PALGRAVE MACMILLAN STUDIES IN
BANKING AND FINANCIAL INSTITUTIONS
SERIES EDITOR: PHILIP MOLYNEUX

Japan's Financial Slump

Collapse of the Monitoring System under Institutional and Transition Failures

Yasushi Suzuki

Palgrave Macmillan Studies in Banking and Financial Institutions

Series Editor: **Professor Philip Molyneux**

The Palgrave Macmillan Studies in Banking and Financial Institutions are international in orientation and include studies of banking within particular countries or regions, and studies of particular themes such as Corporate Banking, Risk Management, Mergers and Acquisitions, etc. The books' focus is on research and practice, and they include up-to-date and innovative studies on contemporary topics in banking that will have global impact and influence.

Titles include:

Yener Altunbaş, Blaise Gadanecz and Alper Kara
SYNDICATED LOANS
A Hybrid of Relationship Lending and Publicly Traded Debt

Yener Altunbaş, Alper Kara and Öslem Olgu
TURKISH BANKING
Banking under Political Instability and Chronic High Inflation

Steffen E. Andersen
THE EVOLUTION OF NORDIC FINANCE

Seth Apati
THE NIGERIAN BANKING SECTOR REFORMS
Power and Politics

Elena Beccalli
IT AND EUROPEAN BANK PERFORMANCE

Paola Bongini, Stefano Chiarlone and Giovanni Ferri (*editors*)
EMERGING BANKING SYSTEMS

Vittorio Boscia, Alessandro Carretta and Paola Schwizer
COOPERATIVE BANKING: INNOVATIONS AND DEVELOPMENTS

COOPERATIVE BANKING IN EUROPE: CASE STUDIES

Roberto Bottiglia, Elisabetta Gualandri and Gian Nereo Mazzocco (*editors*)
CONSOLIDATION IN THE EUROPEAN FINANCIAL INDUSTRY

Alessandro Carretta, Franco Fiordelisi and Gianluca Mattarocci (*editors*)
NEW DRIVERS OF PERFORMANCE IN A CHANGING FINANCIAL WORLD

Dimitris N. Chorafas
CAPITALISM WITHOUT CAPITAL

Dimitris N. Chorafas
FINANCIAL BOOM AND GLOOM
The Credit and Banking Crisis of 2007–2009 and Beyond

Violaine Cousin
BANKING IN CHINA

Vincenzo D'Apice and Giovanni Ferri
FINANCIAL INSTABILITY
Toolkit for Interpreting Boom and Bust Cycles

Peter Falush and Robert L. Carter OBE
THE BRITISH INSURANCE INDUSTRY SINCE 1900
The Era of Transformation

Franco Fiordelisi
MERGERS AND ACQUISITIONS IN EUROPEAN BANKING

Franco Fiordelisi, Philip Molyneux and Daniele Previati (*editors*)
NEW ISSUES IN FINANCIAL AND CREDIT MARKETS

Franco Fiordelisi, Philip Molyneux and Daniele Previati (*editors*)
NEW ISSUES IN FINANCIAL INSTITUTIONS MANAGEMENT

Franco Fiordelisi and Philip Molyneux
SHAREHOLDER VALUE IN BANKING

Hans Genberg and Cho-Hoi Hui
THE BANKING SECTOR IN HONG KONG
Competition, Efficiency, Performance and Risk

Carlo Gola and Alessandro Roselli
THE UK BANKING SYSTEM AND ITS REGULATORY AND SUPERVISORY FRAMEWORK

Elisabetta Gualandri and Valeria Venturelli (*editors*)
BRIDGING THE EQUITY GAP FOR INNOVATIVE SMEs

Kim Hawtrey
AFFORDABLE HOUSING FINANCE

Jill M. Hendrickson
REGULATION AND INSTABILITY IN US COMMERCIAL BANKING
A History of Crises

Otto Hieronymi (*editor*)
GLOBALIZATION AND THE REFORM OF THE INTERNATIONAL BANKING AND MONETARY SYSTEM

Munawar Iqbal and Philip Molyneux
THIRTY YEARS OF ISLAMIC BANKING
History, Performance and Prospects

Sven Janssen
BRITISH AND GERMAN BANKING STRATEGIES

Kimio Kase and Tanguy Jacopin
CEOs AS LEADERS AND STRATEGY DESIGNERS
Explaining the Success of Spanish Banks

Alexandros-Andreas Kyrtsis (*editor*)
FINANCIAL MARKETS AND ORGANIZATIONAL TECHNOLOGIES
System Architectures, Practices and Risks in the Era of Deregulation

M. Mansoor Khan and M. Ishaq Bhatti
DEVELOPMENTS IN ISLAMIC BANKING
The Case of Pakistan

Caterina Lucarelli and Gianni Brighetti (*editors*)
RISK TOLERANCE IN FINANCIAL DECISION MAKING

Roman Matousek (*editor*)
MONEY, BANKING AND FINANCIAL MARKETS IN CENTRAL AND EASTERN EUROPE
20 Years of Transition

Philip Molyneux and Eleuterio Vallelado (*editors*)
FRONTIERS OF BANKS IN A GLOBAL WORLD

Imad Moosa
THE MYTH OF TOO BIG TO FAIL

Simon Mouatt and Carl Adams (*editors*)
CORPORATE AND SOCIAL TRANSFORMATION OF MONEY AND BANKING
Breaking the Serfdom

Anastasia Nesvetailova
FRAGILE FINANCE
Debt, Speculation and Crisis in the Age of Global Credit

Anders Ögren (*editor*)
THE SWEDISH FINANCIAL REVOLUTION

Dominique Rambure and Alec Nacamuli
PAYMENT SYSTEMS
From the Salt Mines to the Board Room

Catherine Schenk (*editor*)
HONG KONG SAR's MONETARY AND EXCHANGE RATE CHALLENGES
Historical Perspectives

Yasushi Suzuki
JAPAN'S FINANCIAL SLUMP
Collapse of the Monitoring System under Institutional and Transition Failures

Noël K. Tshiani
BUILDING CREDIBLE CENTRAL BANKS
Policy Lessons for Emerging Economies

Ruth Wandhöfer
EU PAYMENTS INTEGRATION
The Tale of SEPA, PSD and Other Milestones Along the Road

The full list of titles available is on the website:
www.palgrave.com/finance/sbfi.asp

Palgrave Macmillan Studies in Banking and Financial Institutions
Series Standing Order ISBN 978–1–4039–4872–4

You can receive future titles in this series as they are published by placing a standing order. Please contact your bookseller or, in case of difficulty, write to us at the address below with your name and address, the title of the series and the ISBN quoted above.

Customer Services Department, Macmillan Distribution Ltd, Houndmills, Basingstoke, Hampshire RG21 6XS, England

Japan's Financial Slump

Collapse of the Monitoring System under Institutional and Transition Failures

Yasushi Suzuki
Professor of Finance, Ritsumeikan Asia Pacific University, Japan

palgrave
macmillan

First published 2011 by
PALGRAVE MACMILLAN

Palgrave Macmillan in the UK is an imprint of Macmillan Publishers Limited, registered in England, company number 785998, of Houndmills, Basingstoke, Hampshire RG21 6XS.

Palgrave Macmillan in the US is a division of St Martin's Press LLC, 175 Fifth Avenue, New York, NY 10010.

Palgrave Macmillan is the global academic imprint of the above companies and has companies and representatives throughout the world.

ISBN 978–0–230–29034–1 hardback

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources. Logging, pulping and manufacturing processes are expected to conform to the environmental regulations of the country of origin.

A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data
Suzuki, Yasushi, 1963–
Japan's financial slump : collapse of the monitoring system under institutional and transition failures / Yasushi Suzuki.
p. cm. — (Palgrave Macmillan studies in banking and financial institutions)
Includes index.
ISBN 978–0–230–29034–1 (hardback)
1. Bank failures—Japan. 2. Banks and banking—Japan. 3. Financial institutions—Japan. 4. Financial crises—Japan. 5. Nihon Choki Shin'yo Ginko. I. Title.
HG3767.J34S99 2011
332.10952—dc22 2011002016

10 9 8 7 6 5 4 3 2 1
20 19 18 17 16 15 14 13 12 11

Printed and bound in Great Britain by
CPI Antony Rowe, Chippenham and Eastbourne

Contents

List of Tables

List of Figures

Preface

The arguments contained in this book are based primarily on the perspective of institutional requirements of a financial system to perform its *credit monitoring and supervising* functions. This book, I believe, explores a new hypothesis that can help to shed light on why the Japanese banks and regulators are still trapped in a unique type of 'transition failure' at the end of the 2000 decade.

My analysis suggests that it was not feasible for the Japanese financial system to effectively transform into the Anglo-American system for a number of reasons. In particular, in the latter system, individual investors and households have demonstrated a willingness to absorb the risk and uncertainty implicit in investments in the corporate sector in a frontier economy. This broad investor base was absent in the Japanese economy. The types of financial institutions that may work better in the Japanese frontier economy require further institutional analysis and practical experimentation. Meanwhile, it is very important to recognize the significance of improving the 'hybrid' system that characterizes the Japanese financial sector, consisting of both an emerging 'direct-finance' market and a predominant 'indirect-finance' market. In particular, an efficient indirect-finance mechanism run by banks is still critical for the overall Japanese financial system. It follows that Japanese banks have to develop and adapt their monitoring system for the corporate sector because this type of long-term lending is not amenable to a fully codified and algorithmic mode of monitoring as was implicitly attempted in the *Big Bang* and subsequent reforms in Japan.

This book recognizes that the traditional system of monitoring by lead banks had run into trouble and could not be continued. But we believe that lead banks could have exercised a substantially higher degree of effort in collaboration with regulators to use the network relationships that they had enjoyed to develop new ways of classifying and monitoring uncertainty and risk. A reform attempt that built on the strengths of the Japanese financial system rather than attempting to abandon it entirely would probably have had a greater chance of success and would have been more consistent with Keynes and post-Keynesian heterodox analysis of the non-quantifiability of uncertainty in frontier investments. This book does not propose an alternative financial structure because such a structure can only be constructively adapted

through a process of trial and error. Rather, our policy conclusion is that the direction of experimentation in Japan has not been the most effective one.

This book challenges the conventional explanations of Japan's prolonged financial slump and suggests a different set of failures that affected the Japanese banking system. We argue that, firstly, an important driver behind the structural failure was the inability of Japanese banks to respond to the 'uncertainty' created in the economic environment as a result of the changes introduced in the 1980s as Japanese banks tried to integrate into a global financial market in a context in which Japan was itself transforming from a 'catching-up' economy into a frontier one. Secondly, we argue that the problem of adaptation was in fact compounded by an ill-planned transition to the Anglo-American monitoring system and Basel requirements. This new system failed to address how Japanese lenders were to manage intensifying uncertainty in the new international system *given the specificities of the Japanese financial context*. Finally, we argue that the internal collapse of *trust* in the system can explain how the Japanese financial system has fallen into a unique type of 'transition failure' that prevents it from responding to the obvious failings of its financial structure. We suggest that these problems result from a significant lack of complementarity between the viable parts of the pre-existing Japanese financial system and the parts of the Anglo-American system that were being added. In other words, the emergent 'mixed' institutional structure had more serious problems compared to the pre-existing 'main bank' system or the coherent versions of Anglo-American banking system operating in countries where it had gradually evolved over time.

Acknowledgements

The collapse of the Long-Term Credit Bank of Japan (LTCB) was not only a collapse on a scale that shocked most observers, it also revealed significant features of the ongoing Japanese financial slump. The causes that beset the LTCB turned out to be quite general ones affecting a wide swathe of Japanese banks. How can we make sense of the LTCB collapse? This was the motivation for the writing of this book, because I was in the collapse as a bank manager.

In the first place, I would like to express my gratitude to Mushtaq Khan for his advice throughout my research. I owe my biggest debt to him. He provided me with continuous encouragement and support with his truly academic rigour and passions in research, which exceptionally enriched my growth as an academic. I also sincerely thank Gabriel Palma and Ha-Joon Chang who kindly provided helpful and valuable suggestions.

I am grateful to those seniors and colleagues at the LTCB, who encouraged and supported my research as well as the subsequent academic life. During my stay in the LTCB I had a satisfying working life with many supervisors and colleagues. Particular thanks are due to Koji Hirao, Akira Kagiichi, Masaharu Kuhara, Mike Tanji, Hiroshi Sasaki, Al Arakawa, Tetsuya Fujisaki, Kotaro Aoki, Chen H-F., Yasuyuki Matsumoto, Seiji Shintani, Masaaki Sakaguchi, Hiroyuki Miyake, Katsuhiko Fujimoto, whose continuous help in different ways, even after I left the bank, was invaluable.

I benefited substantially from discussions with Yoshimasa Nishimura at Waseda University and Kotaro Tsuru at the Research Institute of Economy, Trade and Industry. They read parts of the earlier versions of the manuscript and made helpful comments.

I would also like to acknowledge the encouragement of Masanori Namba, the former Dean of the College of International Management of Ristumeikan Asia Pacific University (APU), and Susumu Yamagami, the former Dean of the College of Asia Pacific Studies of APU during my research. In addition, six consecutive years of my academic life at APU gave me time to contemplate the arguments in this book. The support, comments and criticisms from my colleagues were invaluable. In particular I would like to acknowledge Md. Dulal Miah, Bishnu K. Adhikary, A.S.M. Sohel Azad and Manjula K. Wanniarachchige.

This book reminds me of my old days of research at the School of Oriental and African Studies (SOAS) and of good times with my friends, including Gaku Kato, Henry Ma, Yasuyuki Matsumoto and An-Yu Shih. I am grateful to Yasuhiro Tsutsumiguchi, Vibhav Upadhyay and Neerendra Upadhyay who kindly supported these good years at London.

Finally, I would like to thank my wife, Akiko Suzuki, for her constant support. During the last 15 years, we have moved to various places: Jakarta, Singapore, Holborn, New York, Putney, Marble Arch, Kanazawa, Tokyo and Beppu. Without her encouragement and significant contributions, this research – along with the long journey – would not have been completed. This book is dedicated to her.

Yasushi Suzuki

This page intentionally left blank

1
Introduction and Summary

1.1 Fundamental questions about Japan's financial monitoring system

In the 1980s, Japan's financial system – and, in particular, its banking system – was the largest in the world. In terms of loan asset size nine of the world's top ten banks were Japanese, including the Long-Term Credit Bank of Japan Limited (LTCB). They were expanding their international banking operations vigorously and accounted for 34 per cent of the world's international lending business, supported in part by the strength of the Japanese Yen. Today, the picture is very different. In contrast to the buoyant 1980s, the 'bank-led' financial system has been in a slump. The LTCB collapsed in October 1998. Japanese banks, with the exception of the Mitsubishi-UFJ Financial Group,[1] no longer rank among the world's top ten and their credit ratings have declined dramatically.

What has caused this dramatic change in fortunes? For one, a large proportion of the non-performing loans (NPL) held by the Japanese banking sector became a drag on its economy after the bursting of the 'bubble'. Particularly until the mid-2000s, Japan had been trapped in a vicious circle, where a massive overhang of non-performing debt in the banking sector hampered the growth and recovery of the whole economy. At the same time, lingering economic stagnation exacerbated the overhang. Fundamentally, effective screening and monitoring by lenders and investors are critical for the proper functioning of financial markets, at least in terms of preventing the rapid build-up of NPL. In normal financial markets, it is the case that individuals and firms usually seek more funds than there are available. From the perspective of asymmetric information facing lenders and borrowers, the efficient

allocation of scarce funds requires *ex ante* monitoring by lenders for selecting projects to be funded, *ongoing* monitoring to track how the allocated funds are used, and then *ex post* monitoring to identify financial outcomes and take action based on them. To the extent that lenders and borrowers face fundamental uncertainty (in the sense that the *ex ante* risk associated with many investment activities is arithmetically unquantifiable), the lender's ongoing monitoring activities become even more significant and are now required on a continuous basis to protect the lender.

It is widely argued that the accumulation of a huge volume of NPL in Japanese banks represented a malfunction of the traditional mode of monitoring. Commonly accepted theories suggest that (1) this problem was due to a *protective* institutional framework in the traditional 'main bank' and 'convoy' monitoring system (see section 3.3 for details), which created a false sense of security that Japanese banks would not be allowed to go bust. This in turn created a moral hazard problem since banks arguably believed that any dismal loan portfolio would be finally bailed out by the regulator (for instance, see IMF 2000; Patrick 1998; Saito 1998; Harada 1999; Takeda 2001; Hoshi and Kashyap 2001; Ikeo 2006). Other theories suggest that this problem was compounded by (2) Japan's slow process of transforming its traditional system towards the Anglo-American mode of monitoring promoted in the name of financial deregulation by the US since the mid-1980s (for instance, see IMF 2000; Cabinet Office 2001; Kanaya and Woo 2000; Chan-Lau 2001; Miyoda 1994). This book challenges these theories and suggests that as far as arguments such as (1) above are concerned, moral hazard was a relatively minor problem for the Japanese banking system as it had its own effective form of monitoring. Rather, the crisis can be better explained in terms of an intensification of 'uncertainty' which magnified previously manageable structural and institutional problems in the Japanese financial system. In respect of arguments like (2) above, the book argues that it was in fact the badly planned transition to an monitoring framework based on the Anglo-American and Basel model that further contributed to Japan's prolonged slump in financial intermediation. In order to justify these objections, this book aims to analyse the institutional change in the Japanese financial system from the point of view of the institutional setting necessary for carrying out an effective reform of its mode of monitoring. The mode of monitoring here includes the method of credit risk screening and monitoring by banks as lenders (or investors in general), as well as the mode of monitoring and supervising by the financial authorities as

regulators and monitoring agents of banks. This book suggests that the institutional failure in the transition of the mode of monitoring was the root cause of the prolonged financial stagnation after the hard landing of the bubble economy.

This book aims to answer the following questions:

1 Why was the Japanese traditional mode of monitoring, which had been fairly effective during the high-growth period, no longer effective? What institutional characteristics of the traditional mode were effective during the high-growth period and what institutional settings were hindering effective monitoring in the subsequent period? How can we understand the relation between the institutional settings and the associated costs of monitoring?
2 Given the external pressures to change from the higher cost of monitoring in the traditional mode to the Anglo-American and Basel mode of monitoring, to what extent was the transition feasible? What were the foundations and institutional settings necessary for the transition to the Anglo-American and Basle-type mode? Did Japan possess these foundations?

1.2 Economic realities

To analyse the factors that constrained screening and monitoring activities, which had an impact on Japan's prolonged financial slump, this book divides the structural change in Japan's economy into the following phases:

1 The 'catching-up' period, that is, the period up to the mid-1970s when Japan's economy enjoyed 'high economic growth'.
2 The 'moderate economic growth' period from the mid-1970s until the hard landing of the 'bubble' economy. During this period, many Japanese industries had already reached the international technology frontier. By the end of this period, Japan had become what we can describe as a 'frontier economy' in terms of technology.
3 The period of prolonged 'economic and financial stagnation' since the onset of financial crisis when the bubble finally burst.

In the 'catching-up' period, when Japan's economy was trying to catch up with that of the US, the business model of absorbing and improving engineering know-how absorbed from abroad made a substantial contribution to Japan's high levels of economic growth.

This period was ended by the 'Oil Shock' of 1974. During the subsequent 'frontier economy' era, many Japanese industries were getting closer to or even reaching the international technology and marketing frontier. A number of empirical studies have observed a trend of 'internationalization' and 'technological change' in Japanese firms since the mid-1970s (Aoki *et al*. 1994; Schaberg 1998; Patrick 1998; Kanaya and Woo 2000; Hoshi and Kashyap 2001). This book suggests that the trend of internationalization and technological change intensified in the mid-1980s. Furthermore the frontier economy had seen a substantial increase in the share of the tertiary sector in the overall economy. It can be reasonably argued that the development paradigm for the Japanese economy shifted to that of a frontier economy around 1975. This period also comes to an end around 1991 when the financial bubble that had been developed eventually burst and the adverse macroeconomic consequences became significant. As a result, we take 1992 to be the starting point of the prolonged economic and financial slump. Table 1.1 illustrates the average real GDP growth rate in each phase.

This book considers the structural and macroeconomic environment changes that led to changes in the modes of monitoring used by Japanese banks from the catching-up period to the frontier economy period. We identify a number of 'structural failures' and 'transition failures' in the evolution of new modes of monitoring as the root cause of Japan's lingering financial slump. Structural failures refer to inadequacies in the structure of the new institutions for achieving efficiency, including efficient levels of monitoring, while transition failures refer to inadequacies in the pace and direction of institutional change to achieve better efficiency over time (Khan 1995).

Table 1.2 shows the typical changes in the sectoral shares of different types of activities in the Japanese economy as it matured over the period we are discussing in the three phases. From these data, it is evident that the shares of primary and secondary sectors were in decline, while the share of the tertiary sector was on the increase.

Table 1.1 Japan's average real GDP growth rates (at constant prices)

1966–1974[a]	***1975–1991***[a]	***1992–2008***[b]
8.82% p.a.	4.05% p.a.	1.20% p.a.

Notes: [a] base year = 1990, [b] base year = 2000.
Source: Author based on statistics of Cabinet Office and ESRI (2008).

Table 1.2 The changes of the share of each industry in Japan's GDP (at current prices)

Sector	*1966–1974*[a]	*1975–1991*[a]	*1992–2008*[b]
Primary	7.5%	3.8%	1.8%
Secondary	40.7%	36.7%	28.5%
Manufacturing	*33.5%*	*27.9%*	*21.3%*
Tertiary	51.8%	59.5%	69.6%

Source: Author based on statistics of Cabinet Office[a] and ESRI (2008)[b].

The recent stagnation of the Japanese economy, together with periods of negative growth, can be observed in Figure 1.1. One reason which has been suggested for this prolonged economic slump is the structural failure in the intermediation of financial resources (Cabinet Office 2001, 2008; Hoshi and Kashyap 2001; Ikeo 2006; Tsuru 2006). Since the mid-1990s the government had been operating its monetary policy of increasing the money supply. In spite of this, the level of lending by private banks was falling. The outstanding loans towards small and medium-sized enterprises (SME[2]) had dropped sharply – from ¥344.9 trillion in December 1998 to ¥260.3 trillion in December 2003, then to ¥253.1 trillion in December 2009 (see Figure 1.2). Clearly, the Japanese banks were very conservative when it came to assessing the credit risks of SME. According to SMEA (2009), the Survey on SME Business Conditions, which surveyed about 19,000 SME, including enterprises with capital of less than ¥20 million that were not covered by the Bank of Japan (BOJ) National Short-Term Economic Survey of Enterprises in Japan (referred to as *BOJ Tankan*), indicated that the SME's business conditions DI (Diffusion Index) continued to decline for 12 consecutive quarters, from second quarter of 2006 to first quarter of 2009. The Business conditions DI in the fourth quarter of 2008 had been the worst since the revision of the survey contents in 1994, until a new record was made in the first quarter of 2009.

The argument in this book has implications for such explanations of Japan's prolonged and deep financial slump. Explanations[3] that place much of the blame on the Ministry of Finance (MOF) as the regulator for persistent failures of omission and commission from the bursting of the bubble to the nationalization of the LTCB are insufficient. Such theories fail to explain why policy errors apparently continued over such a long period. In particular, why did the regulator change the financial policy radically to an Anglo-American rules-based supervision system, which had an adverse effect on banks that were already in financial trouble?

Figure 1.1 Japan's GDP growth (at constant price)
Notes: Up to 1991 base year = 1990, from 1992 base year = 2000.
Source: Author based on statistics of Cabinet Office and ESRI (2008).

