,000**	**50,000**	(110,000)
UNREALIZED GAINS AND LOSSES									
Revaluation/ revaluation decreases of financial assets	–	**100,000**	–	–	60,000	–	–	(160,000)	–
Taxation	–	–	–	–	–	–	–	–	–
Unrealized gains and losses	–	**100,000**	–	–	**60,000**	–	–	(160,000)	–
Comprehensive income	**60,000**	**160,000**	**160,000**	**30,000**	**90,000**	**90,000**	**50,000**	(110,000)	(110,000)

Table 17.13 Comprehensive income statement (CIS): example 2

	Italy before IFRS	CIS – Italy	IFRS US GAAP	Italy before IFRS	CIS – Italy	IFRS US GAAP	Italy before IFRS	CIS – Italy	IFRS US GAAP
		Period 1			Period 2			Period 3	
OPERATING									
Revenues	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Expenses	(1,498,000)	(1,498,000)	(1,498,000)	(1,498,000)	(1,498,000)	(1,498,000)	(1,498,000)	(1,498,000)	(1,498,000)
Operating income before taxation	*2000*	*2000*	*2000*	*2000*	*2000*	*2000*	*2000*	*2000*	*2000*
Taxation	(1500)	(1500)	(1500)	(1500)	(1500)	(1500)	(1500)	(1500)	(1500)
Operating income	**500**	**500**	**500**	**500**	**500**	**500**	**500**	**500**	**500**
FINANCING AND TREASURY									
Financing gains and losses	–	–	500	–	–	100	(100)	(100)	(700)
Financing and treasury before taxation	–	–	500	–	–	100	(100)	(100)	(700)
Taxation	–	–	–	–	–	–	–	–	–

Financing and treasury	**–**	**–**	**500**	**–**	**–**	**100**	(100)	(100)	(700)
Income of the period	**500**	**500**	**1,000**	**500**	**500**	**600**	**400**	**400**	**(200)**
UNREALIZED GAINS AND LOSSES									
Revaluation/ revaluation decreases of financial liability	–	**500**	–	–	100	–	–	(600)	–
Taxation	–	–	–	–	–	–	–	–	–
Unrealized gains and losses	**–**	**500**	**–**	**–**	**100**	**–**	**–**	(600)	**–**
Comprehensive income	**500**	**1,000**	**1,000**	**500**	**600**	**600**	**400**	(200)	(200)

see note 15). IFRS and US GAAP allow fair value measurement for the derivatives and account for fair value changes in the financing and treasury section, considering them as realized and distributable items. However, in period 3 a financial loss (€700) has to be reported in the same section.

Italian CIS presents the fair value changes (€500 and €100) in the unrealized gains and losses section in periods 1 and 2. Gains are credited to a nondistributable reserve. In period 3, the entity will recognize:

- A financial realized loss (€100) in the financing and treasury section.
- The recycling of the amounts credited to the nondistributable reserve (€500 + €100 = €600). At the same time, any restriction on the distribution of the fair value reserve is removed. The CIS's comprehensive income is equal to IFRS', but the information that can be drawn from them is different.

17.8 Conclusion

This chapter has examined the key economic and financial reporting issues related to the effects of adoption of IFRS in the separate and only financial statements of Italian nonfinancial listed companies. Italian policymakers believe that IFRS could provide information of higher quality than national GAAP. Thus, in accordance to EU options, it has required their adoption even for separate and only financial statements starting in 2006.

This chapter has provided a brief comparison between IFRS, US, and Italian GAAP concerning fair value accounting, the key innovation brought about by IFRS. With their widespread use of fair value measurements, IFRS seem to be able to provide information, which is likely to be more useful to investors than Italian GAAP, which are based on historical cost measurements because of the importance of the prudence accounting principle. In fact, information based on historical cost is likely to be more reliable (as it tends to be less volatile) and prudent in comparison to information based on fair value, but is less relevant to investors.

The key issues relating to the distribution of fair value gains have been discussed with the use of two examples: the accounting of an investment property and a financial liability. These examples support the argument that the Italian treatment of fair value gains seems to safeguard better the interests of a wide range of corporate stakeholders, without lowering the quality of information provided to investors.

This chapter has examined how Italian GAAP and Italian law give a different definition and importance to the concepts of accrual basis and prudence in comparison with IFRS and US GAAP. Such differences do have a significant impact on accounting regulations.

To balance the potential tradeoff between the 'relevance' and 'prudence' principles, Italian policymakers have maintained a 'conservative' approach to fair value measurements. The prudence principle has been safeguarded against distribution of unrealized gains. Italian companies that adopt IFRS are not allowed to distribute most of the fair value gains. Thus, the adoption of fair value to disclose and measure the entity's working capital at current values and the introduction of 'unrealized' fair value gains in the income of the period do not undermine the corporate entity's capital maintenance in the long term.

The significant importance of the prudence principle in Italy seems to have its roots in corporate governance factors, such as the Italian ownership concentration, capital, and control structures, the generally accepted concept of the corporate entity and cultural issues, in relation to prudence, risk-taking, and uncertainty avoidance. An analysis of these factors has shown relevant differences between the Italian environment and the corporate reality assumed by the IASB.

Finally, the authors recommend the adoption of a comprehensive income statement, where all economic items that will affect the future entity's cash flows are disclosed. In particular, fair value gains (and losses) are disclosed separately from other items in a section named 'unrealized gains and losses', so that the 'volatility' of these economic items is disclosed. Thus, users of financial statements may understand if, how, and to what extent 'unrealized' gains derived from fair value measurements have contributed to the comprehensive income of the period.

The comprehensive income statement, together with the constraints on distribution of gains imposed by Italian law, seems likely to meet the informational needs of investors who are able to evaluate the ability of an entity to generate cash, profits, and judgments of corporate management about the future, as well as to safeguard the economic interests of other corporate stakeholders.

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Notes

1. For ease of exposition, we will use the term 'IFRS' to refer to both IAS and IFRS. More precisely, IAS are the International Accounting Standards issued by the International Accounting Standards Committee, while IFRSs are the International Financial Reporting Standards issued by the International Accounting Standards Board.
2. The term 'prudence' is more commonly used in Europe, while in the USA this concept is often expressed as the term 'conservatism'. For ease of exposition, in this chapter both terms will be used interchangeably.
3. The term 'fair value', except when expressly defined differently, is to be meant according to the definition given by the current IASB Glossary, i.e. 'the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction'.
4. Italian policymakers have not disclosed the underlying reasons that lead to these exceptions. Furthermore, they give rise to a problem of comparability with Italian companies that are allowed to adopt Italian GAAP. For instance, the same company that adopts Italian GAAP shall credit the gains from operations in foreign currency markets to a nondistributable reserve, while it is allowed to distribute such gains if it decides to adopt IFRS.
5. 'The best evidence of an asset's *fair value less costs to sell* is a price in a binding sale agreement in an arm's length transaction, adjusted for incremental costs that would be directly attributable to the disposal of the asset'. The 'value in use is the present value of the future cash flows expected to be derived from an asset or cash generating unit'. IAS 36 (2004, paragraphs 25, 33).
6. For a further examination of Italian financial statements, see, *inter alia*, Melis and Congiu (2001).
7. Despite this fact, IAS 19 (2004, Appendix BC39) considers that: 'Immediate recognition can cause volatile fluctuations in liability and expense and implies a degree of accuracy which can rarely apply in practice … in the long term, actuarial gains and losses may offset one another … They are not a gain or loss of the period but a fine-tuning of the cost that emerges over the long term … The immediate recognition of actuarial gains and losses in the income statement would cause unacceptable volatility.' For these reasons, the Board prefers the *corridor approach*.
8. Investments in equity instruments are measured at their fair value except for those instruments that: (a) do not have a quoted market price in an active market and (b) whose fair value cannot be reliably measured. They are measured at cost. Equity instruments may be classified as *held for trading* or as *available for sale*. In the first case the fair value changes are recognized in profit or loss, in the second one they are credited to a reserve of equity. Equity instruments may not be classified as *held to maturity*. Held to maturity investments are nonderivative financial assets with fixed or determinable payments and fixed maturity that an entity has the positive intention and ability to hold to maturity. Equity instruments cannot have such attributes.
9. 'A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity' (IAS 32, 2004, paragraph 11).
10. 'The amortized cost of a financial asset or financial liability is the amount at which the financial asset or financial liability is measured at initial recognition minus principal repayments, plus or minus the cumulative amortization using the effective interest method of any difference between that initial amount and the maturity amount, and minus any reduction (directly or through the use of an allowance account) for impairment or uncollectibility' (IAS 39, 2004, paragraph 9).

11. An *investment held to maturity* is reclassified as *available for sale* if there is a change in intention or ability to hold it to maturity. However, the reclassifications are restricted by IFRS (see IAS 39, 2004, paragraphs 50–54).
12. Except for investments in equity instruments that do not have a quoted market price in an active market, whose fair value cannot be reliably measured, that are measured at their cost.
13. Differences between the IFRS's requirements and the Italian's concern only the presentation of such instruments in the balance sheet. Under IAS 39, the carrying amount of the financial instrument is directly increased (or decreased) by the cumulative amortization of any difference between its initial and maturity amounts. In this way, the carrying amount develops into the redemption amount. Under Italian GAAP, the carrying amount of the financial instrument remains unchanged and increments or decrements are recognized in another asset or liability called prepayments and accrued income. The instrument's carrying amount does not develop into the redemption amount.
14. The measurements of *changes of fair value of nonmonetary items that are measured at fair value in a foreign currency*, *actuarial gains and losses on defined benefit plans*, *investments in subsidiaries, jointly controlled entities, and associates in separate financial statements*, *financial assets at fair value option*, *financial liabilities at fair value option*, and *biological assets and agricultural produce* have the same effects on the entity's capital maintenance because IFRS require fair value changes to be recognized in profit or loss.
15. Entity A's obligation, equal to the fair value of entity C's share, is decreased. The obligation is equal to an amount of €19,000 when the put option is written. It decreases to an amount of €18,000 at the end of period 1 and to an amount of €17,600 at the end of period 2.
16. The loss is equal to the sum of the fixed exercise price (€18,500) and put option price (€1000) minus entity A's final obligation (€19,600 = fair value of entity C's share). In other words, entity A paid €1100 (19,600 – 18,500) to entity B and received €1000 (put option price) by it.
17. 'Historically, managers, investors, and accountants have generally preferred that possible errors in measurement be in the direction of understatement rather than overstatement of net income and net assets. This has led to the convention of conservatism' (see APB No. 4, 1964, paragraph 171).
18. However, in practice, the 'substance over form' principle is applied in Italy only when it is not in contrast with the legal form of the transition. This is a clear difference with IFRS (e.g. Dezzani, 2005).
19. There are only few notable exceptions in which Italian GAAP allow the recording of a value that is higher than historical cost: 'Extraordinary revaluations of assets' (see Civil Code article 2423), investments in subsidiaries accounted for using the equity method, and exchange differences arising on translating monetary items at closing rate. Any profit due to these procedures shall be credited in nondistributable reserves, until the amount is realized on disposal or via depreciation.
20. However, Deakin (2005, p. 11) notes that: 'It is surprisingly difficult to find support within company law for the notion of shareholder primacy.' Shareholder primacy is 'essentially a cultural rather than a legal point of reference' (Deakin, 2005, p. 16).
21. This *holding tank* approach has been used in the USA since 1997 (see SFAS 130, 1997). When an unrealized item becomes realized or when an uncertain item becomes certain, it is displayed as a part of the realized items section of the income statement (*business profit or financing and investing activities*). At the same time, it is *recycled* from the unrealized section of the income statement. This method is called *recycling*. The IASB takes a different approach (called the

component approach): gains or losses are disclosed only once, when they arise. 'Recycling' is not allowed. Items are disclosed having regarded their economic nature, not their realization.

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18

Factors Affecting Accounting Development in the Harmonization Process with the International Framework: The Case of Estonia

Toomas Haldma

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18.1 Introduction

In the early 1990s, Estonia's economic system was transformed from a centrally planned to a market-based economy, which involved significant legal and institutional changes in regulations and especially accounting regulations. Finally, in May 2004, Estonia joined the European Union. According to the European Commission decision at the beginning of 2005, all European Union (EU) companies listed on a regulated market were required to prepare their consolidated accounts in accordance with the International Financial Reporting Standards (IFRS). This requirement represents a preliminary step in the internationalization process of financial accounting and reporting in Europe.

Earlier research viewed the post-socialist countries as a bloc with common problems and challenges (Seal et al., 1995). However, as expressed by Roberts et al. (2002), there are no two countries with identical accounting systems. In a similar way, Bailey (1998) stated that the Central and Eastern European (CEE) countries were heterogeneous, being at different stages of transformation from command economies at certain times. In view of this, the present exploratory study focuses on one particular country, Estonia, and examines the factors which have influenced Estonian accounting reforms throughout the stages of its development, to conform to the requirements of the future European accounting framework. This chapter examines the evolutionary factors of the Estonian accounting system within the context of EU accession and harmonization, by indicating how such factors have influenced accounting reform during the different stages of its development.

The chapter is organized as follows. Section 18.2 reviews some of the relevant literature on international accounting harmonization and the factors influencing such harmonization in transitional economies. Some general and specific issues that might arise when using a phased approach to accounting regulation development and analysis of factors influencing an accounting reform will be identified in section 18.3. In section 18.4, a phased framework is applied to describe how the Estonian accounting regulations and institutional framework have changed in the course of three different Estonian accounting reform stages: introduction, system building, and system improvement. Research findings will follow in section 18.5 and factors influencing accounting reform in Estonia are outlined. Finally, section 18.6 concludes.

18.2 Literature review

Accounting harmonization at the global and regional levels has been broadly discussed during the last decade (see, for example, Van Hulle, 1993; Hoarau, 1995; Haller, 1995, 2002; Cairns, 1997; Flower, 1997). Hoarau (1995) defined international accounting harmonization as a political process, which aims to reduce differences in accounting practices across the world in order to achieve compatibility and comparability. Accounting harmonization has been examined to a much lesser extent in transitional countries. Saudagaran and Diga (1997b) pointed out that harmonization issues in the development of accounting regulations, particularly in developing countries, provide a basis for analyzing the comparability of accounting systems worldwide. Several studies have analyzed accounting harmonization at national level among the CEE countries, such as Russia (Ramcharran, 2000), Slovakia (Daniel and Suranova, 2001), Romania (King et al., 2001), Hungary (Roberts et al., 2002), Czech Republic (Sucher and Jindrichovska, 2004), and Poland (Vellam, 2004).

Regarding the issue of harmonization for the CEE countries, Bailey (1998) argued that the accounting reform has to be oriented to harmonization with the EU directives and acceptance of the International Accounting Standards. To succeed in the public accessibility of statutory financial statements of companies, Bailey (1998) suggested that a phased approach could be used in accounting reform.

The collapse of centrally planned economies in the late 1980s and early 1990s changed the accounting environment in the former socialist countries dramatically. The need for conceptual development of the whole accounting framework and of companies' accounting systems grew rapidly. Several factors influencing the development of an accounting framework in such countries must be taken into consideration.

As asserted by Roberts et al. (2002), an accounting system is the outcome of a complex process influenced by and itself influencing a number of factors. It has generally been recognized that financial reporting varies among developing countries because of differences in political, economic, and socio-cultural backgrounds (Hoarau, 1995; Radebaugh and Gray, 1997; Saudagaran and Diga, 1997a; Ramcharran, 2000). Moreover, as Saudagaran and Diga (1997a) pointed out, the factors in each country's national and international environments constrain the policy options available to the government. There is a large list of possible causes for accounting system differences (see Nobes 2002; Roberts et al., 2002; Radebaugh and Gray, 1997). As regards criteria used to evaluate and compare the

state of financial reporting of developing countries, as an outcome of accounting developments, Saudagaran and Diga (1997a) suggested availability, reliability, and comparability of information. Bailey (1998, pp. 1456–1460) pointed out a number of issues concerning availability, reliability, and comparability of accounting information, which must be considered in the accounting harmonization process for a transition country. More specifically, Bailey raised the following issues:

- Issue of compliance with EU directives when no translation is available in the local language.
- The possibility of implementing a large accounting change when there is so much systemic instability (new political and legal systems, new institutional structures). Also, acute economic disturbances (e.g. bankruptcy; financial difficulties) make it very difficult to implement accounting changes successfully.
- The immaturity of the legal system, corrupt business practices, and weak trust relations may hamper the system of financial statements.
- Accessibility of the financial statements of companies in the public domain.
- Should accounts only reflect legal compliance rather than be 'true and fair'?
- Who do the accounting laws apply to? Would phased implementation of the IFRS be appropriate?
- The influence of taxes on accounting issues.
- Are there severe external pressures from ministries on the enterprises as the flows of power?
- How liquid is the stock exchange and how is it connected with the accounting issues?

This study will identify the factors that may influence Estonian accounting harmonization to achieve better availability, reliability, and comparability of accounting information. The literature suggests that there may be contextual factors that affect the appropriateness and effectiveness of the accounting reforms in a transitional economy towards harmonization with an international framework. Based on an analysis of the available literature, factors influencing a national accounting system may be divided into five groups: the political system, the legal system, the taxation system, the companies' financing system, and the accounting profession. There may also be additional factors concerning how a particular country initiates the construction of its national accounting system.

Obviously, these specific transition country factors are interrelated with contextual factors. Practically, it would also be useful to determine the level of readiness of the Estonian accounting system for harmonization with the European framework. In the next section, the development of factors influencing accounting reform in Estonia will be discussed.

18.3 Factors influencing accounting reform in Estonia

A number of papers have been dedicated to the factors influencing a national accounting system (see, for example, Gray and Roberts, 1991; Nobes, 2002; Roberts et al., 2002; Radebaugh and Gray, 1997; Saudagaran and Diga, 1997b; Sucher and Jindrichovska, 2004). They deal mainly with the factors associated with market economy countries. In the previous section we listed a number of factors pointed out by Bailey (1998) that need to be considered when moving towards accounting harmonization in a transitional economy. In this chapter, based on the results of the literature review, a cross-sectional list of the factors influencing a national accounting system that were found in Nobes (2002), Roberts et al. (2002), Radebaugh and Gray (1997), and Sucher and Jindrichovska (2004) is constructed, merging them with the list of the influential factors and issues found in Bailey (1998). A selected list of factors is used to characterize the Estonian accounting framework: the political system, the legal system, the taxation system, the companies' financing system, and the accounting profession. But additional influencing factors also need to be identified, in particular for the initial period of formation of a national accounting system. These factors and their influence in Estonia will be discussed below.

Saudagaran and Diga (1997b) view accounting harmonization as a 'process' of achieving a higher level of accounting harmony. They argued that if accounting harmonization is a linear process, then the intermediate stages have to be realized. Also, for the transitional countries, Bailey (1998) suggested application of a phased approach to accounting reform. This was achieved by placing the companies' statutory financial statements in the public domain. In the current chapter, the phased approach has been used in order to study the development over time and to expand the scope of Estonian accounting reform. Literature analysis revealed that the phased approach has been used in the Czech Republic (Seal et al., 1995; Sucher and Jindrichovska, 2004), Poland (Kosmala-MacLullich, 2003; Jaruga and Szychta, 1997), Romania (King et al., 2001), and Estonia (Haldma, 2004) to a certain extent to divide accounting reform into

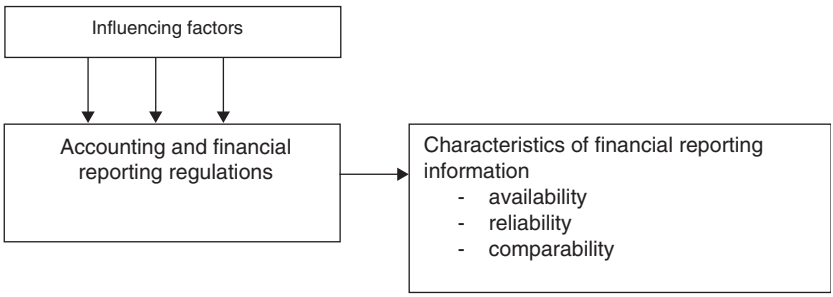

Figure 18.1 Impact of influencing factors

periods. These two issues raise two research questions. First, is the influence of these factors similar for each stage of accounting reform? Second, does the materiality of various factors differ among the stages of accounting reform? Therefore, the particular stages (phases) of accounting reform are suggested to have different impacts on the outcome of accounting developments: availability, reliability, and comparability of information. The theoretical framework of this chapter is given in Figure 18.1.

Therefore, to analyze the conceptual aspects of Estonian accounting reform, an integrated theoretical framework of the factors influencing accounting change and a phased approach to the change are used, which are merged into a single theoretical framework.

18.4 Stages of the integration of the Estonian accounting system into the international framework

The key issue of all accounting regulation changes within the European framework is to ensure that it conforms to EU law (also known as the *acquis communautaire*) for the accession countries to the EU, i.e. that Estonia fulfills the requirements of an EU member. In the World Bank and International Monetary Fund (IMF) Report on the Observance of Standards and Codes (ROSC), regarding the status of Estonia's progress towards harmonization with EU legislation in May 2004, it was stated that 'in the area of financial reporting and auditing law, Estonia implemented the Fourth, Seventh, and Eighth EU Company Law Directives, the EU Regulation on the use of International Accounting Standards, and International Standards on Auditing' (ROSC, 2004).

The ROSC team also reviewed a sample of financial statements prepared in accordance with the IFRS and Estonian Accounting Standards (EAS). Results of the analysis reveal that the quality of the EAS and IFRS financial statements of *most public interest entities* in the corporate sector is generally very high, with only a few minor issues. The accounting policies and disclosures are generally very clear (ROSC, 2004).

Consequently, the Estonian accounting legislation and regulations conform to the EU directives and regulations. How has this process proceeded? Table 18.1 summarizes the accounting developments since 1990.

As regards the development of the Estonian accounting system, Haldma (2004) delineated three stages in this process: the introductory (1990–1994), system building (1995–2002), and system improvement (2003 onwards) stages. To analyze, in depth, the content of Estonian accounting changes, a discussion of the development of the accounting regulations, the scope of accounting regulations, and the degree of independence of the accounting regulatory institution (see Table 18.1) will follow.

Estonia started to aspire towards market economy when it was still a part of the Soviet Union, and much earlier than the other Soviet republics. In July 1990, more than a year before independence was regained in August 1991, the Regulation on Accounting was adopted by the Estonian Government. This event was the first step towards creation of a market economy accounting environment in Estonia. The effective date of the Regulation on Accounting was 1 January 1991. As pointed out by Bailey et al. (1995), this event also marked the beginning of the spread of accounting disharmony within the territories of the USSR.

Although, relatively speaking, the regulations were quite modest in content and volume, consisting of only 10 pages, the actions spurred by the regulations were instrumental in creating a favorable environment for the adoption of market-based accounting principles, and prepared the country for moving to the second stage of Estonian accounting reform.

The second, system-building stage started in 1995. The accounting framework and procedures in Estonian companies and institutions have legally been regulated by two parallel regulations:

- Estonian Act on Accounting (EAOA)
- Estonian Accounting Standards issued by the Estonian Accounting Standards Board (EASB).

Such a combination had a number of advantages in the initial period of the accounting reform, speeding it up, and enabling the transition process to be

Table 18.1 The stages of development of Estonian accounting regulations

Stage and dates and basic regulation	Aim of the regulations	Developments in accounting issues	Scope of the regulation	Status of the EASB
The first, introductory stage (1990–1994) Regulation on Accounting 1990 Applied from 1 January 1991	The regulations made accounting an autonomous area of information provision and established minimum requirements to all juridical persons for the organization, structure and maintenance of the bookkeeping (accounting) system. Quite modest in content and volume (10 pages)	The regulations introduced a list of subjective elements (depreciation rates, inventory valuation methods, assets valuation methods, etc. decided by companies) into the accounting practice, formation of a particular accounting policy, change from cash-basis accounting to accrual-basis accounting, institution of some basic accounting principles (realization principles, the matching principle, the historical cost principle). The Regulation served as an initiative to link the future development of accounting in	Formally the regulations related to all juridical persons in Estonia (enterprises, entities of state and local authority, and other organizations).	The Estonian Accounting Standard Board (EASB), supervised by the Ministry of Finance became the guiding body of accounting. The main task of the Board was to issue mandatory accounting instructions as well as recommendations concerning the methods to be applied.

(*Continued*)

Table 18.1 (*Continued*)

Stage and dates and basic regulation	Aim of the regulations	Developments in accounting issues	Scope of the regulation	Status of the EASB
		Estonia to the EC 4th Directive.		
The second, system-building stage (1995 to 2002) **Act on Accounting 1994** Applied from 1 January 1995	To create the legal basis and establish general requirements for organizing accounting and reporting in the Republic of Estonia based on internationally accepted accounting principles (Article 1). Internationally accepted accounting and reporting principles are defined as the accounting directives of the European Community and the principles, standards, and recommendations developed and approved by the International Accounting Standards Committee (IASC) (Article 3) (*Hea raamatupidamistava*, 2000).	The accounting framework and procedures in Estonian companies and institutions have legally been regulated by: • Estonian Act on Accounting (EAOA); • Estonian Accounting Standards (EAS) issued by the EASB. Between 1995 and 2000 the EASB issued 16 EAS to improve the following particular aspects: Conceptual Framework of Generally Accepted Accounting Principles; Revenue Recognition under the Revenue Principle; Liquidation and Termination Balance Sheet Preparation;	The scope was expanded. Initially the EAOA related to registered companies, but in the subsequent years it was expanded to sole proprietorships (in September 1995) and public legal juridical persons (institutions) (in June 1996). Central and local government accounting entities were required to comply with the general principles of the EAOA (Chapters 1–16), but the main guidelines were issued by the Ministry of Finance.	The status of the EASB has improved substantially towards independence. The EASB is an independent governmental unit, established by the Government of Estonia and operating within the administrative jurisdiction of the Ministry of Finance. (Article 38).