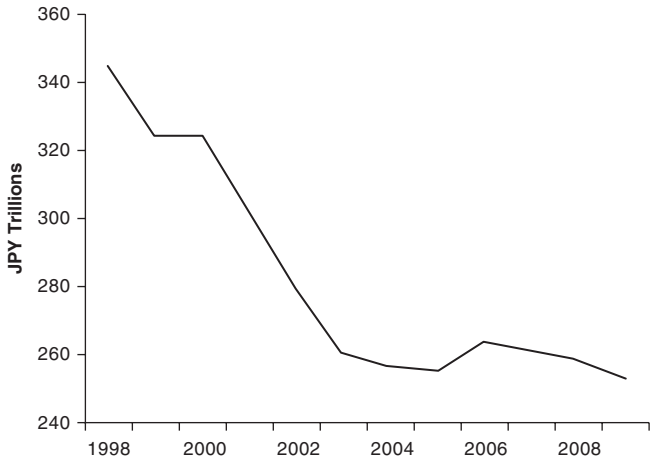

Figure 1.2 Changes in the outstanding loans towards SME
Source: SMEA (2005, 2008).

And, subsequently, why did the regulator allow one of the major banks (the LTCB) as a *quasi*-insider in the convoy system to go bust?

The book also addresses a number of important policy questions. Japan's financial deregulation was almost complete after the financial 'Big Bang'. This made a very limited contribution to bailing out the

Japanese banks and lifting the Japanese economy out of its prolonged period of stagnation. If the reason for this was the difficulty in applying the Anglo-American monitoring system to Japan, or, at least, the difficulty in achieving a smooth transformation, is it possible to revert to the 'traditional' Japanese monitoring system? And if it is not possible for Japan to revert to the system it abandoned, can Japan find a better alternative system? The traditional monitoring system, in which the bank as lender was deeply involved as a *quasi*-insider in the operation of the client firm and the associated convoy system, was based upon a dense information network between the regulators and the banking industry and this contributed to the efficient allocation of financial resources in the post-war period of rapid economic growth. Why does the Japanese abandon this system and yet fail to find a well-working alternative system?

1.3 Analytical framework

This book draws on the traditions of Post-Keynesian economics, with its focus on 'uncertainty' (for instance, Keynes 1936, 1937; Knight 1921; Davis 1995; Dymski 1993, 1999; Kindleberger 2000; Minsky 1975, 1977, 1984; Shackle 1957, 1972; Simon 1983, 1996). In this case, the monitoring actors (the banks as lenders and the government as the regulator) were working under conditions of uncertainty and bounded rationality. This means that monitoring activities are not mechanical, and that they are based intrinsically on judgements that are often extremely difficult. Uncertainty is fairly understated in academic arguments on this issue.

Second, this book supports the proposition that effective screening and monitoring is dependent upon *institutions* in terms of 'rules that constrain economic behaviour'. For instance, the creation of rents for banks or the imposition of capital adequacy requirements is by themselves not necessarily effective in achieving the desired outcomes. Rather, these strategies can turn out to be more or less effective, depending upon the institutional setting in each financial system. This draws on the work of Masahiko Aoki (Aoki 1994, 2001; Aoki *et al*. 1994), Masahiro Okuno-Fujiwara (Okuno-Fujiwara 1997, 2002), Joseph Stiglitz (Stiglitz 1988, 1994; Stiglitz and Weiss 1981, 1992; Hellmann, Murdock and Stiglitz 1997; Stiglitz and Greenwald 2003) and Ronald Dore (Dore 1998, 2000) comparing the financial systems of Japan and the US, and on Mushtaq Khan's analysis of the efficacy of rents in different institutional and political contexts (Khan 1995, 1999, 2000a, 2000b).

Third, this book draws on the theoretical contributions of the New Institutional Economics and Transaction Cost Economics (for instance, Alchian and Demsetz 1972; Aoki 2001; Arrow 1974; North 1981, 1990, 2005; Knight 1992; Williamson 1985), and applies some of these contributions to an analysis of changes in the Japanese banks' monitoring system. In particular, the analysis in this book addresses not only formal institutions but also informal or intangible ones. Although there should not be an overemphasis on the cultural factors, this book argues that 'mutual trust' played an important role in reducing transaction costs in the traditional Japanese 'relation-based' economic system. The specific ways in which trust was created and maintained drew on some Japanese cultural norms. Although it is almost impossible to quantify the informal and intangible variables, the economic performance of a 'relation-based' economic system can be expected to vary in accordance with a change in the relations or degree of trust in the system.

1.4 Summary of conclusions and contributions

This book addresses the institutional changes in the Japanese financial system and their relationship with the prolonged financial slump since the 1990s, focusing in particular on changes in the modes of monitoring borrowers.

1 This book suggests that since the 1980s there has been a structural failure to respond to the increased 'uncertainty' in the economic environment facing Japanese banks. This was associated with the growing internationalization of Japanese banks, and financial deregulation and technological changes since the 1980s. This in turn led to the Japanese traditional monitoring system becoming increasingly ineffective.

To explain this phenomenon we analyse and clarify the distinct characteristics of the traditional Japanese monitoring system in comparison with those of the Anglo-American system, drawing on the existing analyses of the 'convoy' system advanced by Aoki, Okuno-Fujiwara and others. We will focus on an important element of this traditional 'convoy' monitoring system in which informal institutional features helped to counter aspects of lenders' uncertainty. These included: (i) The non-algorithmic mode of monitoring, in which the main banks were deeply involved as *quasi*-insiders in the operation and management of their client firms; (ii) the role of bank rents, which facilitated the channelling

of financial resources to new industries and the stabilization of lender confidence by pooling monitoring skills and knowledge; and (iii) dense information networks between the regulators and the regulated, which contributed to mitigating some of the banks' uncertainty.

In the period when the Japanese economy was still catching up in terms of technological capability, one important element in the screening and monitoring process of the Japanese banks was to look at the managerial ability and efforts of the borrowing firm to absorb and improve engineering expertise developed abroad. During this period the assessment of the commercial and engineering values of an emergent technology per se was less important for the banks. The lender's confidence in the borrower depended more on whether the lender believed the borrower was making an effort in learning the use of existing technologies or whether they were shirking their responsibilities. These judgements, while difficult, involved a very different type of uncertainty than the uncertainty involved in betting on new innovations that may be undertaken by a borrower. During this period, the participation of the main bank as a *quasi*-insider in the operation of firms provided information that made it difficult for the borrower difficult to shirk.

However, once Japan entered into the 'frontier economy' period, when more Japanese industries were reaching the international technology and marketing frontier, their business and investment was exposed to increasing levels of fundamental uncertainty. As more and more lending went to investments that involved R&D and the development of frontier technologies, both firms and banks were exposed to the type of fundamental uncertainty discussed by Keynes and the post-Keynesians. Even if the bank was deeply involved as a *quasi*-insider in the operation of the firm, its detailed network of knowledge on management quality did not have a significant mitigating effect for this type of environmental uncertainty. During the catching-up period, the majority of the uncertainty was the result of shirking and a variability in management quality. In the frontier economy, uncertainty was fundamental and was related to innovation and new product development. In this respect, this book suggests that Japan could not resolve this transition challenge by simply maintaining its traditional mode of monitoring, and even less by reverting to it again now.

2 We also suggest, however, that an ill-planned transition to the Anglo-American and Basel-type approach to monitoring (which we describe as 'algorithmic monitoring' because it is based principally on the

codification of credit risk and the development of an arm's-length approach to maintain an adequate capital buffer against unexpected credit losses; see section 3.2 and 4.3 for details) exacerbated the transition problems faced by the Japanese banking system. The adoption of elements of this 'algorithmic monitoring' model neglected the important question of how Japanese lenders were to manage uncertainty given their greater exposure to industrial lending, and given the particular ways in which Japanese banks were intermediating financial resources in the macro economy.

The Japanese banking system started to adopt Anglo-American and Basel-type modes of monitoring when the exposure to greater frontier uncertainty began to undermine the traditional network-based 'relationship banking'. The pace of this transition accelerated after the bursting of the 'bubble' economy but the transition had actually begun much earlier. The deregulation of the deposit rate ceiling was completed in 1994 and the financial 'Big Bang' deregulation was enacted in 1998. Against this background, the LTCB collapsed in 1998 and major Japanese banks continued to suffer from significant NPL until the mid-2000s. Clearly, the financial deregulation was unable to achieve a smooth revitalization of the Japanese financial system.

One critical problem that prevented a significant adoption of important aspects of the Anglo-American system emanates from a characteristic feature of the Japanese financial structure. The revealed preference in portfolio selection by the Japanese household sector, the largest source of funds for the Japanese banking system, shows that this sector remained *risk averse* during the 1990s (the Japanese households owned substantially more 'safe' assets, in proportional terms, than the US households, see section 4.4), so that finance for industry continued to rely on the intermediation of these savings through the Japanese banking system. Thus, Japanese banks were required to transform the savings of *risk-averse* Japanese households into long-term loans for industry. However, this long-term intermediation had to continue even as Japanese banks were shifting over to meeting the short-term portfolio quality conditions under the Basel Accord. These conditions were required after deregulation but they only made it far more difficult for the Japanese banks to perform their traditional role of converting *risk-averse* funds into long-term industrial loans, a role that they could not abandon given the structural features of the Japanese financial system. From another perspective, this meant that Japanese bank managers had to somehow attempt to adjust themselves to a securities-based financial

system in the absence of the critical foundation for such a system, namely a sufficient and diversified base of individual investors willing and able to absorb small amounts of uncertainty in diversified individual portfolios. Therefore, while the Japanese financial system had a huge surplus of 'safety' investors in currency and deposits, there was a scarcity of the 'risk' investors in shares, equities and securities necessary for the incubation of new enterprises and industries if banks were to withdraw from this role. The inherent structural contradiction in adopting an Anglo-American model of financial intermediation without the Anglo-American distribution of risk-absorbing small investors was a crucial factor in Japan's deepening financial slump and the inability of the banking system to contribute to its resolution.

The 8 per cent capital adequacy requirement of Basel was devised to ensure the solvency of banks by ensuring that investments in assets with uncertain returns are limited. However, these requirements do not address the fundamental problem faced by the Japanese financial structure, which is that Japanese banks have to absorb risk and uncertainty for a risk-averse investor base. If financial sector reform in Japan does not address this problem, there can be no guarantee of an adequate intermediation of financial resources from savers to investors.

3 The book also looks at how the change in the Japanese monitoring system actually affected Japanese bank operations and contributed to the 1997–1998 financial crisis. To this end, the book analyses the economic and financial performance of the collapsed LTCB as a case study.

In the Japanese traditional 'rent-based' and 'relation-based' financial system, banks functioned as a *buffer* to absorb risk and uncertainty, leaving individual savers with 'riskless' savings. This system worked because the intense monitoring of management in a catching-up scenario mitigated uncertainty and ensured that the pooling of savings was sufficient for providing savers with their desired risk–return profile. In addition, the availability of relatively cheap finance for industry contributed to the economic success of post-war Japan. As the uncertainty associated with industrial lending increased in the frontier economy, this arrangement would not remain viable for too long. The asset price boom of the bubble economy and the subsequent burst both hid this underlying problem and exacerbated it by accelerating the financial demise of a number of Japanese banks. Some of them, including the LTCB, went bust because of their insufficient capacity to cover the losses they

incurred. While the collapse of the LTCB was exceptional, its failure demonstrates important features of the crisis affecting the Japanese banking system in general.

4 The arguments in this book provide a new perspective on the 'transition failure' in the Japanese financial system. The term transition failure can be applied to two different types of problems. First, transition failures can occur where the costs (including political costs) of abandoning an existing institutional arrangement are substantially higher so that a new, more efficient institutional arrangement does not emerge (remembering that the identification of a more efficient institutional arrangement is itself subject to uncertainty). But secondly, transition failure can also occur with an ill-planned transition to an alternative that proceeds despite very high costs of transition, and a net loss for society because the transition cost is higher than the potential gains from the new institutional arrangement. We argue that elements of both types of transition failure can be identified in the Japanese case.

5 The book also sheds light on the nature of trust in the traditional Japanese financial system, and how it was created and maintained.

In the traditional monitoring system, trust played a role in the relationship between banks and borrowing firms, as well as between banks and the regulator. The trust between banks as lenders and firms as borrowers was based on a number of characteristics of this financial system and had a number of important consequences. First, the deep involvement of the bank as *quasi*-insiders (in particular, the main bank) in operations of the client firm contributed to a strengthening of the banks' confidence in the borrower. Based upon this confidence, repeated transactions between the same parties led to a long-term relationship in which lenders developed 'trust' in the credibility of the borrower, in the sense that the borrower would not shirk from putting in high levels of effort into the business and would not take opportunistic actions against the lender. Based upon the creation of such 'trust', there was a reduced need for detailed monitoring of day-to-day decisions. Secondly, trust based on a long-term relationship also enabled the firm to expect the necessary financial support from the main bank, including stable lending for investment and working capital as well as rescue operations if the firm experienced temporary difficulties. Where culture and context probably played a role for both parties, the failure to meet the other's expectations in such a context of mutual dependence would hurt its

'reputation' and thereby affect their chances of relationships with other banks or firms.

The second aspect of trust was between regulators and banks in the 'convoy' monitoring system. This was based upon a protection and sanction mechanism. Our understanding of this system comes from the author's experience as a Japanese bank insider, supplemented by interviews and secondary literature. The elements of this system included, first, the co-operation of banks as *quasi*-insiders in the regulator's process of modifying financial policies. The participation of banks in this process built trust between the banks and the regulators. The close relationship between banks and regulators meant that banks in trouble could report the situation promptly through a non-public route for sharing information, thereby enabling regulatory action without creating panics. In this scenario, the banks – and, in particular, the main banks – acted as long-term monitoring agents of their client firms and any failure here would violate the trust regulators had in the main banks. It was understood that this, in turn, would probably be penalized by the reduction of rent opportunities for the errant banks. The banks on their part trusted the regulator's guiding role, and the expectation in the banking industry was that the regulator would be benevolent, particularly in unexpectedly adverse situations.

These relationships of trust began to break down in the transition from a 'catching-up' economy to a 'frontier' economy. In the latter, Keynesian fundamental uncertainty becomes prominent and the 'mutual trust' between the main bank and the client firm may not necessarily create favourable outcomes for both parties. Rather, this relationship of trust can contribute to banks being exposed to excessive risks. In addition, this trust and the cultural norms on which it was built made it difficult for banks to resort immediately to a legal process for liquidation or corporate reorganization to deal with the firms in trouble when they made the transition to an alternative Anglo-American mode of monitoring. It is against this background that this book proposes a new perspective for explaining why the transition to a rules-based Anglo-American mode of financial monitoring and supervision exacerbated the 1998 financial crisis and led to a deepening of its adverse effects including the bankruptcy of LTCB and the subsequent financial stagnation.

6 This book potentially provides an alternative framework for assessing institutional developments in the financial and corporate sector taking into account the lack of success to date of the reforms intended

to introduce the Anglo-American financial system in Japan. We conclude that, first, there are good reasons for policy to support a mix of direct and indirect monitoring systems as well as direct and indirect financing of investment in a 'hybrid' system given the specific characteristics of the Japanese financial structure, and second, the policy challenge is to ensure prompt adjustments in that mix as economic conditions evolve over time.

1.5 Chapter outline

Chapter 2 surveys the theories and arguments related to monitoring activities (including the significance of monitoring, the incentives for monitoring, the regulatory objectives of the monitoring system and the relevance of bounded rationality and uncertainty). This develops the conceptual tools used for the main analysis of this book and presents the theoretical framework. Chapter 3 looks at the distinctive characteristics of the Japanese traditional financial system from the perspective of monitoring activities, in comparison with those in the Anglo-American system. It describes how the institutional features of this financial system were designed to ensure an appropriate balance between two regulatory objectives. The first objective was to maintain financial stability and the second to achieve sound financial intermediation in a very specific financial structure. The relevant institutional features include not only formal institutions but also informal and intangible ones.

Drawing on the New Institutional Economics and Transaction Cost Economics, Chapter 4 argues how the change in the economic environment in which Japanese banks operated in the 1980s may have affected the efficiency of the traditional monitoring system and the relationship-based method of screening and monitoring. It was also at this time that the transition to the Anglo-American and Basel-type monitoring system began, but we argue that in fact this transition made it more difficult to resolve the structural failure affecting the Japanese financial system. How did the change in the economic environment surrounding the Japanese financial and monitoring system actually affect the economic performance of Japanese banks and cause the 1997–98 financial crisis in Japan? A case study of the collapsed LTCB is provided as an illustration in Chapter 5.

Chapter 6 describes the political and economic realities of the 1997–98 financial crisis and the prolonged financial stagnation based on the persistent failure of regulators to achieve a successful transition to resolve the critical problems facing the Japanese financial system.

Chapter 7 attempts to shed further light on this 'transition failure'. It analyses this issue from the perspective of intensified *uncertainty*, drawing on the argument on the factors of 'trust' and 'opportunism' in New Institutional Economics. Chapter 8 concludes and draws some of the lessons that we can learn from Japan's prolonged financial stagnation.

2
Theoretical Framework and Basic Analysis of Monitoring Activities

2.1 Introduction

Despite very significant discussions in the literature on the institutional specificities of the Japanese banking system, less has been done to investigate the reasons why the institutional changes in Japan's financial system, especially reforms that attempted to change the framework of monitoring activities resulted in poor outcomes for the Japanese economy. In the banking sector, the framework of monitoring activities, include: (1) the mechanisms through which credit risk is monitored by banks as lenders (and by investors in general) by collecting information about borrowers and screening firms that are potential borrowers; (2) the mechanisms through which financial authorities, as regulators, monitor and supervise financial institutions by collecting information about the activities of banks and investors, setting regulatory rules and implementing these rules together with associated sanctions (see Figure 2.1).

This chapter looks at the theories and arguments related to the efficacy and design of monitoring activities, and offers a critical review of the issues raised by different theories and arguments. Section 2.2 reviews the theories mainly related to (1) above and section 2.3 reviews theories mainly related to (2) above. There is, of course, some overlap between the two sections as banks as financial institutions are involved in both sections.

In the economics literature the word 'monitor' means 'to check or regulate' (Aoki 1994, p. 111). In the context of this book, we are interested in monitoring activities related to the financial system. These include: (i) the *ex ante* monitoring that goes on in screening projects to be funded as well as for evaluating the credibility of particular

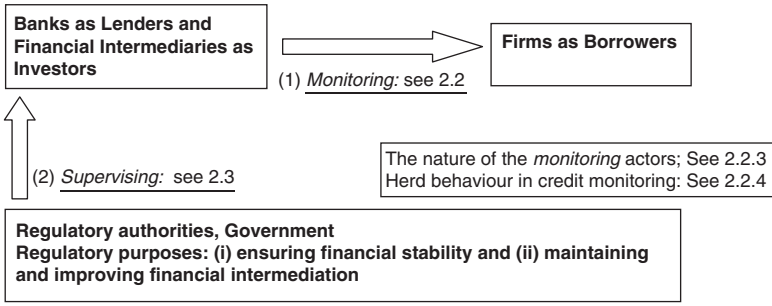

Figure 2.1 The 'monitoring system'

borrowers; and (ii) *interim* (or *on-going*); and (iii) *ex post* monitoring for ensuring that the allocated funds are used for the purposes allocated. This includes checking the schedule and status of projects as well as the borrowers' financial status in the process, and regulating borrowers' contractual obligations. The interim and *ex post* monitoring includes making due claims for compensation as well as taking due process for accelerating the loan expiry when borrowers' contractual obligations are not fulfilled.[1] The manner of monitoring financial systems differs vastly across major capitalist countries. As Aoki (1994) points out, corporate monitoring and control is only possible with professional expertise, resources for accumulating skills, and a broad scope in terms of cross-sectional coverage as well as product/firm life cycle. In capitalist economies, the system has seen the emergence of a variety of financial intermediaries and agents specializing in corporate monitoring and control. The Anglo-American financial system has a highly decentralized structure of monitoring in which the three stages (*ex ante*, *interim* and *ex post*) of monitoring are delegated to separate specialized intermediaries such as investment banks, venture capital firms and rating companies. This was very different from the Japanese traditional 'main bank' system in its heyday where the three stages of monitoring were highly integrated and exclusively delegated to the main bank of the borrower (see section 3.3 for details).

This leads us to a very important question: how should the lenders themselves be monitored? In this book we try and address this question by shedding light on the institutional setting of the financial system, and look at the incentives lenders have for their monitoring efforts and the impact this has on their decisions vis-à-vis undertaking (excessive) credit risk. In this respect the monitoring and supervision institutions

of the regulators and their regulatory capacities become important, showing the interrelationship of the two aspects of monitoring outlined in Figure 2.1. We therefore also have to analyse the monitoring (supervisory) activities of the regulatory authority that was deeply involved in designing the institutional framework that operated in the traditional Japanese financial system and the ways in which these regulatory requirements changed over time, leading the regulators themselves to support changes in the way bank monitoring was organized.

In addition, we should ask: how does an institution change? This book draws on the tradition of New Institutional Economics (NIE) and Transaction Cost Economics for its theoretical framework of analyses. Section 2.4 aims to survey their theories of institutional changes. Institutional approaches insist that institutional failure is the result of high *transaction costs*, which is avoidable only if it moves to an alternative institutional structure with lower transaction costs. It also provides an overview of the concepts of 'trust' and 'opportunism' on which NIE sheds analytical light as variables determining transaction costs.

2.2 Theories related to monitoring activities: Screening and monitoring activities by lenders and investors

There is widespread agreement in the literature that effective screening and monitoring by lenders and investors are critical for the proper functioning of a financial market. In most financial markets, it is usually the case that individuals and firms seek more funds than are available. Efficient allocation of scarce funds requires *ex ante* monitoring for selecting projects to be funded, *ongoing* monitoring for tracking how the allocated funds are being used, and then *ex post* monitoring for verifying the financial outcome and judging the actions taken by borrowers to see if action needs to be taken to protect the interests of the lenders. Despite the availability of sufficient funds, monitoring activities still matter because the failure of monitoring by lenders would exacerbate the asymmetric information problem from which lenders suffer, and thereby restrict the optimal allocations of funds. In the light of this, it is surprising that standard neoclassical general equilibrium theory has not considered the monitoring activities of lenders in any detail. Although the general equilibrium model has been criticized and modified as a result of the development of the economics of information, we begin with the overview of an Arrow–Debreu simple general equilibrium model in which the public sector (the regulator) is not required and therefore typically not introduced in the models to retain simplicity.[2]

2.2.1 Arrow–Debreu general equilibrium model

In this model, the ultimate provider of financial resources is the *household* sector. This is because the profit and value added which are earned mainly in the *corporate* (firm) sector are considered to be transferred to households in the form of salaries, dividends and so on. Some portion of the incomes received by households is consumed whereas the rest goes to savings (S). On the other hand, the largest user of financial resources is considered the *corporate* sector. Essentially, firms make various investments (I) in order to maximize their profit. To finance these investments, firms need financial resources. For the macro-economy and from an *ex post* perspective, the savings of households finance the investments in the corporate sector.

The funding source for firms, that is, the flow of funds from savings (S) held by households to investment (I) of the corporate sector, has two routes: First, the 'direct finance' route in which the stocks or corporate bonds issued by firms are purchased directly by households through the capital and securities market. Second, the 'indirect finance' route in which banks as financial intermediaries play the role of collecting funds from households in the form of 'deposits' and then provide funds to the corporate sector in the form of 'loans'. The most distinctive difference between direct finance and indirect finance lies in who undertakes the credit risk of the firms that borrow and use funds. In the indirect finance route, banks absorb the credit risk. Even if a borrower becomes bankrupt, the default does not directly affect any deposit contract between the bank and households as depositors. In contrast, in the direct finance route, the credit risk of the firms which issue their stocks and bonds is absorbed directly by the households as purchasers and holders of these securities, even if these securities are sold through securities brokers and investment banks which play the role of intermediaries in the capital and securities market. For example, when an issuer becomes bankrupt, the households holding these securities suffer the loss.

The Cabinet Office (2002) of Japan defines 'indirect finance' as a system in which financial institutions essentially absorb the borrowers' default risk by playing the role of intermediaries between households and firms where they lend to firms using the funds collected from households as deposits. It also defines 'direct finance' as a system in which the ultimate investors, including households, directly absorb the risk of default by purchasing primary securities (notes, stocks, corporate bonds, commercial papers, and so on) issued by firms through the capital and securities market. Then, how are the separate 'direct finance'

and 'indirect finance' routes balanced across the whole system? While attempting to answer these questions, the general equilibrium model faces a serious limitation that is largely of its own making. The standard general equilibrium model assumes zero monitoring costs (indeed zero transaction costs, see section 2.4), but this makes it difficult to explain why banks as financial intermediaries exist at all.

The financial decisions of economic agents in a simple general equilibrium model of Arrow–Debreu are represented in Figure 2.2. Each type of agent is denoted by a particular subscript: f for firms, h for households, and b for banks. The superscript '+' represents supply, and the superscript '–' represents demand. In addition, D represents deposits, L represents loans and B represents bonds (securities) here.

1 Savings (S) held by the households are invested either in securities B_h or deposits D^+.
2 Investments (I) made by the firms are financed either by the funds raised in the securities and capital market B_f or loans from banks L^-.
3 Banks provide loans L^+ to meet the demand of firms. Banks in turn collect the necessary funds either from the securities and capital market B_b (each bank as a firm can issue its stocks or corporate bonds) or deposits collected from households D^-.

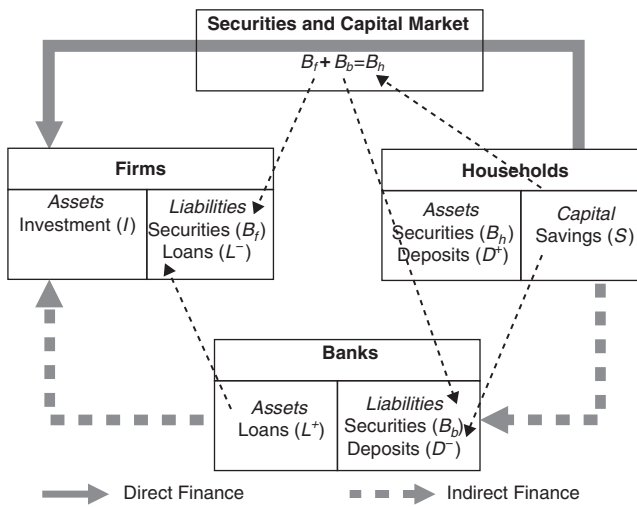

Figure 2.2 General equilibrium model in direct and indirect financing
Source: The author has based this upon Freixas and Rochet (1997, p. 9).

4 In the securities and capital market, the demand of firms B_f as well as that of banks B_b should be balanced with the supply from the households B_h.

In this model in which all agents are considered to behave competitively, each market clears:

$I = S$ (goods market)
$D^+ = D^-$ (deposit market)
$L^+ = L^-$ (credit market)
$B_h = B_f + B_b$ (securities and capital market)

It is clear that if there were zero monitoring costs the only possible general equilibrium would be one where all risk-adjusted interest rates are equal. In such an economy risk would be due to nature, rather than to the moral hazard problems that emerge as a result of costly monitoring. Household investors would therefore face the same risk regardless of whether they invested directly and carried out the costless monitoring themselves or indirectly through banks, leaving the bank to do the costless monitoring. In this simplistic framework the coupon rate on securities (denoted by r) and the deposit rate (denoted by r_D) for the households should be perfect substitutes. If one of the two rates is higher than the other, households would prefer to invest all their savings there, resulting in the potential disappearance of the other. Therefore, these interest rates should be equal: $r = r_D$. Secondly, the funding rate through the securities market (denoted by r) and the interest rate on bank loans (denoted by r_L) for the firms are perfect substitutes. Therefore, these interest rates should be equal; $r = r_L$. General equilibrium is characterized by a vector of interest rates (r, r_L, r_D). As a result, the only possible equilibrium is realized when all interest rates are equal, $r = r_D = r_L$.

Clearly this general equilibrium is unrealistic. In particular, banks would necessarily make a zero profit at equilibrium. A zero profit gives banks no incentive to play the role of financial intermediaries, and indeed banks would have no reason to exist. This is why, if firms and households have unrestricted access to perfect financial markets, then at the competitive equilibrium, banks make a zero profit. That is, the Arrow–Debreu paradigm leads to a world in which banks are redundant institutions. In reality, each borrower has distinctive credit risks related to their type and the type of activity in which they engage. Thus, investors face significant and borrower-specific information and monitoring costs for screening and monitoring this credit risk. It is extremely difficult and

costly for individual investors (households) who are not professionals in monitoring to evaluate the credit risk of SME, although it may be somewhat easier to do this for internationally reputable large firms. The delegation of monitoring activities to banks as professionals in the indirect finance scheme would result in lower transaction costs of monitoring for the household compared to the situation in which the households do the monitoring themselves. In addition to this, delegating monitoring activities to banks can help to accumulate knowledge and skills for monitoring in banks as financial intermediaries, which leads to a further improvement of the financial intermediation of resources. Thus, by dropping the assumption of zero transaction costs of monitoring, we can begin to explain the emergence of a system of financial intermediation. Banks can perform a function as financial intermediaries because the monitoring costs faced by banks are very likely to be lower than the potential cost of monitoring by individuals. This is a different argument from the one that is commonly made, namely that banks can reduce the risk faced by investors by pooling large portfolios.

2.2.2 The incentive approach

Transactions between investors (including banks) and industrial borrowers undertaking business projects entail a substantial degree of information asymmetry and imperfection (Aoki 1994, p. 109). Aoki (1994) points to: (i) an *adverse selection problem*; where investors may not be as well informed as the firm with regard to technological and marketing opportunities and management capabilities and intentions which define the outcome of a project; (ii) the *coordination problem*; where managers of the firm may not necessarily be in an advantageous position with regard to information if the financial returns of the project depends upon coordinated undertakings of complementary projects by other firms; and (iii) a *moral hazard problem*; where a manager's promise to use funds for profitable purposes may not be fulfilled because of the manager's incompetence or effort-avoiding behaviour that cannot be clearly identified because they are hidden behind stochastic natural variations in outcome that constitute noise.

Transactions between shareholders and managers also entail a substantial degree of information asymmetry and imperfection. The analysis of the consequences of the separation of ownership and control has been one of the major subjects of research in the economics of information. With costly information or costly contracting, the principal–agent problem arises when those who own physical assets must rely on others to make use of them. For instance, firms are not run directly by shareholders

(principal) but by managers (agent). With costly information, shareholders can only exercise limited control over managers. Thus managers have to be provided with *incentives* to perform well. Their incentives have to be based on the actual performance of the firm (Stiglitz 1994, pp. 98, 177). The problem of bank shareholders or other owners controlling the executives who actually give loans is a principal–agent problem.

'Information Economics' has seen notable advances in the scope and depth of the theory of market failure applied to credit markets facing information problems. As Stiglitz (1994) points out, it is a commonsensical observation that in the process of mediating transactions, banks acquire considerable information that might be valuable in loan assessment and monitoring (Stiglitz 1994, p. 103). This observation supports the incentive approach that is disregarded by the standard neoclassical model. The central problem of incentives also affects the bank management, because depositors and bank shareholders cannot also take it for granted that bank managers will be efficient and put in all their effort in monitoring the bank's portfolio so that credit is extended only to the most efficient borrowers and rapid action taken to withdraw resources from borrowers who appear to be failing. Therefore, the quality of bank management and their incentives are other variables that matter as much as the rules for allocating funds.

In theory, the owners of a bank in the form of shareholders have the incentive to monitor the managers of the bank because the proper monitoring of managers brings them higher residuals in the form of higher dividends. This insight from Alchian and Demsetz (1972) is a development of their explanation of the emergence of the capitalist firm as a solution to the 'shirking' problem that arises due to the moral hazard problem of teamwork in a context of asymmetries of information where each team member (player) has an incentive to shirk. This solution requires: (i) a monitor, (ii) incentives for the monitor to monitor efficiently, and these are achieved by making the monitor the *residual claimant*. The monitor has to have the power to observe and discipline team members, and this is a description of the capitalist firm. However, Alchian and Demsetz's residual claimant solution is attenuated as soon as we have a separation of ownership and control when shareholder ownership emerges. The shareholders are the true *residual claimants* but they have to delegate the monitoring task to managers whose incentives are attenuated. Even if bank managers were effective in monitoring, they cannot by definition capture the entire residual, though incentive payment schemes or a market in managers can be devised to reduce – although not entirely eliminate – this problem.

For instance, the discretion of bank managers can lead to moral hazard problems if they use their discretion to lend to their friends, and the possibility of significant negative externalities due to this type of monitoring problem results in the necessity of outside regulation of banks. Therefore, owners of banks as well as regulators have to spend resources monitoring and creating incentive structures that aim to ensure that bank managers adequately manage and monitor their loan portfolios.

The question is how to create adequate incentive for owners of banks to engage in monitoring. There is an argument that the bank itself must earn a 'rent' that gives the bank 'franchise value' if anyone is to have strong incentives to monitor its management. The franchise value is the worth of the bank that the owners of the bank will try to protect by ensuring good management (Hellmann *et al*. 1997, pp. 171–4; see section 2.3.2). Hellman *et al*.'s model assumes that the bank's ownership structures were such that the rents earned provided an incentive for owners to monitor their portfolios effectively. The institutional structure that would best achieve this would be one where banks were owner-managed and the owners appropriated the rents. A second-best structure would be one in which banks were not owner-managed but the owners could coordinate their actions to hire and fire managers to maximize their rents. However, in this second-best structure, the adequacy of franchise value for creating sufficient incentives for monitoring by shareholders is by no means self-evident.

This is why externally enforceable criteria such as capital requirements become perceived, presumably by owners of banks, as important mechanisms for constraining the behaviour of bank managers. These mechanisms could – in theory and probably sometimes in practice – achieve the good monitoring which franchise value does in theory. For instance, capital requirements or reserves are often used to discipline banks to keep a part of their portfolio in government securities. This forces them not to take risks because there is an asset base that can be called on to pay bad debts. However, this issue is controversial. We will argue in section 2.3.4 why capital requirements are not always effective. For instance, in the context of their 'portfolio' approach, Kim and Santomero (1988) show that solvency regulations on capital requirements entail a recomposition of the risky part of the bank's portfolio in such a way that risks may be increased, particularly because some small banks cannot completely diversify their risks. Ironically, the probability of the bank's failure may increase after the solvency regulation has been imposed (see also Hellmann, Murdock and Stiglitz 2000 who point out that the capital requirement regulation can yield Pareto-inefficient outcomes).

As financial markets have internationalized, major central banks have cooperated to standardize the rules preventing internationally active banks from taking excessive risks. In particular, the BIS Capital Accord and credit risk modelling that is being standardized by the Bank for International Settlements (BIS) or Basel Committee on Banking Supervision (BCBS) have played an increasingly important role in risk management and performance measurement processes of international bank managers and owners of banks (see section 4.3 for more details). Increasingly, bank managements are requested directly by their national supervisors or choose voluntarily to pay more attention to the calculation of required reserve requirements but also to performance-based compensation, customer profitability analysis, risk-based pricing and active portfolio management.

Stiglitz claims that 'information' about the financial position of the firm is a public good (Stiglitz 1994, p. 211). Private rating agencies, such as Moody's and Standard & Poor's for bonds, and Dun and Bradstreet for other investments, do play a role in providing private incentives for disclosure as good ratings reduce the cost of capital for borrowers. In addition, most governments have decided that international disclosure requirements such as those suggested by the BCBS would further improve the information available for more effective monitoring of both borrowers and bank managements. We need to assess the extent to which these types of international codes of monitoring, and the development of private ratings for quantifying credit risks, are effective in providing banks or financial institutions the appropriate information and incentives for improving their monitoring.

Thus, the economics of information has identified a series of market failures in credit markets that can lead to credit rationing even in equilibrium, caused by information asymmetries between lenders and borrowers. Information economics insists that the incomplete information paradigm explains why financial markets cannot be complete and shows why banks as financial intermediaries exist. This approach makes a significant contribution to our understanding of the importance of banks as monitoring actors and the incentives of monitoring for bank managers, bank shareholders and regulators that are collectively required to achieve effective financial intermediation. However, information asymmetries do not exhaust all the problems faced by financial institutions, borrowers and lenders. This is because monitoring is subject to 'bounded rationality' and 'uncertainty'. The information and incentive approaches do not take all of these factors into consideration.

2.2.3 Determinants of imperfect monitoring solutions

As economies become more complex, the screening and monitoring activities of bank managers and regulators are intensified. This book proposes that 'bounded rationality' and 'uncertainty' need to be emphasized as primary drivers of this increase in complexity.

Bounded rationality

Herbert Simon developed the thesis that economic actors are *intendedly* rational but only *limitedly* so, partly because of information problems but mainly because of the complexity of computing best strategies. In the real world, instead of trying to work out Nash equilibria or solve complex optimization problems, individuals follow *rules of thumb*. Simon himself treated the use of rules of thumb as short-cut devices for decision-making. This is not because they are irrational, but simply because they economize on a scarce resource, the brain's limited computational capacity.

Suppose that the forces of internationalization and technological change in the banking and credit market mean that lenders (as well as regulators) face ever more difficult tasks of monitoring and supervision. As Williamson (1985) and Hargreaves Heap (1992, p. 17) point out, the increasing cost of monitoring often drives people to use *rules of thumb* to save the cost of acquiring the information for calculating the optimal course of action. That is, as there is an increase in the complexity of monitoring, bounded rationality will induce lenders to use *codes* for measuring credit risks and externally accepted sources of credit risk information instead of effort- and computation-intensive internal skills and knowledge for monitoring. Perhaps their behavioural pattern aims to be *instrumentally* rational at the beginning. Then, as more complex risk factors are encountered, the computation becomes too onerous. This results in changing their behavioural pattern to be *limitedly* instrumental, eventually becoming *procedurally* rational at best.

According to Weale (1992, pp. 62–5), *homo economicus* is *intendedly* and instrumentally rational and calculates how to maximize preference satisfaction, typically appearing in neoclassical economic theory as a maximizer of utility. The main activity of *homo economicus* is to calculate preference satisfaction within the available freedom of *manoeuvre*. On the other hand, *homo sociologicus* is introduced in the process of investigating how this freedom of *manoeuvre* might be bounded by prevailing technology and/or by the preferences of others. In particular, this introduces constraints on human action through *norms*. The associated sociological concept of a role shows how *homo sociologicus* is educated

from childhood to adulthood, thereby encoding norms and conformity to norms into roles that become immediate motives of behaviour. Norms make the calculation tasks easier but actions based on prevalent social norms will typically be difficult to justify in terms of instrumental rationality. If all individuals reason in a role- or rule-bounded way, their collective action may fail to achieve and certainly to maximize individual or collective benefit. This type of approach that looks at the tension between computational costs and collective interests allows us to identify conceptual limitations and arbitrariness in any codified assessment of credit risks as under the Basel rules (see section 4.3).

Another salient feature of the Simonian analytical perspective is that as a result of our bounded rationality, we can greatly enhance our effectiveness by accepting information and advice from social groups of which we are members. Individuals who are *docile* therefore have a great advantage in fitness over those who are not docile (Simon 1996, p. 45). In fact, docility can be taxed by influencing people to take certain actions that are not personally beneficial for them but are beneficial to the group. As long as taxation is not so onerous that it cancels out the advantages of docility, the altruistic individual will be fitter than the non-docile individual. This can explain why *altruism*, as well as opportunism (see section 2.4), can survive as important human motivations within organizations and institutions. These are insightful observations but Simon does not clearly identify the conditions under which following rules of thumb are actually viable and allow effective solutions to the computation problem.

Uncertainty

Since the consequences of actions extend into the future, accurate forecasting is essential for making objectively rational choices. But in the real world, most choices take place under conditions of uncertainty. Knight (1921) drew a famous distinction 'between "measurable uncertainty" or "risk", which may be represented by numerical probabilities and "unmeasurable uncertainty" which cannot' (see Ellsberg 1961). Numerical probabilities, in turn, are based on the possibility of repeated observation of an event that allows the calculation of a statistical probability for that event. In contrast, many events in the economic domain are not of this type. There is no repeated observation that can give us an objective probability for the success of an innovative process. Here, the risk involved is a subjective judgement, and this can vary across persons making the judgement based on their experience and knowledge of subtle and unquantifiable aspects of a situation. The formulation of subjective probability judgements is what Knight described as decision-making under uncertainty.

This book adopts the Knightian definition of uncertainty as the subjective assessment of the likelihood of events whose objective probability is not susceptible of measurement. Subjective probability can be distinguished from statistical or objective probability in the sense that uncertainty cannot be reduced to measurable risks. Knightian uncertainty, the same as Keynesian uncertainty, emerges when: (i) stochastic variation is not governed by stable probability distributions; (ii) agents lack costless information providing insight into the 'true' state of affairs in the economy; (iii) agents cannot always determine the extent to which their own actions are responsible for the outcomes they experience; (iv) it is impossible to preclude the possibility of systemic risk, because the economy has no parameters (see Dymski 1993). Uncertainty may be more or less ignored or, alternatively, subjective probabilities may be applied, together with a risk premium to cover unspecified adverse events. Since there is no precise economic theory of how decisions are made under uncertainty, agents tend to observe each other's responses and do not deviate widely from the norm regarding which factors should be taken into account and how much weight should be assigned to them. But, 'when the crowd is wrong *ex-post*, there is the making of a financial crisis' (Davis 1995, p. 135).

This book draws on the contributions by the Post-Keynesian economists who shed analytical light on 'uncertainty'. The fundamental implication of Keynes's uncertainty is that all economically meaningful behaviour derives from agents' efforts to protect themselves from uncertainty (Dymski 1993). Keynes defined what he meant by 'uncertain' knowledge:

> By uncertain knowledge, let me explain, I do not mean merely to distinguish what is known for certain from what is only probable. The game of roulette is not subject, in this sense, to uncertainty; nor is the prospect of a Victory bond being drawn. Or again, the expectation of life is only slightly uncertain. Even the weather is only moderately uncertain. The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the obsolescence of a new invention, or the position of private wealth owners in the social system in 1970. About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know. Nevertheless, the necessity for action and for decision compels us as practical men to do our best to overlook this awkward fact and to behave exactly as we should if we had behind us

> a good Benthamite calculation of a series of prospective advantages and disadvantages, each multiplied by its appropriate probability waiting to be summed. (Keynes 1937, pp. 213–14)

Market failure in credit markets, such as credit rationing in equilibrium, can be caused by information asymmetries between lenders and borrowers (Stiglitz and Weiss 1981). However, market failures in credit markets can be caused by other types of information problems. This book proposes that important market failures in credit markets are caused by divergences in the state of *confidence* of lenders and borrowers in the information used to assess risk or in the reliability of the instruments for measuring risks. The difference in the degree of confidence emanates intrinsically from differences in the market perspectives of borrowers and lenders. Under conditions of *uncertainty,* swings of confidence are apt to be substantial and volatile.

'The state of confidence, as they term it, is a matter to which practical men always pay the closest and most anxious attention' (Keynes 1936, p. 148). The state of confidence with which one makes a forecast determining the state of long-term expectation is one of the major factors determining the marginal efficiency of capital *à la* Keynes. We will argue later that the volatility stemming from lenders' *uncertainty* in credit risk management is one of the most crucial factors making their monitoring activities difficult and ineffective. Some difference in the degree of confidence between lenders and borrowers will always occur, because their market perspective is intrinsically different. Under these circumstances, a swing of lender's confidence in whatever information or instrument for measuring risks under conditions of uncertainty can then result in a type of market failure that is peculiar to credit markets.

Uncertainty makes decision processes both complex and volatile. Volatility stemming from lenders' uncertainty, in particular, in terms of subjective probability in credit risk management, is a crucial factor in the systemic fragility of financial markets (Meltzer 1982; Davis 1995). Uncertainty often encourages agents to adopt rules of thumb because standardization and coordination may be more effective than individual prediction (Simon 1996, p. 42, Koppl 2002). However, such standardized rules of thumb can themselves become constraints on our decision-making: if they acquire the status of norms, they can reduce us to mere engines of procedural rationality. In international banking and credit operations, a codified assessment of credit risk in purely quantitative statistical terms is now a widespread practice. The codified rule of thumb encourages lenders to measure expected credit losses mathematically

and to maintain a capital buffer against unexpected credit losses. One important example of this paradoxical response to uncertainty is the gradual adoption of the Basel guidelines in international credit markets. To promote the stability of international banking and credit markets, banking regulators at the BCBS established a required capital ratio of 8 per cent as the international norm for a capital cushion; lenders are discouraged from assuming credit liabilities that cause their capital ratio to fall below this threshold. But we will also see that the convergence to standardized credit risk modelling creates a misleading homogenization of information flows and can contribute to undermine financial stability by amplifying herd behaviour in lending.

2.2.4 Minsky's financial fragility hypothesis and herd behaviour in credit risk assessment

Hyman Minsky, a man with a reputation among monetary theorists for being particularly pessimistic (Kindleberger 2000, p. 13), made a significant contribution to the modelling of the fragility of the monetary system and its propensity to periodic disaster.

> *Financial fragility* is an attribute of the financial system. In a fragile financial system continued normal functioning can be disrupted by some not unusual event. *Systemic fragility* means that the development of a fragile financial structure results from the normal functioning of our economy; financial fragility and thus the susceptibility of our economy to disruption is not due to either accidents or policy errors. Therefore, a theory of systemic fragility endeavours to explain why our economy endogenously develops fragile or crisis-prone financial structures. (Minsky 1977, pp. 139–40)

Kindleberger points to another of Minsky's views about the determinants of financial fragility, namely events leading to a financial crisis often start with a 'displacement', some exogenous shock to the macroeconomic system (see Kindleberger 2000, p. 14). Yet it is apparent that Minsky's emphasis is placed on the endogenous determinants of financial fragility.

Minsky referred to the following three dimensions as the determinants of the robustness or fragility of a financial system: (i) the mix of hedge, speculative, and Ponzi finance in the economy; (ii) the weight of cash or near-cash assets in portfolios: the liquidity narrowly defined, of various classes of business units; (iii) the extent to which ongoing investment is debt-financed.

According to Minsky, if a business unit's cash flow commitments on debts are such that over some period the cash receipts are *expected* to exceed the cash payments by a significant margin, the unit is said to be engaged in 'hedge' financing. Then, a 'speculative' financing unit has cash flow payments that exceed the cash inflows *expected* during some of the periods. However, the present value of the cash flow expected to accrue to the firm from owned assets exceeds the present value of contractual cash payments. Since a speculative financing unit has positive net worth, the borrower may be able to refinance its position. Finally, a Ponzi financing unit is a speculative financing unit for which the interest portion of its cash payment commitments exceeds its net income cash receipts – that is, business units engaged in Ponzi finance have a negative net worth in computation of present values (Minsky 1977, p. 143). Minsky emphasized that the business units that engage in speculative or Ponzi finance, even in hedge finance, are vulnerable to changes in interest rates as well as to events that reduce the cash flows from assets. For instance, increases in interest rates may increase cash flow commitments without increasing receipts. In addition, if the lender refers to an increasing market rate as discount rate for calculating the present value of cash inflows, the expected income on a present value basis will decrease. However, it is intrinsically difficult to determine the appropriate discount rate for net present value calculations, because future interest rates are uncertain.

Although Minsky did not emphasize this, so far as cash flow projections are subject to conditions of uncertainty, the lenders' evaluation of the project – the lenders' screening and monitoring – matters for their assessment of financing or refinancing. Lenders' screening and monitoring is the basis of their assessment of the extent to which expected cash inflows will cover cash payment commitments (Minsky labelled the excess 'margins of safety'). Therefore, the screening and monitoring of borrowers is critical for credit appraisal. However, monitoring is always intrinsically imperfect because monitoring agents are always exposed to bounded rationality and uncertainty.

2.3 Theories related to monitoring activities: Supervising and monitoring activities of regulatory authorities

2.3.1 Overview

There is a delicate relationship between monitoring by lenders and the financial regulation of the credit market. Effective, appropriate and active screening and monitoring by lenders and investors are critical for

a properly functioning financial market. The same applies to banking and credit market regulation. Credit markets deal not only with intertemporal trade but also with promises whose fulfilment is uncertain (Stiglitz 1994, pp. 209–11), 'What is exchanged is money today for a (often vague) promise of money in the future', 'A financial contract is a money today–money tomorrow deal. Money today–money tomorrow deals are a pervasive reality in our economy' (Minsky 1977, p. 142). Lenders' solvency is undermined by borrowers' defaulting on their promises to repay. Hence, these markets are exposed to a *systemic* risk of potential contagious *runs*, which cannot be prevented and resolved by the ordinary auction market mechanism.