		Business Combinations; Balance Sheet Accounts; Income Statement Accounts; Equity Method; Leases; Consolidated Accounts of Credit Institutions; Government Grants; Interim Report Preparation; Earnings Per Share; Segment Reporting; Long-term Construction Contracts; Consolidated Accounts.		
The third, system improvement stage (beginning in 2003) New amended Act on Accounting 2002 Applied from 1 January 2003	Increase further harmonization with EU directives and Regulation 1606/2002 on IFRS.	The new EAOA permits all companies to apply in their consolidated and parent's financial statements either: (a) IFRS, or (b) national accounting standards (EAS, Estonian GAAP). EAS should be harmonized with IFRS and cross-referenced to applicable IFRS	Expanded scope of the EAOA. The accounting principles of all types of institution (including governmental institutions) are the subjects of the EAL.	The Act enhanced the independence of the EASB. The EASB is an independent committee whose rules of procedure are approved by the Government of the Republic on the proposal of the Minister of Finance. The Ministry of Finance, the Government of the Republic and other

(*Continued*)

Table 18.1 (*Continued*)

Stage and dates and basic regulation	Aim of the regulations	Developments in accounting issues	Scope of the regulation	Status of the EASB
		paragraphs. Any differences in the local standards compared to IFRS must be explained and justified. The EASB rewrote most of its standards by the end of 2002. Currently there is a set of 17 EAS in use: EAS 1: *General principles of Preparation of Financial Statements*; EAS 2: *Presentation of Financial Statements*; EAS 3: *Financial Instruments*; EAS 4: *Inventories*; EAS 5: *Tangible and Intangible Assets*; EAS 6: *Investment properties*; EAS 7: *Biological assets*; EAS 8: *Provisions, Contingent Liabilities and Contingent Assets*; EAS 9: *Leases*;		government agencies shall interfere with neither the content of the guidelines issued by the Standards Board nor the process of their preparation (Chapter 5).

EAS 10: *Revenue recognition*; EAS 11: *Accounting for Subsidiaries and Associates;* EAS 12: *Government Grants*; EAS 13: *Liquidation Balance Sheet*; EAS 14: *Accounting for Nonprofit Association and Foundations*; EAS 15: *Interim Reporting*; EAS 16: *Segment Reporting*; EAS 17: *Public–Private Partnerships.*

flexible. The EAOA served as a frame law, whereas the EAS prescribed more particular issues of financial accounting.

The conceptual change within the European accounting framework, enacted in July 2002, required revision of the set of Estonian accounting regulations, which by 2000 had reached a certain level of professionalism, to make the corresponding improvements. The initial steps to carry out the third stage were arranged through the new, amended version of the EAOA and a new (revised) set of Estonian Accounting Standards. Both came into effect on 1 January 2003. The main characteristic of the new EAOA and the new set of EAS are in their harmony with the IFRS.

Consequently, starting from 2003, there are no significant differences in recognition and measurement policies between IFRS and Estonian GAAP. Minor differences remain, mainly in disclosure (Estonian GAAP requires less disclosure than IFRS), as the Estonian GAAP is primarily designed for small and medium-sized entities (see also ROSC, 2004, p. 12). As a result of recent Estonian accounting reform, large companies are expected to choose the full IFRS option, while small and medium-sized companies may continue using the revised set of EAS as their accounting framework.

Based on the above analysis, the phased development of Estonian accounting reform (system) can be summarized in three different directions:

- Substantial development of the accounting regulations towards implementation of the IFRS
- Development of the scope of accounting regulations from private business companies to governmental institutions
- Development of the degree of independence of the accounting regulatory institution – the Estonian Accounting Standards Board.

Furthermore, below is a summary of how the integrated theoretical framework of factors influencing the national accounting system and phased approach seek to identify the pathways followed by the Estonian accounting reform.

18.5 Findings and discussion

18.5.1 The political system

The political system has an effect on how the economy is organized and controlled. This also influences the objectives of accounting. Saudagaran and Diga

(1997b) proposed that accounting harmonization should be conceptualized as a policy option available to a country. Roberts et al. (2002) distinguished between two main political systems: the liberal–democratic and the egalitarian–authoritarian system.

Estonia has consistently built up a liberal–democratic political and economic system. In fact, Estonia ranked sixth in the 2004 Index of Economic Freedom released in early January 2004 by the *Wall Street Journal* and the Heritage Foundation (*Äripäev*, 2004). Estonia's rank was the same as in 2003. In the 2002 ranking, Estonia came fourth. A liberal–democratic economic system creates favorable conditions for improving the disclosure and transparency issues of financial reporting.

Among the political issues, Bailey (1998) also suggested a flow of power from ministries to companies. In the initial period of the transition from command economy accounting to market-led accounting, as suggested by Bailey (1998) and Nobes (2002), actions by the state are required in the form of new accounting regulations, mainly due to the absence of a strong accountancy profession. This position is confirmed by the experiences of Poland (Jaruga and Bailey, 1998), Hungary (Borda, 1998), the Czech Republic (Dolezal, 1998: Seal et al., 1995), Slovakia (Daniel and Suranova, 2001), and Romania (King et al., 2001). In some cases the ministries have consulted and taken advice externally and internally (see King et al., 2001). Bailey (1998) left open the question about when ministerial supervision and ministerial direction (e.g. of professional associations) become indistinguishable, which clearly has political features. Sucher and Jindrichovska (2004) assess that in the case where the Ministry of Finance is playing a key role in accounting change, the change may be very slow. Therefore, the main problem in Estonia at the end of the first stage was: how to build a forward-looking and flexible accounting regulation system, which would enable Estonian accounting integration into the European accounting framework. The main decisions were made by the EASB.

Since 1990, the first stage of the Estonian accounting reform, the EASB has played the main role. Section 32 of the EAOA (Act on Accounting, 2002) defines the function of the EASB as issuing accounting standards explaining and specifying the EAL and direct activities in the field of accounting.

As pointed out in the previous section, there was a certain development of the degree of independence of the EASB during the three accounting reform stages in Estonia. Starting in 2003, it was added that 'the EASB shall be served by the Ministry of Finance' (Act on Accounting, 2002, section 32). The EASB consists of seven members who are either accounting specialists, theoretical accounting

experts, or accounting practioners. It is evident that the political attitude is very modest in the case of Estonia, and has diminished in the last decade.

According to section 32 of the EAOA (2003), the drafts of the new EAS shall be made available to the public on the website of the EAS and they must be open for public discussion for at least two months before approval by the EAS. This will result in making the new standards more participatory among the accounting profession.

18.5.2 The legal system

Liberal–democratic countries generally adopt either of the two types of legal system – the Roman-Germanic (or code law) or common-law legal systems (Roberts et al., 2002). The majority of CEE countries, including Estonia, base their legal systems on code-law principles. Therefore, one of their first priorities has been setting up a regulation system based on laws of accounting. Accounting regulations are part of a complex system of commercial regulations that apply to all business institutions.

The legal framework of Estonian accounting regulations has been mainly based on the following legal acts: (1) the Commercial Code enforced in September 1995; (2) the Act on Accounting enforced in January 1995 and amended in January 2003; and (3) the Certified Public Accountants Act enforced in July 1999. Roberts et al. (2002, p. 15) have generalized that in most code-law countries the accounting code (law) is typically prescriptive, detailed, and procedural. However, this research argues that Estonia seems to be an exception in this matter. To enable flexibility of regulations, particular accounting issues are regulated by the EAS, which are issued by the EASB. The law on accounting serves more as a frame law.

Bailey (1998) hesitated about the possibility of implementing a large accounting change in conditions of systemic instability (new political and legal systems, new institutional structures). An analysis of the development of the Estonian accounting system (see section 18.4) leads to the conclusion that, throughout its three stages, the Estonian accounting change can be regarded as a process of harmonization, where it moved from regional (until the mid 1990s) towards global harmonization (currently). One obstacle to the accounting harmonization during the first half of the 1990s was systemic instability. However, its impact was sufficiently softened by two factors. First, in the middle of the 1990s, the EASB was able to conceptualize a forward-looking and flexible accounting regulation system based on the EAOA and EAS. This concept has been in use since 1995.

Second, this process was supported by the Ministry of Finance, which relied on the operation of the EASB and did not interfere with the content of the concept nor the process of the preparation of the EAOA and accounting standards. Therefore, we can conclude that the systemic instability was overridden by the intended harmonization process and legitimized accounting regulations in the second half of the 1990s. As pointed out in the previous section, the scope of accounting regulations has continually expanded during different accounting reform stages from private business companies to governmental institutions.

According to Saudagaran and Diga (1997a), availability means that financial and other information, particularly information about publicly listed companies, is adequate, timely, and conveniently accessible. Since 1995, according to the EAOA (Chapter 3, section 24) and the Commercial Code (section 334), an accounting entity has to submit a copy of its annual report to the Company Register (within the Ministry of Justice) six months after the balance sheet date at the latest, where they will be kept on file indefinitely. This file is open for public access. Communication with the Center of Registers revealed that the percentage of successfully submitted Annual Reports in 1998 was 71% (from a total of 42,761 companies). By the year 2000 this indicator had grown, reaching 82% (from a total of 42,667 companies). In later years the percentage has been between 75 and 80%[1].

The annual reports of the 17 companies (mainly for all the years that the companies had been listed) on the Tallinn Stock Exchange are available on the Tallinn Stock Exchange website (see http://www.tse.ee).

To warrant and enforce the actual submission of annual reports, a system of penalties and fines was devised for cases of nonsubmission. For example, in accordance with the Commercial Code, section 71, upon failure to submit information prescribed by law or upon submission of false information to the registrar, a person who is competent to make a judgment on entry may impose a fine of up to 400 days' wages on the obligated persons. At the same time, an enterprise or an obligated person need not be warned beforehand upon imposition of a fine for failure to submit information prescribed by law within the term prescribed by law[2].

In accordance with the Penal Code, section 281, submission of incorrect information to the registrars of the commercial register or foundations register, or to the registrar of nonprofit associations, is punishable by a pecuniary punishment or by up to two years' imprisonment. The same act, if committed by a legal person, is punishable by a pecuniary punishment[3].

Communication with the Ministry of Justice exercised extensive punishment and imposed fines for the nonsubmission of annual reports starting in 2000;

since that time, the number of companies that were fined reached 1500 cases annually[4].

In accordance with the Tallinn Stock Exchange Rules, fines in the range of 1000–500,000 Estonian kroons (approximately 65–32,000 euros) are imposed for violation of the requirements regarding disclosure of information (see http://www.tse.ee).

In summary, the legal framework of the Estonian accounting regulations has been improved and has certainly contributed to the implementation of accounting regulations and information availability.

18.5.3 The taxation system

Several studies have explored the influence of tax regulations on accounting and reporting practices in different countries. Roberts et al. (2002) have generalized that code-law countries tend to have common tax and financial reporting regulations. This chapter argues, however, that as far as the CEE countries are concerned, the effect of tax regulations on accounting practices has to be specified and revised. Following the economic reforms, the tax law and accounting law have *de jure* developed separately in Poland (Jaruga and Szychta, 1997; Jaruga and Bailey, 1998), Hungary (Borda, 1998), the Czech Republic (Seal et al., 1995; Dolezal, 1998), and Romania (King et al., 2001). This list of countries is supplemented by Estonia. Although the tax law and accounting law have *de jure* separated in Poland and the Czech Republic, the tax regulations have overridden the accounting regulations (see Sucher and Jindrichovska, 2004; Vellam, 2004). Due to the new Estonian taxation regulation system enacted in 1994, the tax and financial reporting rules were set by different bodies and are kept separate. In 2000, the Estonian Government abolished corporate income tax on reinvested profits, although it remains payable on dividends. Therefore, as was estimated by ROSC (ROSC, 2004), companies in Estonia are less pressured than most companies in the EU Member States in satisfying the accounting requirements of the taxation authorities.

This chapter argues that the Estonian tax rules largely removed the need for tax audits that indirectly contribute to enforcing accounting regulations. Hence, the compliance of the financial statements with the EAL and EAS in small and medium-sized unlisted companies depends mainly on the quality of auditing (if the entity is subject to a statutory audit) and the skills of the company managers who are responsible for preparing the financial statements. Some authors argue (see Kosmala-MacLullich, 2003) that in certain CEE transitional countries the

existence of sanctions for misstated tax charges, while there are no sanctions for inappropriate application of accounting regulations, implies that, de facto, compliance with tax regulations overrides the accounting rules. As revealed by the current analysis in this section (see section 18.5.2), imposing fines on the non-submission of annual reports in Estonia started more intensively in 2000. Therefore, we can conclude that the influence of tax legislation on accounting rules has also diminished de facto during the last few years in Estonia.

18.5.4 Finance and capital markets

Corporate accounting and information disclosure practices are influenced by the nature of enterprise ownership, sources of finance, and the stage of development of capital markets. Radebaugh and Gray (1997) argued that there tends to be more pressure for public accountability and information disclosure where finance is raised from external shareholders. Saudagaran and Diga (1997a) pointed out that financial reporting is central to the regulations pertinent to establishing an active market for corporate securities. We can define the Estonian stock market as an 'emerging capital market' (ECM) located in a developing country[5]. One of the main policy aims in ECMs is to ensure that only those companies that satisfy the minimum 'quality' requirements for financial reporting are allowed to issue publicly traded securities (Saudagaran and Diga, 1997a). Financial reporting information also becomes more important if foreign direct investments (FDIs) increase (Daniel and Suranova, 2001). In the competition for FDIs, Estonia has been rather efficient and has succeeded in attracting a significant amount. For example, among the Eastern and Central European countries, in 1992–1999 Estonia ranked third after Hungary and the Czech Republic by FDI inflow per capita (Varblane, 2001). Although this fact is remarkable, the public capital market is rather small in Estonia. On the Tallinn Stock Exchange, which opened for trading in May 1996, 17 domestic companies are listed; the market capitalization is 3.02 billion euros and the annual trading volume is 0.501 billion euros[6]. In April 2001, the Helsinki Stock Exchange (HEX) Group, from Finland, acquired strategic ownership in the Tallinn Stock Exchange Group. Trading in Estonian securities in the HEX trading system started in February 2002. These changes, in particular, necessitated the need for internationally acceptable accounting standards and legal requirements for the disclosure and reporting principles of listed companies.

The Requirements for Issuers in the Tallinn Stock Exchange Rules stipulate that the issuer's financial reports shall be prepared using the calculation schemes and

methods that comply with the Estonian accounting legislation and the IFRS. Where the IFRS allow for the use of alternative methods in preparing the reports or presenting financial information in the reports, the issuer is obliged to proceed from the alternatives that comply with the applicable Estonian legislation and the provisions of the standards of the Estonian Accounting Board[7]. This requirement is outdated, due to the decision of the European Commission in July 2002 to adopt IFRS, and with the amended Estonian Accounting Act in 2003, which require that all listed companies, credit institutions, financial holding, and insurance companies use IFRS in their consolidated and separate accounts effective 1 January 2005. The Tallinn Stock Exchange does not enforce accounting standards. Therefore, it is concluded that small stock exchanges have no direct impact on the development of national accounting systems. At the same time, there seems to have been sufficient influence on financial reporting information availability, reliability, and comparability.

In the second half of the 1990s, when Estonian companies first entered the European stock market, it was essential for such companies to use IFRS when compiling their financial statements. In particular, the companies listed on the Tallinn Stock Exchange started to use IFRS due to the fact that the HEX Group acquired strategic ownership of the Tallinn Stock Exchange (2001), and the new Estonian accounting regulations (2003) and European accounting harmonization policy were adopted. As a matter of fact, from the 12 companies currently listed on the Tallinn Stock Exchange, only two applied the IFRS in their 1998 Annual Reports. These companies are listed on European stock markets. In 2000, eight out of the 17 companies currently listed on the Tallinn Stock Exchange applied the IFRS, while the rest used the Estonian accounting regulations. Two years later, 11 companies applied the IFRS and six applied the Estonian accounting regulations. In 2003, 15 out of the 17 listed companies applied the IFRS, while only two applied the Estonian accounting regulations (see http://www.tse.ee).

18.5.5 The accounting profession

The transformation of the role of accounting in transitional Estonia has been greatly complicated by that fact that, for half a century, the Estonian financial reporting and accounting practices were very different from those applied by market-led countries. In a controlled economy, accounting had a relatively low status, being inflexible and unresponsive to market innovations. Contrary to the West, the prestige of accounting was extremely low in the USSR. For example,

in a 1990 opinion poll among secondary school students, accounting was ranked 91st among 92 professions (Smirnova et al., 1995).

The Estonian Association of Accountants (EAA) was established in 1996 as an accounting interest group open to anyone, without any qualification requirements. Initially, the main objective of the Association was to gain membership in order to improve the accounting system. The association is not directly involved in accounting regulation setting, except for the fact that a representative of the association is a member of the EASB, the issuer of the EAS. Currently the main objectives of the association concerning their potential impact are to disseminate accounting knowledge and practical experience, and to represent their professional opinion in public discussions (including comments and suggestions on the drafts of the EAS opened for public discussion on the website of the EASB). In January 2001, the Vocational Law was enforced in Estonia, which created basic conditions for organizing the certification for accountants.

The Estonian Board of Auditors (EBA), which was established in 1999, has 422 individual members (19 have been temporarily suspended)[8]. This number is greater than in the other Baltic States (see Moller, 2001). The Estonian Board of Auditors estimated that about one-third of individual members practice as sole practitioners and the rest operate within more than 50 registered audit firms[9]. Audit firms include local members of international audit firm networks as well as 'truly local firms'. Currently, two representatives of the Board are members of the EASB. Previously, the above areas were within the competence of the Estonian Board of Auditing, which was established by the Ministry of Finance in March 1990.

Unfortunately, the EAA and the EBA do not work together and, therefore, though they have been influential in the development of financial reporting in Estonia, their lack of collaboration has hindered further progress.

Bailey (1998) claimed that the immaturity of the legal system, corrupt business practices, and weak trust relations may invade the system of financial statements and reporting. I agree that, despite a favorable legal context for financial reporting, in a number of cases an inadequate level of disclosure appeared, which was probably related to the widespread cultural attitudes supporting secrecy and lack of transparency in matters concerning a company's performance. The Soviet society and its legacy matches well with the system described by Hofstede (1980) as the societies with a strong collectivist orientation, which share a strong sense of 'in-group' vs 'out-of-group' identity. Saudagaran and Diga (1997a) estimated that this cultural orientation results in restricting corporate outsiders access to corporate information, which is seen as being reserved for insiders only. Such an

attitude was also widespread in Estonia in the 1990s. A newspaper article published in January 1996 in an Estonian newspaper, *Äripäev* (Business Daily), commented on the structure of the management report within an annual report, required by section 22 of the EAL. According to this section, among other items, the management report also has to disclose the significant events planned for the coming year. One comment was as follows: 'If an entrepreneur discloses to the public what he is intending to do in the coming year, then he will hardly have anything to disclose in the year after the next' (*Äripäev*, 19 January 1996, translation). In my estimation, the development of the business environment increased the demand for transparent financial statements among potential investors and lenders; thus, the improved requirements for disclosure in the Estonian accounting regulations override the widespread attitude from the past at the end of the 1990s.

There may also be some additional factors concerning how a particular country is starting to build up its national accounting system. The main problem in transition countries was how to build a forward-looking and flexible accounting regulation system, which would enable integration into and harmonization with the international accounting framework. Saudagaran and Diga (1997b) emphasized that the actual choice of whether or not to pursue accounting harmonization has to be made at national level. The traditional continental European approach based on the accounting law would have been too inflexible to reflect the rapid changes in transition circumstances. Moreover, Van Hulle (1993) expressed the idea that the use of accounting law as a means of standard setting could also be an interesting mechanism against too frequent (and sometimes unnecessary) changes. But this could not be the position of the transition countries (e.g. Estonia), because a stable and effective accounting regulation system, consistent with general accounting principles, was almost nonexistent there. Therefore, Nobes's (1983) point of view, that historical differences in accounting thought, context, ethos, and practice between a number of countries may affect de facto accounting harmonization, is perhaps not very relevant for future perspectives of transition economies. As they have changed their economic formation from centrally planned to market based, they also needed to change their accounting system. However, because of the lack of accounting sophistication among local practitioners, there was still an inability to distinguish between suitable and unsuitable aspects of the accounting procedures and practices transferred. Choosing an appropriate accounting model, the EASB had to avoid this shortcoming and reach appropriate decisions. Therefore, advice from other nations appeared to be of great support in improving Estonian accounting

legislation. This external advice has contributed to national accounting reform, for example, in Romania (see King et al., 2001) and in Slovakia (see Daniel and Suranova, 2001). In Estonia it was significant that three of the seven members of the EASB, re-formed by the Ministry of Finance in 1993, who were leading the preparations for the new Law on Accounting in 1993–1994, were émigré Estonians having international backgrounds and work experience in Sweden, the UK, and Canada. One of the local members of the former Accounting Board commented on the situation as follows:

> 'We local members were aware of the different elements of market economy accounting, but we lacked a systematic understanding of the whole system. We did recognize the main pieces of the puzzle, but were unable to recognize the whole picture.'
>
> (A local member of the Estonian Accounting Board, 1993–1996, December 2003)

After a comprehensive exploration, internal discussions, careful consideration, and some practice testing, the EASB drafted the Estonian Act of Accounting, which was passed by the Estonian Parliament in June 1994 and came into effect in January 1995. The fact that a national accounting law was drafted by the EASB rather than by the Ministry of Finance is quite unusual in transition economies. When the EASB was re-formed by the Ministry of Finance in 1993, the authority and roles of the EASB were in essence expanded. This aspect was treated in more detail in a previous section. Consequently, it is argued here that the benchmark and knowledge transfer serve as an additional essential factor influencing the development of national accounting systems in transition economies.

18.6 Conclusion

From this analysis of the main impact on the accounting framework in Estonia, which has peculiar characteristics and circumstances as regards accounting reform regulations, it became evident that the influencing factors may include separation of accounting regulations from tax regulations, a small stock exchange, a considerable inflow of FDI, and the growing accounting profession.

The development of the Estonian accounting system can be divided into three different stages: introductory (1990–1994), system building (1995–2002), and system improvement (from 2003 onwards). It can be concluded that, as a result of the changes made during these stages, the Estonian accounting regulations are

now in line with the requirements of the new European accounting harmonization policy. This analysis revealed that in recent years the access *de jure* to companies' financial reports in the public domain has substantially been supplanted by access de facto.

To analyze the conceptual aspects of Estonian accounting reform, in this chapter I have used an integrated theoretical framework of influencing factors on accounting change and the phased approach to the change, which was explained in section 18.5 to merge into a single theoretical framework. It is suggested that the same framework may also easily and successfully be applied to other transition countries. It seems that the issues which might be of interest to transition countries and that would deserve further consideration may include: accounting regulatory systems, the development of the scope of accounting regulations, and the degree of independence accounting regulatory bodies may have.

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Notes

1. Communication with the Center of Registers, 4 June 2004.
2. See the Commercial Code on the Estonian Legal Language Center website: http//:www.legaltext.ee.
3. See the Penal Code on the Estonian Legal Language Center website: http://www.legaltext.ee.
4. Communication with the Ministry of Justice, 5 June 2004.
5. The world defines a developing country as one whose average income per capita does not exceed a certain level. In 2002, the cutoff was set at $9075 (http://www.worldbank.com/data/countryclass). In Estonia, income per capita reached $4130 in 2002 (*ibid*.).
6. Tallinn Stock Exchange, Equity Market capitalization, 31 December 2003 (http://www.tse.ee).
7. Tallinn Stock Exchange, The Requirements for Issuers, 31 December 2003 (http://www.tse.ee).
8. Communication with the Estonian Board of Auditors, 11 June 2004.
9. Communication with the Estonian Board of Auditors, 11 June 2004.

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19

An Elegant Comparison of the Tax Advantages of Mutual Funds, IRAs, and Roth IRAs – What Hath Roth Wrought?

Colin Read

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19.1 Introduction

There is a growing appreciation among taxpayers to provide for their retirement needs while at the same time deferring current taxes paid. As in any tax deferment exercise, it is necessary to compare the implications on present and future consumption and the changing rates of taxation between periods. While such analyses are typically illustrated through 'what if' examples, there has been no simple analytic model that allows for direct comparisons in a way that allows us to draw simple conclusions between inter-temporal tax rates, rates of return, and rates of time preference. This model corrects the oversight and creates some very simple equations that easily allow us to draw definitive policy conclusions.

In section 19.2, I set up and solve the model for the traditional IRA savings vehicle. In section 19.3, I solve the model for the Roth IRA savings vehicle and make comparisons between the two vehicles. I simplify the model in section 19.4 by assuming an infinite time horizon, and introduce a comparison between traditional and Roth IRAs and a traditional nondividend-paying mutual fund. I conclude in section 19.5 with a discussion of the policy and planning ramifications of the model.

19.2 A model of lifetime consumption and savings under various tax regimes

Consider an individual with W years of work to retirement who expects to survive R years from retirement until death. Let us assume all calculations are in real dollars with a real rate of return on investment of r[1]. For simplicity, let us also assume the rate of time preference is ρ_W in the working years up to retirement and ρ_R following retirement[2,3]. Let us assume two tax regimes. The marginal tax rate during working years will be τ_W while the tax rate upon retirement will be τ_R[4]. Let us assume the individual would like to determine the optimal level of 'x' pre-tax dollars to put toward retirement each year for W years, to result in an effective pre-tax annuity paid for R retirement years of 'y'. Finally, let us assume continuous compounding and discounting. The value upon retirement A_T of investment in a traditional tax deferred retirement plan is then:

$$A_T = \int_0^W x e^{rt}\, dt, \tag{19.1}$$

which will result in a present value of a flow of retirement payments over R years of retirement of:

$$B_T = \int_0^R y e^{-rt}\, dt, \tag{19.2}$$

for which we could solve for pre-tax retirement benefits as a function of the retirement savings rate x and the parameters R, W, and r.