The intangible and uncertain nature of the information relating to the risk associated with a borrower's promise to repay makes it almost impossible for this market to perform efficiently as an ordinary auction market. Since banks exchange huge amounts of liquidity for the settlement of various payment orders in interbank money markets, the insolvency of a bank could trigger a system-wide bank run. In addition, the possibility of a contagion of expectations and collective loss of confidence leading to a run or collapse of the system means that in principle even the insolvency of a single bank could mark the beginning of a collapse of the entire banking system, with severe macroeconomic consequences. Consequently, financial regulation and government intervention are very important to maintain financial stability.

Most banking textbooks emphasize liquidity risk – the inability to obtain funding for current obligations. Instruments like deposit insurance and central bank lender of last resort facilities have been developed to counteract liquidity risk by maintaining confidence in banks. The more important and more complicated issue for banking regulators is how to discourage banks from acquiring bad loans in the first place. Monitoring banks is costly and necessarily imperfect because of: (1) the element of *uncertainty* in credit risk assessments (the difficulty of estimating the *subjective* probability of default); and (2) *asymmetries of information* between banks and banking supervisors, which can possibly create an inefficient protective structure, resulting in moral hazard problems in the loan portfolio management by banks. As Stiglitz (1994) points out, the structure of financial markets is in some important respects vastly different among major capitalist economies. The differences are important; each country's institutions reflect an adaptation to particular cultural or economic circumstances. It follows that the appropriate rules for socializing risk and uncertainty to allow better monitoring and more efficient allocation of financial capital may vary according to historical circumstance.

Aoki (1994), Davis (1995), Dore (2000) and Stiglitz (1994), among others, have made useful comparative analyses of the economic and financial systems of Japan and the United States. One common observation is that banks play a dominant role in corporate finance in Japan, while the financial role of US banks is limited largely to making short-term working capital loans. Securities markets in Japan are relatively underdeveloped, while more long-term funds are mediated through bond and equity markets in the United States. Bank loans amounted to at least 90 per cent of total corporate finance in Japan in the catching-up and subsequent period until the early 1990s, while American banks contributed no more than 30 per cent (Davis, 1995, p. 37).

Each financial structure evolved over a long period based on country-specific conditions, and therefore could not be easily reproduced elsewhere (Davis 1995; Stiglitz 1994). Japan, however, has been encouraged to abandon its traditional financial system. Since the mid-1980s, Japan has moved to adopt the Anglo-American style of financial deregulation which has been promoted and propagated by the United States. Although American banks play a limited role in providing corporate finance, they are subject to strict disclosure rules and tight capital adequacy requirements as discussed later in this book. At the same time, US regulators, worried that tighter capital adequacy standards might cause US banks to lose their competitive edge in international financial markets, promoted the establishment of an international capital adequacy standard at the Basel Committee. In the US financial system, the diversification of risk and uncertainty was accomplished through securities markets comprised of a large and diversified base of investors. This unique structure (see sections 3.2 and 4.4 for details) allowed and encouraged US banks to avoid large exposures to particular companies or industries. By contrast, given the predominance of Japanese banks in corporate funding, the limitation of their important financial intermediary and monitoring roles had profound implications for the Japanese economy.

2.3.2 Bank rents

The analysis of *bank rents* has provided a new tool as an institutional approach to investigating the important role of banks. According to the definition by Khan (2000a), *rents* refer to 'excess incomes' which, in simplistic models, should not exist in efficient markets. 'More precisely, a person gets a rent if he or she earns an income higher than the minimum that person would have accepted, the minimum being usually defined as the income in his or her next-best opportunity' (Khan 2000a, p. 21). This section aims to assess the 'financial restraint' regulation of

creating bank rents, as an important institutional setting in the Japanese traditional financial system. As is argued later in section 3.3, this institutional setting contributed to creating and maintaining an 'integrated' monitoring system in which the Japanese main banks played important roles as financial intermediaries and monitors in the heyday of the system. Meanwhile, it is often said that the stability in the Japanese main bank system was achieved in part by interest rate controls, with a wide spread between deposit and lending rates, so that the major banks could earn profits. Patrick (1998) points to this arrangement whereby the essence of the regulatory regime was to guarantee that banks would not fail, so that management, stockholders and depositors were protected from systemic collapse while effective monitoring of lenders was achieved through the internal incentives of the banking system. In this context the Hellmann *et al.* (1997) financial restraint model provides a theoretical framework that provides the core elements of an explanation for the efficiency and effectiveness of the Japanese 'rent-based' main bank system in its effective period.

The Hellmann et al. financial restraint model

The model advanced by Stiglitz and Weiss (1981) is of importance in showing that credits are intrinsically rationed as the result of asymmetric information problems. Since lenders cannot perfectly and without costs select the right borrowers *ex ante* and monitor the behaviour of borrowers *ex post*, the price mechanism does not clear the excess demand for funds. For instance, even when a borrower deemed by a bank to be uncreditworthy offers to pay higher interest rates, the bank may decline the loan application, because this offer is interpreted as a signal of higher default risk. Hellmann *et al.* (1997) expand this theory by arguing that government can enhance the incentives for banks to actively monitor their loan portfolios by enhancing bank-based rents. If government imposes ceilings on the deposit rate paid to savers that are below the market-clearing rate, rent opportunities may emerge in the form of a significant gap between deposit and lending rates that will give banks strong incentives to monitor their portfolio more carefully.

According to this financial restraint framework, the household sector supplies funds, the corporate sector is a user of funds, and banks act as financial intermediaries. Figure 2.3 shows the market equilibrium at interest rate r_0 as the intersection of a supply curve of household funds and a corporate demand curve for funds. If the government intervenes in the financial sector by regulating the deposit rate of interest, financial intermediaries can capture rents. The new lending rate will be r_L and the

gap between the regulated deposit rate, r_D, and the market lending rate, r_L, is the source of the rent. The rent will continue to be available for banks, more precisely for owners of banks, only if the banks' portfolio of assets and liabilities is managed sufficiently well to keep the portfolio solvent (see Khan 2000a, p. 58). It is possible to argue that a similar set of government interventions in Japan along the lines suggested by the financial restraint framework were key elements of the Japanese financial system, and gave its major banks an incentive to improve their skill and expertise in monitoring and in financial intermediation. This in turn contributed to an efficient social allocation of financial resources at least in the catching-up period in Japan.

The model also argues that while savings may respond favourably to higher interest rates, this elasticity is likely to be very low (Hellmann *et al.* 1997, p. 168). On the other hand, the model assumes that the amount of savings depends on the available infrastructure for deposit collection, in particular on the extent of the bank branch network and the efficiency of services provided to the local communities. The model thereby claims that by increasing the returns to intermediation, banks have strong incentives to increase their own deposit bases. The model considers the possibility that the 'rent effect' on savings is large – that is, the increased savings resulting from greater deposit security and/or increased investments in improving the deposit infrastructure and facilitating access to the formal financial sector will shift the supply curve rightward in Figure 2.3. If the rent effect is large relative to the interest-elasticity of

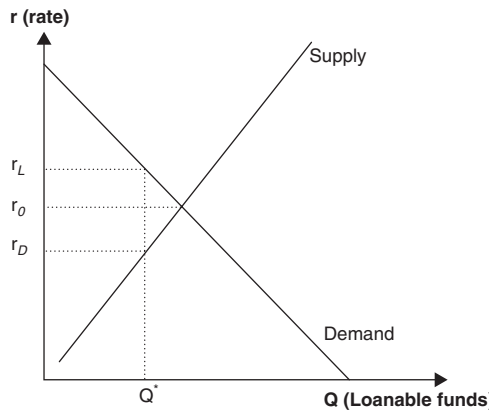

Figure 2.3 Financial sector rents as incentives for portfolio monitoring

savings, then it is possible that the total volume of funds intermediated through the formal financial sector will be larger with financial restraint than would be the case with free markets (Hellmann *et al*. 1997).

Although net benefits for society are not always consistent with those for individuals, the important role of *bank rents* was to create incentives for individual banks to operate as long-run agents that monitored borrowers effectively. We would then look for explanations for changes in bank commitment to monitoring efforts in changes in the organization of this 'financial restraint' system. On the one hand, the prospective benefits from monitoring efforts in the rent-based mode include the rent that a bank earns if it can preserve its 'franchise value' (Hellmann *et al*., 1997, pp. 171–4) and its 'reputation' (Stiglitz 1994, p. 223). On the other hand, the threat of losing these rent opportunities prevents banks shirking their monitoring function (Aoki 1994). The Japanese rent-based mode of monitoring relied on these incentive and sanction mechanisms and the effective control of this mechanism by regulators. We will elaborate on the mechanism in section 3.3 and 4.2.3.

2.3.3 How should credit risks be socialized?

Effective screening and monitoring of borrowers by lenders and investors is very important for the efficient running of a financial market. However, since each agent's capacity of screening and monitoring is limited as the result of bounded rationality and conditions of uncertainty, the financial regulatory framework cannot rely solely on these monitoring efforts. A further factor that is important in the design of an effective financial system is the socialization and absorption of lenders' uncertainty. The socialization of credit risks and of uncertainty depends upon the formal and informal institutional settings and the associated background of each country. This means that a system that works in one country will not necessarily have universal applicability.

The most important regulatory objectives for any regulatory authority are: (1) to maintain financial stability, in particular, to preserve the stability of the banking system by preventing contagious bank runs; and (2) to improve financial intermediation (mobilizing savings from surplus units and intermediation to investors in such a way that there is a minimization of the friction of transaction costs and the inefficiencies of asymmetry of information), including, in particular, the acquisition and accumulation of skills and knowledge for credit risk management in the monitoring process. However, we will argue later that to promote one of these objectives may hinder the achievement of the other. Ensuring an appropriate balance between the two objectives

is therefore most important in the design of an appropriate financial system. Table 2.1 compares the features of the institutional setting in the Anglo-American financial system and the Japanese traditional one, in the light of these regulatory objectives (see chapter 3 for details).

The Anglo-American financial system is characterized by a 'division of work' and 'specialization'. Both the credit (bank loans) market and the securities (bonds) market play important but clearly distinguished roles in the US framework of corporate finance. For example, the credit market caters the short-term working capital requirements while the securities market mediates long-term funds for medium- to long-term investment. Financial and banking stability, on the one hand, is preserved by the imposition of tight regulations on the credit market, i.e. US commercial banks, and by constraining excess competition among the banks under a protective framework. On the other hand, the existence of a large and diversified base of investors who can absorb various risks and uncertainty in the securities market – that is, the market for bonds, stocks, securities and venture capital funds – results in stability in that market while regulators ensure sufficient information disclosure and prevent insider trading that could undermine confidence in these markets amongst small to medium-sized investors. Regulators also aim to maintain competition among financial and informational intermediaries. The fairly free and competitive securities market intermediates a significant part of financial resources and maintains the dynamism of the economy by channelling these resources into corporations and through venture capital funds into new investments.

The Japanese 'rent-based' mode of financial intermediation and monitoring also included a protection and sanction mechanism that was effectively controlled by the regulators during the heyday of the system (Aoki 1994, pp. 126–7). On the one hand, the prospective benefits from monitoring efforts in this mode included the *rent* – in other words, the protected profits that a bank wished to preserve as part of its 'franchise value' (Hellmann *et al.*, 1997, pp. 171–4) and 'reputation' rent (Stiglitz, 1994, p. 223). On the other hand, the threat of reduced rent opportunities (that is, the threat of not getting the licence for opening new branches) played an important role in preventing banks from shirking on their monitoring functions. While the US system could limit the scope and role of commercial banks to ensure financial stability, Japan relied upon *indirect* finance under its financial structure where the Japanese households' preference for portfolio selection was *risk-averse*. Therefore, the Japanese needed to design an institutional framework to create incentives for Japanese *main banks* to play the important role

Table 2.1 Comparison of the institutional setting of regulation in the US and Japan

Institutional arrangements for ensuring financial stability	**Institutional arrangements for maintaining and improving sound financial intermediation**
US	
○ Tight regulations on commercial banking (severe capital adequacy ratio, severe requirement for disclosure of information) → preventing banks from undertaking excess credit risks → limiting the role of bank loans in corporate finance (No more than 30% of total corporate finance in the US depends on bank loans. Besides, these loans are extended for short-term working capital) → limiting the economic power of US banks.	○ The existence of a large and diversified base of investors with quite different animal spirits and initiatives which is essential for financing the entire range of economic activities in a growing and changing economy → Competitive and market-oriented securities markets are promoted
○ Constrained banking competition (by Glass–Steagall Acts[a], Limitations on interstate banking)	○ Financial intermediaries specialize in credit risk screening and monitoring functions. For instance, investment bankers act as underwriters, venture fund managers as incubators and rating agencies as evaluators in this framework
Japan	
○ Protection mechanism: Constrained competition by controlling licences to entry and to expand branches. Creation of bank rent opportunities (see section 2.3.2) by controlling deposit and lending rates	○ Scarcity of 'risk' funds for direct investment due to the risk-averse preferences of Japanese households. The system depends upon indirect finance (Around 90% of total corporate finance, including working capital as well as long-term loans for equipment, relied upon bank loans in the past)

○ Sanction mechanism: Effective power retained by the inspection team of the Ministry of Finance → Penalties imposed by sending a retired high-ranking MOF bureaucrat as the president or director to banks that shirk on monitoring efforts or otherwise reducing their rent opportunities	○ A high degree of bank capability of screening and monitoring borrowers was required. Incentive (such as bank rent opportunities) to monitor were important
○ 'Relation-based' system for sharing information between regulators and the major banks: Ensures flexibility in creating and changing financial regulations for resolving problems	○ Long-run relationship of repeated transactions may have contributed to the pooling and accumulation of the skill and knowledge for incubating new ventures, screening & monitoring and restructuring corporations. Banks play the important role of financial intermediaries and integrated monitors with a *quasi*-partner strategy for the client firms' success, rather than a short-sighted approach to portfolio management.

Note: [a] Although on 12 November 1999, the Gramm Leach Bliley Act was enacted to repeal the Glass Steagall Act of 1933, there remains a high level of separation in practice between commercial banking and investment banking in the US.

as long-term agents of other financial intermediaries and effectively screen and monitor client firms as well as managing risk in their own loan portfolios. In effect, both systems imposed protective regulation on commercial banks for the maintenance of financial stability. It is worth noting that the purpose of setting such a protective institutional framework for the US banks was to limit the scope of their business and to *weaken* their economic power. In contrast, the purpose of Japanese banks playing a regulatory role was to *strengthen* the profit base of banks and to get them to act as financial intermediaries and monitors.

It is widely argued that the accumulation of a huge volume of NPL in Japanese banks after the creation and collapse of the 'bubble' economy represented a malfunction of the traditional 'rent-based' and 'relation-based' banking system. These theories, however, focus only on the negative aspects of bank rents – in particular, the moral hazard consequences or the unproductive character of rent-seeking activities. This period saw some very significant changes in the Japanese banking sector. First, the collapse of the bubble economy encouraged Japanese banks as well as banking regulators to move away from the traditional mode of screening and monitoring towards an Anglo-American mode of monitoring which used external criteria such as risk-adjusted returns on capital to quantify credit risks solely by objective, or at least 'objectifiable' information. Second, the Anglo-American-influenced Basel Capital Accord had increasingly become a normative standard for solvency regulation and therefore another constraint on the behaviour of Japanese bank managers. Japanese bank managers were increasingly encouraged to adjust to the new style of financial intermediation, monitoring and risk management based on the practices of the Anglo-American 'securities-based' financial system.

The introduction of a capital adequacy requirement (the 1988 Basel Accord with its 8 per cent capital adequacy requirement) was designed to strengthen the international banking system by making internationally active banks maintain an acknowledged *buffer* to cover a variety of risks and unexpected losses. The BCBS explains that the 1988 Accord was expected to be the cornerstone of the international financial architecture and its overriding goal was to promote safety and soundness in the international system (BCBS 1999b, p. 9). The primary concern of banking regulators was to prevent *bank runs*, which could be triggered by the insolvency of internationally active banks that were outside the geographical control of national regulators. This led to the idea of promoting convergence to international standards that would improve the trade-off between financial liberalization and financial stability in terms

of preventing international bank *runs*. For instance, Eichengreen (1999), an IMF economist in 1997–98 and a strong supporter of the Basel Accord New Framework (see section 4.3), provides just such an argument. This Accord looked at the justification of *supervisory reviews* and the enhancement of *market discipline* in its Pillars 2 and 3 respectively (see BCBS 1999b) to encourage lenders to ration credit to those borrowers who failed to take the steps necessary for ensuring their financial stability. According to Eichengreen's neoclassical view, financial liberalization, both domestic and international, was being driven by powerful changes in information and communications technologies that made it far more difficult to regulate financial transactions. In order to retain their effectiveness, controls on international transactions must therefore become more onerous and distortionary (Eichengreen 1999, p. 2). However, the question that arises is: how would the convergence to the Basel Accord conditions affect financial intermediation in domestic markets? The mainstream argument does not address this sufficiently. For instance, Eichengreen assumes that the flows and allocations of financial resources would be better managed under an Anglo-American securities-based financial system. Later we will look at this assumption in the setting of an individual country's institutional and financial structure.

2.3.4 Theories of solvency regulation

It is worth noting that one key feature of the 1988 Basel Accord was a minimum level of capital determined at 8 per cent of qualifying capital relative to aggregate risk-weighted assets as a common framework for maintaining capital adequacy and solvency. We consider theories of solvency regulation by means of capital requirements. These approaches have been controversial. Although there are several approaches that attempt to analyze and model the optimal regulatory scheme, they can be classified into two broad types: the *portfolio* approach and the *incentive* approach.[3]

The *Portfolio* Approach was pioneered by Kahane (1977) and later investigated by Freixas and Rochet (1997), Kim and Santomero (1988) and Koehn and Santomero (1980). The main idea was that if banks behaved as portfolio managers when they selected their portfolio of assets and liabilities, it was important that they used risk-related weights for the computation of their capital asset ratio. Interestingly, using a mean-variance model, Kim and Santomero (1988) compared the bank's portfolio choice under incomplete markets for the diversification of their risks before and after the imposition of a solvency regulation. They showed that the solvency regulation entailed a recomposition of the risky part of the bank's

portfolio in such a way that its risks were increased, particularly because some small banks could not completely diversify their risks. Ironically, the probability of the bank's failure often increased after the solvency regulation had been imposed. This is a controversial point for this approach. For instance, Rochet shows that this distortion in the banks' asset allocation would disappear when regulators used 'correct' measures of risks for computing their risk exposure and solvency ratio. However, achieving the 'correct' measures of risk is critical to this approach and it is not clear whether 'market-based' risk weights can be reliable.

In the *Incentive* Approach, solvency regulations were modelled as solutions to principal–agent problems between a public insurance system and private banks. Since regulators' insurance was costly, solvency regulations were required to create incentives that limited the potential cost in terms of public funds being used to bail out depositors. The new capital adequacy framework was in reality more likely to have been driven by such an incentive (principal–agent) approach, which was consistent with the traditional concern of US regulators to limit the freedom of banks to expose themselves (and thereby the regulator) to large risks. This approach attempted to capture the social cost of an insured failure to justify a capital adequacy ratio. However, this approach also faced difficulties in getting *correct* measures of risks for computing the exposed risks and the solvency ratio as well as for calculating the optimal level taking into account information problems. Furthermore, the social utility of the banks' own screening and monitoring efforts as financial intermediaries and monitors was not sufficiently reflected in this approach.

Here, we should note that the instruments of banking regulation are specific to the national characteristics of each banking sector. Freixas and Rochet (1997, p. 259) classify safety and soundness regulations used in the banking industry into six broad categories: (i) deposit interest rate ceilings; (ii) entry, branching, network, and merger restrictions; (iii) portfolio restrictions, including reserve requirements and even, as an extreme case, narrow banking;[4] (iv) deposit insurance; (v) capital requirements; and (vi) regulatory monitoring including not only closure policy but also the use of market values versus book values. Except for entry and merger restrictions, these regulatory instruments are specific to the banking industry. They conclude that banking regulation appeared to involve diverse issues that were so heterogeneous that no general model could encompass the main issues.

We should note that the main approaches to designing the optimal bank solvency regulation focus on how to ensure financial stability,

with less emphasis being paid to how to improve the appropriate financial intermediation for economic development. There is, however, another interesting approach which looks at this issue and aims to formalize the notion of *substitutability* between capital requirements and monitoring in controlling the behaviour of bank managers (Campbell, Chan and Marino 1992). In their approach they consider three sets of possibilities:

1 The monitoring of banks' assets is impossible, and the regulator uses capital requirements to prevent excessive risk-taking by the bank.
2 Monitoring is feasible, and the regulator is benevolent. There is substitutability between bank capital and monitoring efforts. At the optimum, capital requirements are less severe and simultaneously the banks' monitoring efforts may prevent them from taking risky loan exposures.
3 Monitoring is still feasible, but the regulator is self-interested. The crucial limitation is that the monitor (regulator) has limited liability and is unlikely to put much effort into monitoring. This induces distortions in the levels of capital and monitoring that were achieved in version (2). As expected, more bank capital will be needed for solvency and less monitoring effort on the part of regulators will be offered.

This model does not suggest any optimal level of capital requirements. The monitoring by the regulators aims not only to prevent the insolvency of banks – in other words, to maintain financial stability – but also to make banks undertake the important role of acting as financial intermediaries and monitors for efficient flows and allocations of financial resources. In this model, assuming that it is possible to monitor banks' assets, a lot would depend on whether the regulator is benevolent or self-interested if we wanted to optimize the required bank capital and the banks' monitoring efforts. Although the causality suggested in the model requires further testing, it sheds light on the relationship between the regulator and the banking industry when designing a financial system that can ensure sound financial intermediation and appropriate monitoring efforts.

2.4 Theories of institutional changes

What causes institutional change? Through what mechanism is a new institution created or replaced with another one? In the context

of NIE, an 'institution' can be defined as *rules that constrain economic activities and behaviours*.[5] Institutional approaches insist that both market and government failures result from high *transaction costs* resulted from an associated institutional structure. These market and government failures are avoidable only if the system moves to an alternative institutional structure with lower transaction costs. We note that transaction costs can be defined as 'the economic equivalent of *friction* in physical systems' (Williamson 1985) or the cost of 'running economic systems' (Arrow 1974; see also Williamson 1985, p. 18). Transaction costs, in general, include *ex ante* costs such as: (i) finding the right partners; (ii) negotiating prices; (iii) drafting and writing appropriate contracts; and *ex post* costs of: (iv) monitoring; (v) enforcing contracts; and (vi) disputing and contesting terms. Transaction costs are determined by a number of different variables such as the technology with which trading partners are dealing, the distribution of bargaining power between them, the presence or absence of shared cultures that induce trust and self-enforcement and so on. Yet it is often difficult to quantify transaction costs. According to Williamson (1985), this difficulty is mitigated by the fact that transaction costs are always assessed in a comparative institutional way, in which one mode of contracting is compared with another. But we also know that institutional structures that worked well in one context might not work in another. In other words, there is a problem in identifying the notional institutional structure which would increase society's net social benefits. We certainly cannot do this by comparing the performance of alternative institutions in other countries unless we can be sure that we have adjusted for all the variables that can affect transaction costs.

Theories of institutional change can be classified into two broad categories: (1) functional theories; and (2) process-oriented theories. Knight (1992) also points out that theories explaining the origin of institutions emphasize one of two processes: (1) spontaneous or evolutionary emergence; or (2) intentional design. Evolutionary processes are ultimately quite close to functional explanations that explain, in a cultural context, social institutions in terms of their ability to satisfy the functional needs of members of that society (Knight 1992, pp. 84–6). As Khan (1999) points out, although process-oriented theories have been developed as a reaction against functionalist theories, many process-oriented theories are still strongly influenced by functionalist ideas which are often very misleading. A satisfactory process-oriented analysis would therefore have to be done carefully by allowing for differences in

the distribution of political power and/or culture and informal norms between societies. If these variables are taken into account, it is possible for institutions to emerge that are not functionally the most efficient (Khan 1999).