The present value of the flow of sacrificed consumption over the working years is given by:

$$C_T = \int_0^W x(1-\tau_w)e^{-\rho_W t}\, dt, \tag{19.3}$$

while the present value of retirement consumption with the traditional IRA is given as:

$$D_T = \int_W^{W+R} y(1-\tau_R)e^{-\rho_R t}\, dt. \tag{19.4a}$$

We can transform D_T to express it as the present value at time $t = 0$:

$$D_T = \int_W^{W+R} y(1-\tau_R)e^{-\rho_R t}\, dt = e^{-rW} \int_0^R y(1-\tau_R)e^{-\rho_R t}\, dt. \tag{19.4b}$$

The exercise for the individual investor is to maximize $D_T - C_T$ through their choice of pre-tax IRA investments x, given that the value of retirement savings at time of retirement A_T equals the present value at that point of future payments B_T. If we assume $\rho_R = r$, then by inspection we see that $D'_T = e^{-rW}(1-\tau_R)B_T = e^{-rW}(1-\tau_R)A_T$. Then the maximization exercise reduces to:

$$\begin{aligned}
&\underbrace{\max_x} D_T - C_T. \qquad (19.5)\\
&= \underbrace{\max_x} D'_T - C_T.\\
&= \underbrace{\max_x} e^{-rW}(1-\tau_R)A_T - C_T\\
&= \underbrace{\max_x} e^{-rW}(1-\tau_R)\int_0^W x e^{rt} dt - \int_0^W x(1-\tau_W)e^{-rt}\, dt\\
&= \max(\tau_W - \tau_R)x(1-e^{-rW})/r
\end{aligned}$$

This maximization exercise of course is a corner solution, requiring investors to maximize their tax-deferred contribution to traditional IRAs if the marginal tax

rate while working is greater than the marginal tax rate when retired. Once the individual will be placed in the highest marginal tax rate upon retirement (after significant and calculable contributions over their working career), there is no longer any advantage to sacrificing current consumption for future consumption, assuming a constant rate of time preference[5].

19.3 The analysis of Roth retirement savings

I next repeat the analysis for a Roth retirement vehicle. The Roth retirement savings account is a hybrid. The contributions during the working years and the sacrifice in contribution are no different than investment in a nondividend-paying mutual fund – that is, all are on an after-tax basis. However, the central feature of the Roth instrument is that income received upon retirement is tax free, while earnings on a mutual fund are taxed at the capital gains tax rate.

Again, an individual with W years to retirement expects to survive R years from retirement until death. The value upon retirement A_{Roth} of investment in a traditional tax-deferred retirement plan is then:

$$A_{\text{Roth}} = \int_0^W (1-\tau_w) x e^{rt}\, dt, \tag{19.6}$$

which will result in a present value of a flow of retirement payments over R years of retirement of:

$$B_{\text{Roth}} = \int_0^R y e^{-rt}\, dt, \tag{19.7}$$

for which we could solve for pre-tax retirement benefits as a function of the retirement savings rate x and the parameters R, W, and r.

The present value of the flow of sacrificed consumption over the working years is given by:

$$C_{\text{Roth}} = \int_0^W x(1-\tau_w) e^{-\rho_W t}\, dt, \tag{19.8}$$

while the present value of retirement consumption with the Roth IRA is given as:

$$D_{\text{Roth}} = \int_W^{W+R} y e^{-\rho_R t}\, dt. \tag{19.9a}$$

We can transform D_{Roth} to express it as the present value at time $t = 0$:

$$D'_{\text{Roth}} = \int_W^{W+R} y e^{-\rho_R t} dt = e^{-rW} \int_0^R y e^{-\rho_R t} dt \tag{19.9b}$$

The exercise for the individual investor is to maximize the $D_{\text{Roth}} - C_{\text{Roth}}$ through the choice of pre-tax IRA investments x, given that the value of retirement savings at time of retirement A_{Roth} equals the present value at that point of future payments B_{Roth}.

If we assume $\rho_{\text{R}} = r$, by inspection we see that $D'_{\text{Roth}} = \mathrm{e}^{-rW}B_{\text{Roth}} = \mathrm{e}^{-rW}A_{\text{Roth}}$. Then the maximization exercise reduces to:

$$
\begin{aligned}
&= \underbrace{\max_{x}} \; D_{\text{Roth}} - C_{\text{Roth}} \\
&= \underbrace{\max_{x}} \; D'_{\text{Roth}} - C_{\text{Roth}} \\
&= \underbrace{\max_{x}} \; \mathrm{e}^{-rW}A_{\text{Roth}} - C_{\text{Roth}} \\
&= \underbrace{\max_{x}} \; \mathrm{e}^{-rW}(1-\tau_{W})\int_{0}^{W} x\mathrm{e}^{rt}\,\mathrm{d}t - \int_{0}^{W} x(1-\tau_{\text{W}})\mathrm{e}^{-rt}\,\mathrm{d}t \\
&= \max(\tau_{\text{W}} - \tau_{\text{W}})x(1-\mathrm{e}^{-rW})/r \qquad (19.10)
\end{aligned}
$$

Inspection of equation (19.10) reveals that the net present value of consumption streams under a Roth IRA is neutral to the Roth contribution. Recall that net present value of consumption streams under a traditional IRA are also neutral once retirement accumulations result in retirement income that is taxed at the margin at the same rate as working income.

19.4 Comparison to mutual funds under an infinite time horizon

I previously noted that the Roth IRA is in some sense a hybrid instrument. It has the same effect on consumption and accumulations during the working years as does a mutual fund, but more advantageous treatment in the retirement years because it avoids the capital gains tax levied upon a nondividend-paying mutual fund as the fund is drawn down. We already have the analytic tools to compare the traditional IRA to the Roth IRA. Let us next compare the Roth IRA to a nondividend-paying mutual fund where capital gains are not realized until retirement. For simplicity, we will assume an infinite time horizon upon retirement. This simplifying assumption does not change our conclusions, and is relevant if

the principal invested is maintained as a bequeath, for instance. Then the streams of investment accumulation and consumption reduction are identical in the work years and differ as follows in the retirement years:

$$\text{Roth IRA annuity} = r\int_0^W (1-\tau_W)xe^{rt}dt \tag{19.11}$$

$$\text{Mutual fund annuity} = (1-\tau_g)r\int_0^W (1-\tau_W)xe^{rt}dt, \tag{19.12}$$

where τ_g is the capital gains tax rate upon retirement. The Roth IRA performs better than the mutual funds investment portfolio to the extent of the capital gains tax rate.

19.5 Conclusion and public policy ramifications

The Roth IRA has been the darling of the press, financial advisors, and the private investor of moderate to minimum sophistication. It is appealing in the sense that earnings can escape taxation upon retirement. However, the attractiveness of this conclusion is mitigated by the reduced investment amounts (in post-tax contributions) over the working life of the individual. This analysis shows that while the Roth instrument performs better than a simple mutual fund, it does not perform as well as a traditional IRA, at least until the traditional IRA is of sufficient size to place investors in the same tax bracket upon retirement as they find themselves over their working career.

One of the subtle points in this analysis is the role of the individual investor's rate of time preference. Economic theory suggests that individuals align their rate of time preference to that of the prevailing interest rate. This equilibrium conclusion requires all have identical and perfect access to capital markets. However, such is typically not found in practice. As a consequence, present savings may be of more value because there is a bias in favor of deferring present consumption to the future. If such is the case, the conclusions of superiority of one instrument over another will not change. Rather, this observation will bias upward the desirability of all instruments, resulting in the superiority of the traditional IRA until marginal tax rates during the working years and retirement years are equalized, the desirability of the Roth instrument even if it is otherwise neutral, and even the potential desirability of other forms of savings that are inferior to the consumption neutral Roth IRA.

Notes

1. We will assume that changing rates of risk preference over a planning horizon do not affect the choice of investment instrument. In other words, let us assume *r* is the risk-adjusted normal real rate of return on financial investment.
2. The rate of time preference is the rate at which an individual investor discounts the future. With access to perfect capital markets, an individual will shift consumption, savings, and borrowing across time to equate their individual rate of time preference to the market rate of return. However, because individuals typically do not have access to perfect capital markets, we keep this value distinct from the rate of return for now.
3. For simplicity, we will later assume a constant rate of time preference but will nonetheless show how different rates of time preference over the planning horizon affect our results.
4. While the effective tax rate for retirement planning purposes during the working years is the marginal tax rate in most cases, the effective tax rate upon retirement changes. While an individual is accumulating a retirement fund to produce retirement income, the rate will rise with increased expected retirement disbursements. Initial retirement investments will be weighed against a low retirement tax rate. As the investments result in more significant retirement disbursements, the individual will be facing higher and higher retirement tax rates. At some point an individual facing the highest marginal tax rate while saving toward retirement will be deferring taxation at the highest marginal tax rate in retirement as well. The policy implications of this life cycle of retirement savings will be discussed later.
5. However, it can be observed that a rate of time preference that further discounts the future as retirement is neared may shift this conclusion somewhat. We discuss this possibility later.

20

A Meta-National Perspective on Accounting and Auditing in Nonprofit Organizations: The Literature Interpreted in a Principal–Agent Framework

Marc Jegers

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20.1 Introduction

Compared to the vast economics-based literature on accounting and auditing for profit organizations, nonprofit accounting and auditing is under-researched, taking into consideration the role and importance of the nonprofit sector in society. In this chapter I try to collect the existing literature and present it in a structure allowing the reader to understand the role of accounting and auditing in nonprofit organizations. The by now traditional micro-economic principal–agent framework will be used as a unifying framework.

The current formulation of a general principal–agent relationship goes back to Jensen and Meckling (1976, p. 308): '… a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. If both parties … are utility maximizers there is good reason to believe that the agent will not always act in the best interests of the principal.' The ensuing welfare losses are labeled agency costs, and consist of monitoring costs (to be borne by the principal), bonding costs (to be borne by the agent), and the eventual welfare loss incurred by the principal in comparison with a first best situation (residual loss).

Although mostly analyzed in a profit context, principal–agent relations also abound in nonprofit organizations (Steinberg, 1990; Herman and Heimovics, 1991; Brody, 1996; Hewitt and Brown, 2000; Miller-Millesen, 2003). To understand the role of accounting and auditing in nonprofits in a 'positive accounting theory' tradition (Watts and Zimmerman, 1986; Belkaoui, 1992), two of these relations are relevant: the external stakeholders–management relationships, and the management–other staff relationship (on both, from an agency perspective, see Caers et al., 2004).

In line with the existing literature, it will be assumed that the external stakeholders are perfectly represented by the organization's board, although this is clearly a stylized fact. Knowing that objectives of board members and managers differ (for an early empirical indication, see Steinberg, 1986), agency costs automatically ensue. Financial accounting costs and auditing costs then can be considered as monitoring costs, reducing the residual losses up to the theoretical optimum where the marginal monitoring cost equals the marginal decrease of residual loss (for a theoretical exposition on this, see Jegers, 2002). Also, some cost accounting data are used in this vein, especially in the relations between a subsidizing authority (an important external stakeholder) or donors (Berman and Davidson, 2003, p. 422) and the organization. The next section will provide a literature review within this frame of reference.

Internal control techniques are appropriate instruments to contain the agency costs between management and other staff. The limited nonprofit literature on this topic will be presented in a subsequent section.

20.2 Containing the external stakeholders–management agency costs

20.2.1 The role of accounting: reducing information asymmetry between board and management

Assuming managerial utility in nonprofit organizations is affected by both the achievement of organizational objectives and discretionary managerial behavior (Williamson, 1963), probably with other weights than in the case of managers of profit firms (Rose-Ackerman, 1987; Young, 1987; Schiff and Weisbrod, 1991; Lynk, 1995; Gassler, 1997; Roomkin and Weisbrod, 1999; Hewitt and Brown, 2000), and the nonprofit board members' utilities only by the achievement of organizational objectives, information asymmetries between the board and management can induce managerial behavior that is not compatible with board utility maximization, entailing welfare losses for the board (which is the principal). Part of the information asymmetry pertains to the financial condition of the organization, which is (partially) affected by discretionary managerial behavior. Christensen and Mohr (1995) describe an example of this for museums. Imposing the production of financial statements will mitigate this asymmetry (and the ensuing residual loss) at a cost, which is a monitoring cost. As long as the latter is lower than the former, the introduction of an accounting system will improve the eventual welfare position of the board, even if, realistically, a first best situation will never obtain. The considerations put forward by Falk (1992, pp. 486–490) to guide the choice between cash accounting and accrual accounting are easily cast in the framework presented here: differences in stakes and ensuing informational needs between club principals and nonclub principals lead him to select accrual accounting as appropriate for clubs, and cash accounting for nonclubs.

Some authors advocate that the nonprofit financial reports should 'reflect the service story of the entity instead of the net income or net loss' (Trigg and Nabangi, 1995, p. 262), which would further bridge the informational gap between principal and agent. Unfortunately, a financial statement is not an appropriate instrument to achieve this, as it is conceptually confined to the organization's financial situation. Other sorts of reporting should be produced to describe the nonfinancial performance of the organization (Falk, 1992, p. 490), which is, of

course, far more important than its financial performance, though the latter constrains in a certain way the former. In that respect it is interesting to note that in a recent sample of 341 US museums (both public and nonprofit), 76 annual reports contained no financial data whatsoever (Christensen and Mohr, 2003), let alone a financial statement.

20.2.2 A special case: religious organizations

Religious organizations are special in the sense that one can consider some deity as the ultimate principal, which, by definition, is omniscient. Therefore, information asymmetry between this principal and the worldly agents cannot exist, and accounting is useless as an information asymmetry reducing tool. As phrased by Abdul-Rahman and Goddard (1998, p. 196): 'Accountability in such a world is to God and accounting can contribute little in this relationship'; or 'Accounting is regarded as no more than a technology to record accounting and financial information' (Abdul-Rahman and Goddard, 1998, p. 192). If one accepts this position, religious nonprofits are to be excluded from the present analysis. If not, they can be treated like any other nonprofit organization, as exemplified by Duncan et al. (1999) or Laughlin (1990). The latter is a so-called principal–agent analysis of the Church of England, albeit with definitions deviating from the Jensen–Meckling standard definitions of principals and agents (Laughlin, 1990, p. 95).

20.2.3 Accounting knowledge

In a profit context, it is taken for granted that both board members and managers fully understand the content and intricacies of financial statements. Even ignoring the case in which the board just does not care and the agent consequently is free to act in his own interest (Jegers, 2002), this need not be the case in nonprofit organizations (see Herzlinger and Sherman (1980) on the application of fund accounting in the USA), either because their expertise lies in the realm of the organization's main objectives (see the data provided by Froelich et al. (2000, p. 245) on the agents in American organizations, or Duncan et al. (1999, p. 143) and Miller (2002, p. 441) on board members), or because of 'the ideological rejection of commercial values and practices' (Panozzo and Zan, 1997, p. 8). The potential effects are higher monitoring costs and a smaller potential residual loss reduction, and consequently higher agency costs compared to a situation in which principals and agents have no problems in producing and/or reading financial statements (Jegers, 2002). Therefore, the more frequent use of conceptually simple cash accounting

(as opposed to accrual accounting) in nonprofits is not surprising: its lower informational content is more than compensated by the higher level of understanding of the principals and agents. Hyndman's (1990, p. 304) empirical results on the information needs of UK donors call for a similar interpretation when modeling them as principals with respect to the organization: they prefer simplified operating statements and simplified balance sheets to audited operating statements, audited balance sheets, and audited funds flow statements.

20.2.4 Donors and the organization

When nonprofit organizations are (partly) financed by (private or corporate) donors, the latter are a specific group of external stakeholders delegating decision authority to the organizations, and therefore principals, the organization being the agent. Clearly, information asymmetries between both exist, even more if there is no direct link between donors and eventual beneficiaries (Gordon and Khumawala, 1999, p. 39; see also pp. 48–51 for more elaborate hypotheses on this). The question then is whether accounting information helps to reduce this gap, stimulating donors to be more generous than without accounting information. Accounting here can be considered as a bonding cost from the point of view of the organization. 'There is little empirical evidence with respect to the extent to which individual donors request financial statements' (Gordon and Khumawala, 1999, p. 31; but Hyndman (1990) is an example), or 'here is limited empirical research examining the impact of *accounting* data on charitable giving decisions' (Parsons, 2003, p. 104), and it appears there is no research at all on the role of auditing, although audited financial statements are mentioned by Gordon and Khumawala (1999, p. 42) and Hyndman (1990). Furthermore, as potential donors essentially seem to be looking at the organizations' efficiency and effectiveness (Hyndman, 1990, p. 304; Parsons, 2003, p. 113), accounting data only shed light on a part of the required information (the inputs), even if fund accounting is applied, as recommended by Falk (1992, pp. 486, 488), in order to facilitate 'patrons' giving decisions (Falk, 1992, p. 486). Nevertheless, the available research reveals an effect of how the resources are split over program activities, fundraising activities, and administrative activities (cost accounting information) on the contributions received (Parsons, 2003, p. 115; see also Gordon and Khumawala (1999, p. 47) for a limited literature review, and Marudas and Jacobs (2004) for an econometrically subtle empirical study on 1014 US nonprofit organizations for 1985–1994), although methodological causality problems remain (Parsons, 2003, p. 119). Krishnan et al. (2004) found

empirical evidence that this effect is taken into consideration by nonprofit organizations when making disclosure decisions: comparing the data of 719 hospital-year observations (Californian nonprofit hospitals, 1994–1998) in two databases that should contain the same data, they found that on average program expenses reported in the publicly available database exceeded the same expenses reported in the other database, with US $13.9 million (p. 15). Furthermore, of the 95 hospitals reporting no fundraising expenses at all, 19 appear to have publicly documented fundraising activities (p. 22).

Clearly, auditing these data will contribute to their reliability when disclosed, further reducing information asymmetries between donors and the organization.

20.2.5 Accounting regulation

In the preceding sections it was implicitly assumed that nonprofit organizations were not subject to any accounting regulation. This clearly does not conform to reality, at least in most countries, for the larger organizations. Although other reasons to enact accounting regulations can be considered (Maijoor, 1991), accounting regulations for nonprofit organizations are also easily understood in a principal–agent framework: authorities only grant subsidies under a number of conditions, making them the principal, and the organization has to report on how the funds obtained have been used. Part of this reporting is financial reporting, which is therefore one of the monitoring instruments available to the authorities. The obligation for US hospitals to explicitly report charity care expenses from 1990 onwards can be interpreted in this vein as far as the nonprofit hospitals are concerned (Eldenburg and Vines, 2004).

Regulations make interpretation of the submitted financial statements easier, enhancing the authority's possibilities to reduce the residual losses. Furthermore, uniform accounting rules reduce the monitoring costs as such, because of the possibility of common training programs, and the availability of common rules that do not have to be reinvented at the organizational level. In the absence of governmental regulation, comparable (monitoring) cost advantages can be obtained by self-regulation, as witnessed in different US nonprofit industries (Christensen and Mohr, 2003).

If the accounting regulations impose rules that imply at least an accounting intensity and sophistication required to cope with the board–management agency problems, there is no need for additional accounting obligations. In the opposite case, where the rules to be applied due to the regulation are not sufficient to optimally

reduce agency costs between the board and management, one can expect accounting to be more elaborate than legally required.

20.2.6 Accounting choices

Most accounting regulations, both for profit firms and nonprofit organizations, allow in a number of cases for some choices to be made. Traditional examples are: depreciation rules (which frequently can be chosen out of a limited set of alternatives), stock valuation rules, capitalization requirements. Theoretically, the eventual choice influences the information (or signal) given to the principal about the agent's performance, and therefore the agent might be induced to choose the most favorable alternative, from his point of view (Steinberg, 1993, p. 24). In a profit context, most choices are analyzed with respect to their effect on managerial remuneration. But there is also published research available to argue that comparable mechanisms are at work in nonprofit organizations.

The findings of Baber et al. (2002) fit completely in the for-profit research tradition: for 331 US charities in the mid 1990s they found a cross-sectional positive and significant influence of relative output changes (measured with accounting data) on relative compensation changes, though they 'cannot observe whether charities explicitly use accounting measures for setting executive compensation' (Baber et al., 2002, p. 691). But this proves at least that such connections are not inconceivable in a nonprofit context.

Chase and Coffman (1994) proposed a 'political cost' reasoning: the reported wealth impacts on the government's and donors' willingness to provide subsidies and gifts – higher levels of wealth are considered to be either a reason to reduce payments or a signal of financial viability entailing more subsidies and gifts, which are then expected not to be wasted. Apparently, the civil servants concerned and the public are assumed not to be able to correctly assess the disclosed data. On top of that, managers are supposed to be concerned with their personal reputation, therefore trying to select accounting methods indicating maximal financial performance (return on endowments in this case). In a sample of 137 private colleges and universities in the USA (data pertaining to 1989), the choice between fair market value reporting of the endowments and their reporting at cost is considered. The results show that the institutions choosing the fair market value method are more endowed (supporting the financial viability reasoning) and realize higher returns on their endowments (not contradicting the reputation argument). In Leona and Van Horn (1999), managerial reputation is the focus of their traditional earnings management study. In a sample of 3997 nonprofit hospital-year observations (USA,

1988–1996) they found data confirming the hypothesis that nonprofit managers try to avoid losses, but not negative earnings changes. On top of that, 'big bath' accounting is frequently found in the first year a new manager is appointed, also consistent with the reputation hypothesis.

Robbins et al. (1993) studied accounting choices in 298 US hospitals (public, private nonprofit, and proprietary). The LIFO/FIFO choice and the depreciation method used are combined in a binary choice variable with two categories: income-increasing choices (84% of the sample) and income-decreasing choices (16% of the sample). Unfortunately, separate results for nonprofit organizations were not given. In the whole sample, there seems to be a positive relation between the existence of management compensation plans and income-increasing choices, but this might be due to the presence of proprietary hospitals in the sample. The other hypothesized relationships turn out to be insignificant, but this might be ascribed to the heterogeneous sample composition.

Christensen and Mohr (1995) framed their accounting choice study on US museums explicitly in a principal–agent context (1989 data on 106 museums, of which 84 are nonprofit). The choice here is whether or not to capitalize the museum's collection. There seems to be statistical support for political cost reasoning: the more federal government support, the less capitalization is observed.

The results of Eldenburg and Vines (2004) can also be understood in a principal–agent framework. Based on a sample of 98 nonprofit hospitals located in Florida (1989–1991), they observed that hospitals with higher cash levels are more prone to report a larger share of their uncompensated care as charity care, and not as bad debt, signaling to the (fiscal) authorities that their tax-exempt status is fully justified. As labeling uncompensated care as charity care implies foregoing any cash collection (e.g. through Medicare or Medicaid), hospitals with lower cash levels have to trade off the expected cost of losing their nonprofit status with the expected cost of illiquidity.

20.2.7 Compliance

Accounting choices are choices between legally allowed alternatives, but one could also consider just not complying with the accounting regulations. From the agent's point of view, this is an optimal decision if the expected costs of noncompliance do not exceed the expected revenues brought about by misinforming the principal on the financial condition of the organization, and causing possibly additional residual losses, especially in relationships where the authorities act as principal.

Empirical research on compliance in nonprofit organizations is scarce. Jegers and Houtman (1993) assessed compliance to accounting rules for 197 Belgian public and private nonprofit hospitals. The compliance variable is the number of specific reporting violations of the law, of which the highest value possible was 32. There appeared to be no statistically significant difference in compliance behavior between public and nonprofit hospitals. Larger hospitals produced significantly better financial statements than smaller hospitals. This can be understood by noting that the relative cost of complying is smaller for larger hospitals, combined with the expectation that the political cost of noncompliance is higher. Krishnan and Schauer (2000) analyzed financial disclosure in 1994–1995 by 164 nonprofit health and welfare organizations from Pennsylvania and New Jersey, and observed a rather low compliance for nonprofit-specific items: only 45 of the 164 disclosed cash donations and pledges, and 91 donated materials and services. Also in this piece of research, larger organizations complied more, in accordance with the agency mechanisms described above. Finally, financially more stable organizations, and less wealthy ones, complied more in their sample.

20.2.8 Choices and compliance when calculating the cost of nonprofit activities

Frequently, subsidizing authorities calculate the amount to be granted taking into consideration the cost of the subsidized activities. If organizations develop both subsidized and nonsubsidized activities, it is rather difficult for the authorities to have a clear picture of the relevant costs. Cost accounting reduces this information asymmetry, especially in cases where cost accounting regulations are enacted to guide the allocation of the indirect costs. Sometimes these regulations are very strict and sometimes they give the organizations some leniency, in which case organizations could be inclined to allocate as much as possible (and allowed if they want to comply) indirect costs to the subsidized activities. If the nonsubsidized activities are taxed, some tradeoff has to be made between higher subsidies and lower taxes payable. Furthermore, if the nonsubsidized activity is developed on a profit market, overhead allocation techniques potentially distort competition on this market (Weisbrod, 1988).

The only empirical study on cost allocation manipulations in nonprofit organizations is, to my knowledge, Trussel (2003), who uses financial data on 8496 US charities (data on 1994–1995). Using an original methodology, he distinguished 467 potential overhead allocation manipulators, by looking at the program-spending ratios applied. Financial characteristics were successfully introduced

in a logit model to explain their occurrence but, unfortunately for the purposes of the present chapter, no further analysis could be performed.

20.3 The role of external audit

20.3.1 Reducing agency costs

In a principal–agent framework, external auditing can be understood as a way to increase the reliability of the financial information produced by the agent on behalf of the different principals. The audit fee is added to the monitoring costs, but should be more than compensated by the increased possibility to reduce residual losses: 'The economic role of auditing is to reduce agency costs' (Sunder, 1997, p. 115). In the absence of appropriate internal control procedures, the residual loss-reducing role of external control is even more important. Results obtained by Krishnan and Schauer (2000) furthermore suggest that, as in a for-profit context, supply of audit services is segmented, with audit quality tied to specific segments: after controlling for client characteristics, compliance of organizations audited by one of the (at that time) Big Six is higher than that of organizations audited by large non-Big Six, which in turn is higher than that of organizations audited by small non-Big Six audit firms. Which situation is optimal theoretically depends on the comparison between the value of the residual losses avoided and the additional audit fees (monitoring costs). Up to now, empirical work on this point does not seem to be available. One paper deals with just one side of the picture, the fees, and is discussed in the next section.

20.3.2 Audit pricing

Beattie et al. (2001) investigated audit fees (1995 and 1997) for more than 200 UK charities (originally more than 300, but a large number of them did not provide their financial statements, contrary to the legal obligation to do so), which have to disclose audit fees and fees for nonaudit services. Generally, fees appear to be lower than for as comparable as possible audits in the profit sector. The three possible reasons for this (lower audit risk, auditor altruism, lower audit quality) cannot be disentangled. A traditional audit pricing model is developed and tested. Two auditee characteristics positively influence audit prices (and thus monitoring costs): size and the share of year-end stock in total assets. On top of that, Big Six fees are considerably higher than fees for other audit firms (18.5%), and there is also an, albeit small on average, premium for non-Big Six audit firms with charity experience.