North (1990) emphasizes relative price changes, driven by changes in the ratio of factor endowments, changes in the cost of information or changes in technology, and these induce institutional change. In addition, he insists that fundamental changes in relative prices over time will alter the behavioural pattern of people and their rationalization of what constitutes standards of behaviour. A change in relative prices or a change in tastes can lead to the gradual erosion of particular norms and their replacement by different ones. Over time, the rule may be changed or simply ignored and not enforced. Similarly, a custom or tradition may be gradually eroded and replaced with another (North 1990, p. 86). Although this very simplified story can be complicated in many ways – by the free-rider problem or by the tenacity of some norms of behaviour – he points out that a change in relative price plays an important role in institutional changes.

The cost-minimization standard in the transaction cost theory is often misleading. Knight (1992) raises three factors as exceptions to the standard: (1) hidden benefits that are not readily apparent; (2) formal external constraints (i.e. the interests of the state); and (3) uncertainty as a result of which economic agents may not create the least costly rules because they lack either the capacity or the knowledge to establish them. Khan (1995, 1999) gives a critical assessesment of North's functionalist views in which institutional change is driven largely by individual bargaining where gainers compensate losers. By definition, if gainers always compensate losers and if institutional change only happens through voluntary bargaining, only value-enhancing institutions will emerge. Presumably, there are some important reasons why in the real world institutional changes typically do not happen through processes of negotiation and compensation. When large differences in power exist between classes of agents, it makes no sense for the strong to compensate the weak in every case. Even if they were so minded, their commitments to compensate losers are often not credible. This is because the institutional change, once it takes place, will *ex post* change the bargaining power of the losers usually making them weaker than they were *ex ante* (Khan 1999).

Trust and opportunism

In the traditional Japanese mode of monitoring (see section 3.3), the role of *trust* was to reduce the cost of monitoring. The cost of monitoring

is an important component of transaction costs. While the transaction cost is defined as the economic equivalent of *friction* in physical systems, we assume that trust may, not always but fairly often, play the role of *lubricant* for helping the economic system to run smoothly (Arrow 1974, p. 23). Risks of Williamsonian 'opportunism' can be reduced by mutual trust. In general, opportunism in terms of pursuing self-interest with guile involves subtle forms of deceit and refers to the incomplete or distorted disclosure of information, especially to calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse (Williamson 1985, p. 47).

'Trust' has been referred to as 'attitudes and behaviour which indicate that each person is willing to rely on the other to act fairly and to take into account the other's welfare' (Cohen and Knetsch 1992), as 'solidarity', and as 'a belief in future harmonious affirmative cooperation' (Ian Macneil[6]). 'Contract negotiations and performance will likely take place more effectively if trust is present and is generated by the process' (Cohen and Knetsch 1992). Fukuyama (1995), referring to what the sociologist James Coleman has called 'social capital', argues that the ability of people to work together for common purposes in groups and organizations and their ability to associate with each other depends on the degree to which communities share norms and values and are able to subordinate individual interests to those of larger groups. 'Out of such shared values comes trust' (Fukuyama 1995, p. 10). One of the most invaluable insights of Francis Fukuyama and Kenneth Arrow is that trust has a large and measurable economic value and has an important bearing on economic organization. 'Ethical elements enter in some measure into every contract; without them, no market could function. There is an element of trust in every transaction; typically, one object of value changes hands before the other one does…' (Arrow 1974, p. 24).

However, since the operationalization of trust, no matter how it is defined, has proved inordinately difficult (Williamson 1985, p. 406), the empirical analysis of the variable is still limited. Arrow insists that the efficacy of alternative modes of contracting and monitoring would vary among cultures because of differences in trust. Due in part to the popularity of Fukuyama's definition of trust, some political economists in the Anglo-American tradition were interested in analyzing trust relations in the Japanese economic system. On the contrary, the Japanese themselves tended to be preoccupied with what they see as the problem of an excess of trust (Dore 2000, p. 81). To some extent, cultural factors are related to the degree of trust relations. However, we would

say that the degree of trust even in a particular culture or society could rather vary.

> Most of us operate in some middle realm where we admit social claims, sometimes forget about them for long stretches of time as we go about our daily private role, sometimes rise to an occasion, sometimes fall miserably short, as we assert our individuality in contexts that are not totally appropriate. (Arrow 1974)

From the perspective of Williamsonian 'opportunism', we may say that the cooperative mode of economic organization, as in the Japanese traditional economic mode, where trust and good intentions are generously imputed to the membership, has its weakness in being endowed with few organizational responses to the debilitating effects of *opportunism*. 'Such organizations are easily invaded and exploited by agents who do not possess those qualities' (Williamson 1985, pp. 64–5). Transactions that are subject to *ex post* opportunism will benefit if appropriate safeguards can be devised *ex ante* (ibid., p. 48). We should note that, in other words, if safeguards are not sufficiently devised *ex ante*, opportunism would possibly emerge as a troublesome source of behavioural uncertainty in economic transactions.

2.5 Conclusions

This chapter surveyed a number of theories and arguments related to monitoring activities to look at different aspects of the relationships summarized in Figure 2.4.

Firstly, we drew on the traditions of Post-Keynesian economics with its emphasis on 'uncertainty'. Monitoring actors, such as banks and government regulators, are operating under conditions of uncertainty and bounded rationality that intrinsically make their activities extremely difficult. Secondly, the effectiveness of the screening and monitoring activities could be helped or hindered by *institutions* in terms of 'rules that constrain economic behaviour'. For instance, the effectiveness of bank rent opportunity or capital adequacy requirement depended upon institutional settings and changes in each financial system. As Aoki (1994, 2001) points out, in capitalist economies a variety of financial intermediaries and agents specializing in corporate monitoring and control have emerged; financial intermediaries include investment and securities houses, commercial banks, long-term credit banks, universal banks, venture capital firms, rating and accounting companies, corporate boards,

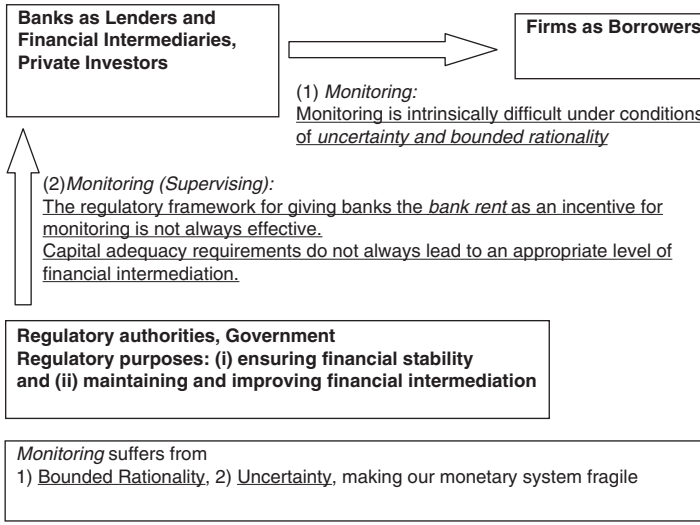

Figure 2.4 The financial 'monitoring system'

mutual and pension funds, takeover raiders, bankruptcy courts, and so on. These organizations differ not only in terms of the kind of financial instruments they create, but also in the nature, scope and orientation of information collection, and their roles in the corporate governance structure (Aoki 1994, pp. 109–10). In each economy we see the evolution of a particular set of institutional arrangements embedded in broader institutions. The institutional arrangement of various intermediaries in a particular financial system may have a significant bearing on the performance of the economy in which the system is embedded. At the same time, the efficiency and effectiveness of a particular financial system may also change over time as the economy progresses. This overview underlines the importance of a comparative institutional analysis of financial systems.

3

Characteristics of the 'Traditional' Japanese and Anglo-American Financial Systems

3.1 Introduction

With diverse histories, technologies and attitudes towards risk-taking, different financial systems have a common factor, which is to ensure financial stability and efficiency within a geographical region. There are, however, differences between various financial systems, which are a result of their evolution and their adaptation to their surrounding environment. The financial systems that we describe as the Japanese traditional or 'bank-led' system and the Anglo-American financial system are in many ways fundamentally different. Aoki (1994), Davis (1995), Dore (2000) and Stiglitz (1994, 2003), among others, have made useful comparative analyses of the economic and financial systems of Japan and the United States; in particular, between the Japanese 'main bank' system and the Anglo-American securities-based financial system.

The main objectives of any financial institutional structure including banking regulations are threefold: (1) to preserve the safety of the financial system in order to prevent bank runs and monetary panics; (2) to mobilize savings and allocate savings to productive, efficient uses, through the financial intermediation of banks or capital markets; and (3) to provide a variety of financial services efficiently. These objectives can be in conflict, depending on how the institutional structure is organized. Of particular importance is the way in which financial institutions are organized and designed for socializing and absorbing different types of credit risks and uncertainty.

The economic literature has drawn a sharp distinction between the Anglo-American and Japanese financial systems in these terms. The former has been referred to as the Anglo-American securities-based or capital-market financed financial system (Aoki *et al.* 1994), as 'stock

market capitalism' (Dore 2000) and the neoclassical spot market model of independent, arm's-length financial transactions (Aoki *et al.* 1994, p. 36), in which securities markets play important roles in raising and allocating financial resources. The alternative model has been referred to as the Continental European and Japanese model (Davis 1995) or the Japan–Germany model (Aoki *et al.* 1994), as 'welfare capitalism' (Dore 2000) and a bank-based system of relationship finance, repeated transactions and more or less close relations between banks and firms (Aoki *et al.* 1994). Section 3.2 is an overview of the institutional characteristics of the Anglo-American financial system. Section 3.3 surveys the institutional features of the Japanese *traditional* 'main bank' system in the pre-deregulation period, drawing on the explanation of the 'convoy' monitoring system in Aoki, Okuno-Fujiwara and others. Section 3.4 analyses the understated 'informal' and 'intangible' monitoring characteristics of the Japanese traditional financial system and fills in some gaps in our understanding of the convoy monitoring system.

3.2 The Anglo-American financial system

The seeds of Japan's prolonged financial slump were sown when Japan bowed to diplomatic pressure from the United States for *deregulation*, and attempted to meet their 'level playing field' demand for a convergence to the Anglo-American financial system (Dore 2000). In the mid-1980s, the performance of Japanese banks was in stark contrast to that of the American banking system, which had been hit hard by the NPL accumulated in the Savings and Loans (S&L) Crisis and the Latin American Crisis. The main demand of the US regulators was for the introduction of new rules that would minimize restraints on international competition and take away the home advantage of national banks. As a means to this end of financial deregulation, the United States championed the setting up of standardized international capital adequacy standards at the BCBS[1] in 1984, the bilateral deal on capital adequacy requirements in 1987, and the Basel Capital Accord in 1988. In parallel, following the recommendation of the Japan–US Yen–Dollar Ad Hoc Committee in 1984, the deregulation of term deposit rate control was started in Japan in 1985 (the deregulation of all types of deposit interest control was completed in 1994). In this context it is interesting to note that financial regulations changed at a much slower pace in the United States. For instance, deposit rate deregulation was completed only in 1986, even though its gradual implementation began in 1970.

It is reported that during the abovementioned Committee's discussion 'Japan showed reluctance to overhaul its traditional financial system completely but the United States pressed very hard for comprehensive deregulation' (Osugi, 1990, p. 8). This type of evidence suggests that external pressures instigated Japan's wholesale deregulation. Of course, we should not overlook the possibility that the Japanese regulators used the excuse of foreign pressure as a political device to pursue their own deregulation agenda (see also section 4.2.2).

The salient features of the Anglo-American banking and financial system, at least, until the repeal of the Glass–Steagall framework in 1999 are as follows (see also Figure 3.1):

1 Tight regulations on commercial banking (lending) business and for promoting competition.
2 The promotion of competitive securities markets, based on the neoclassical expectation that such a market-oriented mechanism backed by a large and diversified base of investors would result in a greater flow of savings and better allocation of savings.
3 Financial intermediaries based on the specialization and division of labour in credit risk screening activities and monitoring functions. In this context, investment bankers play a specialized function as underwriters, venture fund managers act as incubators and external rating houses act as evaluators. Rating companies were meant to engage in the ongoing monitoring of changing financial states of firms, but their evaluations also affect the capacity of firms to raise new funds from capital markets so ratings companies also play an important role in *ex ante* monitoring in the securities-based financial system.

Despite the fact that the Anglo-American monitoring system is based on decentralized monitoring by investors and banks in a market environment, it is not a simple free market in banking defined as free entry and exit. First, strict regulatory institutions ensure that unfettered banking (lending) business and competition is not allowed, even in the United States, where market-oriented competition and allocations are promoted and widely observed in other industries. The US regulatory structure was based largely on banking legislation enacted during the 1930s, in particular, the Banking Act of 1933. The Glass–Steagall Act was a direct response to a series of banking panics in the period 1930–3. Glass–Steagall (modified in the Banking Act of 1935) had three basic elements. First, it created the Federal

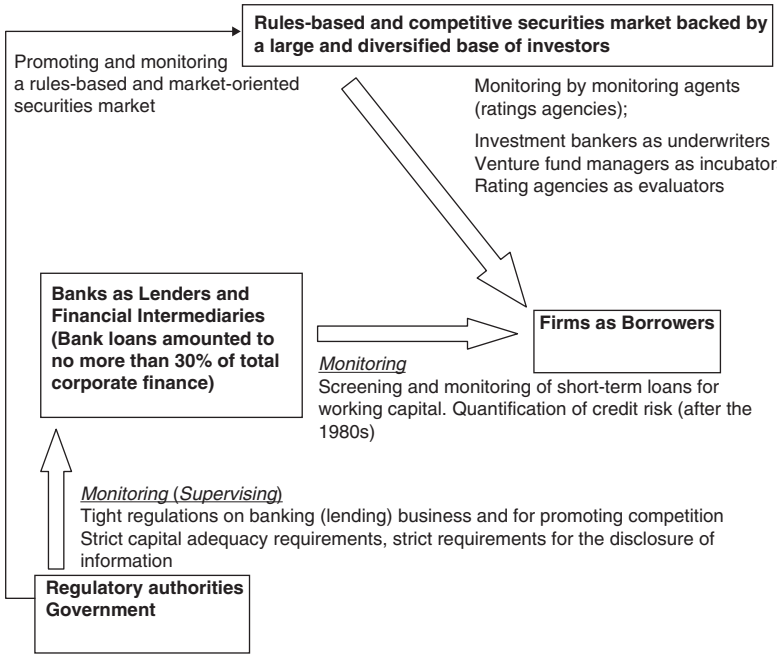

Figure 3.1 The Anglo-American monitoring system

Deposit Insurance Corporation (FDIC) to insure deposit accounts. Participation in the FDIC insurance system was mandatory for all Federal Reserve member banks. Secondly, Glass–Steagall restricted the operations of insured banks. The restrictions included limitations on deposit interest payments and a strict separation between investment and commercial banking that prohibited the latter from originating, trading or holding securities other than those of the US Government and general obligations of state and local governments. Third, together with the McFadden–Pepper Act of 1927, Glass–Steagall raised entry barriers that reduced competition between banks (see Boot and Greenbaum 1993 for details).

The paradox that market competition between banks was limited by regulators in the US can be explained by the concern of the US regulators that a free market in banking would increase the concentration of economic power in large banks with damaging effects for the productive economy. As Stiglitz (1994) points out, the United States

was more concerned than other countries that banks would be able to exercise undue economic power without strict government regulation. Stiglitz also points out that the United States has periodically been plagued with bank runs, perhaps more frequently than other countries. In addition, Stiglitz (1994) points out that banks could have and indeed did have limited competition in product markets. Banks were in an ideal position to coordinate decision making. Moreover it was even in the bank's narrow interest as a lender to limit competition in product markets to ensure that their borrowers did not go bankrupt. In this context, many of the restrictions imposed on banks, such as those relating to interstate banking and those relating to their activities (for instance, the Glass–Steagall portfolio restrictions[2]), were intended to limit the scope and boundary of their economic power to restrict competition in product markets.

In this respect the tight regulation of the banking business implies that US banks were not allowed to engage in unfettered banking business and competition. One result of such implementation was that banks were restricted from engaging in interstate operations. For instance, as recently as 1978, all states in the US restricted interstate banking. The US Congress passed the Riegle–Neal Interstate Banking and Branching Efficiency Act in 1994 which allowed banks to expand their branches across states. However, much discretion was allowed to states in the sense that if a state did not want to participate, it could opt out (Krol and Svorny 1996). Despite the fact that the US wants to ensure decentralized monitoring by investors and banks in a market environment, the banking system is still highly regulated. White (2002, p. 137) thus points out 'banks in the United States remain among the most heavily regulated entities in the US economy'. But the financial crisis of 2008 showed that even this level of regulation was not sufficient.

Finally, US regulators traditionally suspected that deregulation would give banks the incentive of over-lending on riskier projects (to prefer short-run speculative profit making). The S&L debacles, which cost US taxpayers hundreds of billions of dollars, served to remind regulators of the adverse effects of deregulation. The magnitude of closed or merged assets of the insolvent S&L institutions amounted to approximately US$540 billion (Davis 1995, p. 166). Stiglitz (1994) suggests that the government's losses for the S&L debacles were only part of the total losses to society, because significant resources were misallocated elsewhere in the economy. The tightening of 'capital adequacy requirements' (CAR) as a part of solvency regulations in the aftermath of the S&L crisis was based on this conservative tradition of US regulators.

From our perspective, what is interesting is that the US banks developing under this regulatory structure developed an arm's-length approach to managing risks for their own shareholders. A historical perspective shows that capital adequacy requirements (the level of equity capital to total assets) was conceptualized by US regulators as a mechanism for preventing banks from over-lending to riskier projects (Miyoda 1994). In the United States, Returns on Equity (ROE) had long been used as an important indicator for measuring business management performance. If operating costs remained unchanged, there were two major ways for bank managers to raise ROE. One was to expand loan assets by leveraging. This involved borrowing funds and increasing the weight of debts for lending in order to earn profits for equity capital. The other was to pursue higher Returns on Assets (ROA). ROA is a ratio of profits to total assets [ROA = Profits/Total Assets], while ROE is a ratio of profits to equity capital [ROE = Profits/Equity Capital]. Thus, we could say that the capital adequacy ratio is a ratio of ROA to ROE [ROA/ROE = Profits/Total Assets ÷ Profits/Equity Capital = Equity Capital/Total Assets = Capital Adequacy Ratio]. In other words, ROE is a ratio of ROA to capital adequacy ratio. Therefore, the capital adequacy requirement aimed to prevent banks from expanding loan assets by leveraging and thereby promoted safety and soundness in the banking system by getting banks to maintain an adequate capital buffer against unexpected credit losses.

A further logical development for managing risk for bank shareholders was the increasing codification of risk in the decision-making process of banks. The codified assessment[3] of credit risk developed by US banks aimed to estimate their portfolio's Probability Density Function (PDF) of credit losses by calculating the amount of capital needed to support their credit risk activities. The process for determining this amount was analogous to *value at risk* (VaR) methods, which were used in allocating economic capital against market risks (volatility risks), a common financial methodology used in the United States in the late 1980s. In other words, US banks applied the financial technology and engineering that had been developed to calculate the volatility of financial market products and derivatives such as swaps and options to quantify credit risks as well. In these exercises, banks express the risk of the portfolio with an *algorithmic* measure of unexpected credit loss (i.e. the amount by which actual losses may exceed the expected loss) such as the standard deviation of losses or the difference between the expected loss and some selected target credit loss quantile.

The codification of risk and the development of arm's-length banking is not unconnected to the tight rein US regulators kept on the lending

business of banks (Dymski 1999). In US corporate finance, bank loans, most of which are short-term contracts for working capital, have historically contributed to no more than 30 per cent of the total funds raised by US firms (see Davis 1995, p. 37). In spite of this, regulators held to the conservative strategy of enforcing tight capital adequacy requirements and disclosure rules on banks to prevent *bank runs*. The constant demand by the US for 'level playing field' regulations in other national banking regions that began to be heard with growing intensity in the 1980s arose from the fears of US regulators that tighter capital adequacy requirements on their own national banks might cause US banks to lose their competitive edge in the international financial markets. This helps to explain why US regulators were at the forefront of the pressure for setting up international capital adequacy standards at Basel (see Miyoda 1994; Eichengreen 1999 for historical perspectives on the 1988 Basel Accord).

As far as the securities market was concerned, US regulators accepted a much more market-oriented framework (see Antoniewicz 2000). The securities markets were not only competitive and rule-based; they were also regulated by a much less protective framework. The key players in this market were *financial intermediaries* who developed capabilities in credit risk screening and monitoring functions by specialization and the division of work. Ultimately, credit risks and uncertainty in this framework were absorbed by a large and diversified base of private investors in the US market who could afford to take credit risks on their own as fund providers, having assessed the information packaged by investment bankers or venture fund managers. This large and diversified base of relatively small investors in securities markets is a critical foundation of the Anglo-American financial system. The way in which US household preferences for securities as 'risk assets' matter will be discussed in section 4.4.

Keynes' theory of *expectations* pointed out that while it was impossible to come up with objective calculations of 'risk' in the case of investments, he also rejected the idea that investments or stock markets were based entirely on mass irrational psychology. The bridge between the two was his concept of 'animal spirits'. Stock markets and investments more generally required 'animal spirits' in individual initiatives that supplemented and supported reasonable calculations of risk. If prevailing animal spirits were such that no investor could afford to absorb 'downside risks' for a firm, it would be unable to raise capital. The existence of a large and diversified base of investors with a broad range of animal spirits was therefore essential for financing the entire range of economic

activities in a growing and changing economy. As long as the base as a whole keeps the strength and capacity to absorb many different types of risks and uncertainty, the financial market backed by such a base of investors can be dynamic and powerful. The Anglo-American financial system relies on banks financing a limited range of capital requirements and a diversified base of investors with a range of animal spirits financing the difficult areas of long-term investing through securities markets. This analysis implies that the Anglo-American financial system is not necessarily universally applicable, since other countries may not possess a large and diversified base of investors willing to invest in securities markets, which is a critical foundation of the Anglo-American financial system.

3.3 Japanese 'main banks' as intermediaries and monitors

The Japanese 'main bank system' is a system in which main banks play an important role, at least during the 'catching-up' period (which characterized the Japanese economy from the post-war years until around the mid-1970s). Here main banks act as financial intermediaries and monitors for flows and allocations of financial resources. The academic literature traditionally defines a main bank relationship as a long-term relationship between a firm and a particular bank (the main bank) from which the firm obtains its largest share of borrowings. The recent literature, including Aoki *et al*. (1994, pp. 3, 126–8), sheds more light on the roles of the main bank which, delegated by other lenders, acts as a *quasi*-insider of the borrowing firm and as a mediator when borrowers fall into stress. '"Main bank" is a practitioners' term used by financial institutions, corporations, and regulators, as in "Bank X is the main bank of Firm Y" or "Firm Y has Bank X as its main bank".' The term 'main bank system' as currently used encompasses not only these corporate financing relationships, but also the various monitoring- and governance-related practices and institutional arrangements that connect industrial and commercial firms, banks and regulatory authorities (see Aoki *et al*. 1994, p. 3).

The important roles of banks as financial intermediaries and monitors was a salient feature of this system and was sustained, especially in the Japanese context, by several specific institutional features, in particular

1 The *financial restraint* regulations of creating 'bank rents' or 'franchise values' (see Hellmann, Murdock and Stiglitz 1997; our section 2.3.2);

2 Tacit delegation of reciprocal monitoring arrangements among main banks (see Aoki *et al*. 1994, pp. 24–5): The main bank used to assume the leading role in screening and assessing private investment projects by its client firm, while other private financial institutions relied on the main bank's credit analysis rather than monitoring the firm's creditworthiness on their own (ibid., p. 118);
3 The informal 'relation-based' (see Okuno-Fujiwara 1997) sets of practices, applications and behaviours among firms, banks and regulatory authorities.