Combining these results with those obtained by Krishnan and Schauer (2000) discussed above leads to the, admittedly very preliminary, conclusion that both audit quality and audit prices are higher when larger audit firms are appointed to nonprofit organizations, leaving inconclusive on *a priori* grounds the aforementioned comparison of residual losses avoided and additional monitoring costs.

20.3.3 Containing the management–other staff agency costs: internal control

Internal control can be seen as a monitoring device available for managers to ensure that administrative procedures, theoretically designed to add to the achievement of the managerial objectives, are applied correctly. Furthermore, it impacts on the audit cost, as external auditors first assess the quality and reliability of the internal control system before drawing up their audit plan. As it happens, and contrary to the situation in profit organizations, for nonprofit organizations there is an 'accumulation of evidence which points to systemic and widespread failure of internal control' (Ortmann and Schlesinger, 1997, p. 103), including religious organizations (Bowrin, 2004). This situation is also reflected by the available empirical research on internal control in nonprofit organizations: it is almost nonexistent, except for the paper by Rayburn and Rayburn (1991), who analyzed internal control reactions of 307 US hospitals to the introduction of prospective payment systems for hospital financing. The nonprofit hospitals appeared to increase tightening and centralizing of financial controls, use of administrative committees and ad hoc coordination groups more intensively than proprietary hospitals. Whether this could be explained as catching up or taking the lead could not be assessed.

20.4 Conclusion

The traditional principal–agent framework is shown to be useful as a framework to understand the role of accounting and auditing within nonprofit organizations. Results obtained in the relevant empirical literature fit in this framework, and add to our understanding of the role of accounting and auditing. In its most general formulation, it consists of reducing agency costs by inducing decreases in residual welfare losses for the principal by bearing less than commensurate monitoring costs, accounting and auditing being the monitoring instruments.

Therefore, accounting and auditing regulations for nonprofit organizations should be based on this kind of reasoning to justify the costs inflicted to the

organizations. As far as future research is concerned, as the conclusions obtained in the literature can only be considered to be very preliminary due to the low number of studies available, all the points raised in this chapter merit further empirical and theoretical studies, in order to obtain a generally agreed upon body of concepts and results from which further developments can be ventured.

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21

How about Performance Audits for Public Companies?

Haji Shafi Mohamad

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21.1 Introduction

External auditing is an important function in the business environment (Watts and Zimmerman, 1983). Legislation exists in most Western countries to ensure that the function is mandatory for public companies (Arpan and Radebaugh, 1985). Even if auditing were not legislated, Watts and Zimmerman (1983, p. 633) argued that the function of external auditing would continue to exist, as it is an efficient method of reducing overall contract costs for an entity. The latter refers to all manner of costs likely to be incurred when transacting business with the particular entity concerned. External auditing serves many purposes. It can act to monitor the performance of management on behalf of shareholders or as a demonstration by management to existing and potential shareholders of their effort and performance. The former is usually referred to as the 'monitoring role' performed by external auditors, while the latter purpose is referred to as the 'signaling role' performed by the independent external auditors.

Herbert (1979) indicated that, traditionally, the purpose of accounts examination or auditing used to be to detect fraud and certify the accuracy of records, whereas the primary purpose now is to express an opinion on the truth and fairness of presentation of the financial statements (p. 3). The latter role of auditing, also known as the 'attest function', is to simply add credence to the truth and fairness of the financial statements and to confirm that they comply in all material respects with the statutory requirements of any relevant legislation.

21.2 Extensions to the role of external auditing

To ensure that the actual audit performance corresponds more closely to expectations of the different user groups, Gwilliam (1987, p. 64) noted that the auditors' attestation role could be extended to include systems and performance auditing (encompassing the 'audit' of internal controls).

A potential benefit from extending the scope of the statutory audit beyond the traditional attest function into areas encompassing performance audits would be their role in narrowing what is commonly referred to in the audit literature as the audit expectation gap (henceforth referred to as the 'expectation gap'). This exists due to differences between the public's perceptions of the auditor's role and responsibilities and what auditors actually do in practice. Blair (1990) described the expectation gap as the difference between what auditors do and what the users of audit reports think they receive.

21.3 The concept of performance auditing

Performance auditing, whereby auditors review and comment on internal controls, has become a topic of concern for auditors as a measure to be used in the pursuit of financial accountability. This type of auditing has come to be viewed by some, usually nonpractitioners in the audit area, as a procedure that is complementary to attest auditing. The realization of the worth of performance auditing has encouraged both academics and practitioners to address it in a meaningful and concerted manner (see, for example, Herbert, 1979; Brown et al., 1982; Parker, 1986; Guthrie et al., 1990).

This begs the following question: What is a performance audit and how does it differ from the conventional 'attest' audit?

Gill and Cosserat (1996) defined a performance audit as one that involves the process of obtaining and evaluating evidence about the economy, efficiency, and effectiveness of an entity's operating activities in relation to specified objectives. This type of audit is also referred to as value-for-money (VFM) auditing, operational auditing, management auditing, or efficiency auditing (p. 5).

In the literature, the above terms are often used interchangeably, to denote the same operation or activity. In fact, according to Parker (1986), they are, to all intents and purposes, identical in the prescription of their constituent elements, with all focusing upon the evaluation of economy, efficiency, and effectiveness of resource utilization, operation procedures, and activities, and the pursuit of objectives (p. 11).

There were a spate of large corporate collapses and corporate scandals in the late 1980s and early 1990s in a number of Western countries. As mentioned by Godsell (1990), the demise of Estate Mortgage, Spedley Group, National Safety Council of Victoria, and Tricontinental Corporation in Australia all resulted in legal proceedings against the audit firms involved. This in turn led to an increase in the demand for greater management accountability from some sectors of the business community.

More recently, the collapse of Barings Bank plc in the UK in 1995 drew attention to the question of the auditor's responsibility to report publicly on the efficacy of internal controls. Sinha (1995), in his analysis of the Barings plc collapse, attributed it to the almost total failure of internal control mechanisms in place.

In response to similar concerns in the USA, the American Institute of Certified Public Accountants (AICPA) issued a white paper in June 1993 which proposed that the Securities and Exchange Commission (SEC) establish a reporting system requiring public companies to state whether the internal controls over their

financial reporting were effective. Independent auditors would then be required to publicly comment on the validity of management's assertions.

The motivation for this chapter is derived from the perceived dissatisfaction that exists among some user groups of financial statements with certain aspects of current auditing practices. This dissatisfaction appears to have existed for some time. As far back as 1973, Beck surveyed 2000 shareholders selected at random from the share registers of two major Australian companies and found that a surprisingly large proportion (81%) of the respondents thought an auditor's work assured them that there was a basis for considering the entity audited to be financially sound. Another study by Steen (1989) in the UK found that 25% of a subset that participants described as influential believed that auditors guaranteed the financial soundness of the entity being audited. Based on some of the above findings, it is quite obvious that an audit expectation gap appears to exist. As mentioned above, this is the difference between the role the audit profession perceives auditing plays in the business environment and the general public's perception of what function auditors currently serve. The expectation gap also incorporates the difference between auditor's current functions and functions the general public considers they should be performing. The expectation gap and the increase in litigation involving auditors referred to earlier, taken together, suggest a level of dissatisfaction with certain aspects of the traditional external audit function.

In light of this perceived dissatisfaction and the demand for more management accountability due to widespread corporate failures, some of which were mentioned earlier, this chapter looks at the possibility of extending the role of auditors beyond their traditional attesting and statutory compliance functions to incorporate mandatory reporting on internal controls. In other words, this chapter explores the possibility of making performance audits mandatory, initially at least, for publicly listed companies.

O'Leary (1996) commented on how performance audits have traditionally been conducted by the internal audit departments of the entities under audit. The results of these audits have usually been kept very much 'in-house'. Internal auditors have been requested to review an area and report back to management on how economically, efficiently, or effectively that area has been managed during the period under review. As the findings may not always be complimentary to management, they have been reluctant to disclose them to the members of the entity or to the general public. Therefore, the important issues to be raised are:

1. Whether the users of the financial statements of the entity concerned would like to have this information.

2. Whether the members of the entity concerned are reasonably entitled to have access to information of this nature relating to the efficient and effective performance of the present management team.

There are many potential problematic areas that will have to be tackled and overcome before a mandatory performance audit framework can be established. If, however, the pressure for performance audits escalates, then ways will have to be found to overcome some of these potential problem areas. According to writers like O'Leary (1996), these are not insurmountable problems.

This in turn leads to questions about the purpose of the audit function and, further, about what is in store in the future? A review of the origins and history of auditing, as it is traditionally understood, is therefore pertinent.

21.4 The origins of auditing

Brown (1962) commented on how auditing can be traced back to the days of the Roman Empire. Similarly, Gill and Cosserat (1996) noted that, in ancient Egypt, authorities provided for independent checks on the recording of tax receipts. In ancient Greece, inspections were made of the accounts of public officials, and the Romans compared disbursements with payment authorizations.

Furthermore, Gill and Cosserat (1996) noted how the early records of auditing were primarily confined to public accounts, with those handling public monies required to meet a responsible official known as the auditor who 'heard' their accounting for such funds. The latter was similar to the approach taken by a judge hearing the evidence of witnesses at a trial. The word 'auditor' is derived from the Latin *audire* – 'to hear'. The authors also describe the practice of the government in medieval England of sending auditors on a circuit to manors and estates to hear accounts for disbursement and revenues. This practice contributed to the stable financial condition of the English Crown. Traditionally, auditing only performed a stewardship function. It informed the members of an entity whether management of that entity, to whom they had entrusted their capital, had invested it as planned and could account for its current whereabouts.

It is interesting to note that a statement of audit objectives published in a practice manual by Dicksee (1892) stated the object of an audit to be threefold:

1. The detection of fraud
2. The detection of technical errors
3. The detection of errors of principle.

Auditing practice evolved over time. In the early part of the 20th century it was recognized that some reliance on internal control was possible. It now appears as though the practice of auditing has turned full cycle from its early beginnings. In what might be referred to as the formative days of auditing, it was popularly held that the chief objects of an audit were the detection and prevention of both fraud and errors, whereas in the latter days the auditor was viewed as merely expressing an opinion and not certifying or guaranteeing the accuracy of the records (the latter is also known as the 'attesting' role).

Today it appears that there is a move by some sectors for an extension to the traditional attesting role to incorporate, amongst other things, a performance audit, with an auditor being required to express a public opinion on the efficacy or otherwise of a company's system of internal controls.

As we enter the new millennium, the recipients of financial statements have become a far more sophisticated and informed group. They demand more from an audit function than a mere attestation that their investments can still be accounted for. Accounting standards have necessitated the issuance of much more than bare profit and loss and balance sheet figures. Significantly more data has to be given these days. Consider, for instance, the voluminous notes that nowadays accompany published financial statements. Items such as segment information, related party transactions, and lease commitments, to name but a few, are now part and parcel of the Annual Report of most entities. Auditors now have to comment on these data as well as the basic accounts. Hence, auditing has expanded from its traditional stewardship role to one of a more informative nature as well.

The brief history of auditing outlined earlier demonstrates an interesting point. Auditing is a profession and just like any other profession, it is dynamic and not static. It will grow and adapt as the demands of the users of that profession change over time. According to O'Leary (1996), currently a level of dissatisfaction can be perceived worldwide with what an audit function is seen to provide, and Malaysia is not immune from this global trend. This is due partly to the audit expectation gap referred to earlier.

As reported by Gwilliam (1987), the American Institute of Certified Public Accountants (AICPA) established the Cohen Commission in 1974 *inter alia* to consider whether a gap may exist between what the public expects or needs and what auditors can and should reasonably expect to accomplish. Gwilliam (1987) noted how, in respect of its primary brief, the Commission came to the conclusion that such a gap does exist. However, the Commission noted that the principal responsibility does not appear to lie with the users of financial statements. The Commission considered that the main reason for this 'expectation gap' was the

failure of the public accounting profession (or auditors) to react and evolve rapidly enough to keep pace with the speed of change in the business environment.

Blair (1990) further expanded on the functions that an audit does not perform. He noted that an audit is not an assurance of the future viability of an entity. It is not an opinion on the economy, efficiency, or effectiveness with which management has conducted its affairs, nor is it an assurance that there has been no fraud or other irregularity. His comment on management performance is interesting. Like many others, these comments appear to mirror some members of the public's expectations as to what an audit service should offer.

Some users of accounts obviously feel that auditors should comment on management's performance for the period under review, as well as reporting on the accuracy of the financial statements of that entity.

The audit expectation gap is, unfortunately, a current fact of life and, while it exists, it will continue to cause criticism of and litigation against auditors, and to undermine confidence in their work. According to Porter (1991), if irreparable damage to the profession's reputation is to be prevented, the auditing profession must take urgent and effective action to narrow the gap.

Porter (1991) noted how, in recent years, the profession, particularly in the UK and the USA, has taken some positive steps to narrow the gap, but that these efforts have generally been fire-fighting in nature, targeted to quell the most vociferous and scathing criticism of auditors, or else they have been enforced by legislation and designed to serve specific objectives.

21.5 Limitations and problems with implementing performance audits

From a review of the literature, it appears that there is a lack of support for recommendations that auditors' traditional attestation role be extended to incorporate performance audits amongst other functions. Smith and Lanier (1970), Smith et al. (1972), Santocki (1976), Edmonds (1983), and Boys (1985) discovered, amongst other things, that auditors were unwilling to perform such audits due to the wider responsibilities being undertaken. Gwilliam (1987) also attributed the reluctance to take on these additional tasks to the threat of greater legal exposure.

There are many limitations and potential problem areas that will have to be tackled and overcome before a mandatory performance audit framework can be established. O'Leary (1996) foresaw three major problems that can arise as a result of attempting to implement performance audits on a mandatory basis.

Briefly, some of the pitfalls include:

- Loss of audit independence
- Cost/Benefit considerations
- The establishment of adequate measurement criteria.

21.6 Auditor independence

As mentioned earlier, most large organizations currently conduct some form of performance auditing via their internal audit departments. Given their in-depth knowledge of the entity that employs them, internal auditors are in the ideal position to comment on management's efficiency and effectiveness or otherwise. However, by definition, they cannot be expected to conduct the performance audit function with complete objectivity. Even if they could, the perception of independence would be extremely clouded.

The ideal alternative is, of course, to utilize an entity's external auditors to conduct a performance audit, as well as the mandatory financial statements audit. Their knowledge of the client's operations will be reasonable but certainly not as thorough as that of the internal auditors. Hence, if the external auditors perform the function, this introduces a second problem, cost.

21.7 Cost/Benefit

Information always comes at a price. Whereas the shareholders of a company (or the members of any audited entity) and the general public would almost certainly welcome comments as to how economically, efficiently, and effectively the management of an entity has performed its functions, they will probably only welcome such additional information if it is obtainable at a reasonable price. Significant time, effort, and resources would have to be employed in conducting any worthwhile performance audit. It would be expected that management would wish to recoup these costs from shareholders, be it by way of additional contributions or reduced returns (dividend payments, etc.). This would appear reasonable, as shareholders would be the major beneficiaries of the additional review function, i.e. the performance audit.

As mentioned by Gwilliam (1987), a general problem that arises when considering the possibility of such extensions to the traditional audit role lies in the lack of evidence as to the potential costs and benefits. The fact that there is generally no prohibition on many of these services being offered and purchased at

present seems to suggest *a priori* that, in the majority of cases, the costs currently exceed the benefits.

21.8 Establishing measurement criteria

One of the major difficulties with performance audits is how to establish measurement criteria. Commenting on what is economic, efficient, and effective is obviously not as clear-cut as commenting on dollar and cent valuations and results. Performance evaluations may be highly subjective unless adequate guidelines are set, against which performances can be gauged. It is critical, therefore, in a performance audit that the audit objective be properly defined so that the results of the investigation can be assessed correctly. However, setting the objective for a performance audit as opposed to a financial statements audit will not usually be as straightforward. This is due to the lack of succinct meaning of the terms economic, efficient, and effective.

The above three difficulties may partly explain why the concept of issuing the results of performance audits to outside parties has not yet been embraced readily by some elements of the financial community. However, these problems are not insurmountable. The difficulty of a lack of independence can easily be overcome by having the performance audits conducted by external audit firms, and this may not necessarily result in exorbitant costs, which have to be passed on to the members of the entity. The external auditors must already possess a sound knowledge of their clients' operations.

The work carried out by Boys (1985) in the UK found that there was already a very considerable overlap between performance auditing and the work of the management consultancy divisions of professional accounting firms, hence the finding that accounting firms were much more prepared to countenance the auditor in this additional role, since the extra costs, if any, were likely to be marginal. When carrying out the audit of financial statements, the external auditors usually review several aspects of management performance. For instance, the auditor should obtain an understanding of the internal control structure in order to plan the audit and develop an effective audit approach. This means that the auditors are bound to review and assess the effect of the internal controls on the entity. The by-product of this function is often seen in the letter of recommendation. Arens et al. (1990) commented that a secondary purpose of many financial statements audits is to also make operational recommendations to management.

The external auditors can further reduce costs when assessing the work of the entity's own internal audit department. If they are satisfied that the internal audit department is competent and acts independently of management pressure, they are entitled to rely on their work to a large extent.

If this is allowable for a financial statements audit, why not for a performance audit as well? Relying on the performance audit work of the internal audit department would greatly reduce the cost to the external auditors of performing an independent review. Hence, it may be quite feasible to have external auditors conduct performance audits without the costs becoming too prohibitive.

This then leaves us with the problem of establishing adequate measurement criteria. Here again, however, significant progress has already been achieved. In the USA, Charnes and Cooper (1980) attempted to develop a method of evaluating management efficiency that did not necessitate the use of imputed market prices. Their new method uses complex linear programming techniques.

Sherman (1984) then compared the performance of these techniques, which he termed 'data envelopment analysis' (DEA), with the techniques of financial ratio analysis and analytical reviews that are traditionally employed by auditors as part of their performance audits. He found DEA was better able to capture efficiency dimensions not covered by the more traditional methods of evaluation. Sherman suggested two valid reasons for the use of DEA techniques.

Firstly, DEA can provide technical measures of efficiency, thereby removing all the problems associated with internal cost allocations (this also includes those situations where market imperfections allow for high profitability in spite of operating inefficiencies) and, secondly, it is better able to account for expenditures such as training, research and development, etc., which contribute to future output but are not taken into account in arriving at more current measures of profitability.

In some countries, like Australia, the fact that an audit practice statement, AUP 33 (and the subsequent AUS 806), has already been issued since 1992 indicates that a fairly high degree of agreement already exists as to what the measurement criteria entail. The three critical factors in performance auditing are economy, efficiency, and effectiveness. Although they are still prone to a certain degree of subjectivity in their implementation, they are certainly not as nebulous as some commentators would have us believe. With time, the measurement criteria can be refined and redefined if necessary. Hence, the problems associated with performance auditing should not be considered insurmountable. With careful planning, monitoring, and implementation, they can be overcome.

21.9 Conclusion

The issue of the audit practice statement AUP 33 in 1992 heralded the official recognition of performance auditing by the auditing profession in Australia. Certain members of the business community and some academics believed that it would be the future of auditing worldwide. Rather than just the traditional financial statements audit, in years to come audit firms may have to comment on management performance as well as the accounts under review, in conducting their periodic reviews of audit entities.

Questionnaire studies and other evidence suggest that user groups see the auditor as performing a wider function than that encompassed by the presently limited scope of the financial audit. A number of possible changes in, and extensions to, the audit function have been suggested so as to ensure that the actual audit performance corresponds more closely to the expectations of various user groups. Research work relating to this problem of the audit expectation gap and some suggested solutions have been reviewed earlier.

Smith et al. (1972), who undertook a survey to determine the need for and scope of the audit of management's performance, concluded from their study that corporate management has its responsibility towards society and there is a very clear need for appropriate professional standards. It must be borne in mind, in relation to the latter, that their comments were made more than 30 years ago. The question of standards would no longer appear to be an important issue, since professional standards covering the area of performance auditing have already been in use in Australia since 1992 and it is only a matter of time before other countries in the region follow suit.

Similarly, Beck (1973) performed an empirical appraisal looking at the role of the auditor in modern society and made the following observations:

> 'If the ascribed role is not fully performed, there arises the possibility that social action will be taken to enforce conformity, perhaps by new legislation or to downgrade the status and thus shrink the role. As a role develops only out of social wants, it is axiomatic that the void created by a reduced role will, in due course, be filled by other social functionaries prepared to satisfy those social wants.
>
> (p. 118)

He then goes further, noting that 'it may be doubtful whether any other credible source can provide information of this kind: but auditors certainly should be aware that it is wanted and that a significant proportion of shareholders expect auditors to supply it' (p. 121). Porter (1991) concluded from her research investigating the

structure and composition of the audit expectation gap that auditors are failing to meet society's expectations in relation to their corporate watchdog function. The auditing profession has usually downplayed the latter role, yet survey results consistently demonstrate that auditors' stakeholders expect auditors to perform these additional duties.

These concerns of both Beck and Porter, amongst others, have been borne out in recent years by the additional responsibilities imposed on auditors in many parts of the English-speaking world through legislation. Much of the information presented in corporate annual reports which is generally not covered by the external auditor's opinion is important for making sound investment decisions. The purpose of this chapter, therefore, has been to consider whether the external auditor's attesting function should be extended by mandate to incorporate performance auditing. Probably the only significant barriers at the present time to extending the attesting function to include information outside the financial statements are the economic and legal implications of any such proposed extension.

Perhaps recent developments, such as the clarification of legal responsibilities and the development of accounting standards and procedures, which reduce time and cost limitations, will lessen the effect of these obstacles. External auditors should seize this opportunity to extend their services to society wherever desirable and feasible. Failure to do so promptly may well have the undesirable consequence of weakening their claims to being the principal attester in our contemporary society.

Mautz and Sharaf (1961, p. 200) presented the challenge confronting the profession very clearly, noting:

> 'As the public requires more and more verified information, much of it well beyond that currently found in financial statements, will auditing see and seize the opportunity to extend its range of service? If it does, there are literally no bounds to its future. If, on the other hand, it either deliberately or unconsciously limits itself to but a small fraction of the total of verifiable information, its position of eminence may be lost to those who do seize the larger opportunity.'

Although these observations were made more than 40 years ago, there seems to be a ringing truth to their predictions in light of the current controversies surrounding the suggestions made about the extension of the auditor's role to incorporate mandatory performance auditing.

If the general public and the business community consider that this is the function they want an audit to perform in the future, for both public and private entities, then performance auditing may gain just as important a status as financial

statement auditing currently holds. Therefore, debate over the potential benefits of compulsory performance audits continues to increase, both in Malaysia and overseas.

In conclusion, irrespective of whatever role the audit profession wishes to ascribe to auditors, in the long run the public will shall be expected to prevail. The auditing profession must be seen to possess considerable economic power, albeit indirectly, since in the absence of a functioning auditing profession the economic structure in most English-speaking countries would be different and corporate organization as we understand it would disappear. The following comments attributed to Berle (1960, p. 111) apply to auditors no less, 'we have considered public consensus, if not as originator, certainly as final arbiter of legitimacy'.

It seems reasonable to view the public consensus concerning the role of auditor as in a state of continuous change or development, but generally there is small likelihood of sudden or dramatic change in this consensus. Although these last comments were made as the result of a study undertaken by Beck in Australia almost three decades ago, it is suggested here that they are still valid and can be taken as supporting an expanded role for auditors.

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22

Empirical Evaluation of Discretionary Accruals Models

Xavier Garza-Gómez

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22.1 Introduction

Every time an outsider needs to use the financial information of a publicly traded firm, he or she has to assess the reliability of the reported numbers. Nevertheless, generally accepted accounting principles (GAAP) allow certain discretion when calculating and reporting performance. Managers may want to use this discretion in order to show better financial results. For example, managers sometimes manage earnings to avoid showing a loss and to meet analysts' expectations (Burgstahler and Dichev, 1997; DeFond and Park, 1997; DeGeorge et al., 1999). Managers may want to lower the perceived risk by reducing the variation of inter-period earnings ('earnings smoothing'), which in turn would reduce the cost of capital for the firm (Chaney et al., 1998). This helps to keep the company's stock price up (or avoid a plunge), which may help managers personally to collect bonuses and/or exercise options (Healy, 1985), or sell stock at higher price (Teoh et al., 1998). Other reasons include avoiding penalties and/or getting external rewards. Examples in the former include debt covenants (DeFond and Jiambalvo, 1994), while getting government subsidies may be an example of the latter (Jones, 1991).

The accounting shenanigans at the beginning of this century further increased the interest of analysts, regulators, and investors in general about techniques that can identify earnings manipulation by the firm's management. Most methods attempting to find evidence of earnings management rely on the calculation of accounting accruals and their separation into two parts: the normal or expected accruals (referred to as nondiscretionary) and the abnormal or unexpected (referred to as discretionary) accruals. Once discretionary accruals are estimated, statistical tests are run to determine if the discretionary accruals of the firm(s) under scrutiny differ from zero, the normal or expected value.

Nevertheless, despite all the generated interest and the abundant literature on this subject, there is no consensus about which model or method of estimating discretionary accruals is superior. As a matter of fact, there are no guidelines about how to estimate these models in order to improve the power of the tests. Some early attempts to develop recommendations are found in Dechow et al. (1995) and Guay et al. (1996) with US data, and in Young (1999) using data from the UK. These early studies concentrate on the Healy (1985) model, the DeAngelo (1986) model, and the Jones (1991) model. The main conclusion, however, is that the models estimate accruals with considerable imprecision and that the models cannot account for variations in cash-flow performance. Following these recommendations, there have been separate attempts to account for the

relation between accruals and cash flows. Hunt et al. (1997) (among others) added a cash-flow variable to the Jones model; Shivakumar (1996) added five cash-flow variables to the Jones model. These two articles add to the Jones model while, Garza-Gómez et al. (2000) developed a new model based on cash flow from operations. These studies reported a general improvement over the traditional Jones model, but concerns about methodology and comparability still remained. Furthermore, the need for better accrual models is always present. However, despite the great need for sound recommendations on how to improve earnings management studies, previous studies provide no clear guidelines on how to compare or evaluate alternative accrual models. This chapter tries to fill this gap in the literature by revising how discretionary accrual models are typically estimated and compared, and thus develop a framework that may be used to test for earnings management.

The approach followed in this chapter is straightforward. Discretionary accruals are the residuals left by the model of expected or normal accruals derived by the researcher. A good expectations model will capture most of the volatility and leave a small amount of variation in the discretionary part of accruals. On the other hand, a weak model will not explain variation in total accruals and leave most of it in the discretionary part of accruals. Therefore, the power to detect earnings management is inversely related to the standard error of the discretionary part. This is the main premise of this work, and it is applied and tested on a series of accrual models. This chapter first explores three sources of variation in total accruals: the time effect, the industry classification, and the exchange effect. These three factors play an important role in accrual determination because total accruals are supposed to reflect the economic activity of the firm. Since the economy changes year by year, across industries and depending on the type of firm, differences in the level of total accruals can be expected. Initial results demonstrate that the three sources are significant and that considering them when accrual models are estimated results in lower standard errors. That is, splitting the total sample into subsamples by time, industry, and exchange when estimating accruals models is critical in improving the estimates of nondiscretionary accruals. Furthermore, these subsamples become the yardstick against which competing models can be compared.

When models are evaluated, results clearly indicate that those models that consider cash flow as an explanatory variable are more powerful than naive models and the popular Jones model. In particular, the accounting process (or AP) model proved to be the best for the whole sample. Discretionary accruals obtained with this method have the lowest standard error and a median and average close to

zero (nondiscretionary accruals under this method yield the highest R^2). Finally, to confirm the results, the information content of discretionary and nondiscretionary accruals to predict future cash flow from operations and future earnings is measured. Consistent with the results obtained from the volatility analysis, nondiscretionary accruals estimated with the AP model yield the highest contribution to explain future performance. Main conclusions are robust to different sample selection methods and different methods of estimating accruals.

This chapter contributes to the literature in several ways. It explores recent accrual models that address the reported weakness of the Jones model and presents evidence that these models are superior to the Jones model. It describes an empirical framework to detect earnings management and a straightforward approach to compare new accrual models that will come in the future. The chapter is organized as follows. Section 22.2 describes how total accruals are calculated and the models used in this study. Section 22.3 describes the data and identifies three main sources of dispersion. Section 22.4 shows tests of the accrual models. Section 22.5 presents tests of the information content of discretionary accruals and some robustness tests, while section 22.6 concludes the chapter.

22.2 Estimating discretionary accruals

The separation of total accruals into a discretionary part and a normal (or nondiscretionary) part is an extremely difficult task, not only because discretion is unobservable but also because there are economic events in the life of a company that will cause total accruals to change from year to year. Every time a researcher estimates discretionary accruals, he or she is forcing an expectation model of the 'normal' or expected behavior of accruals in relation to economic events. Most models will require the estimation of one or more parameters.

Two methods are found in the literature to estimate these expectation models. The time-series approach estimates parameters for each firm in the sample using data from periods prior to the period in question. In contrast, parameters in the cross-sectional models are estimated each period for each firm in the event sample using data of firms in the same industry. Early tests done by Dechow et al. (1995) and Guay et al. (1996) are based on the time-series approach. Nevertheless, a natural disadvantage of this technique is the estimation of the model for new firms. Since the model requires the existence of at least $N + 1$ years of data (where N is the number of explanatory variables used in the model), the models can only be estimated for firms that have a long series of financial data.

For example, Guay et al. (1996) required 15 years of data to be considered in their study. This introduces survivorship bias as well as selection bias, since young, new companies won't be considered. DeFond and Jiambalvo (1994) introduced a cross-sectional method. They separated firms by SIC code and estimated normal accruals using yearly cross-sections. This method assumes that the situation for each year will affect the firms in the industry in a similar way. This approach is becoming the norm to estimate accrual models. Subramanyam (1996) estimated the Jones model and the modified Jones model proposed by Dechow et al. (1995) and reported better fit for the cross-sectional versions of these two models. In general, he found lower standard errors for the coefficients, fewer outliers, and coefficients that fit better the predicted signs. Jeter and Shivakumar (1997) also argued in favor of the cross-sectional estimation method over the time-series method, stressing that industry-relative abnormal accruals can be a useful tool for researchers trying to detect the average unconditional earnings management found in the industry.

In general, the assumption that the time-series approach makes is that, prior to estimation, no systematic earnings management is expected to occur. On the other hand, cross-sectional models assume that all firms in the subsample are affected equally in the period. Initial evidence (further explored in the next section) tends to support the second assumption. Furthermore, the number of firms decreases substantially when the time-series approach is used. For these two reasons, the cross-sectional approach is chosen for all the calculations in this chapter. Nevertheless, the next section shows empirically how this cross-sectional method improves estimation.

22.2.1 Basic accrual models

This chapter compares several discretionary accrual models. The first three models (Healy, 1985; DeAngelo, 1986; and industry median) are simple or naive models.

The simplest version of the Healy (1995) model assumes:

$$E[TA_t/A_{t-1}] = NDA_t = 0, \tag{22.1}$$

where TA_t = total accruals in period t and A_{t-1} = beginning of period total assets.

This model effectively makes all discretionary accruals equal to total accruals. An inherent weakness of this is that the model doesn't allow for accruals to fluctuate in response to economic conditions.

The DeAngelo (1986) model assumes that nondiscretionary accruals follow a random path. This model uses last period's total accruals (scaled by lagged total assets) as the measure of nondiscretionary accruals. Therefore, the DeAngelo model is:

$$E[\mathrm{TA}_t/\mathrm{A}_{t-1}] = \mathrm{NDA}_t = \mathrm{TA}_{t-1}/\mathrm{A}_{t-1}. \tag{22.2}$$

The industry model allows for nondiscretionary accruals to fluctuate over time. It assumes that the variation in the determinants of nondiscretionary accruals is common across firms in the same industry. The model is:

$$E[\mathrm{TA}_t/\mathrm{A}_{t-1}] = \mathrm{NDA}_t = \mathrm{median}(\mathrm{TA}_t/\mathrm{A}_{t-1}). \tag{22.3}$$

Jones (1991) employed a regression-based expectation model to control for variations in nondiscretionary accruals associated with the depreciation charge and changes in economic activity:

$$E[\mathrm{TA}_t/\mathrm{A}_{t-1}] = \mathrm{NDA}_t = \alpha_1(1/\mathrm{A}_{t-1}) + \beta_1([\Delta]\mathrm{REV}_t/\mathrm{A}_{t-1}) + \beta_2(\mathrm{PPE}_t/\mathrm{A}_{t-1}), \tag{22.4}$$

where $\Delta\mathrm{REV}_t$ = change in revenue from period $t - 1$ to t and PPE_t = gross plant property and equipment. According to Jones, the [Δ]REV and PPE terms are to control for the nondiscretionary component of total accruals associated with changes in operating activity and level of depreciation respectively.

Dechow et al. (1995) argued that since all revenue changes in the Jones models are assumed to be nondiscretionary, the resulting measure of discretionary accruals does not reflect the impact of sales-based manipulation. Therefore, they tried to capture revenue manipulation and change the Jones procedure by subtracting the change in receivables (ΔREC) from ΔREV for each sample firm. Their model is:

$$E[\mathrm{TA}_t/\mathrm{A}_{t-1}] = \mathrm{NDA}_t = \alpha_1(1/\mathrm{A}_{t-1}) + \beta_1(\Delta\mathrm{REV}_t/\mathrm{A}_{t-1} - \Delta\mathrm{REC}_t/\mathrm{A}_{t-1}) + \beta_2(\mathrm{PPE}_t/\mathrm{A}_{t-1}). \tag{22.5}$$

Dechow et al. (1995) and Guay et al. (1996) evaluated these five models and reported that the discretionary accruals (DAs) estimated with these five models are imprecise and generate low-power tests for earnings management. Furthermore, DAs correlate with operating cash flows.

22.2.2 Alternative accrual models

Until recently, the Jones and modified Jones models have been the models of choice in the earnings management research. Nevertheless, to account for the reported correlation between accruals and cash flows (Dechow, 1994; Dechow et al., 1995), some authors have added a term that includes CFO into the original Jones model (Subramanyam, 1996; Hunt et al., 1997). This model becomes:

$$E[\mathrm{TA}_t/\mathrm{A}_{t-1}] = \mathrm{NDA}_t = \alpha_1(1/\mathrm{A}_{t-1}) + \beta_1(\Delta\mathrm{REV}_t/\mathrm{A}_{t-1}) + \beta_2(\mathrm{PPE}_t/\mathrm{A}_{t-1}) + \beta_3(\mathrm{CFO}_t/\mathrm{A}_{t-1}). \quad (22.6)$$

Shivakumar (1996) argued that cash from operations varies across firms in the estimation sample and expected the sensitivity to cash flows to be different between firms with low cash flows and firms with moderate or high cash flows. Shivakumar's model, also used in Jeter and Shivakumar (1999), can be written as:

$$E[\mathrm{TA}_t/\mathrm{A}_{t-1}] = \mathrm{NDA}_t = \alpha_1 + \beta_1(\Delta\mathrm{REV}_t/\mathrm{A}_{t-1}) + \beta_2(\mathrm{PPE}_t/\mathrm{A}_{t-1}) + \beta_3 D_1\mathrm{CFO}_t/\mathrm{A}_{t-1} + \beta_4 D_2\mathrm{CFO}_t/\mathrm{A}_{t-1} + \beta_5 D_3\mathrm{CFO}_t/\mathrm{A}_{t-1} + \beta_6 D_4\mathrm{CFO}_t/\mathrm{A}_{t-1} + \beta_7 D_5\mathrm{CFO}_t/\mathrm{A}_{t-1}, \quad (22.7)$$

where $D_1 - D_5$ are indicators of the cash-flow quintile to which a firm belongs. This model, especially designed for cross-sectional methods, substantially increases the number of parameters needed and cannot be used in time-series estimations.

The last model considered in this chapter is the one introduced in Garza-Gómez et al. (2000). This model, referred to as the accounting process (AP) model, tries to incorporate the natural relation between accruals and cash flow modeled by Dechow et al. (1998), and is expressed as:

$$E[\mathrm{TA}_t/\mathrm{A}_{t-1}] = \mathrm{NDA}_t = \alpha_1 + \beta_1\Delta\mathrm{CFO}_t/\mathrm{A}_{t-1} + \beta_2(\mathrm{TA}_{t-1}/\mathrm{A}_{t-1}). \quad (22.8)$$

This model, which was applied to Japanese data, differs from the previous two since it doesn't use the Jones model as the starting point[1].

22.3 Important properties of total accruals

This chapter uses data from the US stock market to analyze discretionary accrual models. In this section, we establish the definition of accruals and describe the data used in this study.

22.3.1 Accruals calculation

The literature to date that focuses on accruals includes two main approaches to calculate the accrual components of earnings.

The balance-sheet approach estimates accruals as:

$$TA_{tbs} = (\Delta CA_t - \Delta Cash_t) - (\Delta CL_t - \Delta STD_t) - DEPTN_t. \quad (22.9)$$

Total accruals are then subtracted from earnings to estimate cash flow from operations (CFO_t) as follows:

$$CFO_t = EBXI_t - TA_{tbs}, \quad (22.10)$$

where ΔCA_t = change in current assets during period t (Compustat item 4); ΔCL_t = the change in current liabilities during period t (Compustat 5); $\Delta Cash_t$ = the change in cash and cash equivalents during period t (Compustat 1); ΔSTD_t = the current maturities of long-term debt and other short-term debt included in current liabilities during period t (Compustat 34); $DEPTN_t$ = depreciation and amortization expense during period t (Compustat 14); and $EBXI_t$ = net income before extraordinary items and discontinued operations (Compustat 18).

This approach (or a similar one) is used in Dechow (1994), DeFond and Jiambalvo (1994), Guay et al. (1996), Sloan (1996), Subramanyam (1996), and DeFond and Park (1997), among others. Most of these studies use a long sample that includes data from the 1970s, 1980s, and even the 1960s (Guay et al., 1996; Sloan, 1996; Hansen, 1999). Since the statement of cash flows became compulsory until 1988, there was no other way to determine the accrual component of earnings.

This approach, however, has suffered severe criticisms by Hansen (1999), and by Collins and Hribar (2002). They argued that the balance-sheet approach biases the estimates of discretionary accruals when a real business change, such as acquisitions, discontinued operations, capital expenditures, and divestments, occurs during the year. To alleviate this problem, Collins and Hribar (2002) recommended the use of an alternative method to estimate accruals. This approach calculates accruals directly from the cash-flow statement as follows:

$$TA_{cf} = EBXI - CFO_{cf}, \quad (22.11)$$

where TA_{cf} = the total accrual adjustments provided on the cash-flow statement under the indirect method; EBXI = earnings before extraordinary items and

discontinued operations (Compustat 123); and CFO_{cf} = operating cash flows (from continuing operations) taken directly from the statement of cash flows (Compustat 308 − Compustat 124). This method to calculate accruals based on the statement of cash flows has also been used by Barth et al. (2001).

All variables in this study are scaled by lagged total assets. The reason for this choice is that the discretionary accrual models studied here are defined using lagged assets and thus this deflator is the natural choice for all the tests in this chapter. Some studies (see Sloan, 1996; Barth et al., 2001) used average total assets as a deflator, which is a method that may reduce the effect of business changes identified by Collins and Hribar (2002) and Hansen (1999).

To control for the effect of mergers, acquisitions, and divestitures, this chapter limits the sample to firms experiencing 'moderate' changes in total assets during year *t*. All observations for which a company's total assets grew more than 100% in a year and those in which a company's assets decreased more than 50% are discarded. This selection criterion excludes firms experiencing extreme changes in their level of total assets and does in fact eliminate about 10% of the possible observations. However, it allows the variation of TA for the remaining firms to remain within reasonable limits[2].

22.3.2 Sample and descriptive statistics

The sample consists of all US nonfinancial firms listed on the NYSE, AMEX, and NASDAQ for which all required data are available and satisfy the requirements defined above. All accounting information is taken from the 2004 Compustat database. There is a maximum of 4516 firms in 1997 and a minimum of 2899 in 1988. The original set of information consists of 63,482 firm-years. This set of firms, however, still contains a considerable number of outliers, so in order to avoid their effect, the median and interquartile range are shown instead of the typical measures, the average and standard deviation.

Table 22.1 shows earnings before extraordinary items (EBEI) lagged by total assets and its two components, cash flow from operations (CFO) and total accruals (TA) for the years between 1988 and 2003. It can be observed that the events in 2001 really had an impact on the performance of US companies: median earnings fell drastically to 0.8%, while the dispersion increased from average levels of 0.10 in the early 1990s to 0.187 in 2001. Median CFO, on the other hand, has remained relatively constant during the sample period and with stable volatility. The TA component also changed considerably in 2001. Interesting to notice is the fact that the dispersion of CFO was higher than the dispersion of EBEI until

Table 22.1 Descriptive statistics of earnings, cash from operations, and accruals (all firms, yearly averages, 1988–2003)

	N	Median			Interquartile range		
		EBEI	CFO	TA	EBEI	CFO	TA
1988	2899	0.040	0.067	−0.039	0.108	0.138	0.107
1989	3587	0.035	0.065	−0.045	0.120	0.139	0.106
1990	3570	0.032	0.075	−0.055	0.107	0.132	0.104
1991	3563	0.027	0.074	−0.059	0.103	0.116	0.095
1992	3699	0.033	0.074	−0.052	0.098	0.125	0.098
1993	3902	0.036	0.076	−0.051	0.107	0.132	0.101
1994	4054	0.042	0.076	−0.045	0.105	0.140	0.103
1995	4129	0.043	0.076	−0.043	0.110	0.138	0.107
1996	4366	0.045	0.081	−0.049	0.111	0.144	0.113
1997	4516	0.042	0.076	−0.047	0.127	0.151	0.109
1998	4428	0.036	0.071	−0.050	0.143	0.158	0.109
1999	4329	0.031	0.073	−0.055	0.138	0.148	0.102
2000	4048	0.030	0.066	−0.054	0.142	0.156	0.110
2001	4230	0.008	0.064	−0.077	0.187	0.159	0.125
2002	4109	0.013	0.072	−0.076	0.174	0.149	0.107
2003	4053	0.021	0.071	−0.064	0.143	0.140	0.094

The variables are defined as follows (Compustat data items in parentheses): EBEI = income before extraordinary items and discontinued operations (item 18); CFO = net cash flow from operating activities (item 308) less the accrual portion of extraordinary items and discontinued operations reported on the statement of cash flows (item 124); TA = total accruals, calculated as EBEI − CFO. All variables are deflated by the lagged value of total assets (item 6). Sample is defined as nonfinancial US firms listed on the NYSE, AMEX, and NASDAQ with enough data to compute total accruals based on the above definition. Sample size is 63,482 company-year observations.

2000, but in the last three years, values of earnings across firms have been more volatile than values of CFO. This is evidence that the yearly movements in the economy should be considered every time researchers try to investigate the possibility of earnings management.

Most previous studies defined their sample as firms listed on the NYSE and AMEX. NASDAQ firms are commonly excluded from the research. To test the existence of an 'exchange' bias, Figure 22.1 plots the time series of TA for NASDAQ firms from firms listed on the NYSE and AMEX. The upper part of the graph (corresponding to interquartile range) shows a clear difference between NASDAQ and NYSE/AMEX firms. NASDAQ firms have a much higher intercompany

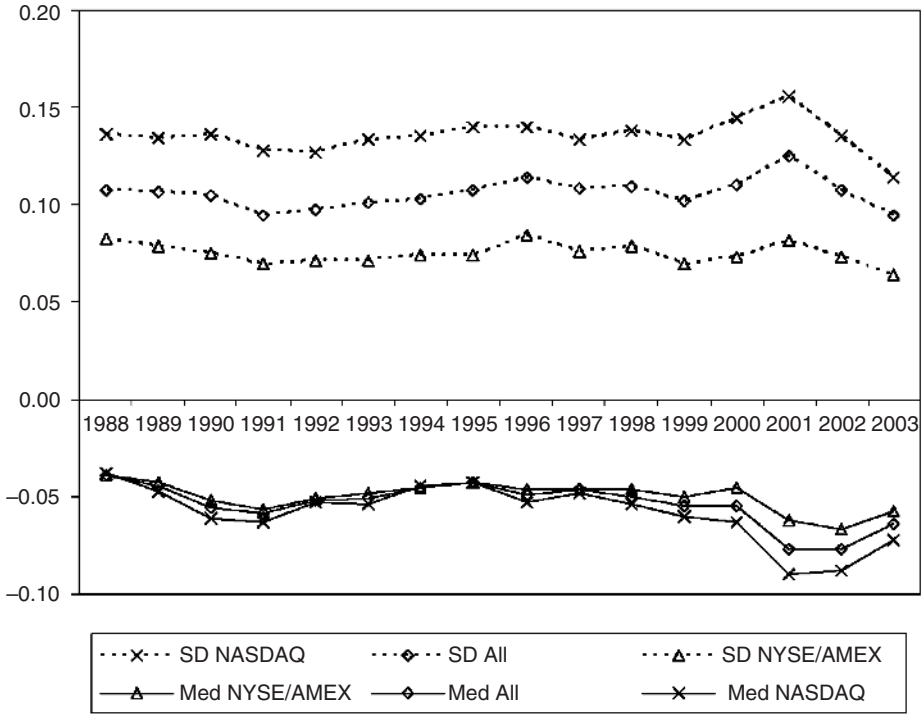

Figure 22.1 Median and interquartile range of total accruals subsamples based on market listing, 1988–2003. Plots obtained with 63,482 observations

volatility than the NYSE/AMEX firms. The lower part of the graph (depicting the level of accruals) shows that, prior to 1998, the level of TA for the two samples remains very close. However, since 1998, the median TA for NASDAQ firms has been markedly lower (higher absolute value) than the median TA for NYSE/AMEX firms.

Finally, to analyze a third possible source of identifiable variation, Table 22.2 shows the distribution characteristics of TA for the 13 industries defined in Barth et al. (2001). It can be seen that industry membership varies significantly. It goes from 35 firms in Agriculture all the way to 2068 firms for Durable Manufacturers. Median TA also presents wide variations. Though the median for all the firms is −5.4%, there are 10 industries with lower levels of accruals (in absolute value) and four industries with higher levels of accruals (in absolute value). The highest level (in absolute value) is for the Extractive sector, followed by Computers and Transportation. On the volatility side, Utilities shows a remarkably low level of intercompany dispersion. In contrast, firms in the

Table 22.2 Descriptive statistics of total accruals industry averages, 1988–2003

Sub-sample	No. of firms	No. of obs.	p 0.10	p 0.25 Q1	p 0.50 median	p 0.75 Q3	p 0.90	IQ range Q3-Q1	ID range 9-1	Esti-mated SD
Industry										
Agriculture	35	286	−13.8%	−8.0%	−4.1%	−1.0%	4.4%	7.0%	18.3%	6.2%
Mining and Construction	178	1393	−18.8%	−10.2%	−3.8%	3.4%	13.1%	13.6%	31.8%	11.3%
Food	200	1735	−13.6%	−8.3%	−4.5%	−0.9%	3.5%	7.4%	17.1%	6.1%
Textiles and Printing/ Publishing	407	3686	−14.1%	−8.9%	−5.2%	−1.1%	5.2%	7.9%	19.3%	6.7%
Chemicals	197	1882	−13.4%	−8.2%	−4.4%	−0.6%	4.3%	7.6%	17.7%	6.3%
Pharmaceu-ticals	494	3264	−25.0%	−11.2%	−4.5%	−0.2%	5.3%	10.9%	30.3%	10.0%
Extractive	384	2948	−25.9%	−16.6%	−10.3%	−5.3%	−1.2%	11.3%	24.8%	9.0%
Durable Manu-facturers	2068	16,937	−17.1%	−9.2%	−4.1%	1.1%	7.9%	10.2%	25.0%	8.7%
Computers	1577	9183	−28.6%	−16.7%	−8.2%	−1.1%	7.3%	15.6%	36.0%	12.8%
Transpor-tation	559	3715	−20.5%	−13.0%	−8.1%	−4.0%	0.4%	9.0%	20.9%	7.4%
Utilities	280	2940	−9.5%	−6.4%	−4.4%	−2.5%	−0.2%	3.9%	9.3%	3.2%
Retail	1047	7882	−16.6%	−9.9%	−4.7%	1.2%	9.0%	11.2%	25.6%	9.1%
Services	1130	7198	−22.3%	−12.5%	−6.1%	−0.9%	6.3%	11.5%	28.6%	9.9%
Other	75	433	−31.1 %	−14.3%	−4.1%	0.9%	11.5%	15.2%	42.6%	13.9%
Exchange										
AMEX and NYSE	2592	25,492	−14.3%	−8.9%	−5.0%	−1.4%	3.6%	7.5%	17.9%	6.3%
NASDAQ	6039	37,990	−24.0%	−13.2%	−5.9%	0.3%	8.4%	13.5%	32.4%	11.3%
All	8631	63,482	−20.0%	−11.1%	−5.4%	−0.6%	6.4%	10.5%	26.4%	9.0%

Total accruals are calculated as described in Table 22.1. Industry membership is determined by primary SIC code as follows: Agriculture (0100−0999); Mining and Construction (1000−1999, excluding 1300−1399); Food (2000−2111); Textiles and Printing/Publishing (2200−2780); Chemicals (2800−2824, 2840−2899); Pharmaceuticals (2830−2836); Extractive (2900−2999, 1300−1399); Durable Manufacturers (3000−3999, excluding 3570−3579 and 3670−3679); Computers (7370−7379, 3570−3579, 3670−3679); Transportation (4000−4899); Utilities (4900−4999); Retail (5000−5999); and Services (7000−8999, excluding 7370−7379). Estimated SD is calculated as the average of two numbers: interquartile range/1.349 and interdecile range/2.5631. These figures correspond to the interquartile range and interdecile range of a normal distribution.

Computers, Mining and Construction, and Pharmaceuticals industries tend to differ more among them. Consistent with previous tables, NASDAQ firms have a higher median TA (in absolute value) and a higher dispersion of TA among them than firms listed on the NYSE/AMEX.

As mentioned above, the numbers reported in this section have not been trimmed yet and still contain some outliers. In fact, this sample of 63,482 observations still contains firms with earnings below and above 100% of lagged assets. Similar to other studies, this chapter removes all firms with EBEI, CFO, and TA values above 100% and below −100%. A total of 965 firms was removed from the study[3].

22.4 Evaluation of discretionary accruals models

The first step in evaluating competing models is to define the criteria to determine which model is best. Dechow et al. (1995) argued that the power of the earnings management test is inversely proportional to the magnitude of the standard error. As they explain, given a standard error of DA of 9%, discretionary accrual models cannot detect earnings management unless it exceeds 18% of total assets. This 9% referred to by Dechow et al. (1995) is an important benchmark, because some studies found that the standard deviation of total accruals fluctuates around 9%: Barth et al. (2001) found 8% for their sample, Collins and Hribar (2001) reported 6.7%. Though both of these studies limit their results to AMEX/NYSE firms, they are an important reference because the sample period and estimation method are similar to those used in this chapter. Hansen (1999) reported 10.4% for a large pool of 66,716 firm-year observations.

Once the standard deviation of TA is known, this number becomes the benchmark with which discretionary accruals should be evaluated. That is, a good discretionary accrual model must yield standard errors below this level because, in principle, nondiscretionary accruals take away the part of the variation of TA that is related to the explanatory variables. If the model is 'reasonable' and actually explains accruals, the volatility of the discretionary part should decrease. A few studies have reported the standard errors for discretionary accruals. Dechow et al. (1995) found that the standard error DA calculated with the Jones and modified Jones models was 9.2% but the Healy, DeAngelo, and industry models generated standard errors of over 20%[4]. This suggests that the Jones and modified Jones models are better than the other models. However, since the standard error of TA is missing, a complete evaluation cannot be made. Hansen (1999) reported that the Jones, modified Jones, and DeAngelo models have standard errors of

11.3%, 11.5%, and 13.2% respectively. When compared to the standard deviation of TA of 10.4%, we can conclude one of two things: (1) the explanatory variables introduced in the model cannot explain variation in accruals or (2) the estimation method did not support the model. Since Hansen still uses time-series estimation of the models, one can argue that the estimation method was the cause of these results.