With respect to the first pillar, the financial restraint model (see section 2.3.2) suggests that the Japanese regulation of controlling deposit and lending rates helped to create *rent* opportunities that could potentially be captured by banks as financial intermediaries. The so-called 'bank rents', on the one hand, created incentives for banks to operate as long-run agents by creating a franchise value for the banks that could be maintained as long as banks did their job well in monitoring firms and borrowers effectively and managing the risk of their portfolio of loans (Hellmann *et al*. 1997, p. 170). Another aspect of this particular model was that the bank rents created strong incentives for banks to increase their own deposit bases by increasing the returns to intermediation. To deal with the prevailing situation, the MOF of Japan used the *carrot and stick* approach. The carrot was licenses for new bank branches, which promised higher profits due to expansion, while the *stick* was the threat of a reduction of rent opportunities for those banks that shirked their duties of monitoring and prudence, which was an important part of the system of financial restraint (Aoki *et al*. 1997; Aoki 1994, p. 129).

With regard to the second pillar, the Japanese financial intermediary set up a unique monitoring system, which Aoki (1994, pp. 113–19) calls the 'integrated' monitoring system. This system shares the same assumption as the 'delegated' monitoring theory of financial intermediation (originally advanced by Douglas Diamond) that banks, in general, have a comparative advantage in monitoring activities (Diamond 1984; see also Freixas and Rochet 1997, p. 29). The delegated monitoring theory also suggests that monitoring typically involves increasing returns to scale, which implies that if many projects are financed by a typical bank, and the skills and knowledge for monitoring are pooled in the bank, the cost of delegation of monitoring roles to the bank is low. The Japanese main bank in the integrated monitoring system could therefore be expected to have lower costs in monitoring their client firms than other banks lending to the firms. For instance, the main bank had

the power to operate all of the current accounts for a client firm. The ability to monitor its cash inflows/outflows was critical for monitoring the borrower. Presumably, the integrated monitoring system would work only if the following conditions were fulfilled:

1 The cost of delegation was sufficiently low for each participating lender. In other words, the cost of monitoring the monitoring bank (the main bank) did not exceed the prospective benefit from participating in the loan. It is worth noting that corporate finance in Japan has been largely provided in the form of *bilateral* loan contracts, rather than in the form of loan syndication.[4] However, as Aoki (1994) points out, the characteristic of diversified long-term loan arrangement led by the main bank was the formation of a de facto long-term consortium. It is worth noting that regardless of whether it was the main bank's initiative, or the firm's own decision not to rely exclusively on the main bank as a borrowing source, diversified long-term loan arrangements, in other words, the formation of a de facto long-term loan consortium, have been made only with the initial lead decision by the main bank to extend a certain critical portion of the required investment funds. Other private financial institutions and non-main commercial banks (city banks[5], see also section 5.2), have been seen as delegating *ex ante* monitoring to the main bank. As Aoki points out, the ability of the main bank to assume such *ex ante* responsibility, as well as the reliance of other institutions on the main bank's *ex ante* judgement without explicit delegation, were derived from the even greater role of the main bank in *interim* and *ex post* monitoring. The de facto consortium, although Aoki (1994) does not emphasize this, depended heavily upon each agent's *confidence* in the provided and disclosed information or mutual *trust* in the 'main bank system' among firms, banks and the regulators.
2 The cost of monitoring the main bank is lower for each participating bank than that of directly monitoring its own portion.
3 For the main bank, its internal cost of monitoring borrowers does not exceed the prospective benefit from undertaking the role of monitoring. The prospective benefit includes the benefit of maintaining its franchise value, reputation and rent opportunities under the financial restraint policy.
4 From a macro prospective, the cost of monitoring or controlling the monitoring bank does not exceed the benefit of exploiting scale economies of monitoring and controlling borrowers and investment projects through this system.

The financial restraint policy, upon which the 'integrated' monitoring system is based, understates the role of banking regulators in monitoring and disciplining major banks. The fact is that banking regulators are very closely involved in the operation of banks, in order to retain their effective power to monitor and discipline banks for the primary purpose of maintaining financial stability. In the case of Japan, the cost of delegation – in other words, the cost of monitoring the reputable major bank to which each lender delegates the role of monitoring – was almost negligible until the mid-1990s. The low cost of delegation emanated from the *convoy*[6] system, the foundations of which were the protection and sanction mechanisms for Japanese banking regulators to retain a strong and effective power to monitor and discipline banks. One source of this power was the effective power of the Inspection Division (*Kensabu*) of the MOF Banking Bureau to inspect the books of banks at its discretion. Then the MOF played a strategic role when a bank was judged to be poorly managed and needed drastic organization and asset restructuring. The steps taken could include the following:

1 The MOF could arrange for a retired high-ranking MOF bureaucrat to be appointed as director or as president.
2 The MOF could influence bank decisions in relation to dividend payouts.
3 The MOF could mediate acquisitions of troubled smaller banks by larger banks (for instance Sumitomo's takeovers of Kawachi Bank in 1965 and of Heiwa Sogo Bank in 1986). It could also encourage mergers of city banks (for instance, Daiichi and Nihon-Kangyo were merged into Daiichi-Kangyo, Taiyo and Kobe were merged into Taiyo-Kobe, Taiyo-Kobe and Mitsui were merged into Sakura, Kyowa and Saitama were merged into Asahi) for enhancing competitiveness.

As a result, the effective sanctioning mechanism created a credible belief that the regulators effectively monitored the loan portfolio of main banks. At least, the impression that was given to every reputed major bank was that the management of the failing bank would be punished before it fell into a critically dismal portfolio position. This was a critical foundation of the Japanese integrated monitoring system that maintained a low cost of delegation.

The third pillar of the convoy system as described by Aoki (1994) was the regulatory framework for the main bank system, which was based in turn on five pillars: (1) Keeping the deposit interest rate low, but with a positive real rate. (2) Restricting bond issues to privileged

companies and restraining the development of the secondary bond market. (3) Restricting new entry to the banking industry, while barring banks from engaging in the underwriting and brokerage businesses. (4) Managing performance-indexed rewards and penalties for banks, such as branch-licensing, the dispatch of ex-bureaucrats as executives, and so on. (5) Administratively guiding the differentiation of lending rates according to the strategic priority of industry and the market performance of borrowing firms.

The emergence and evolution of these regulatory rules for the 'relation-based' structure described by Okuno-Fujiwara (1997) shows the importance of close 'information-sharing' between the regulators and banks, in which the MOF and some selected banks had the power to influence decisions as the 'insiders' and negotiate rules on the basis of *ex post* flexibility (Okuno-Fujiwara 1997, p. 375). As Knight (1992) points out, effective institutions ensure compliance by a combination of: (1) information provided about the choices of other actors; and (2) the threat of sanctions in the event of non-compliance. The flexibility in the 'relation-based' structure was quite effective for sharing information and avoiding the occurrence of non-compliance situations that would fail to achieve the institutionally targeted resource allocations. We will elaborate on the unique relation-based 'convoy' financial system in section 3.4.

3.4 Intangible and informal institutional features of the 'convoy' monitoring system

The distinct characteristics of the traditional Japanese monitoring system, based on the 'convoy' system described by Aoki, Okuno-Fujiwara and others, are summarized in Figure 3.2.

As was argued in chapter 2, monitoring activities by lenders or investors are intrinsically difficult under conditions of uncertainty. The question for us is how the Japanese traditional financial system dealt with lender's uncertainty and maintained an appropriate level of financial intermediation. This section looks at some underlying mechanisms that existing analyses of the 'convoy' monitoring system have not focused on sufficiently.

3.4.1 Institutions for dealing with lender's uncertainty: The Japanese approach to credit risk management

We focus attention on important but now discarded features of the Japanese rent-based monitoring system. First we look at *non-algorithmic*

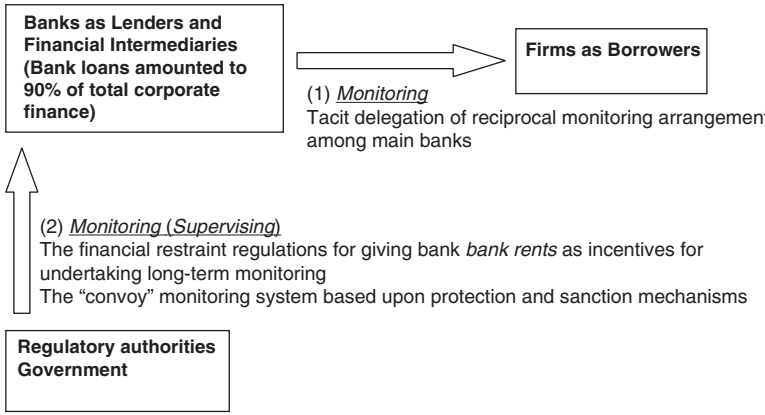

Figure 3.2 Japanese traditional 'convoy' monitoring system

monitoring style (see section 1.4 for the brief description of *algorithmic* monitoring), which developed as a result of the establishment of long-term partnerships between Japanese main banks and their clients, and the banks' intense participation in the operation of their clients in the heyday of the main bank system. In this context non-algorithmic means an increased reliance on long-term relations and professional knowledge gathered through long-time experience for credit screening and monitoring than on codified algorithmic methods.

Shiro Yokoi, an influential Japanese banker (former the Managing Director of the LTCB), pioneered the so-called 'limited recourse loan' or 'project finance'. In this arrangement, the lender, while coordinating the complicated interests of the concerned parties to a project, bears a portion of the project's risk on the condition that the projected cash revenue is pledged as security. This required a great deal of skill as limited recourse loans had to be structured and the risks associated with them had to be assessed. Consequently, higher spread margins were awarded for undertaking higher risks. Interestingly, although Yokoi talks about 'risks' in his book on *Project Finance*, in fact, lender confidence (at least, in a *subjective* sense) that there is 'no risk at all', was a prerequisite for approving any loan application, including rescue operations (Yokoi 1985, p. 272). Indeed, in the heyday of the main bank system, Japanese bankers did not use the concept of probability of default in their screening and appraisal process. The relationship banking-based non-algorithmic style encouraged an 'all or nothing' approach to credit risk assessment.

What is the foundation of the non-algorithmic style described above? Herbert Simon's concept of bounded rationality recognized that 'a great deal of the success of human beings in arriving at correct decisions was due to the fact that they had good intuition or good judgment' (Simon 1983, p. 200).

> What is intuition all about? It is an observable fact that people sometimes reach solutions to problems suddenly. They then have an 'aha!' experience of varying degrees of intensity. There is no doubt of the genuineness of the phenomenon. Moreover, the problem solutions people reach when they have these experiences, when they make intuitive judgments, frequently are correct. (Simon 1983, p. 201)

Many executives may find Simon's account of their intuitive decision processes persuasive. The non-algorithmic nature of decision-making in the relationship-based banking system is closer to what Simon describes as intuition-based decision-making. Under the main bank system, experienced Japanese bankers seemed to have identified credit risks by intuition, whereas more junior lending officers often would not be able to recognize problems with clients whose staffs were later accused of covering up serious losses. Sometimes, in spite of positive recommendations by junior officers, the suspicions of veterans were raised by an examination of the profit and loss account of a firm with a hidden liquidity problem.

How did Japanese bankers acquire a reliable intuitive monitoring style? While the substantive characteristics of non-algorithmic decision-making cannot, by definition, be codified, we do know that success here is based on some preconditions. Simon (1983) points out two interesting features of 'intuitive rationality'. First, it emerges only in people who possess the appropriate knowledge; Simon refers to Henri Poincaré, who suggested that inspiration comes only to the 'prepared mind'.[7] Second, intensive learning and practice are required to acquire intuitive rationality. Simon referred to empirical data gathered by John R. Hayes, on chess masters, composers, painters and mathematicians. Hayes found that 'Almost no person in these disciplines has produced world-class performances without having first put in at least ten years of intensive learning and practice' (Simon 1983, p. 203). Both of these conditions were present in the post-war Japanese banking and financial system.

The Japanese monitoring system relied on the cultivation of long-term partnerships. Japanese bank managers based their credit risk assessment largely on the analysis of actual and projected cash flows. Through this

process of analysis, they acquired the appropriate knowledge to monitor their clients. The main banks were in a position to compel their client firms to open checking accounts for clearing almost all of their payment transactions. This arrangement enabled the bank managers and officers in charge to monitor their borrowers' outflows of funds because their promissory notes and checks for accounts payable were addressed to the bank. At the same time, loan officers usually contacted the clients on an almost daily basis to collect their bills of accounts receivable, enabling them to monitor the borrowers' projected inflows of funds. The ability and right to monitor clients' flows of funds were presumably very important to the main banks, who would otherwise have been less willing to act as incubators or partners. Most firms consulted their main banks about their cash management and about their need for working capital. The main banks taught cash management skills when necessary and gave warning when clients' projections seemed too optimistic. The partnership strategy created by monitoring dynamic flows produced a positive incentive for the Japanese main bank officers and managers to support their client firms. At the same time, the partnership arrangement enabled them to acquire a higher capability of monitoring, which put banks in a better position to make intuitive credit risk assessments.

The main banks' central role in the Japanese economy also enabled them to recruit graduates from elite educational institutions. The quality and morale of their staff were exceptional. The banks cultivated an organizational ethics that encouraged managers and lending officers not only to pursue business profits but also to evaluate the social value of their clients and their businesses and to support clients and projects considered socially beneficial.

Ultimately non-algorithmic monitoring is based on non-codifiable judgements, but these judgements can always be tested by the outcomes achieved. This is why relation-based non-algorithmic monitoring skills of bankers in the traditional Japanese banking system were developed through a process of trial and error. In Japanese society, 'practicality outweighs the theoretical element' (Nishida 1958, p. 125). Non-algorithmic methods of assessing investments were acquired through trial and error and this approach has traditionally been highly respected in Japan.[8] On the other hand, non-algorithmic monitoring ran the risk of error, but this is a risk with any method of management, including algorithmic or formula-based methods of assessing risk. The real question is which method is more open to systematic errors. The non-algorithmic system enabled judgements to be made about the quality of management that can often not be reduced to measurable features of the balance sheets or

cash flows of companies. Nevertheless, in the Japanese system hopeless borrowers were sometimes carried for much longer than circumstances warranted because bank managers judged their managements to be better than eventually proved to be the case. The result was that the cost of the eventual default was sometimes higher than they would have had the loans been terminated earlier. However, bank rents created time and incentives for the Japanese main banks to manage their loans effectively over the long run. Moreover, bank rents facilitated the development of relation-based non-algorithmic monitoring approaches, which require skills of judgement acquired through trial and error and the acquisition of knowledge about the qualities of management in different companies. The profits and franchise value which the bank earned through more effective management of their loan portfolios gave their staffs the incentives and time to improve their non-algorithmic monitoring style, which in turn contributed to the profitability and the long-run reputation of the banks.

In the Japanese traditional 'main bank system' of relationship finance and of repeated transactions, the main bank played the important role of allocating financial resources and ensuring that the allocated funds should be used in the way promised. In this regard, intuition may not be the definitive characteristic of relationship banking. Rather, it could have been the close participation of the lender in the operation of the company and the information that was available to them that made it difficult for the borrower to shirk. In the heyday of the system, the main bank acted as a *quasi-partner* of the borrowing firms. In post-war Japan, having a good relationship with one of the major banks was deemed the cornerstone of corporate financial strategy, and virtually essential for corporate success. Of course, in the post-war *keiretsu*[9] system, the role of major commercial banks as main banks for those firms and enterprises within their groups was quite unique, stemming from a historical context of a relatively decentralized exclusive group – *zaibatsu* – banking system (see Aoki *et al.* 1994, pp. 42–7). However, throughout the post-war period and the adjustment to slower economic growth from the mid-1970s when many leading Japanese industries reached the international technological and marketing frontier, the main bank was deeply involved as a *quasi-partner* in mapping out a strategy for its client firms, in particular, firms within its group. The bank often played the role of incubating entrepreneurs, who were considered strategically important for integrating and internalizing supporting industries for its core business in order to enhance the group's competitiveness, and occasionally also of rescuing clients in

temporary trouble. Presumably, the officers and managers of the main bank acted upon a *partner's strategy*, rather than merely an *investor's strategy* of portfolio management.

3.4.2 Bank rents as a source of implicit transfers to new enterprises

In addition to the *non-algorithmic* monitoring style financial sector rents prevailed in the traditional banking system also played a major role in nurturing new enterprises. There has often been an underestimation of the role of bank rents in nurturing and incubating new technologies in the traditional rent-based mode of monitoring in Japan. Financial sector rents facilitated the channelling of financial resources to new industries and the stabilization of lender confidence by pooling the monitoring skills and knowledge of the financial intermediaries.

In a closed financial system, even large borrowers had to pay higher spread margins than would have been the case if they could raise funds in international financial markets. The rent in terms of excess spreads was captured by banks. In the case of Japan before financial differentiation (see section 4.2.2), the lending rate to all firms – and, in particular, the Long-Term Prime Lending Rate (LTPR) – was firmly controlled and was fixed at the level of 0.9 per cent over the coupon rate (funding rate) of the five-year debenture which long-term credit banks were privileged to issue. Three private long-term credit banks, the Industrial Bank of Japan (IBJ), the LTCB and the Nippon Credit Bank (NCB), were established by a re-capitalization or transformation of the special long-term credit banks from the pre-war period. They were completely private banks, however, they operated under a special law (Long-Term Credit Bank Laws) giving them a privilege to issue bank debentures (5 years maturity) for collecting stable fund resources.

Figure 3.3 illustrates the mechanism, which contributed to incubating new enterprises and ventures through the transfer of rents through the fixed lending rate. A particular firm's credit rating and statistical Expected Default Frequencies (EDF) for its credit category allows us make a rough estimate of the interest rate margin above the coupon rate of debentures that would be justified on purely market considerations as a borrowing rate for that firm. We can then draw a curve showing the *Justifiable Borrowing Margin Above the Debenture Rate* relevant for firms in successive creditworthiness categories (defined by the judgement of banks about the quality of firm management and the expected profitability of projects). The expectation is that creditworthy firms should be able to borrow at a very small margin above the debenture

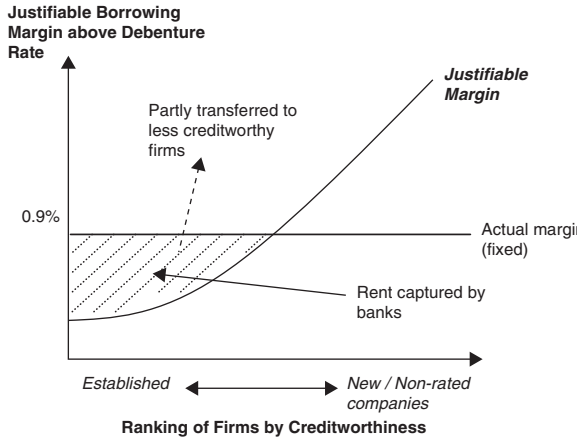

Figure 3.3 Bank rents transferred to less creditworthy borrowers

rate (less than the 0.9 per cent margin stipulated by law), while new firms trying out new projects should justifiably have been borrowing at rates which exceeded the debenture rate by a significant margin (see section 4.3 and Table 4.4 for a sample data of the EDF in successive creditworthiness categories). In a closed financial system, a gap between the required margin for large borrowers and the regulated LTPR may provide rent opportunities to be captured by banks if large companies cannot easily tap into international financial markets.[10] Meanwhile, another gap between the required margin for new enterprises or small companies and the regulated LTPR may be partly covered by a transfer of these rents, so that incubating companies receive financing at lower interest rates than they would have had to pay if they attempted to raise funds in international financial markets. To the extent that these transfers were useful for incubating infant industries and new technologies, the rent transfer could be easily justified.

This rent-management mechanism attenuated adverse selection/moral hazard effects described by Stiglitz and Weiss (1981) who argued that as there is an increase in the interest rates for borrowers, it becomes increasing likely that only risk-loving borrowers or borrowers with no intention of repaying will continue to borrow. However, a closed financial market keeps good borrowers in the domestic debt market and creates the opportunity for incubating new enterprises by financing them at lower interest rates. From the lenders' viewpoint, the rent

opportunity may function as a buffer for them to underwrite 'venture capital', and the lower rates may contribute to raising the probability of success in these new investment projects.

On the other hand, the incentive to screen and monitor new enterprises can be weakened because banks can enjoy more rents by concentrating their portfolio on large borrowers. This problem did not arise so significantly in Japan during the catching-up period. In the Japanese main bank system of relationship finance (Aoki *et al*. 1994), the main bank played the role of allocating financial resources and of ensuring that the allocated funds were used in the way promised. The mechanism of transferring rents described above was well-suited to the post-war period, when banks and Japanese enterprises worked together to revitalize their groups. These institutional arrangements underpinned what came to be called Japan Incorporated.

Dealing with lenders' *uncertainty* was difficult but very important for the efficient allocation of financial resources while at the same time maintaining financial stability. Adverse selection or moral hazard problems in credit markets have a complex relationship with lenders' uncertainty. For example, the *keiretsu* system in Japan may have created moral hazard problems by encouraging main banks to make credit easily available to companies within their group. In this case, rents were no longer effective in ensuring responsible management of banks and the efficient allocation of funds. On the other hand, the mechanism of transferring main bank rents in a partnership strategy may have contributed to the incubation of new enterprises. There was thus a trade-off between differentiation of terms between companies and financial intermediation by banks for nurturing ventures, in particular in the special context of Japanese catching up. This is why it is important to examine the conditions and mechanisms arising from the specific Japanese context in which relationship banking operated that increased the likelihood of positive effects of bank rents.

3.4.3 Critical features of the Japanese context

In the post-war Japanese catching-up period a unique relationship developed between the Japanese regulatory authorities – the MOF and the BOJ – and the banking industry, which we describe as the *convoy* system, referring to the role of the MOF in leading a convoy of banks. This is essentially the *main bank* system and its mechanisms for screening, monitoring, and rent management and transfer. At that time, as Patrick (1998) points out, the BOJ was subservient to, rather than autonomous of, the MOF. The foundation of the *convoy* system

involved 'protection' and 'sanction' mechanisms (Aoki *et al.* 1994, pp. 30–3), encouraging the Japanese main banks to play important roles as financial intermediaries and monitors for efficiently mediating financial resources in the catching-up period. On the other hand, the system had its informal 'relation-based' institutional practices and behaviours, in which the MOF and some selected banks had the power to influence decisions as 'insiders', negotiate rules and even to change rules with *ex-post* flexibility (Okuno-Fujiwara 1997). In the special context of Japan, the government's dense network of relationships with the private sector enabled the government in the relation-based mode to limit potential information losses at the centre. As a result, the government's guiding role and its *ex post* flexibility in modifying policies greatly contributed to stabilizing private sector expectations and led to more long-term investments.

In the heyday of the convoy system, major financial failures were avoided (Aoki 1994; Patrick 1998). In effect, the essence of the post-war regulatory system was to guarantee that banks would not fail, so their management, stockholders and depositors were protected. In this system, interest rate competition was not allowed and other forms of competition were muted. In addition, the regulators (the MOF) controlled new entry to city bank status by restricting the allocation of nationwide branch licenses to incumbent city banks. In fact, while the number of branches of Japanese city banks increased from 1,765 in 1957 to 2,989 in 1991 (Aoki *et al.* 1994, pp. 28–30), the number of city banks was kept small (not more than 15 banks) since 1953. The intense moral hazard problems that such a system may have led to were, however, entirely averted because the MOF had oversight on bank activities and could force mergers and management changes when required. For instance, the MOF retained the power to mediate acquisitions of troubled smaller banks by larger city banks (for example, Sumitomo's takeovers of Kawachi Bank in 1965 and of Heiwa Sogo in 1986) and to mediate mergers of city banks in order to maintain financial stability. In this regime, the losses caused to the successful banks by mergers with troubled banks were compensated sufficiently by the potential franchise value of the branches acquired. As Patrick (1998, p. 5) points out, these collusive arrangements were based on the leadership of the MOF through administrative guidance, price setting, protection and sanction. At least, in the post-war and catching-up period, the rent-based convoy system provided safety to the financial system through constrained competition while avoiding serious moral hazard problems.