Evidence in markets outside of the USA includes studies by Young (1999) and Garza-Gómez et al. (2000). Young reported results obtained with data from the UK market. The modified Jones model yielded the lowest error (5.2%), followed by the Jones model (5.7%) and the Healy model (8.4%). The DeAngelo model yielded 11.9%. Unfortunately, data for TA was not reported and a conclusion could not be obtained. Garza-Gómez et al. (2000) reported results for the Japanese market. They found that TA had a standard deviation of 7.3% and the Jones model produced a standard error of 5.3%, which suggests that the Jones model does capture some of the variation of accruals. Nevertheless, other models tested in their study generated much lower standard errors. In particular, the AP model they propose yielded a standard error of 1.6%.

This chapter will thus use the standard error as the main criterion to compare DA models. However, due to the large sample used, small changes in SE cannot be appreciated easily. To circumvent this problem, in addition to the SE, the sum of squares (SS) is also reported in Table 22.3.

22.4.1 Initial standard errors

The results in the previous section identified three sources of variation in total accruals. Controlling for that variation is critical if a fair evaluation of the discretionary accrual models is to be made. That is, if a discretionary accrual model is to be tested, it must be done in a way that only the additional information content brought by the model is measured. That is, if the pooled variation of TA is, say, 9% and the standard error of the Jones model estimated under the cross-sectional approach is 7%, we need to know how much of this 2% gain arises from the variables in the Jones model. As section 22.3 showed, there are industry variations, year variations, and firm-listing variations that may be causing the reduction of 2% in standard error. A fair evaluation of the Jones model can only be made if the 7% is compared against a naive model that uses the industry median model for each year. This benchmark model does account for the industry variation and the time-series variation, so a comparison would yield the reduction in dispersion that is attributable to the variables in the Jones model.

Table 22.3 presents the standard errors (SE), sum of squares (SS), and the number of parameters (k) estimated in a series of naive models. The first two models correspond to the basic Healy model and the DeAngelo model. It is clear that these models do not reduce the volatility of discretionary accruals. On the contrary, the standard error of DA turned out higher than the standard deviation of TA. Therefore, these two models will no longer be considered. NDA values for the rest of the basic models are obtained as the median of the partition, where the partition can be years, industries, year-industry combinations, and their combination with the firm-listing partition. The total number of firm-year observations for each of these naive models is exactly the same, which allows analysis of variance to be applied in order to derive statistical inferences. Table 22.3 shows that each of the three sources of variation identified in section 22.3 makes a slight contribution to the reduction of standard error of DA. The initial benchmarks for the pool, the AMEX and NYSE sample and the NASDAQ samples, are 11.9%, 8.8%, and 13.7% respectively. When time variation is ignored and only industry classification is considered, the SE slowly decreases as the number of industries increases. The reduction from using one industry to five industries is 0.1%. Another 0.1% is gained if 13 industries are used instead of five. Since increasing the number of industries reduces the SE of DA, researchers would logically try to increase the number of industries to the maximum extent. The next industry classification (81 industries) takes advantage of this reduction of volatility of DA. Using SIC information, four-digit codes would be a natural way of classifying companies into industries. However, the number of firms in each four-digit group varies considerably. Some industries contain two to five companies, while other groups would include dozens of companies. By requiring a minimum number of firms per industry, one can develop a grouping methodology. This chapter used the following technique: each year, the number of firms with enough data is determined. If the four-digit SIC code has eight or more firms for each year in the study, the industry is defined as the four-digit SIC code. If in one year of the sample the number of firms within this code falls below 10, these firms will be combined with firms with the closest four-digit SIC code and a matching three-digit code. This process is repeated until a minimum of 10 companies have enough data every year of the sample. A total of 81 industries was obtained through this process.

The expansion of the number of industries to 81 brings a small reduction of 0.4% in the total variation of TA. This difference, however, is statistically significant (using an F-test) for this industry classification, while the reduction of variation for the five- and 13-industry classifications is not. Considering differences

Table 22.3 Standard errors of naive discretionary accrual models, 1989–2003

Type of model for NDA	All firms			AMEX and NYSE			NASDAQ			Combined		
	SS	SD	*k*	SS	SD	*k*	SS	SD	*k*	SS	SD	*k*
Naive model (NDA = 0)	903.1	0.119	0	230.2	0.088	0	672.9	0.137	0			
DeAngelo (NDA = TA_{t-1})	1049.6	0.145	0	233.0	0.104	0	816.6	0.170	0			
Population median	716.2	0.119	1	169.8	0.088	1	543.2	0.137	1	713.0	0.118	2
Industry median (5 industries)	708.3	0.118	5	168.6	0.088	5	537.3	0.136	5	705.9	0.118	10
Industry median (13 industries)	691.8	0.117	13	161.3	0.086	13	528.6	0.135	13	689.9	0.117	26
Industry median (81 industries)	675.3	0.115	81	154.9	0.084	81	517.0	0.134	81	671.9	0.115	162
Yearly median	708.3	0.118	15	168.1	0.088	15	533.9	0.136	15	702.0	0.118	30
Industry year median (5 industries)	699.3	0.117	75	166.9	0.087	75	529.4	0.135	75	696.2	0.117	150
Industry year median (13 industries)	680.7	0.116	195	158.5	0.085	195	518.9	0.134	195	677.5	0.116	390
Industry year median (81 industries)	654.6	0.114	1215	147.6	0.082	1215	496.3	0.131	1215	643.8	0.113	2430

Number of observations for all models is 50,717. Industry membership for the five-industry classification is separated as follows (no. of firm-year observations included in parentheses):
Ind1 = Consumer = Consumer Durables, Nondurables, Wholesale, Retail, and Some Services (Laundries, Repair Shops) (12,049).
Ind2 = Manufacturing = Manufacturing, Energy, and Utilities (14,397).
Ind3 = High-tech = Business Equipment, Telephone, and Television Transmission (12,026).
Ind4 = Health = Healthcare, Medical Equipment, and Drugs (5298).
Ind5 = Other = Mining and Construction, Building Materials, Transport, Hotels, Bus Services, Entertainment (6947).
Industry membership for the 13-industry classification is defined in Table 22.2. Industry membership for the 81-industry classification is obtained as follows:
Each year, the number of firms with enough data is determined. If the four-digit SIC code has eight or more firms for each year in the study, the industry is defined as the four-digit SIC code. If one year of the sample the number of firms falls below 10, we combine that industry with the closest four-digit SIC code with matching three-digit code. This process is repeated until a minimum of 10 companies have enough data every year of the sample. This process generates 81 industries (1215 year-industry subsamples). The average number of firms in the subsamples is 42 (median of 35) and the maximum number of firms is 204.

across time by expanding the sample from one period to 15 years provides a consistent reduction of the standard error of TAs. However, the improvement is not statistically significant.

The separation of firms by the exchange in which where they are listed was the third factor analyzed in this study. Separating firms based on market listing does not reduce the standard error of the combined data much relative to the pooled data. However, doing this creates two different samples with characteristics that differ drastically. As shown in Table 22.3, the standard error of NASDAQ (13.7%) is much higher than that for NYSE/AMEX firms (8.8%). This difference is quite significant. As can be seen from the pooled sample, mixing the volatile NASDAQ firms with the more stable NYSE/AMEX firms produces a considerable standard error of 11.9%. Evidence in Table 22.3 clearly suggests that the NASDAQ and the AMEX/NYSE subsamples should be estimated and evaluated separately, and that aggregation of results should be done with caution.

22.4.2 Results of discretionary accrual models

Having established the initial benchmark and the methodology to estimate the accrual models, this subsection now presents the main results of the chapter. Following the findings in previous subsections, the estimations of accrual models are performed first for the totality of the sample and then repeated for the two subsamples defined by market listing. Since one of the models requires the use of lagged total accruals, one full year of observations is lost. Furthermore, since the Shivakumar model (referred to as 5CFO in Table 22.4) has to estimate eight parameters, some industry-year combinations do not have enough observations to be estimated in the NASDAQ and AMEX/NYSE subsamples. This leads to a reduction of sample size to 49,799 observations. Table 22.4 shows the standard error for the benchmark (the industry median model) and the five models defined in previous sections.

Three observations can be made in relation to the Jones and modified Jones models. First, the contribution of these two models towards the reduction of volatility is rather small (0.5% for the 81-industry classification but only 0.1% when 13 industries are used). The reduction of volatility is not uniform across the 13 industries. For some industries, the volatility decreases as much as 2%, but for other industries using the Jones model actually increases the standard error. Also, results for the modified Jones model and the original Jones model are basically the same, which suggests that the additional variable suggested by Dechow et al. (1995) does not have an important role.

Table 22.4 Standard error of discretionary accruals obtained with five competing models, 1989–2003, full sample

Sample used to estimate models	*N*	Industry	Jones	MJones	CFO Jones	5CFO	AP
Yearly samples of:							
Agriculture	234	0.107	0.073	0.074	0.079	0.065	0.072
Mining and Construction	996	0.139	0.119	0.119	0.099	0.103	0.093
Food	1486	0.087	0.082	0.082	0.075	0.073	0.071
Textiles and Printing/Publishing	3168	0.090	0.091	0.091	0.076	0.075	0.069
Chemicals	1614	0.087	0.081	0.081	0.074	0.073	0.071
Pharmaceuticals	2177	0.121	0.117	0.117	0.119	0.115	0.113
Extractive	2329	0.115	0.123	0.123	0.103	0.095	0.095
Durable Manufacturers	13,890	0.111	0.109	0.109	0.099	0.097	0.096
Computers	6791	0.146	0.151	0.151	0.138	0.131	0.132
Transportation	2823	0.109	0.102	0.102	0.096	0.094	0.084
Utilities	2576	0.068	0.060	0.060	0.052	0.051	0.051
Retail	6,452	0.119	0.115	0.115	0.096	0.096	0.085
Services	5263	0.130	0.131	0.131	0.1l6	0.1l4	0.108
All the 13 industries (15 years)	49,799	0.1l7	0.1l6	0.1l6	0.103	0.100	0.097
One industry (15 years)	49,799	0.1l9	0.1l9	0.119	0.109	0.106	0.100
Five industries (15 years)	49,799	0.1l8	0.1l9	0.1l7	0.105	0.103	0.098
Eighty-one industries (15 years)	49,799	0.1l5	0.108	0.108	0.093	0.085	0.089

Industry membership is defined in previous tables. The benchmark model was estimated with the industry median model. All accrual models were estimated using the cross-sectional approach. MJones refers to the modified version of the Jones model. CFO Jones represents the Jones model with one CFO as an additional term in the equation. 5CFO refers to the Shivakumar model, which uses five dummy variables to control for different levels of cash flows. AP refers to the accounting process model introduced by Garza-Gómez et al. (2000). The total number of observations is 49,799 for all models.

On the contrary, results for the models that use cash-flow terms in their specification yield standard errors consistently lower than the benchmark (the industry model). The three model specifications produce lower standard errors than the two basic versions of the Jones model. Among the three models, the AP model has a lower pooled standard error when estimated using one, five, or 13 industries, yet

the 5CFO model produces lower error when 81 industries are used. Across industries, it can be observed that the industry identified as Computers has the highest volatility, while Utilities has the lowest dispersion of DA.

The results in Table 22.5 and 22.6 are consistent with those in the pooled sample; the contribution of the Jones models is limited. The 5CFO and AP models are clearly superior to the Jones CFO and other Jones models. They reduce the standard error of TAs for AMEX/NYSE firms by about 2% and that of NASDAQ firms by around 4%. This reduction of dispersion in DAs is critical for all earnings management studies. Lowering the standard error increases the power of the tests. Nevertheless, there is no clear winner between the AP and 5CFO models. For some industries, the AP generates lower standard errors but in others the 5CFO model is better. In order to break this stalemate, other

Table 22.5 Evaluation of discretionary accrual models, 1989–2003, AMEX/NYSE firms

Sample used to estimate models	*N*	Industry	Jones	MJones	CFO Jones	5CFO	AP
Yearly samples of:							
Agriculture	87	0.080	0.060	0.051	0.076	n.a.	0.045
Mining and Construction	586	0.112	0.098	0.098	0.108	0.067	0.070
Food	804	0.078	0.085	0.084	0.091	0.064	0.065
Textiles and Printing/ Publishing	1766	0.068	0.069	0.069	0.070	0.049	0.045
Chemicals	993	0.056	0.060	0.060	0.063	0.046	0.045
Pharmaceuticals	621	0.094	0.104	0.103	0.105	0.077	0.083
Extractive	1412	0.098	0.103	0.103	0.106	0.073	0.075
Durable Manufacturers	5721	0.080	0.081	0.080	0.087	0.065	0.063
Computers	1448	0.116	0.127	0.127	0.130	0.092	0.098
Transportation	1144	0.088	0.088	0.088	0.088	0.069	0.065
Utilities	2031	0.044	0.045	0.045	0.049	0.028	0.031
Retail	2742	0.090	0.092	0.092	0.099	0.064	0.058
Services	2108	0.103	0.102	0.102	0.103	0.082	0.077
All the 13 industries (15 years)	21,463	0.085	0.087	0.088	0.092	0.066	0.064
One industry (15 years)	21,463	0.088	0.087	0.088	0.091	0.074	0.069
Five industries (15 years)	21,463	0.087	0.088	0.087	0.091	0.070	0.066
Eighty-one industries (15 years)	21,463	0.082	0.089	0.089	0.094	0.045	0.053

factors need to be considered. From the point of view of statistical modeling, the AP model would be better because it uses fewer parameters than the 5CFO model. This is important because, as Tables 22.5 and 22.6 show, some subsamples do not have enough observations for the 5CFO to be estimated, especially if the 81-industry classification is used on subsamples based on market listing. Furthermore, the more parameters needed for estimation, the lower the adjusted R^2 that the model will obtain. Finally, since the 5CFO model is designed for cross-sectional estimation, it cannot be used for time-series estimation. On the other hand, since [Δ]CFO, the predictive variable of the AP model, is available time-series wise, this model is well suited for time-series estimation. To try to reach a final conclusion, a new set of statistical tests is introduced in the next section.

Table 22.6 Evaluation of discretionary accrual models, 1989–2003, NASDAQ firms

Sample used to estimate models	*N*	Industry	Jones	MJones	CFO Jones	5CFO	AP
Yearly samples of:							
Agriculture	147	0.119	0.124	0.122	0.124	n.a.	0.072
Mining and Construction	410	0.172	0.156	0.156	0.155	0.114	0.112
Food	682	0.096	0.095	0.095	0.106	0.069	0.073
Textiles and Printing/ Publishing	1402	0.112	0.116	0.116	0.124	0.093	0.088
Chemicals	621	0.119	0.120	0.120	0.122	0.095	0.096
Pharmaceuticals	1556	0.128	0.129	0.129	0.128	0.122	0.119
Extractive	917	0.137	0.157	0.158	0.163	0.113	0.115
Durable Manufacturers	8169	0.129	0.130	0.128	0.137	0.112	0.112
Computers	5343	0.153	0.163	0.161	0.169	0.137	0.139
Transportation	1679	0.120	0.115	0.115	0.117	0.100	0.093
Utilities	545	0.119	0.117	0.115	0.130	0.084	0.091
Retail	3710	0.135	0.130	0.130	0.140	0.110	0.099
Services	3155	0.146	0.150	0.151	0.151	0.126	0.122
All the 13 industries (15 years)	28,336	0.134	0.138	0.138	0.144	0.116	0.114
One industry (15 years)	28,336	0.136	0.139	0.144	0.144	0.123	0.118
Five industries (15 years)	28,336	0.134	0.138	0.144	0.144	0.119	0.116
Eighty-one industries (15 years)	28,336	0.131	0.140	0.147	0.147	0.093	0.103

22.5 Information content of discretionary and nondiscretionary accruals

The results in the previous section provide evidence that the AP model and the 5CFO models are capable of reducing the standard error of discretionary accruals. In other words, these models yield estimates of nondiscretionary accruals that are good enough to capture some of the variation in total accruals. Since many studies have shown that total accruals, defined as the difference between EBIT and cash flows, have explanatory power for future performance, a natural way to assess the goodness of fit of accrual models is to compare how much of the information content of TA is captured in the NDA of competing models. This approach is similar to that used by Subramanyam (1996).

Table 22.7 presents results for three sets of regressions trying to predict next year's earnings $EBEI_{t+1}$ and next year's cash flow from operations CFO_{t+1}. The first set corresponds to the univariate regressions that use current levels of earnings and cash flow from operations as explanatory variables. Since the regressions are used to predict performance one year ahead, some data points are lost. The resulting sample size is 42,591 year-observations. All regressions are done from

Table 22.7 Regressions of measures of future performance on current cash flow and nondiscretionary accruals, 1990–2002

	Dependent variables			
	Next year's earnings $EBEI_{t+1}$		Next year's cash flows CFO_{t+1}	
	Adj. R^2	SE	Adj. R^2	SE
Current performance				
$EBEI_t$	0.165	0.242	0.318	0.121
CFO_t	0.125	0.248	0.402	0.113
Total accruals				
CFO_t TA_t	0.175	0.241	0.432	0.111
Nondiscretionary accruals				
CFO_t $NDA_{t\ (Jones)}$	0.142	0.246	0.422	0.112
CFO_t $NDA_{t\ (Jones\ CFO)}$	0.143	0.246	0.407	0.113
CFO_t $NDA_{t\ (5CFO)}$	0.146	0.245	0.408	0.113
CFO_t $NDA_{t\ (AP)}$	0.156	0.244	0.424	0.111

Sample size is 42,591 firm-year observations. Accrual models were calculated using the cross-sectional method on 13 industries.

a pool and the standard error and adjusted R^2 are reported as means of comparison. The first set of results shows that earnings (EBEI) are more volatile than CFO and therefore cash flow is more predictable than earnings. When a regression is run using TA and CFO as explanatory variables, R^2 increases significantly above the figure obtained in the univariate regressions. Relative to the original explanatory power of CFO, the increases in R^2 were 5% for EBEI and 3% for CFO when total accruals were added to the regressions. This constitutes strong evidence of the information content of total accruals. The contribution of total accruals to explain future performance permits the setting of a benchmark to evaluate the information content of the nondiscretionary accruals obtained from the competing models.

The third set of regressions is done using cash flow from operations and the nondiscretionary accruals estimated with four of the competing accrual models. The higher the goodness of fit of the model, the greater the information content of total accruals that should be captured in NDA and the higher the adjusted R^2. The results show that the NDA from the AP model yields the highest R^2 and the lowest standard error of the predicted variables for regressions of next year's earnings and next year's cash flows.

22.5.1 Sensitivity tests

The results listed in Table 22.7 show that, from the set of accrual models included in this study, the AP model is the clear winner. It produces the lowest standard error of DA estimates and most of the information content of total accruals is kept on the nondiscretionary part. To assess whether the results are robust to different empirical settings, two methodological variations were tested. The first change explored was the use of total accruals calculated with the balance-sheet approach instead of the cash-flow approach, the one that was reported throughout the chapter. Conclusions about the goodness of fit of the models remain unchanged; however, some details about this methodology are worth mentioning. The median of TA calculated with the balance-sheet approach is −4.3% compared to the value of −5.4% shown in Table 22.2. Consistent with Collins and Hribar (2002), accruals calculated from the cash-flow statement tend to exceed (in absolute value) those calculated using the balance-sheet approach. The average difference (in absolute value) between these two estimates is 4.7% (with a median of 2.1%). Due to the requirements of more data items, the sample size for TA_{bs} is smaller than for TA_{cf}. Volatility, however, is significantly larger for TA_{cf} than for TA_{bs}. Nevertheless, as expressed

above, the key to reducing the volatility in the sample was the exclusion of all firms having large relative movements in total assets. Ignoring firms that grew more than 100% in total assets or decreased more than 50% of total assets in one calendar year is crucial in this study. It reduces the volatilities of both TA_{bs} and TA_{cf}, which makes them similar to each other after firms with extreme earnings are trimmed. In conclusion, the levels of standard error for discretionary accruals reported in this study depend on how outliers are handled.

The second factor that could modify the main results in the project is how industries are defined. As seen in Tables 22.4−22.6, the AP model does not dominate the other models 100% of the time. It is quite easy then for a researcher to find a different method to group companies in order to favor the Shivakumar model (or a new competing model). Nevertheless, it can be argued that the AP model will be quite robust on large samples like the one used in this study.

22.6 Conclusion

This chapter used a straightforward approach to evaluate discretionary accrual models. Since discretionary accruals are really the prediction error of a model that tries to explain the 'normal' behavior of accruals, its goodness of fit will be crucial to the performance of the discretionary accruals estimates. If the model is weak, all the information contained in total accruals will be left in the discretionary (abnormal) part and incorrect inferences will be made (it will detect earnings management where no management discretion is found or attribute the explanatory power of TA to the discretionary part).

The chapter explored three important sources of variation: time, industry grouping, and market listing. The results show that constructing samples and subsamples across these three variables allows researchers to set a benchmark against which proposed discretionary accrual models can be tested. Results based on a broad sample spanning from 1989 to 2003 indicate that the AP model was the best model in this study.

There are several limitations to this work. First, all the models in this chapter were evaluated using least squares estimation. However, recent work by Kang and Sivaramakrishnan (1995) suggests the use of instrumental variables to estimate accrual models. Furthermore, alternative estimation methods may be needed to further reduce the standard error of accrual models.

Another limitation is that this study did not consider the relationship of discretionary accruals and stock returns. Sloan (1996) reported that accruals have

information content to explain future stock returns. Subramanyam (1996), Barth et al. (2001), Collins and Hribar (2001), and Xie (2001) have also studied the role of accrual components in explaining future stock returns. An interesting avenue of future research is to check if the market correctly prices the discretionary and nondiscretionary component of accruals when estimated with superior expectation models.

Notes

1. The original AP model in Garza-Gómez et al. (2000) uses the term $(1/A_{t-1})$ as explanatory variable and is estimated without intercept. In this chapter, the AP model is calculated as shown in equation (22.8). It may be considered that the resulting standard errors are not altered by the choice of intercept. However, average DA shows a large bias when $(1/A_{t-1})$ is used (−2.2%). Since the average DA is expected to be zero, the original version is dropped and only the version shown in equation (22.8) is used in this chapter.
2. The number of firms eliminated using this criterion is as follows: 799 firms whose assets grew between 500% and 1000%; 4406 firms whose assets grew between 200% and 500%, which correspond to about 8% of the firms in the database. Standard error of total accruals, however, decreased more than 35%.
3. Leaving these observations in the full sample does not affect the main conclusions of this study. Nevertheless, estimates of standard error do increase significantly.
4. Dechow et al. (1995) actually reported the standard error obtained from applying the regression explained in McNichols and Wilson (1988) to a random sample of 1000 observations. Though not identical, this measure can also be used to evaluate discretionary accrual models.

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23

What to Teach? A Comparison of Professional and Paraprofessional Accountants' Views on Accounting Topic Emphasis

Geoffrey Tickell and Kosmas X. Smyrnios

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23.1 Introduction

The decades of the 1980s and 1990s heralded many profound changes to Australia's tertiary education sector. Changes included the elimination of the CAE (Colleges of Advanced Education) sector (Higher Education Division, 1993), Technical and Further Education (TAFE) institute mergers (OTFE, 1997), absorption of a number of TAFE institutes into universities (OTFE, 1997), introduction of the higher education contribution scheme (HECS), an increasing number of full-fee-paying international students, an explosion in fee-for-service postgraduate courses (OECD, 1996), and the introduction of full-fee-paying university places for undergraduate local students (AVCC, 1997). These changes have occurred during two decades of increasing higher education participation rates (OECD, 1997), with associated real reductions in government funding (AVCC, 1997). According to Jones (1998), the 1990s saw the beginning of an era in Australia's education whereby university education shifted from education for the elite to education for the masses. Similarly, TAFE enrolments in paraprofessional courses (e.g. Advanced Diploma of Accounting) have also grown significantly (OTFE, 1995).

Concurrent with increasing numbers of university and TAFE graduates is a growing demand by business for employees with tertiary education qualifications (Dusseldorp Skills Forum, 1999). There is little doubt that, on the whole, persons who hold some form of post-secondary school qualification, particularly degrees, are far better placed when competing for full-time jobs than are those without such qualifications. Interestingly, the paradox is that the earlier a person enters the labor force, the weaker are their long-term employment prospects.

The major sector experiencing high employment growth during the previous decade has been the business services area (incorporating accounting, computing, and legal services), with a 60% growth rate compared with 15% for employment overall (Monash University, 1998). Also, figures show that there were more business services graduates entering the workforce than from any other single field. This trend is likely to continue, with the Department of Employment, Education, Training and Youth Affairs (DEETYA) projecting over the next five years a 56% increase in accountants employed compared with a 27% increase in overall employment.

In fact, this increased emphasis by business for employees with degree qualifications in the business services area has prompted an increasing proportion of students completing paraprofessional courses to look to continue their studies at university, thereby completing a degree and meeting the requirements for entry

into a profession (Hribar and Heazlewood, 1991). TAFE graduates currently comprise approximately 7% of total commencing students in universities, with the largest numbers being enrolled in business disciplines (Teese, 1997).

One implication of this high demand for business services graduates, and more specifically accounting graduates, by the labor force is that it is imperative that these graduates are appropriately educated. That is, that students graduate with the skills and knowledge required by business. Thus, the question is: What should be taught in undergraduate accounting courses?

The previous two decades has seen continued calls by big business and the accounting profession for a broader accounting curriculum, with increased emphasis on nonspecific accounting units, including communication skills (see Bedford Committee, 1986; Zaid and Abraham, 1994; Federation of Schools of Accounting, 1996; MacCallum, 1997; Koh and Koh, 1998). The Bedford Committee, in recognizing that all professions change over time, were of the opinion that accounting education had lost its relevance to the accounting profession. The Committee could foresee the continuance of the profession expanding into nontraditional fields, with accountants becoming more involved with decision-making processes typical of managers. According to Koh and Koh (1998, p. 297), 'the Committee also noted widespread complaints that accounting graduates do not know how to communicate, do not reason logically, are deficient in interpersonal skills and cannot think creatively and responsibly'. Moreover, Riordan and Sullivan (1998) reported that large accounting firms seek accounting graduates with broad-based general studies background, high-level intellectual skills, interpersonal skills, communication skills, organizational and business knowledge, and detailed accounting knowledge. This broad range of skills demanded from accounting graduates prompted the American Institute of Certified Public Accountants (AICPA) in 1988 to introduce the 150-hour requirement for application for membership of the AICPA from 2000 (see Riordan and Sullivan, 1998), thereby extending the length of a US accounting course.

However, in 1999, in an invited article, the Chair of the Education Committee, International Federation of Accountants, Warren Allen, argued that the accounting curriculum was crowded, the course was too long, and that students graduate with insufficient skills and experience in information technology (Allen, 1999). He suggested that topics such as process improvement, risk management, legislative environment, business ethics, knowledge management, and cross-cultural business dealings should be considered for inclusion in accounting degrees. Allen concluded by stating that accounting education programs

urgently need to change and one of those changes should include a much higher level of content in information technology.

The issue of what to teach in higher education accounting courses has previously been considered with research into the views of the accounting faculty (May et al., 1995), nonaccounting faculty (Cherry and Mintz, 1996; Doucet et al., 1998), accounting graduates, and final year accounting students (Mathews, 1990) being undertaken. For example, May et al. (1995) found that the majority of the US-based accounting faculty believed that fundamental changes to accounting curricula are needed. That is, 68% of respondents 'agreed that future accountants are not receiving the preparation they need to meet the demands of the profession' (p. 23). Strong agreement was found for increased emphasis on written and oral communication skills, interpersonal skills, ethical issues, and intellectual skills. These authors concluded that further discussion between the various faculty groups should be implemented to bring about changes quickly and harmoniously.

Cherry and Mintz (1996) investigated the views of the nonaccounting faculty (i.e. management, finance, and marketing) with regard to the focus of introductory financial accounting courses – specifically, the topics covered and skills to be developed. Interestingly, of the five skills nominated (i.e. problem-solving abilities, logical reasoning ability, computer applications, written communication skills, and oral communication skills), respondents regarded none as unimportant and considered problem-solving and logical-reasoning abilities as the most important skills to develop. Cherry and Mintz concluded that the accounting faculty should be careful to explain to their nonaccounting faculty colleagues the reasons for any changes to the amount of emphasis on topics within introductory accounting courses.

Doucet et al. (1998) surveyed the accounting and nonaccounting (i.e. finance, management, and marketing) faculties to determine their level of satisfaction with the introductory accounting unit at their own institution and the degree of importance for topics within that unit. Overall, these authors found that the accounting faculty was the faculty group least satisfied with introductory accounting courses at their own institutions. Also, from a choice of 60 topics, the accounting faculty deemed each topic to be at least somewhat important, with the highest ratings given to financial accounting topics (e.g. income statement use), while management accounting topics (e.g. activity-based costing) tended to receive middling ratings. Accounting faculty ratings were more consistent with finance faculty ratings than with ratings by the management and marketing faculty. As noted by Doucet et al., this similarity is to be expected given the strong emphasis given to financial accounting topics by the finance faculty. Somewhat predictably, the

management and marketing faculty preferred increased emphasis on managerial accounting topics. Content analysis of accounting faculty responses noted that recent changes experienced at their own institutions included increased emphasis on writing and computing skills, and less emphasis on bookkeeping (i.e. journal entries, debits, and credits). Doucet et al. (1998) concluded that 'it is incumbent upon all accounting faculty to ensure that the introductory sequence provides the most effective learning experience possible' (p. 494).

Although findings by Cherry and Mintz (1996) and Doucet et al. (1998) are of practical use, they are limited to assessments of introductory accounting units only. That is, subsequent units of accounting are not considered. Given that employers are critical of the limited knowledge of accounting graduates (see Arthur Anderson & Co., 1989), it is imperative that the whole accounting course, and not just the introductory unit, is considered. Furthermore, recent graduates working as practitioners can provide added perspectives to those provided by educators. To this end, it is important that graduates' views are also considered in any discussion regarding university and TAFE accounting curricula.

Approximately 15 years ago, Mathews (1990) surveyed Australia's accounting graduates and final-year students as to their opinions on the emphasis that was given, and should be given, to 14 skills (e.g. computing skills) within an accounting degree course. Interestingly, Mathews found that participants wanted more emphasis on all 14 nominated skills, with only marginal differences being found between student and graduate ratings. The skill area rated highest for further emphasis related to communication skills (e.g. development of self-confidence and interpersonal skills). Mathews concluded that topics should be added or extended to Australian universities' accounting curricula, thereby extending the length of an accounting degree course. Indeed, Mathews's overall recommendation was that the entry requirement to Australia's accounting profession should be four years of university education instead of the present three years. To date, Mathews's overall recommendation has not been adopted. Given that Mathews's findings are from 15 years earlier, there is sound reason to investigate once again graduates' views regarding the level of importance that should be placed on different skills within a higher education accounting course.

Although undergraduate students' and graduates' views have been sought on this topic (e.g. Mathews, 1990), it appears that the opinions of Australia's Technical and Further Education (TAFE) graduates into the amount of emphasis that should be placed on topics within a TAFE accounting diploma have not been investigated. Australia's TAFE institutes have been recognized as sharing with higher education the major responsibility for tertiary education (Dawkins, 1987)

and are similar in genre to community colleges in the USA and Canada. They provide vocational and nonvocational educational training ranging from training in recreational and leisure pursuits through to basic employment and educational preparation to trades, paraprofessional and professional levels. The major field of study is in the Business Administration/Economics area. The primary responsibility for administration of the TAFE system lies with Australia's state governments. It is noteworthy that TAFE places are funded by government at a significantly lower amount than are university places (Mackenzie, 1995).

TAFE students undertaking the Advanced Diploma Accounting complete the equivalent of two-years of full-time study (post-Year 12). This award provides them with a qualification for paraprofessional accounting employment (e.g. payroll officer, accounts payable clerk). Many units of the two-year program comprise similar topics to those taught in university accounting degrees (e.g. *Financial Management, Company Financial Reporting*, and *Auditing*), as evidenced by holders of an Advanced Diploma of Accounting being granted up to eight cross credits towards a Bachelor of Accounting. Typically, TAFE students are older and are more likely to be working full-time while studying part-time than are their university colleagues (Lewis, 1994). Given the similar yet different curricula of TAFE accounting courses compared to university accounting courses and the different demographics of TAFE students to those of university students (i.e. older and studying part-time), it is possible that TAFE graduates hold divergent opinions on topic emphasis than those held by their university counterparts.

Accordingly, it is hypothesized that:

H1: *Accounting professionals and paraprofessionals differ in their views regarding the amount of emphasis that should be placed on topics within a tertiary accounting course.*

H2: *University graduates' opinions as to the amount of emphasis to be placed on topics within an undergraduate accounting degree have changed over the previous 15 years.*

23.2 Methodology

23.2.1 Participants

Participants were 790 accounting graduates categorized by type of graduate (i.e. university vs TAFE). Of the 790 questionnaires mailed to participants, 312 were returned, representing a response rate of 40%.

23.2.1.1 University graduates

Participants (n = 508) had graduated with a Bachelor of Accounting from either of two Melbourne-based universities. Given the large number of graduates from each university, a stratified (according to year of exit) random sample was selected (see Babbie, 1992; Krejeie and Morgan, 1970). Participants were excluded if they had been enrolled part-time or were full-fee-paying international students.

For the present investigation, ages of participants ranged between 22 and 47 years, with a mean age of 27 years (SD = 4.21 years); 53% were males and over 90% were Australian born. All participants had completed Year 12 prior to commencing university and 83% had completed Year 12 Accounting. Notably, the mean age of participants when commencing university was 19 years (SD = 4.12 years).

With respect to participants' employment details three years post-graduation, 95% are employed full-time in sectors such as Big-Five accounting firms (5%), other accounting firms (18%), other private organizations (67%), the Commonwealth Government (3%), State Government (5%), and education (2%). The vast majority (86%) are working as accountants or in accounting-related positions (e.g. finance analyst). The average gross annual salary is $35,000.

23.2.1.2 TAFE graduates

TAFE students who had graduated from one Melbourne-based TAFE institute with an Advanced Diploma of Accounting were included in the sampling frame (n = 182). Participants were not excluded if they had been studying part-time. The justification for including part-time as well as full-time students is that accurately distinguishing between the two groups (i.e. part-time vs full-time students) is a complicated process associated with limited reliability (see Lewis, 1994). As with the university group, participants were excluded if they were full-fee-paying international students.

Respondents indicated their mean age to be 29 years (SD = 7.80 years), ranging between 21 and 53 years with an average age when starting TAFE of 24 years (SD = 8.07 years). Females comprise 55%, and 65% were born in Australia. Year 12 had been completed by 80% of respondents, with half indicating that they had undertaken Year 12 Accounting. Typically, TAFE graduates had significantly lower Year 12 scores than their university graduate counterparts.

Employment details show that 85% are employed full-time. Notably, Big-Five accounting firms employ none, while 13% are with smaller accounting firms, 70% with other private organizations, 3% with the Commonwealth Government,

3% State Government, 2% local government, and 8% in the education sector. Most (89%) are employed in paraprofessional accounting positions (e.g. bookkeeping, accounts payable/receivable, administration, payroll). The average gross annual salary is $27,500.

23.2.1.3 Instrument

The *Employment and Further Education Questionnaire* (EFEQ) was developed by the principal investigators and adapted from three widely used questionnaires: *Survey of Graduate/Diplomate Employment, Further Study, or Other Activity* (Graduate Careers Council of Australia, 1993), the *1989 National Survey of Graduates Who Qualified for Degrees in Accounting in 1985 and 1987* (Mathews, 1990), and *Accounting Students Characteristics* (Nelson and Deines, 1995). Two versions of the EFEQ were developed, one for each cohort.

Section 1 of the EFEQ requests participants to indicate their gender, current age, country of birth, their Year 12 score, Year 12 Accounting score, age when commencing their tertiary education, and their employment details (e.g. industry sector, type of employment, tasks, and present gross annual salary).

Section 2 of the EFEQ requires all participants to indicate, on five-point Likert scales (1 = *Definitely not* to 5 = *Definitely*), their opinions as to the level of emphasis that should be placed on 19 nominated topics within a Bachelor of Accounting degree course or Advanced Diploma Accounting course (see Table 23.1). Topics range from specific accounting knowledge to general skills. Fourteen items were derived from Mathews (1990). Examples of topics are: *Key accounting skills*; *Skills in financial modeling*; *Knowledge of interaction between accounting and related disciplines*. The remaining five items were developed by the principal investigators. These included: *Skills in dealing with people from different cultures* and *Personal wealth strategies*. This section also included one item asking university graduate participants to indicate whether they feel that the Accounting Degree should be four years long.

The justification for using five-point Likert scales is derived from theory. Likert (1932) recommended this strategy for measuring attitudes. As noted by Alwin (1997), a five-point response format allows respondents to communicate the direction and intensity of their attitudes and also provides a category for *No opinion*. Although these options are also available using seven-point scales, the present investigators wanted to provide respondents with a label (e.g. *Strongly disagree*) for each of the five options. It was recognized by Saris (1988) that labeling each of seven options is difficult and can lead to confusion.

23.2.2 Procedure

The EFEQ was mailed to participants approximately three years following completion of their course. This time interval was selected as it was deemed sufficient time post-graduation for participants to assess the suitability, appropriateness, and relevance of accounting topics within their course of study to their work environment. Questionnaires, with covering letter and reply-paid addressed envelope attached, were mailed to all names provided by the Student Records Office of each institution. Participants completed and returned questionnaires within two weeks of receiving the questionnaire. One month after questionnaires were mailed, reminder letters, with questionnaire and reply-paid envelope attached, were sent to participants who had not replied to the first mailing. No further follow-up was undertaken beyond this point.

23.2.3 Data analyses

Data were analyzed through quantitative procedures using SPSS (Norusis, 2000). Between-group comparisons involving university and TAFE graduate responses were conducted using independent samples *t*-tests.

Principal components analyses were performed on responses for each of the two large groups, reducing items to three common constructs. Finally, a series of independent samples *t*-tests were performed on the three factors derived through principal components analysis to determine group differences (i.e. university vs TAFE graduates).

23.3 Results

> **H1:** *Accounting professionals and paraprofessionals differ in their views regarding the amount of emphasis that should be placed on topics within a tertiary accounting course.*

23.3.1 Descriptive statistics

Group mean scores and standard deviations for all 19 items, ranked from highest to lowest according to university graduates' responses, are shown in Table 23.1. It is noteworthy that mean scores and standard deviations do not vary greatly between the two groups. Also, all mean scores exceed 3, indicating that

participants believe that more emphasis should be placed on all nominated topics. Strongest agreement was apparent for computing skills, followed by quantitative accounting skills, with communication skills (oral, written, and interpersonal) also rating highly. This is in line with current thinking by professional accounting bodies both overseas (see Rebele et al., 1998) and in Australia (see Cheng and Saemann, 1997; MacCallum, 1997; Zaid and Abraham, 1994), in dictating that accounting courses should place more emphasis on communication skills.

A series of *t*-tests show significant differences in responses between university graduates and TAFE graduates on only two items: *Skills in operating a small business*, and *Skills in dealing with people from different cultures.* For both items, TAFE graduates were significantly more definite than university graduates that more emphasis should be placed on these two topics (see Table 23.1).

23.3.2 Principal components analyses

In order to parsimoniously reduce 19 items of the EFEQ to a smaller number of factors, exploratory factor analyses, using principal components (with varimax rotation) and maximum likelihood (with oblimin rotations), were performed on the 19 items. Stability of factors was assessed by consistency between these two methods (Gorusch, 1983; Pedhazur and Pedhazur-Schmelkin, 1991). Attempts to factor analyze this measure for all responses (i.e. both groups of participants combined as one) were not successful, as it was not possible to derive stability of factors. Therefore, analysis of this measure was performed on the two groups separately (i.e. university graduates and TAFE graduates), thereby indicating that the two groups hold different views regarding topic emphasis.

23.3.2.1 University graduates

Initial factor analysis, using eigenvalue cutoff at 1.0, generated four constructs. However, consistency between methods (i.e. principal components with varimax rotation and maximum likelihood with oblimin rotations) was not achieved. Stepwise deletion of five items lacking discriminatory power, and forcing remaining items into three factors (after analysis of the scree plot suggested three factors would be adequate), enabled 14 items to load on the same factors under both methods (see Table 23.2). This process led to 53.5% of the variance for the EFEQ being accounted. Bartlett's test of sphericity is significant at $p < 0.0001$ and Kaiser's measure of sampling adequacy is 0.83, satisfying Kaiser's minimum score of 0.60 (Kaiser, 1974). For the present study, constructs were labeled:

Table 23.1 Ratings of more emphasis on topics within a Bachelor of Accounting and an Advanced Diploma of Accounting

Topic	University graduates (*n* = 226)	TAFE graduates (*n* = 109)
For accounting courses, more emphasis should be placed on:		
Computing skills	4.50 (0.71)[a]	4.55 (0.64)[a]
Skills in identification, analysis, and resolution of accounting problems	4.26 (0.73)	4.34 (0.66)
Oral expression skills	4.19 (0.81)	4.15 (0.87)
Development of self-confidence and interpersonal skills	4.10 (0.94)	3.99 (0.89)
Written communication skills	4.04 (0.89)	4.13 (0.89)
Key accounting skills (e.g. bookkeeping, budgeting)	4.02 (0.93)	4.17 (0.98)
Skills in financial modeling	3.94 (0.76)	3.93 (0.86)
Development of personal skills such as goal-setting, time management, stress management	3.93 (1.02)	3.77 (1.07)
Skills in locating and using information	3.84 (0.86)	3.89 (0.88)
Skills in operating a small business	3.77 (1.00)	3.90 (0.96)*
Knowledge of interaction between accounting and related disciplines	3.75 (0.85)	3.86 (0.86)
Skills in the analysis and design of accounting systems	3.71 (0.93)	3.80 (0.97)
Skills in the analysis, evaluation, and construction of arguments	3.70 (0.92)	3.62 (0.94)
Personal wealth strategies (e.g. shares, real estate, bonds)	3.65 (1.05)	3.61 (1.09)
Awareness of social and ethical problems in accounting practice	3.55 (0.98)	3.75 (0.94)
Quantitative and statistical skills (not computing)	3.53 (1.02)	3.56 (1.05)
Skills in dealing with people from different cultures	3.29 (1.12)	3.49 (1.27)*
Skills in the design and conduct of research in accounting	3.19 (1.00)	3.50 (0.99)
Appreciation of world politics, different religions, world trends	3.03 (1.10)	3.01 (1.24)

[a] Standard deviations are given in parentheses. 1 = *Definitely not*, 5 = *Definitely*. * $p < 0.05$.

Communication skills, *Quantitative accounting skills*, and *Qualitative accounting skills*. Notably, Mathews (1990) undertook principal components analysis on 14 items common to the EFEQ relating to the amount of emphasis that should be placed on topics within an accounting degree course. Mathews's analysis also

revealed three underlying dimensions: *Professional emphasis*, *Communication and interpersonal emphasis*, and *Academic emphasis* (p. 39).

As outlined in Table 23.2, the first factor contained four items reflecting participants' views that increased emphasis in business degrees should be placed on *Communication skills* ($\overline{X} = 3.86$; item loadings range from $r = 0.54$ to $r = 0.82$). The second factor also contains four items reflecting *Quantitative accounting skills* ($\overline{X} = 3.88$; item loadings ranging from $r = 0.62$ to $r = 0.74$), while the third and final factor labeled *Qualitative accounting skills* ($\overline{X} = 3.74$) contains five items with factor loadings ranging between $r = 0.43$ and $r = 0.81$. Cronbach alphas, mean scores, and standard deviations for each factor are reported in Table 23.3. Cronbach's alpha

Table 23.2 Factor matrix of university graduates' opinions as to the amount of emphasis that should be placed on topics within a Bachelor of Accounting

Item (n = 226)	1	2	3
Factor 1: Communication skills			
Oral expression skills	0.82		
Development of self-confidence and interpersonal skills	0.73		
Written communication skills	0.73		
Skills in the analysis, evaluation, and construction of arguments	0.59		
Skills in dealing with people from different cultures	0.54		
Factor 2: Quantitative accounting skills			
Skills in financial modeling		0.74	
Skills in identification, analysis, and resolution of accounting problems		0.73	
Skills in the analysis and design of accounting systems		0.72	
Quantitative and statistical skills (not computing)		0.62	
Factor 3: Qualitative accounting skills			
Skills in operating a small business			0.81
Personal wealth strategies (e.g. shares, real estate, bonds)			0.70
Awareness of social and ethical problems in accounting practice			0.54
Development of personal success skills such as goal-setting, time-management, stress management			0.53
Knowledge of interaction between accounting and related disciplines			0.43
Eigenvalues	4.55	1.59	1.36
% of total variance	32.50	11.30	9.70
Cumulative variance	32.50	43.80	53.50

Absolute values below 0.40 were suppressed.

Table 23.3 Correlations, reliabilities, means, and standard deviations for factors on topic emphasis within a Bachelor of Accounting by university graduates (α = 0.83)

Factors (*n* = 226)	Factor 1	Factor 2	Factor 3[a]	Mean (SD)[b]
1. Communication skills	0.77			3.86 (0.69)
2. Quantitative accounting skills	0.42	0.71		3.88 (0.64)
3. Qualitative accounting skills	0.42	0.34	0.68	3.74 (0.65)

[a] Cronbach alphas shown on diagonal. 1 = *Definitely not*, 5 = *Definitely*.
[b] Standard deviations are given in parentheses.

for all 14 items is α = 0.83. According to Hair et al. (1998), values above α = 0.60 are deemed to be acceptable, with higher values indicating higher reliability.

23.3.2.2 TAFE graduates

Utilizing the same 19 items for the degree course evaluation, TAFE graduates were asked to indicate their opinion as to the amount of emphasis that should be placed on topics within an Advanced Diploma of Accounting course. Stepwise deletion of seven nondiscriminatory items, as well as forcing items into three factors, enabled agreement between the two methods. This process led to 61.4% of the variance being accounted for by 12 items loading on three factors (see Table 23.4). All factor loadings exceed 0.40 which, according to Stevens (1996, p. 371), 'are statistically and practically significant', given the sample size of 109. Bartlett's test of sphericity is significant at $p < 0.0001$ and Kaiser's measure of sampling adequacy is α = 0.83. Table 23.5 shows correlations, Cronbach alphas, mean scores, and standard deviations for the three constructs for TAFE graduates.

23.3.2.3 University vs TAFE graduates

Nine of 12 items load on the same factors for TAFE participants as for university participants. The exceptions were: *Skills in the analysis, evaluation, and construction of arguments*, which loaded on *Communication skills* for university graduates but *Qualitative accounting skills* for former TAFE students; *Computing skills* and *Skills in the design and conduct of research in accounting*, which received nondiscriminatory coefficients for university graduates but loaded on *Quantitative accounting skills* and *Qualitative accounting skills* respectively for former TAFE students.

Table 23.4 Factor matrix of TAFE graduates' opinions as to the amount of emphasis that should be placed on topics within an Advanced Diploma of Accounting

Item (n = 109)	1	2	3
Factor 1: Qualitative accounting skills			
Knowledge of interaction between accounting and related disciplines	0.74		
Skills in the analysis, evaluation, and construction of arguments	0.73		
Skills in the design and conduct of research in accounting	0.69		
Awareness of social and ethical problems in accounting practice	0.61		
Factor 2: Quantitative accounting skills			
Skills in identification, analysis, and resolution of accounting problems		0.74	
Skills in financial modeling		0.69	
Computing skills		0.69	
Quantitative and statistical skills (not computing)		0.62	
Skills in the analysis and design of accounting systems		0.57	
Factor 3: Communication skills			
Oral expression skills			0.85
Written communication skills			0.84
Development of self-confidence and interpersonal skills			0.67
Eigenvalues	4.6	1.5	1.3
% of total variance	38.3	12.5	10.6
Cumulative variance	38.3	50.8	61.4

Absolute values below 0.40 were suppressed.

Table 23.5 Correlations, reliabilities, means, and standard deviations for factors on topic emphasis within an Advanced Diploma of Accounting for TAFE graduates (α = 0.85)

Factors (n = 109)	Factor 1	Factor 2	Factor 3[a]	Mean (SD)[b]
1. Qualitative accounting skills	0.75			3.69 (0.70)
2. Quantitative accounting skills	−0.31	0.75		4.04 (0.60)
3. Communication skills	0.41	0.43	0.81	4.09 (0.75)

[a] Cronbach alphas shown on diagonal. 1 = *Definitely not*, 5 = *Definitely*.
[b] Standard deviations are given in parentheses.

Tables 23.2 and 23.4 show that, although nine of 12 items load on the same three factors for the TAFE group as for the university group, factor loadings were reversed. That is, for TAFE graduates, 38.3% of the variance is accounted for by *Qualitative accounting skills*, while this factor accounts for only 9.7% of the variance for university graduates. Meanwhile, for TAFE graduates, only 10.6% of the variance is placed on *Communication skills*, while university graduates place 32.5% on this factor. Mean scores and standard deviations for each factor, according to major groupings, are shown in Table 23.6.

Independent samples *t*-tests on factor scores reveal significant differences between university graduates and former TAFE students on constructs (all $p > 0.05$). Although these findings demonstrate that views regarding the amount of emphasis that should be placed on broad topic areas (e.g. communication skills) do not differ significantly between TAFE and university graduates, proportions of variance associated with each factor (or construct) differ across groups. Consequently, H1 is partially supported.

> **H2:** *University graduates' opinions as to the amount of emphasis to be placed on topics within an undergraduate accounting degree have changed significantly over the previous 10 years.*

Mathews (1990) reported mean scores for six topic areas relating to the present study: *Key accounting skills* ($\bar{X} = 3.5$); *Computing skills* ($\bar{X} = 3.4$); *Written communication skills* ($\bar{X} = 3.5$); *Oral expression skills* ($\bar{X} = 2.7$); *Skills in the analysis, evaluation, and construction of arguments* ($\bar{X} = 2.8$); and *Skills in the design and conduct of research in accounting* ($\bar{X} = 2.7$). For all six items, mean scores for both groups (i.e. university graduates and TAFE graduates) are significantly higher than those reported by Mathews (see Table 23.1). This finding indicates that, currently, university and TAFE graduates prefer an even greater emphasis devoted to such skills within an accounting degree. Therefore, H2 can also be supported.

Table 23.6 Mean scores and standard deviations on constructs regarding topic emphasis

Factor	University graduates (*n* = 226)	TAFE graduates (*n* = 109)
Communication skills	0.03 (0.98)[a]	−0.06 (1.05)[a]
Quantitative accounting skills	−0.04 (0.99)	0.08 (1.03)
Qualitative accounting skills	−0.03 (1.02)	0.06 (0.95)

[a] Standard deviations are given in parentheses.

23.4 Conclusion

Findings reveal that university and TAFE graduates, having worked for approximately three years as professional or paraprofessional accountants, regard that increased emphasis should be placed on all 19 nominated skills in the current tertiary accounting curricula. This outcome is in line with findings 15 years earlier by Mathews (1990), and concurs with calls by professional accounting bodies and big business (Zaid and Abraham, 1994). Meanwhile, comparisons between the two cohorts (i.e. university graduates vs TAFE graduates) are analogous with respect to mean scores yet differ for factor analyses. Interestingly, university graduates prefer to see greater emphasis on *Communication skills*, while TAFE graduates place more emphasis on *Qualitative accounting skills*. This difference could be attributed to different curricula being taught in the different types of tertiary education institution. For example, the Advanced Diploma of Accounting course includes 60 hours of communication skills type units (i.e. *Presenting reports, Negotiation skills, and Dealing with customers and clients*) as compulsory modules to be completed. University curricula for a Bachelor of Accounting, in general, incorporate communication skills within other units rather than as separate units.

An important limitation of this investigation is that participants were drawn from only one TAFE institute and two universities. Thus, it is possible that responses are not representative of Australia's university and TAFE accounting graduates.

Findings from this investigation add to the debate into what topics should be included in tertiary accounting courses by contributing the views of professional and paraprofessional accountants with approximately three years of work experience, alongside the views of business (IMA/FEI, 1994; Zaid and Abraham, 1994), practitioners (Arthur Anderson & Co., 1989), professional accounting bodies (Bedford Committee, 1986), the accounting faculty (May et al., 1995), and the nonaccounting faculty (Cherry and Mintz, 1996). It is apparent from all of these bodies that universities and TAFEs should continue to implement programs that will develop communication skills (including interpersonal skills) and other demanded skills (e.g. computing skills) within each accounting graduate. However, it is important to reiterate that, as such skills are to be developed over the duration of students' course of study and not in introductory accounting units only, it is important to consider accounting curricula beyond the first year.