Of course, the rapid post-war economic development of Japan may have substantially reduced the credit risks faced by Japanese banks during this period. Nevertheless, we argue that the close and symbiotic relationship between the MOF and the major banks contributed to reducing uncertainty for both lenders and borrowers, allowed the sharing of information in screening and monitoring, enabled long-term investment decisions based on judgements about management quality, and allowed the incubation of new technologies and firms. For instance, we can see these roles in the operation of long-term credit banks such as the IBJ and the LTCB in the post-war catching-up period. In particular, the IBJ played an important role not only as a representative of the banking industry to lobby regulators, but also as a *quasi*-insider representing the regulators by making the case for national economic interests and macroeconomic coordination within the banking industry.

These banks also contributed to granting long-term loans, in collaboration with the Japan Development Bank (JDB), a government development financial institution, in order to reconstruct infrastructure and developing industries in sectors such as power generation, steel, coal, fertilizer, shipping and shipbuilding (see section 5.2 for the details). Their lending policy was reflected in national economic strategy. The IBJ's capacity of offering industrial-strategic and engineering-related judgements improved the city banks' capacity as co-financiers in de facto consortia to assess the managerial competence of their client firms (Aoki *et al.* 1994, pp. 33–5). In addition, the IBJ's neutral position vis-à-vis *keiretsu* enterprise groups helped it to play a brokering role in cross-group mergers such as the merger between Fuji Steel and Yawata Steel in 1970 that resulted in the formation of the world's largest private steel company, Nippon Steel (ibid.). It is also well known that the IBJ played an important role in rescuing the first crisis of Yamaichi Securities in 1965, through lobbying and arranging special borrowing from the BOJ, thereby contributing to the maintenance of financial stability. As a whole, the IBJ played a unique and important role in the allocation of financial resources in the post-war catching-up period and for pooling skills in screening and monitoring borrowers.

Okuno-Fujiwara presents a model of Japanese government–business relationships, which he describes in terms of its emphasis on *ex ante* policy rules and *ex post* negotiation to revise them (Okuno-Fujiwara 1997, pp. 374–6). This model can be applied to the unique relationship between the Japanese regulatory authorities and the banking industry that we have called the *convoy* system. Okuno-Fujiwara (1997) distinguishes between 'rule-based' and 'relation-based' (as well as 'authoritarian')

governments, by looking at: (i) the degree of functional separation between branches of government; and (ii) the degree of centralization of jurisdiction within each branch of government. The former refers to the autonomy of the different agencies of the government, the legislature, the administration and the judiciary. For instance, the US has a high degree of functional separation of government. By contrast, Japan has a much lower level of de facto functional separation in government decision-making. The centralization of jurisdiction refers to the centralization of decision-making within each agency, and especially within the administrative branch of government. The more centralized the agency's jurisdiction power, the more coherent its decision-making, but also the greater the potential information loss at the centre.

The Japanese system of governance was characterized by a low degree of functional separation between branches of government, combined with a low level of centralization of jurisdiction within each branch. This allowed the development of 'relation-based' government that attenuated serious information problems by means of developing decentralized and detailed relationships with the private sector. At the same time, the low level of functional separation in the post-war and catching-up period allowed the executive branch a greater degree of *ex post* flexibility in changing rules. This in turn allowed the relationship-based system to work by allowing the correction of mistakes without very large social costs, encouraging both lenders and borrowers to undertake long-term investments. By contrast, the Anglo-American 'rule-based' government is based on a high degree of functional separation between branches of government but a significant centralization of jurisdiction within each branch. The separation of powers makes the system 'rule-based' because there is no *ex post* flexibility of rules, and the centralized jurisdiction enables rules to be effectively imposed. It is now up to the private sector to plan long-term strategies given the existing rules. This system may be better at micro-innovations by the private sector when stable expectations about policy are important (Okuno-Fujiwara 1997, p. 377). But the success of the rule-based mode depends upon the private sector's capacity as primary undertakers as well as absorbers of risks and uncertainty.

Although not emphasized by the model, it is noticeable that without appropriate *trust* in the government's role and appropriate enforcement capacity, no mode of governance would be feasible. See chapter 7 for our discussion on trust (see also section 2.4). Even in the rule-based system, it is critical that the private sector should have trust in the government's role in providing reasonable and appropriate 'safety nets', as well as in its commitment to enforce rules. The expectation that

government will do this effectively sustains the stability of the mode, encouraging the private sector to develop skills and institutions for dealing with all other types of risks and uncertainty. The capacity of the private sector to socialize risks and uncertainty was a precondition for the dynamism of the Anglo-American rule-based mode of monitoring. In contrast, the foundation of the Japanese 'relation-based' mode of monitoring lay in the trust between parties developed through long-term repeated transactions, and this relationship-based trust undoubtedly contributed to the successful economic performance of Japan in the post-war catching-up period.

3.4.4 A desirable outcome of banking regulation: audience effects

We take it as uncontroversial that the core objectives of banking regulation are: (1) to ensure financial stability; and (2) to promote sound financial intermediation. We have argued that banking regulation has to balance the task of maintaining and enhancing the roles of banks (lenders) as financial intermediaries and monitors for the allocation of financial resources, and that of preventing them from underwriting non-performing credits under conditions of uncertainty in credit risk assessments. At the same time, regulators have to prevent contagious *runs* through the policy for protection, without creating adverse incentives for banks that may lead to a failure of effective monitoring and moral hazard. Here, we should note that banking regulators, virtually in any type of financial structure, are very closely involved in the operation of banks, in order to retain the effective power to monitor and discipline them for regulatory purposes. As the *Regulation* economic school emphasizes, banking regulation is of capital importance because of its effect both on the behaviour of bank managers and on the specific characteristics of the banking industry (Freixas and Rochet 1997, p. 257). Indeed, more or less extensive banking regulation exists in virtually every country with a well-developed banking system.

The financial policy best suited to the achievement of financial stability has been controversial. As a key prescription for preventing crises, Eichengreen (1999) focuses on the 'disclosure of information' that was expected to attenuate asymmetries of information among regulators, banks and borrowers, which would in turn strengthen 'market discipline' and help policymakers to identify the need for corrective action (p. 10). Many analysts in Japan would agree with his emphasis on promoting the disclosure of information. However, does the disclosure of information always help?

Banking is an information-intensive industry, which examines the financial transactions, cash flow history and ongoing credit relationships of a borrower. The intangible and tacit nature of much of the information relevant for assessing a borrower's promise to repay makes it almost impossible to transmit all of this information in any simple way to markets or other lenders through codified signals. Thus, bank defaults and the systemic risk of potential contagious *runs* cannot be prevented and resolved by the ordinary auction market mechanism. Therefore, financial regulations and government intervention are critical to the maintenance of financial stability. Taking the specific nature of information in financial markets into consideration, how should the information pertinent for assessing the potential solvency or insolvency of banks be dealt with?

In an interesting argument, in the context of the 1997 Asian banking crisis, Satyanath (1999) draws attention to the complexity and constraints in the unfettered disclosure of information and argues that if banks are to disclose information through unreliable channels which expose the information to the public, particularly when they are *on the verge of bankruptcy,* they risk costly bank runs, whereas if they communicate such information to the government through private channels, the government can accommodate such information in devising the monetary policy without causing costly bank runs.

Elster (2000, pp. 36–7), referencing Satyanath (1999), highlights the importance of reliability of private channels enabling the banks to inform the regulator without simultaneously informing the public. Such reliable and closed channels are very important for financial systems to make it possible to detect problems and trying to resolve problems of bank solvency before the bank actually becomes insolvent. The disclosure of information between regulators and banks would not always be efficacious as it is conditional on what Elster calls 'audience effects' by which 'one can impose costs on oneself by announcing publicly that one is going to quit, thus raising the stakes by adding shame and loss of prestige to the other costs of relapse' (ibid., p. 69). For example, as Nishimura (1999) points out, in 1995, the MOF announced that the amount of NPL held by the Japanese banks had reached around ¥40 trillion, while it had been previously announced to be only around ¥13 trillion. This was because of a change in the definition and scope of NPL to include not only those loans where repayments had been suspended but also loans where interest rates have been reduced or exempted. In addition, the scope of the definition was extended to include not only the 21 major

banks but also all the depository institutions. This disclosure per se was reasonable. However, as Nishimura (1999) points out, this sudden announcement triggered deeper public uncertainties over the disclosure process of the MOF, consequently fuelling general public distrust in financial system.

Needless to say, a protective structure between banks and banking regulators can also result in potential moral hazard problems. As referred to earlier, the regulatory structure has to keep banks as well as regulators from abusing their power to their own advantage. How do financial systems deal with the above delicate relations? In the case of the US, although the role played by US banks is limited largely to short-term lending for working capital requirements, the regulators held to the traditional conservative strategy of enforcing tight capital adequacy requirements and disclosure rules on banks to prevent *bank runs*. This structure has limited the negative audience effect of disclosure of information related to the insolvency of banks, even when they occasionally occur. Although an affected bank may be insolvent, the macroeconomic impact would be limited, because the financial role played by the US banks was quite limited in the structure, where the US banks were encouraged not to have large commitments and exposures to particular companies or groups. In contrast, given the Japanese banks' predominance in corporate funding in Japan, the increasing pressure on disclosure of information exposed the Japanese banking system to higher economic and political risks due to audience effects.

In its heyday, the Japanese relation-based banking system was based on closed ('private') channels for sharing information, and this allowed efficient transmission of information between regulators and *quasi*-insiders, beyond the ordinary transmission between the regulator and the regulated. The private and closed channel for sharing information in the convoy system was based upon specific Japanese social networks and relationships connecting the *financial establishment* in Japan.

The major Japanese banks, in particular the long-term credit banks that were established to mediate long-term funds for the reconstruction of social and economic infrastructure, aggressively recruited the educational elite of reputed universities as an important investment in human resources and this sustained the *financial establishment* over time. For instance, Okazaki (1995) reports that more than 20 per cent of the new graduates from the economics faculty of the University of Tokyo entered the banking industry after the late 1960s. This share was equal to the share entering manufacturing firms. The LTCB hired 53 persons as new graduates in 1986, of whom 43 had graduated from the five

leading universities: the University of Tokyo, Hitotsubashi University, the University of Kyoto, Keio University and Waseda University. Many of these elite recruits were assigned to critical positions where they were contact points with the MOF and could communicate with individuals of similar backgrounds within the government. The appointment of the so-called *MOF-tan,* who was in charge of contacting and being contacted on an almost daily basis for sharing information or lobbying with the MOF, was considered as a path to the top elite in the bank, with the prospect of further promotion. The major roles of the *MOF-tan* were as follows:

1 To provide information on demand by the MOF officials.
2 To collect and analyze information from the MOF officials for predicting the direction and change of financial policies and regulations.
3 To informally negotiate preliminary drafts of amendments and supplements to existing regulations.
4 To lobby for necessary approvals or for accommodations. Patrick (1998) points out that a 'convoy' system was maintained whereby the assets of all banks grew at about the same rate and their relative ranking did not change over time.
5 To reconnoitre the schedule and strategy of the inspection team. This task was particularly important and relevant for the relationship system. Its importance stemmed from the fact that the Inspection Division (*Kensabu*) of the MOF's Banking Bureau retained the power of effectively disciplining banks. On the other hand, the fact that it was a closely managed process shows how effectively relationships were used to avoid high transaction cost confrontations, and to allow banks enough time to prepare for the Inspection in the form of voluntary disclosures.

In spite of the historical success of the relation-based mode of banking, the question arises of why the Japanese banking regulators were caught out during the 1997–98 financial crisis. Why did the Japanese regulators fail to provide proper guidance or use *ex post* flexibility to overcome specific problems in the post-bubble period? Although they had informed of the near insolvency of some large banks, why did the regulators opt for the apparently ruthless policy of letting those banks go bust, instead of assisting them to overcome problems as in the past? We will turn to these questions in chapter 7 and argue that the Okuno-Fujiwara model of government–business relationships in Japan misses out some important issues.

We should note that not all information is public even in the Anglo-American financial model. There also exist effective private

and closed information channels in the financial industry and in government–business relationships in the United States. For instance, the entrance into the 'Old Boys' network of reputed Ivy League business schools is considered a key to business success in the United States. This is why the Japanese government and many Japanese firms used to send their staffs and officials to get their MBAs at American business schools. Ironically, Dore (2000) claims that this created a critical constituency within Japan pressing for a move towards the adoption of the American model. According to him, the dominance of the United States increased steadily as the proportion of young US-trained PhDs staffing Japanese economics departments and teaching from American textbooks grew steadily, along with the number of Japanese businessmen with MBAs from US universities. Secondly, interviews with insiders suggest that Wall Street maintains an informal club for exchanging information among its limited members and for preventing excessive levels of competition. Markets in special products, such as emerging market bonds or distress loans (heavily discounted loans for secondary trading), are particularly prone to informal subsystems because markets of this kind are naturally oligopolistic and players seek tacit collusion. Third, there were strong relationships between Wall Street and the US Treasury, including frequent exchanges of personnel. For instance, Wade and Veneroso (1998) refer to Jagdish Bhagwati's comments when he was asked why the International Monetary Fund was seeking financial deregulation everywhere:

> Wall Street has become a very powerful influence in terms of seeking markets everywhere. Morgan Stanley and all these gigantic firms want to be able to get into other markets and essentially see capital account convertibility as what will enable them to operate everywhere. Just like in the old days there was this 'military-industrial complex', nowadays there is a 'Wall St.–Treasury complex' because Secretaries of State like Rubin come from Wall Street…

However, closed information exchanges perform different functions in the two systems. In the convoy system, these information flows were a critical part of the system's normal operation. They ensured that the system worked effectively. In the Anglo-American system, much of the closed information exchanges are illicit. On the one hand, even here these channels and relationships may function to provide regulators with opportunities to informally learn from the regulated and so coordinate their interests in making policy. On the other hand, when closed information flows exist in the US 'rule-based' structure, it can very often result

in skewed decision-making because many relevant parties may not have access to this information. This can create strong incentives for unproductive rent-seeking activities,[11] because policy decisions can be easily skewed by informal lobbying activities (Okuno-Fujiwara 1997, p. 398).

3.4.5 Conclusions

To sum up, we note the following formal and informal institutional features of the Japanese traditional 'convoy' monitoring system (see also Figure 3.4):

1 The main banks were involved as *quasi*-insiders in the operation and management of their client firms.
2 Bank rents created incentives for relationship-based monitoring and facilitated the channelling of financial resources to new industries.
3 The dense information network between regulators and the regulated enabled the government to attenuate potential information losses at the centre and to reduce 'audience costs'.
4 The government's guiding role and its capacity for *ex post* flexibility contributed to expectations of borrowers and lenders that favoured long-term investments.

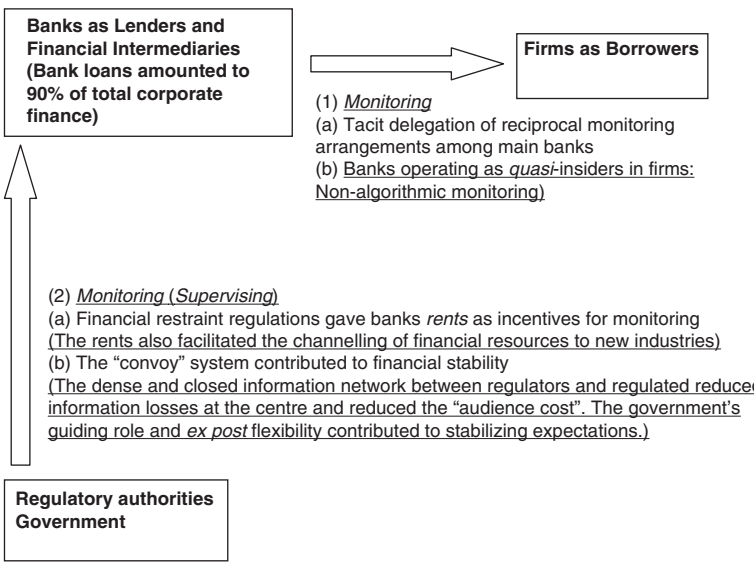

Figure 3.4 Japanese traditional financial and monitoring system

4
Economic Environmental Changes and Institutional Changes

4.1 Introduction

Why did the traditional Japanese monitoring system become less efficient? In the context of the institutional approach (see section 2.4), the question can be rephrased to ask why the transaction cost in the system was getting higher. Section 4.2 aims to overview the changes in economic environment and the associated changes in the relative cost of monitoring, which made the traditional financial and monitoring system gradually ineffective. The main points in our discussion are summarized below (see also Figure 4.1):

(A) Changes in the relative cost of monitoring (see section 4.2.1)
   1 Changes in industrial structure/paradigm shift from the 'catching-up' economy to the 'frontier' economy → Borrowers who still relied on bank loans are exposed to fundamental uncertainty to a greater extent → increasing cost of monitoring
   2 Internationalization of Japanese economy → increasing cost of monitoring
   3 Financial deregulation → reduced bank rent opportunities (see Figure 4.2) which had given banks incentives for playing a role as a long-term monitoring agent and financial intermediary

(B) Changes in the relative cost of supervising by the Japanese regulatory authorities (see section 4.2.2 and 4.2.3)
   1 Technological changes/Innovations in financial engineering and products → increasing cost of supervision.
   2 Internationalization/globalization → increasing cost of monitoring.
   3 Foreign pressure accelerating financial deregulation.

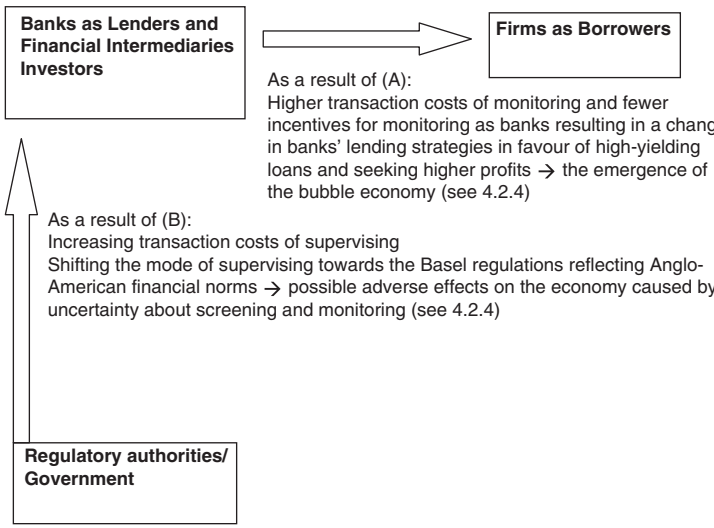

Figure 4.1 Effects of growing transaction costs in the Japanese traditional monitoring system

Japan has been encouraged to abandon its traditional financial system and to adopt the Anglo-American style of financial deregulation that has been promoted and propagated by the US. In addition, Japan has been moving to adopt the Anglo-American monitoring system as an institution for reducing the growing transaction costs in the traditional monitoring system. But did this transformation towards the Anglo-American monitoring system resolve the problems faced by the traditional Japanese monitoring system? Section 4.3 discusses the limitations and arbitrariness of the codified credit risk monitoring and capital adequacy requirement introduced in the Anglo-American mode of monitoring. Section 4.4 discusses the problem of the scarcity of 'risk' funds in the Japanese financial structure which are necessary for its transformation to the Anglo-American 'securities-based' financial system. We point out that the transition does not take into consideration the issue of how to deal with lenders' uncertainty, and this constrains the sound intermediation of financial resources, bringing out an adverse impact on the economy. This ill-planned transition therefore further worsened the structural problem of financial intermediation in Japan. Section 4.5 concludes.

4.2 Changes in economic environment affecting the Japanese traditional monitoring system

One way of examining how the traditional Japanese monitoring system became ineffective is to investigate the reasons why transaction costs increased in the institutional structure of the traditional system. To that end, this section explores the economic and environmental changes surrounding traditional monitoring system and the changes in associated transaction costs. To begin with, we should note that the returns on assets (ROA) achieved by Japanese banks had already been declining as early as the 1970s (see Figure 4.2 and Suzuki 2002, p. 228).

Severe lending competition fuelled by the 'internationalization' of banking activities and 'disintermediation'[1] appears to have accelerated this trend (EPA 1999). Bank spread margins, including bank rent opportunities (see section 2.3.2) that were protected by the regulations of the convoy system, were eroded because of increased competition brought about by deregulation. Foreign presence in the financial markets intensified this competition. In particular, capital markets competed with banks on both sides of the bank's balance sheet. On the assets side, an increase in capital market financing undermined the demand for credit from financial intermediaries. On the liabilities side, investing opportunities created in the capital market threatened bank deposits (mainly

Figure 4.2 Returns on assets (ROA) in Japanese banks
Source: EPA 1999; p. 245, BOJ Time Series data etc.

from corporations and institutional investors) leading to an increased cost of resources for banks. Both effects caused banks spread margins to decline. We survey the relationship between the monitoring activities of Japanese banks and the change in Japan's industrial structure (4.2.1) and financial deregulation (4.2.2). We then assess the changes in lenders' incentives for monitoring (4.2.3) and provide an institutional understanding of the prelude to the financial bubbles (4.2.4).

4.2.1 Changes in industrial structure

As was argued in chapter 1, there has been a decline in the contribution of primary and secondary industries to Japan's GDP, while there has been simultaneously an increase in that of the tertiary sector (see Table 1.2). This trend has been continuing from the 'catching-up' period to the 'frontier economy' period, and even in the period of economic 'stagnation' after the bursting of the bubble economy.

Looking at the change in the distribution of loans by the Japanese banks to industries, the share of loans to the manufacturing sector, which had been relatively dominant in 1960 and 1970, has been declining rapidly since 1970 (see Table 4.1). This change reflects the structural change in Japanese industry.

In respect of the loans by the Japanese banks to the manufacturing sector, it is worth noting the following: first, even though the share of loans to the manufacturing sector has been decreasing, Japanese banks have expanded their overall lending business since 1970. As a result, the outstanding amount of loans to the manufacturing sector has been increasing (see Table 4.1).

Second, those major manufacturing firms who had succeeded in using a business strategy of absorbing and improving engineering know-how during the 'catching-up' period, radically reduced their reliance on bank loans as a source of finance. Hamazaki and Horiuchi (2001) point out, based upon a survey by the BOJ, that the major Japanese manufacturing firms dramatically reduced their reliance on bank loans in the late 1970s from more than 30 per cent to less than 10 per cent (see Table 4.2). One reason for the reduction is that these firms increased their use of internal funds as they became financially mature. Another reason could be that the shift from high to moderate growth reduced the overall investment in manufacturing per se. In contrast, we should note that non-manufacturing firms continued to rely on bank loans as a major funding source into the late 1980s.

Third, those manufacturing firms who maintained their reliance on bank loans as their major funding source were: (i) firms who had not yet

Table 4.1 Changes in the outstanding loans by the Japanese banks to industries (Unit: trillion yen)

In levels	**FY1960**	**FY1970**	**FY1980**	**FY1990**	**FY1995**	**FY2000**	**FY2008**
Manufacturing	4.0	17.5	43.0	59.0	72.6	67.1	56.4
Construction	0.2	1.8	7.3	20.0	31.1	28.8	15.4
Real estate	0.1	1.5	7.6	42.4	57.4	57.0	58.7
Finance	0.1	0.5	4.5	37.7	49.6	39.7	36.9
Wholesale & Retail	2.3	11.3	34.4	65.6	78.1	65.8	45.9
Loans to individuals	0.0	1.6	15.2	61.2	80.9	92.7	112.1
Others	1.4	5.0	22.6	90.1	114.8	107.2	96.1
Total	8.1	39.2	134.6	376.0	484.5	458.4	421.5
In percentage terms							
Manufacturing	49.4%	44.6%	31.9%	15.7%	15.0%	14.6%	13.4%
Construction	2.5%	4.6%	5.4%	5.3%	6.4%	6.3%	3.6%
Real estate	1.2%	3.8%	5.6%	11.3%	11.8%	12.4%	13.9%
Finance	1.2%	1.3%	3.3%	10.0%	10.2%	8.7%	8.8%
Wholesale & Retail	28.4%	28.8%	25.6%	17.4%	16.1%	14.4%	10.9%
Loans to individuals	0.0%	4.1%	11.3%	16.3%	16.7%	20.2%	26.6%
Others	17.3%	12.8%	16.8%	24.0%	23.7%	23.4%	22.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Created by the author upon BOJ (1960, 1970, 1975, 1980), Japan Statistical Year Book 2010.