In conclusion, despite recent changes to broader accounting curricula, graduates continue to hold the view that greater emphasis should be placed on all

skills nominated in the present study. It could be argued, as Mathews (1990) did 15 years earlier, that Australia's accounting degree courses should be extended from the present three years to four. To date, Australia's professional accounting bodies have not required four years for membership, despite the 150-hour rule having been introduced in many US states (see Riordan and Sullivan, 1998).

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24

Australia's Accounting Education in Perspective

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24.1 Introduction

Australia's tertiary education system has experienced a period of unprecedented change over the past two decades (AVCC, 1997a; Teese, 1997; Anderson, 1998). These changes have occurred in relation to structure, number of enrolments, and typical student demographics, leading to Australia's tertiary sector appearing substantially different today when compared with the early 1980s.

24.2 Higher education in Australia

Based on British universities, Australia's first universities (University of Sydney, University of Melbourne) commenced teaching in the 1850s. By 1914, a university had been established in each of the six states (Sharpham, 1997) and, by 1987, 19 universities had been established throughout Australia. Until 1961, when quotas for university places were first introduced, universities admitted anyone who had completed their final year of secondary school (matriculation). Despite this open policy, only a small proportion of Australia's population attended universities (Pascoe et al., 1997). In 1939, Australia's six universities had a total of 14,000 student enrolments (Harman and Selby-Smith, 1972). The post-World War II period brought significant growth for universities, with increasing demand from students and increasing Commonwealth Government funding. By 1960, enrolments had reached 53,000.

In 1965, in response to the Martin Committee's report into the future of tertiary education (Martin, 1965), the Commonwealth Government established Colleges of Advanced Education (CAEs) by bringing together a collection of nonuniversity institutions, including senior technical colleges. These were joined in 1973 by 30 teachers colleges. CAEs provided advanced learning with a strong vocational orientation (Sharpham, 1997). Progressively, throughout the 1970s, CAEs came to offer vocationally oriented bachelor degrees in the areas of education, business, applied sciences, engineering, and nursing. By 1987, there were 57 CAEs, with total enrolments exceeding those of universities (Sharpham, 1997).

In 1987, the Federal Minister of Education, John Dawkins, announced the end of the binary system of tertiary education and the beginning of a unified national system. The Commonwealth Government set minimum equivalent full-time student units (EFTSU) sizes for universities, which at the time exceeded the size of many CAEs, and universities (Dawkins, 1987). This action prompted universities and CAEs to look for partners. In most instances, CAEs merged with existing universities (e.g. Victoria College merged with Deakin University, and

Chisholm Institute merged with Monash University). However, a number of CAEs became universities in their own right and retained their unique identities. For example, Swinburne Institute of Technology became Swinburne University, and The Royal Melbourne Institute of Technology (RMIT) changed to RMIT University. This process of amalgamation resulted in 36 universities, many with multiple campuses (AVCC, 1997a).

The merging of higher education institutions saw the beginning of an era for Australia, with university education shifting from education for the 'elite' to education for the 'masses'. According to Trow (Sharpham, 1997), education shifts from the elite to the masses when the system provides places for more than 15% of the 'age grade'. In Australia, this process occurred between 1988 and 1990.

In line with trends in other parts of the Western world (e.g. the USA and UK), Australian universities during the 1990s experienced strong demand for undergraduate and postgraduate courses (AVCC, 1996b; Shah and Burke, 1996; Anderson, 1997), with the number of students enrolled in universities in 1996 (i.e. 630,000) almost doubling that of 10 years earlier. During this time, the rate of participation in higher education by 17- to 19-year-olds rose from 109 per 1000 in 1985 to 172 per 1000 in 1995. Meanwhile, participation rates for 20- to 24-year-olds rose from 91 to 151 per 1000 over the same period (West Review, 1997). Overall, participation rates of the 17–64 age group increased from 40 to 54 per 1000 between 1988 and 1997 (AVCC, 1997a).

Increasing demand for university places comes from three principal sources: school leavers, mature-aged first-time enrolments, and postgraduates (AVCC, 1997a).

- *School leavers*. As a result of State and Commonwealth Government policies, and the fall in the supply of employment opportunities for teenagers, Australia's secondary school retention rate to Year 12 has increased markedly (AVCC, 1997a; Pascoe et al., 1997; West Review, 1997). In 1983, fewer than 50% of students completed Year 12. By 1996, the figure was consistently over 70%. Presently, 53% of commencing university students are directly from secondary school and nearly 40% of students who complete Year 12 enter higher education within two years of leaving school (Pascoe et al., 1997).
- *Mature-aged enrolments*. Owing to better employment opportunities for university graduates (Dusseldorp Skills Forum, 1999), there is an increasing number of people wanting, for the first time, to undertake a university

degree. TAFE graduates can be included in this category. Quite often, TAFE graduates decide to continue on to university as they regard their diploma qualification as not providing them with optimum employment prospects (Burns et al., 1992). It is expected that improving cooperation between the university and TAFE sectors through efficient credit transfer arrangements will increase demand for higher education courses from TAFE students (West Review, 1997).

- *Postgraduates*. The number of people returning to university to undertake postgraduate study has also been increasing. With increased credentialism (see NBEET, 1995), workers are often finding that they have to keep improving their qualifications to maintain their current employment status. Also, undergraduates are finding that a postgraduate qualification improves their employability. This is most evident for Arts graduates (Monash University, 1998). The West Review (1997, p. vii) summarized the expected future of Australia's tertiary education:

> 'One thing seems certain. Just as the nineteenth century witnessed the universality of elementary education in the dame school and the second half of the twentieth century witnessed virtually universal secondary education, so the twenty-first century will mark the era of tertiary education for everybody – or almost everybody.'

24.3 Technical and Further Education (TAFE)

Technical and Further Education (TAFE) institutions have been recognized as sharing with Australia's higher education the major responsibility for tertiary education in Australia (Dawkins, 1988). TAFE courses cover a wide spectrum of objectives and client groups, and its student population is representative of the socio-economic composition of Australian society (Dawkins, 1988). Dawkins stated that 'for many, who would profit from higher education, TAFE represents the first contact with education beyond school' (p. 63).

As with universities, TAFE's history dates back to before Australia's federation. However, in contrast to universities, TAFEs have grown on a state-by-state basis, with control and funding for TAFE coming predominantly from state governments, thereby creating marked differences in organizational structure between states. For this reason, this brief history of TAFE will generally be limited to the state of Victoria.

From its beginnings in the early to mid 1800s through to the early 1960s, technical education's emphasis was on secondary education. In 1965, the Victorian Institute of Colleges was established and given the responsibility of coordinating tertiary technical colleges (Anderson, 1997). In 1970, it was proposed by the Director of the Victorian Technical Schools Division that post-compulsory technical education should be separated from junior technical schools (Jackson, 1970).

In 1974, the seminal Kangan Report (ACOTAFE, 1974) provided the 'philosophical and policy basis for the development of a distinctive identity for the technical and further education system in Australia' (Anderson, 1997, p. 3). As a result of the Kangan Report the acronym 'TAFE' was implemented. This report also identified that TAFEs were essentially vocationally oriented and had a different culture to universities. The Kangan Report noted that 'TAFE institutions exist for knowledge users, as distinct from the universities which exist traditionally also for knowledge innovators whose functions include basic research' (p. 45). TAFE enrolments in Victoria at the time were 35% trade courses, 25% paraprofessional courses, 15% preparatory courses, and 15% in hobby-type education. Of the 81,700 students enrolled in 1974, only 6000 (7.3%) were full-time (Anderson, 1997). At the time of the Kangan Report, TAFE qualifications were neither transferable nor nationally recognized.

Following on from the Kangan Report, the Victorian Government in 1980 established the TAFE Board and gave it the responsibility for the TAFE system in Victoria. In September 1981, 20 Colleges of TAFE were incorporated under the Victorian Post-Secondary Education Act 1978 (see Anderson, 1997). Also, eight Colleges of TAFE and TAFE divisions in CAEs were recognized by the TAFE Board. This Act provided the foundation for what TAFE is today and also suggests an insight into why CAEs were more responsive to working cooperatively with TAFE Colleges than were universities. At least two of today's universities (e.g. RMIT, Swinburne) involved both a TAFE component and a College of Advanced Education component within the same institute.

In the early 1980s, a technical secondary school typically operated classes to secondary school students during the day and to part-time TAFE students during the evening. Evening classes involved a combination of vocational classes leading to a certificate and short-term hobby classes. School educators typically taught both secondary school and TAFE students. In 1985, the Victorian Government decided to transfer all TAFE provision from secondary technical schools to the direct control of TAFE Colleges. This decision meant that the Schools Division of the Victorian Education Department was no longer recognized as a TAFE provider.

The TAFE sector continues to experience change. For example, the Victorian State Government is encouraging growth of Vocational Education and Training (VET) outside of the TAFE system by allowing private providers to tender for courses that have been the domain of TAFE. Also, secondary school students have the opportunity to undertake VET subjects during their Victorian Certificate of Education (VCE) in Years 11 and 12.

At present, state governments have responsibility for VET and provide about 70% of funding, with the Federal Government providing the remaining 30% (AVCC, 1997a) of total government funding, accounting for approximately 70% of TAFE institutes' operating costs. The remaining 30% is generated by TAFE institutes' own entrepreneurial activities.

Similarly to higher education, TAFE has experienced considerable expansion over the last three decades. Enrolments have been increasing by approximately 10% each year (State Training Board, 1996; NCVER, 1998). Notably, between 1973 and 1996, Victorian TAFEs experienced a fivefold increase in enrolments, from 81,700 to 386,000 students (see Anderson, 1998). Burke (1996) reported that the largest field of TAFE study is Business, Administration, and Economics, which has shown above average growth and accounts for over a quarter of all TAFE students in vocational streams.

24.4 Increased cooperation between TAFEs and universities

The divergent origins of TAFEs and universities, and the differing ambitions of their clientele, meant that for many years TAFEs and universities neither considered nor needed to cooperate. Until the late 1980s, TAFE's vocational orientation allowed most students to obtain employment immediately after completing their TAFE qualification. Also, the vast majority of TAFE students were enrolled part-time and were often already employed. Meanwhile, universities' traditional clients were school leavers wanting to obtain degree qualifications.

However, higher participation rates by school leavers attending TAFE full-time (Anderson, 1997), increased importance placed on bachelors degrees by the workforce (Dusseldorp Skills Forum, 1999), and greater number of students wanting to progress from TAFE to university (West Review, 1997) has culminated in cooperative arrangements between these two sectors. It is noteworthy that the West Review (1997, p. 3) stated that 'the prevailing system [of tertiary education] has been largely ineffective in managing the interface between the higher education sector and VET sectors'. The West Review encouraged public policy to work

towards attainment of a more seamless post-secondary education environment by facilitating maximum flexibility for students both within higher education and between higher education and VET sectors. In recognizing this shift, the AVCC (1997b, p. 4) noted:

> 'The AVCC vision for the 21st century requires closer cooperation, as well as healthy competition, between the sectors (universities, schools, vocational education and training sector, and particularly technical and further education (TAFE)), to improve the choice and quality of educational opportunities for Australian students. While the boundaries may be blurring, the distinctive missions or heartland of each sector remain. Cooperation comes at the intersect. Some universities will be better suited to the TAFE interface and some TAFE institutions will be more in tune to working with universities than others.'

To this end, the AVCC (1997b) established the Australian Credit Transfer Agency so as to 'develop a coherent and workable national system of credit accumulation and transfer for both directions' (p. 24). This action is supported by the OECD, which recognizes that there are major benefits to be gained from closer working relations between universities and TAFEs, especially in course planning and delivery (AVCC, 1996a).

A most recent trend in cooperative arrangements between the two sectors is the increasing number of double university–TAFE award programs. For example, Monash University and Chisholm Institute of TAFE offer a double award program in which students complete a TAFE Diploma in Hospitality Management and then a Bachelor of Business. This blended four-year program provides graduating students with two qualifications.

Although it is generally agreed that TAFEs and universities should enter into cooperative arrangements, a number of proponents (e.g. Business/Higher Education Round Table, 1992; NBEET, 1995; AVCC, 1996a; Teese, 1997) have highlighted the differing mission of each sector and why boundaries should remain. The AVCC, on the one hand, believes that universities discover, preserve, refine, apply, and disseminate knowledge, with the principal aim being to develop intellectual independence, as well as having the principal responsibility for training researchers. On the other hand, TAFE places more emphasis on students achieving defined levels of competencies required by industry. The AVCC (1996a) is of the opinion that 'in a truly diverse system, institutions should seek to cooperate, collaborate as well as compete' (p. 5). The Higher Education Division noted that 'while TAFE's role as a provider of vocational education should be preserved, its geographical spread and accessibility gave it

an important role in expanding opportunities for higher education study' (Higher Education Division, 1993, p. 28).

24.5 Lifelong learning

Lifelong learning is not a new concept. The adage 'the longer I live the more I learn' derives from the belief that we learn from our everyday experiences (see Candy et al., 1994). However, the context in which lifelong learning is used in education relates to learning through formal education and training rather than from everyday experiences. Over the previous three decades, there have been a number of government enquiries (e.g. AAAE, 1974; Dawkins, 1987; Higher Education Council, 1990; NBEET, 1995) into lifelong learning. The Kangan Report (ACOTAFE, 1974) referred to a broad strategy of recurrent education encompassing all adult age groups at all levels of education. Dawkins (1987), in his Green (Discussion) Paper, emphasized the need for graduates to learn how to learn and subsequently wrote in the White (Policy) Paper (Dawkins, 1988, p. 68) that 'the principle of lifelong education is now accepted as fundamental to achieving social, cultural, technological and structural change, and to our future economic development'. The Higher Education Council noted the importance of fostering skills that were of long-lasting value and transferable beyond the confines of a single study. Yet again, 1997 saw the West Review (1997) investigating lifelong learning.

In line with developments in Australia, similar discussions have occurred overseas. For example, in the USA, Cross (1987, p. 99) commented that 'lifelong learning has become a lifelong necessity for almost everyone'. The Canadian Corporate Higher Education Forum (1990, p. 17) wrote that 'all educators must be concerned with promoting lifelong learning in their clients'. Likewise, similar reports have emanated from New Zealand (e.g. Ministry of Education, 1992) and the UK (e.g. Wright, 1992).

With respect to the lifelong skills that a graduate should acquire through their university experience, the Business/Higher Education Round Table (1992) indicated that professional knowledge was considered less important than development of skills in communication, decision-making, problem-solving, the application of knowledge to the workplace, working under minimum supervision, ability to work in a team, and the ability to learn new skills and procedures. According to Candy et al. (1994), business and industry sectors hold consistent views. It is noteworthy that, in the USA, undergraduate degrees tend to be more generalist than in Australia. Also, professional (and hence specifically vocational)

degrees are taught at postgraduate level. Candy et al. (1994, p. 110) concluded that:

> 'An ideal undergraduate curriculum would provide a systematic and integrated introduction to a discipline or field of study; offer a comparative or contextualized framework for that discipline or field of study; encourage the broadening of the student, and the progressive development of certain generic skills; allow some freedom of choice and flexibility to meet the needs of a range of students; and have structure which explicitly devolves to learners a greater responsibility for self-direction.'

The curriculum of TAFE certificates and diplomas concentrate on the technical content of the respective vocation. In contrast, the university undergraduate curriculum, although varying somewhat depending on the degree course, is broader based and far more in tune with the aspirations of lifelong education. In line with the philosophy of lifelong learning, Gonczi (1997) emphasized that learning how to learn is more important than the assimilation of knowledge, and that lifelong learning is essential for most occupations in this era of continuous change.

24.6 Seamless education

It is generally accepted that it is inefficient for students to repeat subjects in which they have demonstrated competencies (Beazley, 1992; Haydon, 1995). As such, principles of credit transfer, advanced standing, cross-credits, and recognition of prior learning have evolved whereby students are given opportunities to reduce the number of subjects necessary to complete their course of studies because they have successfully completed similar subjects. This practice has led to the objective of seamless education. Teese (1997, p. 2) argued that 'in a seamless education and training system, there are multiple points of entry to each sector which allow individuals to build on learning and adapt to changing circumstances'.

Seamless education is occurring between schools and VET. For example, in 1997, 8000 high-school students undertook TAFE modules for which they are eligible for advanced standing, should they enter a TAFE course (Gonczi, 1997). TAFE and university sectors have also cooperated to the extent that about 29% of all degree courses are subject to credit transfer arrangements, mainly in the fields of engineering, business studies, and applied science and technology

(NBEET, 1995). Meanwhile, degree graduates are increasingly enrolling in TAFE courses to improve their vocational skills (Golding et al., 1996; Teese, 1997). For example, in 1996 the West Review (1997) reported that, while 42,800 university graduates undertook study in TAFE, TAFE study was the basis for admission to university for 11,800 (6% of total) commencing undergraduates.

Although universities are becoming more receptive to recognizing prior formal education, as evidenced by the increase in credit transfer arrangements and the AVCC (1997b) establishing the Australian Credit Transfer Agency, universities are reluctant to give recognition for knowledge acquired informally. TAFEs, however, generally recognize that it is possible for a person to acquire knowledge via employment rather than being in class (e.g. knowing how to use a software package), and so grant a cross-credit. This process is usually called recognition of prior learning (RPL).

Despite Teese's (1997) encouragement for seamlessness, he indicates that it should not be overstressed. According to Teese, TAFE should not be seen merely as a stepping stone to university. He stated that there are considerable differences between the two sectors such as different student intakes, program orientation, funding arrangements, administration, governance, public prestige, and cultural reference points. He explains that 'to have TAFE as a stepping stone to university would result in severe tensions because of the much weaker academic profile of students entering TAFE' (p. 3). Meanwhile, the 'big business' sector of Australia believes that students who complete Year 12 have a right to some form of post-secondary education, but not necessarily a university degree (Business/Higher Education Round Table, 1992). To alleviate the pressure on universities as a result of the increased demand for skills training, business is supportive of consideration being given to the American community college and two-year college systems prior to university entrance as an alternative to the current system of tertiary education in Australia. It proposes that TAFE be involved in such a structure (see Business/Higher Education Round Table, 1992).

Despite their totally different origins, culture, clientele, and funding arrangements, this decade has heralded many cooperative arrangements between university and TAFE sectors so that the seamless education concept can be fulfilled. These arrangements have led to some universities becoming multi-sector institutions by absorbing TAFE institutes. Furthermore, given the recent forced mergers of a number of TAFEs in the Melbourne metropolitan area (see OTFE, 1997), it appears that this absorption process might continue.

One of the disciplines for which cooperation between universities and TAFE is paramount, so as to avoid unnecessary duplication, and which has been one

of the forerunners for credit-transfer advances, is accounting. It is this area of learning that is reviewed in the next section.

24.7 The accounting profession and accounting education in Australia

A review of the literature (Freidson, 1983; Abbot, 1988; Dezalay, 1995) suggests that there are differing opinions as to whether accounting can be regarded as a profession. Unlike the professions of medicine, law, dentistry, veterinary science, architecture, psychiatry, pharmacy, and actuaries, there are no laws in Australia preventing people from calling themselves accountants (Mathews, 1990). A person is not required to hold any qualifications to work as an accountant, although persons carrying out the specialized areas of accounting, such as auditors, liquidators, receiver-managers, and tax agents, do require registration by a government authority. Predictably, the Institute of Chartered Accountants in Australia (ICAA) and CPA Australia, as well as accounting bodies overseas (e.g. the American Institute of Certified Public Accountants), regard accounting as a profession (Carey, 1969; Jeffrey, 1995). This view has also been confirmed by independent critics (Abbot, 1988; Freidson, 1983). West (1996) argued that 'the various privileges offered to accounting bodies including monopoly, self-regulation, high social standing, and responsibilities for developing accounting standards enforceable by law' constitutes a profession. Others (Zeff, 1987; Briloff, 1990; Tweedie, 1993; Mitchell et al., 1994) are uneasy about the certainty of regarding accounting as a profession. Despite these differences in views, for the purposes of this article accounting is regarded as a profession.

Discussion of accounting as a profession is important as it is the professional accounting bodies around the world, especially in the USA, Australia, and New Zealand, that influence, if not determine, accounting education in tertiary institutions. An example of this influence is the accreditation process undertaking by Australia's universities with Australia's professional accounting bodies (see Mathews, 1990).

Requirements to become a professional accountant are regulated by the professional bodies of each country and, although similar, differences do exist. A review of the requirements for nations of the Western world reveal that, to become a professional qualified accountant, a person is firstly required to complete an accredited course from an accredited tertiary institution (typically a bachelor's degree in commerce or business), and then complete a postgraduate program of professional-entry exams administered by the accounting bodies

(e.g. CPA, Professional Year) combined with relevant work experience. Once qualified, a professional accountant is required to undertake a minimum number of hours per year of professional education to maintain their title. This is the situation in Australia, with the ICAA and CPA Australia having almost identical membership requirements.

An accounting degree in Australia is usually incorporated into a Bachelor of Business or a Bachelor of Commerce with a major in accounting. A minimum of three years (i.e. six semesters, 24 courses) of full-time higher education study is required. To qualify for entry into CPA Australia or the ICAA, students are required to complete specified courses within the 24-course degree. These typically include two introductory accounting courses, two financial accounting courses, two management accounting courses, two economics courses, one finance course, and one auditing course. In the USA, an accounting graduate has most likely completed five years of higher education study: two years of liberal studies, two years of business and general accounting education, and a fifth (graduate) year of specialized accounting preparation (Mathews, 1992). This five-year program stemmed from recommendations made by the Bedford Committee (1986). An overview of the Bedford Committee's 28 recommendations was for accounting education to be broader and to adopt a more active role for students in learning.

The Bedford Committee, in recognizing that all professions change over time, were of the opinion that accounting education had lost its relevance to the accounting profession, stating that 'accountants in government, industry, and public practice are providing services ranging from data collection and analysis to the installation and operation of computer-based information systems and to strategic planning and implementation' (p. 171). The Committee could foresee the continuance of the profession expanding into nontraditional fields, with accountants being more involved with the decision-making process. As such, the Committee recognized that 'the current content of professional accounting education, which has remained substantially the same over the past 50 years, is generally inadequate for the future accounting professional' (p. 172). The Committee stated that there was a widening gap between what accountants do and what accounting educators teach. It was of the opinion that there was a continuing trend by the general public that professional accountants should have a general manager's perspective and to understand national goals, in addition to qualifying as a technical expert.

In line with other reports of the time into American higher education (Study Group, 1981), the Bedford Committee called for an expansion of liberal education

requirements, stating that 'students should possess a knowledge of humanities, arts, and science' (p. 181). The overwhelming resolution of the Committee was for a broader focus in courses. The Committee also called for an increase in the importance of lifelong learning so that accountants can keep up to date with their changing profession.

In response to the Bedford Committee's recommendations, the American Accounting Association (AAA) established the Accounting Education Change Committee (AECC) to further investigate and where appropriate implement changes. The AECC's first Position Statement (AECC, 1990) noted that accounting education should develop, in students, skills and abilities needed for success in the accounting profession including intellectual, interpersonal, and communication skills.

The AECC (1990), in its Position Statement No. 1, outlined its view that an accounting program is intended to prepare students to become professional accountants, not to be professional accountants, stating that pre-entry education should lay the base on which lifelong learning can be built. The AECC discussed course content in terms of four educational components: general education, general business, general accounting, and specialized accounting education.

24.8 Accounting education in Australia

In a major review of accounting education in Australian universities and CAEs, the Mathews Committee (1990) recommended strongly that undergraduate accounting programs be lengthened from three years to four years. The Committee stated:

> 'The existing undergraduate program is failing in its attempt to achieve three educational objectives within a three year degree – to provide a broad-based general education, to provide a specialized professional education to meet the membership requirements of the accounting profession, and to prepare students for a career in business management.'

After surveying accounting students, graduates, and employers, Mathews (1990) found that students and graduates overwhelmingly criticized accounting courses for not being practical enough and related to the world of business. Small chartered accounting firms agreed, complaining that many graduates do not know a debit from a credit. Similarly, employers stressed that lack of communication skills represented the area of greatest deficiency. Employers also noted that graduates had weaknesses in taxation law, government accounting, management

accounting theory, business acumen, entrepreneurial skills, and small business management. As well, employers supported an increased emphasis on the development of computing skills.

The Committee highlighted that existing undergraduate accounting curricula were restricted by the requirements of professional accounting bodies; that courses in accounting needed to be more conceptual and less procedural; and that computing skills and communication skills needed to be more highly developed in undergraduates. The Committee recommended that CPA Australia and the ICAA should require the equivalent of a fourth year of full-time study as a prerequisite for membership of their bodies at an associate level. The Committee wanted the fourth year to be phased in between 1992 and 1995. To date, this recommendation of a four-year requirement for professional membership has not been adopted by the accounting professions.

In line with recommendations of the Mathews Committee and the Bedford Committee, and as a result of the advanced and specialized skills necessary to meet expanding needs of the accounting profession, Australia in the 1990s has seen an increase in the range and number of honours and masters courses in accounting (Romano and Smyrnios, 1996). Enrolments have grown significantly.

24.9 Accounting education in TAFE

A review of the literature reveals practically no research into the development of accounting education in TAFE. However, a review of courses offered in the discipline of accounting in TAFE over the previous 20 years shows a history of changes in curriculum and nomenclature. For example, in the late 1970s, students undertaking accounting studies at TAFE enrolled in the Certificate in Accounting. This course was the equivalent of one year of full-time study, although most students studied part-time (Lewis, 1994). In 1985, a curriculum change and name change meant that students studied an Advanced Certificate in Accounting (again, one year full-time), and then another year of studies for an Associate Diploma of Business (Accounting). In 1997, curriculum and name changes converted the first year to a Diploma of Accounting and the second year to an Advanced Diploma of Business (Accounting).

24.10 Conclusion

In line with other Western nations, the 1980s and 1990s have seen an increase in demand for places in Australia's universities and TAFE institutes. Associated

with this increase has been further demand for TAFE graduates wanting to transfer to university. TAFE students' desire to complete a degree has largely been created by employer demands, especially in accounting. Recent times have evidenced increased cooperation between universities and TAFE institutes and the proliferation of different tertiary programs (e.g. credit transfer, degree-articulation programs, and double award programs).

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