Table 4.2 Changes in the composition of fund raising by the Japanese major manufacturing/non-manufacturing firms (Unit: Percentage)

Type of firms	Source of funds	FY1961–1965	FY1966–1970	FY1971–1975	FY1976–1980	FY1981–1985	FY1986–1990
Manufacturing	Internal funds	27.1	33.7	35.9	54.3	68.0	53.9
	Corporate bonds	2.8	3.0	3.9	1.0	10.3	19.9
	Borrowing	38.2	30.4	34.0	9.5	1.2	−9.5
	Stocks	10.8	3.2	2.4	7.8	12.8	19.1
	Others	21.1	29.7	23.7	27.4	7.7	16.7
Non-manufacturing	Internal funds	22.7	46.3	29.6	44.9	51.8	35.8
	Corporate bonds	12.3	10.3	12.9	19.3	10.8	14.1
	Borrowing	32.7	65.9	59.0	39.1	26.1	29.1
	Stocks	7.9	6.8	7.0	8.5	9.5	11.5
	Others	24.3	−29.3	−8.5	−11.7	1.8	9.5

Notes: The major part of "others" in the table is the trade credit. According to Hamazaki & Horiuchi (2001), the non-manufacturing industry includes public utilities such as the electric power, the railway companies which were favoured in their bond issuing compared with other industries. Therefore, the relative share of bond-issuing was larger in non-manufacturing than in manufacturing.
Source: Based on Hamazaki and Horiuchi (2001).

matured financially. Most of these firms were SME; (ii) firms who were forced to restructure their business to high-value added manufacturing in the face of market competition; and (iii) firms who shifted their production base overseas to reduce production costs.

Within the manufacturing sector, we have to consider the breakdown according to the type of manufacturing. Tanaka (2002) classifies the manufacturing firms according to the following types of manufacturing: (i) light industry based on assembling and processing, including food industry, textile industry and other manufacturing; (ii) light industry using basic materials, including pulp, paper, ceramic industry and soil and stone products; (iii) heavy industry using basic materials, including chemical industry, petroleum and coal products, primary metal industry and metal products; (iv) heavy industry based on assembling and processing: including general machinery, electric/electronic machinery, transport machinery and precision machinery. Table 4.3 shows the changes in the average real growth rate in each category in the periods between 1956 and 1974 (the high economic growth period), between 1975 and 1984 (the moderate economic growth period), between 1986 and 1991, and between 1992 and 2008, respectively.

Table 4.3 shows that in the high-growth period all types of manufacturing could succeed, while after the moderate-growth period there were clear 'winners' and 'losers'. For instance, heavy industry based on assembling and processing has contributed to the overall growth during and after the period of moderate economic growth, while light industry using basic materials and textiles have declined rapidly. In addition, for instance, almost all types of manufacturing except petroleum and coal products and transport equipment were stagnant in the period 1992–2008. One implication was that as Japan approached the competitive frontier, each firm was required to restructure its business under conditions of fundamental uncertainty.

The 'internationalization' in terms of the hollowing out of domestic industry intensified following the drastic appreciation of the Japanese yen after the Plaza Accord of 1985. Some analysts regard 1972 as the beginning of the first wave of foreign direct investment by Japanese firms, and the boom in direct investment after the yen appreciation in 1978 as the second wave. The dramatic boom after the Plaza Accord was the third wave (Tanaka 2002). The impact of the first and second waves was still marginal, because the 'overseas production ratio'[2] was still around 3 per cent in 1985 (see Figure 4.3). However, following the intensification of internationalization after 1985, according to METI (2003), the overseas production ratio in FY2003 reached 15.5 per cent

Table 4.3 Changes in the average real growth rate by each type of manufacturing (%)

Manufacturing Sector	*1956–1974[a] (High Growth)*	*1975–1984[a] (Moderate Growth)*	*1985–1991[a]*	*1992–2008[b]*
Overall manufacturing sector	**17.0**	**7.1**	**5.4**	**−1.7**
Light industry upon assembling & processing	**13.5**	**7.2**	**4.5**	**−1.9**
Food and beverages	*10.4*	*10.4*	*2.6*	*−0.2*
Textiles	*12.2*	*1.1*	*−0.1*	*−7.5*
Other Manufacturing	*18.0*	*6.8*	*6.6*	*−2.8*
Light industry upon basic materials	**18.2**	**4.2**	**5.0**	**−1.9**
Pulp, paper and paper products	*18.0*	*3.9*	*5.7*	*−2.0*
Non-metallic mineral products	*18.5*	*4.5*	*4.5*	*−1.9*
Heavy industry upon basic materials	**18.4**	**6.2**	**5.3**	**−1.3**
Chemicals	*16.0*	*7.5*	*4.8*	*−2.4*
Petroleum and coal products	*15.9*	*26.7*	*3.8*	*2.8*
Basic metal	*21.8*	*4.7*	*3.7*	*−1.3*
Fabricated metal products	*21.6*	*3.4*	*10.2*	*−3.2*
Heavy industry upon assembling & processing	**21.7**	**8.5**	**6.3**	**−1.0**
Machinery	*22.6*	*8.8*	*8.0*	*−1.3*
Electrical machinery and equipment	*23.1*	*11.6*	*6.6*	*−1.7*
Transport equipment	*21.2*	*5.8*	*3.9*	*1.0*
Precision instrument	*18.5*	*6.3*	*5.8*	*−1.4*

Source: Author based on statistics of Cabinet Office[a] and ESRI (2008)[b].

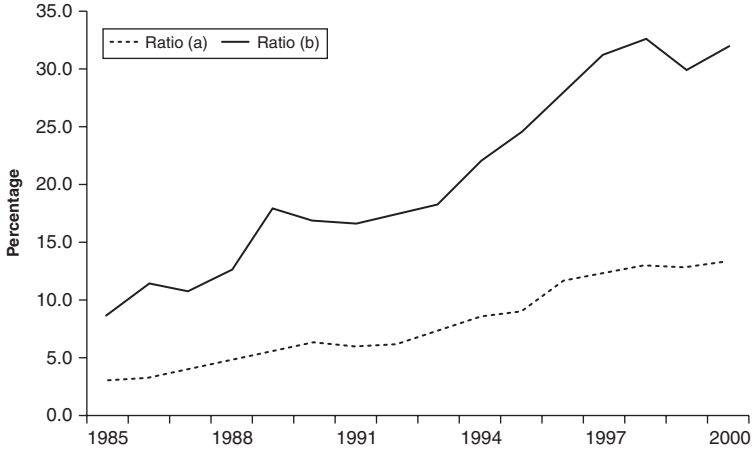

Figure 4.3 Changes in the overseas production ratio
Notes: **Ratio (a):** The ratio of overseas manufacturing subsidiaries' sales to Japanese manufacturing firms' sales. **Ratio (b):** The ratio of overseas manufacturing subsidiaries' sales to the Head Office's sales (manufacturing firms).
Source: Based on METI (2000).

and the ratio of overseas manufacturing subsidiaries' sales to the Head Office's sales (the denominator excludes the sales of the Japanese manufacturing firms without any overseas subsidiary) reached over 30 per cent. Another survey reported that the amount of foreign direct investment (FDI) from Japan jumped by 6.3 times to a total of US$160.4 billion between 1986 and 1990 in comparison with a total of US$25.5 billion between 1981 and 1985 (Nishimura 1999, p. 50).

Aoki (1994) points out that Japanese long-term credit banks such as the IBJ had accumulated the necessary engineering and credit analysis capabilities in the catching-up period, and that therefore the engineering assessments of imported technologies for large-scale projects were often delegated to the bank. However, many empirical studies point out that a structural change occurred in the relationship between the Japanese banks and the Japanese corporations driven by the forces of *internationalization and technological change* beginning in the mid-1970s, which was intensified further around the mid-1980s (see Aoki *et al.* 1994; Schaberg 1998; Genay *cited* in Kanaya and Woo 2000). On the one hand, the internationalization of Japanese manufacturers overseas gave them a wider variety of funding sources such as local (host-country) financial markets and offshore or euro capital markets. On the other hand, monitoring became more difficult as

technology became increasingly complex and as borrowers invested in projects whose prospects were found increasingly difficult to be assessed by outsiders. These forces started to limit the scope and effective power of monitoring by the Japanese main banks including the IBJ.

Fourth, the share as well as the outstanding amount of loans made by Japanese banks to the non-manufacturing sector has been increasing. Japanese banks thus began to undertake relatively higher credit risks, for instance, the credit risk associated with lending to SME whose financial strength was still weak.

The non-manufacturing sector and the SME sector overlap to a considerable extent (Tanaka 2002). Needless to say, there are also many SME (see footnote 2 in chapter 1 for the definition) in the manufacturing sector. However, the SME's share of contribution in the non-manufacturing sector is very high (higher than that of large firms). In particular, there are relatively high shares for areas such as wholesale and retail trade, restaurants, services and construction. According to Tanaka (2002), in 1999 the share of non-manufacturing firms in the SME sector was 87 per cent – a total of 5.65 million firms. Of this, 41 per cent of the SME were engaged in wholesale and retail trade, 24 per cent in services and 13 per cent in construction.

Looking at Table 4.1, outstanding loans to the wholesale and retail trade (including the restaurants and hotels sector) and other services (including the transport and telecommunications sectors), increased in 1980 compared to the manufacturing sector. In 1990 and again in 1995 the Japanese banks expanded lending to the non-manufacturing sector – in particular, to the real estate, finance, construction sector and housing loans to individuals. Yoshikawa (1999) argues that the lower productivity in the Japanese non-manufacturing sector was one of the root causes of Japan's economic stagnation in the 1990s. Our concern is that the Japanese banks increased their loan exposure to SME sector and the non-manufacturing sector since the 1980s, in other words, banks have moved to undertake relatively higher credit risks.

Aoki (1994) implies that the 'integrated' monitoring system (see section 3.3), where the main banks played a dominant role in monitoring, worked effectively in the period when the Japanese economy was still catching up in terms of technological capability. An important component of this mode of monitoring was to monitor the managerial and organizational ability of a firm to absorb and improve engineering know-how developed abroad, rather than to assess the commercial and engineering values of emergent technology per se (Aoki 1994, p. 118).

Ironically, the very success of Japanese industries in reaching the international technological and competitive frontier gradually changed the risk factors which the main bank had to assess and monitor.

Those major manufacturing firms who succeeded in the catching-up period also reached financial maturity. There was a consequent decline in the profit opportunities for Japanese banks from lending to these credible firms. Meanwhile, 'less credible' manufacturing firms who still relied on bank loans had to survive in the competitive 'frontier' economy by developing new competitive technologies, restructuring to higher value-added businesses or shifting their production base overseas to reduce their production costs. Accordingly, Japanese banks had to monitor these firms by evaluating the feasibility and effectiveness of their strategies for survival. The changes in important risk factors increased the cost of monitoring, including the cost of hiring experts with the capacity of evaluating advanced technologies, including those who have expertise in international corporate finance and in monitoring SME. As a result, these changes had a gradual impact on the performance of the rent-based integrated monitoring of the Japanese main banks.

In the traditional financial structure a range of bank rents were maintained by regulated deposit and lending rates. These margins would be eroded from the 1970s onwards due to the increasing cost of operating and monitoring in accordance with changes in the economic environment. Until the mid-1980s when the deregulation of the deposit rate began, Japanese main banks were still attempting to catch up with the changes in risk factors of their new borrowers. Some attempts were probably successful, but others not. However, as firm's success or failure became more exposed to fundamental uncertainty, Japanese banks were similarly exposed to these greater uncertainties in their expanding lending business. We note the decline in the ROA of the Japanese banks over this period which shows that they failed to earn enough profit to cover this increasing credit risk. A failure to adequately assess and monitor major risk factors did not just lower the efficiency of monitoring for maintaining a sound portfolio of loans in individual main banks. The failure also lowered the performance of the rent-based and integrated mode of monitoring as a whole, resulting in a lower efficiency of Japan's banking and credit system.

4.2.2 Financial deregulation and the international standardization of banking supervision

Some economists point out that the most fundamental cause for the malfunction of Japanese traditional mode of supervision emerged in

the mid-1970s when there was a slowdown of Japanese growth and the country shifted from being an economy in which private investment demand outstripped private saving to one in which *ex ante* private saving became greater than *ex ante* private investment (Patrick 1998; Yoshikawa 1999). These arguments suggest that the supply of funds in the structural 'demand-deficient' economy had become abundant and pressures for a system of market-based interest rates became irresistible (Patrick 1998). More or less economists emphasize this economic shift as the context that created pressure for regulators to deregulate the traditional financial system.

We should note, however, that the deregulation beginning in the late 1970s had been very gradual until the second half of the 1980s when there was an acceleration in the pace of financial deregulation. The deregulation that was implemented around the mid-1980s included:

1 Relaxation of interest rate controls, starting with the liberalization of term deposit rates in 1985. This policy seemed to follow the recommendation of the Japan–US Yen–Dollar Ad Hoc Committee in 1984.
2 Financial differentiation:[3] the lifting of the prohibition on short-term Euro yen loans, which were not subject to interest rate controls, to domestic borrowers in 1984. The removal of restrictions on access to the corporate bond market, and the creation of the commercial paper market in 1987.
3 The proposal of setting up the international capital adequacy requirement prescribed by BCBS in 1984, the bilateral deal with the US on capital adequacy in 1987 and the signing of the Basel Accord in 1988.

Presumably, the deregulation that accelerated rapidly in the mid-1980s was due mainly to a 'level playing field' demand by the US for minimizing restraints on international competition to the disproportionate advantage of their own national bankers. The latter were still smarting from the overhang of the notorious savings and loans (S&L) crisis in the US, as well as from the Latin American crisis referred to in section 3.2.

In addition, although it is understated in the economic literature, we should note how the forces of internationalization *and* technological change since the mid-1970s (which intensified after the mid-1980s) were also driven by the relationship between the Japanese banking regulators and the banking industry. On the one hand, the 'internationalization' of financial and banking activities worried each banking regulator. *Bank runs*, potentially caused by the insolvency of

internationally active banks, would now be more difficult to control. On the other hand, technological changes, in terms of the innovation in financial engineering and products such as financial derivatives, were often too complex for banking regulators to monitor and assess the true risk exposure. These forces began to limit the scope and effective power of the monitoring that each regulator could deploy. This, in turn, encouraged banking regulators in developed countries to change their mode of monitoring by adopting international standards for banking regulations.

As is argued later, the bursting of the bubble economy in the 1990s accelerated the Japanese regulators' search for 'rule-based' monitoring (supervising), referring to a codified assessment of credit risks and computing risk-related weights according to the Basel Accord (capital adequacy requirement to be set against calculated unexpected credit losses). We should note that the forces of internationalization and technological change in the 1980s had already begun to give Japanese regulators an incentive to change their mode of monitoring.

4.2.3 Changes in lenders' incentives for monitoring

How did the relatively higher cost of monitoring in the Japanese banks and the decreasing rent opportunities as a result of financial deregulation affect their monitoring and lending activities? Although net benefits for society are not always consistent with those for individuals, the important role of *bank rents* for monitoring was to create *incentives* for individual banks to operate effectively as *long-run* agents engaged in monitoring borrowers. The analysis of changes in the Japanese lender's incentives for monitoring efforts would imply, therefore, that changes in the effectiveness of the 'financial restraint' or the 'integrated' mode of monitoring in the *convoy* regulatory framework.

Aoki (1994) makes the following four points about the potential social benefits of the main bank system:

1 By delegating the monitoring of a firm exclusively to its main bank, the social cost of duplicating monitoring costs *ex ante* and during the course of the loan was avoided (see section 3.3 for a discussion of the delegated monitoring model).
2 The social cost of the myopic liquidation of temporarily depressed, but potentially productive firms was avoided because the main bank had strong incentives to mount rescue operations.
3 The social cost of a failure to coordinate complementary investment projects in strategically important industries was avoided.

4 Contingent intervention by the main bank in the corporate governance structure at all stages of the lending decision (*ex ante*, *interim* and *ex post*) provided effective external discipline for the Japanese firms' team-oriented production (see Aoki 1994, pp. 122–6). The main bank's role also contributed to smoothing the impact of the business cycle for borrowers.

Aoki's model suggests that the main bank may not be sufficiently motivated in its delegated monitoring role for all lenders unless it earns a rent for doing this job properly and maintaining good relationships with firms. The regime of regulated interest rates (and also of regulated bond issue requirements) that prevailed during the period of the main bank system allowed these banks to earn rents as long as they took on the responsibility of performing delegated monitoring. These *rents* provided main banks with 'franchise value' and 'reputation rents' as long as they continued to maintain their reputation of monitoring as a main bank. This reputation, as is pointed out by Aoki (1994), would be damaged if the bank had to liquidate a significant number of its client firms: (1) Depositors would begin to desert the bank, fearing for the security of their deposits. (2) Other banks would become reluctant to lend to that bank's client firms, fearing for the safety of their loans, because the main bank's willingness to lend would no longer signal the creditworthiness of its borrowers. (3) The bank's other client firms may switch their main bank relationships for fear of losing insurance in adversity and losing access to credits from other lenders. (4) The regulatory authorities, concerned with the social consequences of bankruptcy such as the loss of employment, could be expected to eventually penalize banks that begin to liquidate very frequently. These possibilities imply that liquidation penalties for the main bank would be much bigger than the loss of its defaulting loans.

As was argued in section 3.3, bank rents played an important role in preventing banks from neglecting their role as monitors by threatening the reduction of rent opportunities. We should note that to some extent these incentives have to exist for all banks. More than other sectors, banks everywhere have to depend on their *reputation*. As Stiglitz (1994) points out, while some competition among banks is desirable, excess competition may have its problems if it starts to wipe out a bank's reputation rent. Reputation is an asset that is worth preserving, provided that there is an economic return to it in the form of a rent. For this economic return to exist, competition has to be limited. In the US one of the effects of deposit insurance was to reduce or eliminate the barrier

to entry, thereby facilitating entry and competition. Stiglitz (1994) points out that the resulting competition, and the ensuing reduction of reputation rents, encouraged banks to pursue short-sighted policies, and this contributed to the S&L debacle and the related banking crisis. We have seen in section 3.4.3 that the number of Japanese city banks was effectively restricted. On the other hand, there is also a potential problem of insufficient entry – leading to insufficient competition within the financial sector. We cannot necessarily have any confidence in the government's ability to set the 'right' level of entry. Are observed levels of profit just those rents necessary to ensure economic efficiency? Or is there an element of monopoly profit beyond that? From this no clear prescription emerges, simply a word of caution: the financial sector needs to be carefully watched, for evidence of significant 'errors' in either direction (Stiglitz 1994, pp. 222–3). But, this raises another question: who should be doing the careful watching?

We can examine this problem from the perspective of the Japanese banks. On the one hand, their prospective benefits in the traditional system consisted of bank rents, made up of their franchise value or reputation rents as described above. On the other hand, they incurred costs of monitoring including the costs of acquiring information, of internalizing the skills and knowledge required for monitoring, and the costs of delegating monitoring roles within the banking structure. In theory, the positive net benefit is the excess benefit that the bank *expects to potentially capture* at feasible levels of monitoring effort, and this gives the bank the incentive of undertaking the necessary monitoring. The individual net benefit which gives a bank the incentive to monitor does not necessarily represent the optimal level of monitoring for society. However, we can expect that a zero level of net benefit for banks would result in the collapse of this system. Similarly, if banks were to *free-ride* on this system of bank rents, monitoring would become inefficient and result in inferior outcomes from a regulatory perspective.

The cost of monitoring for the banks is determined by a number of variables, including the particular configuration of institutions, the technologies being monitored, the distribution of power between lenders and borrowers, the cultural context and so on. In general, the trend of banking internationalization and disintermediation and Japan's position in technological change relative to the technology frontier would all have an effect on the cost of monitoring, since each of these would make it more difficult to assess or monitor borrowers. The diminishing net benefits of monitoring efforts may have an effect on attenuating lenders' incentives of doing so. Or, it would encourage lenders to seek and adopt

codes of monitoring that were relatively inexpensively available from other banking systems. This can be regarded as a *quasi*-rent-seeking activity since lenders could attempt to maintain a certain level of net benefits for themselves through these strategies.

We should also note that the prospective net benefit from monitoring efforts will also vary according to the bank's *expectation*, that is, its most probable forecast, of the changes in financial policies of the regulators. The expectation 'depends on the *confidence* with which we make this forecast – on how highly we rate the likelihood of our best forecast turning out quite wrong' (Keynes 1936, p. 148). In addition to the structural changes in monitoring costs, we also argue that there was a gradual diminution in the expectation of Japanese banks that regulators would maintain their *ex post* flexibility during and after the process of financial deregulation, which was accelerated in the mid-1980s. This may also have caused a type of *quasi*-rent-seeking activity leading to a shirking of monitoring efforts with banks undertaking gambles for short-term profits, expecting regulators to fail to punish them. These *quasi*-rent-seeking activities, speculative lending and free-riding were driven by self-fulfilling expectations as these strategies resulted in a reduction of the franchise value and reputation of individual banks. However, in addition the actions of these banks, together with the trend of internationalization and technological change also eroded the regulator's trust in the Japanese main bank system.

4.2.4 The prelude to the bubble economy

Bank rents are politically controversial even when they are socially useful. This is because it is intrinsically difficult for the banking regulators to estimate precisely how much protection of the abstract franchise value of banks is required to guarantee efficient screening and monitoring. For instance, bank rents might be politically acceptable when they foster financial deepening and are associated with economic growth. The rent captured by banks can play an important function in increasing investments in infrastructure to enhance deposit collection and facilitate access to the formal financial sector (see section 2.3.2 for the rent effect). But political support for bank rents can become much more difficult when financial deepening is already well advanced and bank rents appear not to be playing any positive function for society at large. In general, a repression of the deposit rate may also distort household savings and generate resentment, although Japanese household saving appear to have been relatively interest-inelastic (Aoki 1994, p. 130).

As was mentioned earlier, the ROA of Japanese banks were already declining as early as the 1970s. Severe lending competition between banks fuelled by 'internationalization and disintermediation' appears to have accelerated this trend still further. However, in those days, the Japanese banks could expand loan assets with leveraging to compensate for the decline of ROA and to maintain or increase nominal profits. This strategy came under severe strain following the introduction of the 8 per cent capital adequacy requirement under the Basel Accord which had been promoted by US regulators since 1984. The introduction of these rules shocked Japanese bank managers as well as their regulators and spurred them to reconsider their lending strategy of expanding lending through leveraging. Here it is worthwhile noting that the international consensus allowed a grace period until fiscal year 1992 for the implementation of the 1988 Basel Accord. The major Japanese banks feared potential penalties – for instance, restrictions on their overseas banking operations for their inadequate capital reserves as defined under the Basel Accord. This fear had the effect of changing their preferences towards high-yielding loans in order to seek higher ROA, while still using leveraging during the grace period when they were allowed to expand loan assets.

Since the mid-1980s there had also been direct foreign diplomatic pressures on the Japanese regulators to lay out a implementation programme for the deregulation of financial constraints. The plan was to address not only the adoption of the Basel Accord, but also to implement deposit rate and commission deregulation, to relax limits on the scope of banking business and to reduce barriers to entry to promote greater competition. The diplomatic compromise to the Plaza Accord in 1985 further pushed many Japanese manufacturers to shift their production base overseas (internationalization of manufacturing), and also affected bank managers' perceptions of the uncertainty. As a whole, the Japanese banks' incentive and prospective benefits of monitoring eroded further when the deregulation plan was announced. The change in the financial environment facing the banks led to the 'bubble' economy which began in the late 1980s when banks were eager to capture easy profits through extending speculative credit and high-yielding mortgage financing in the real estate and construction sectors. These profit-driven strategies were rent-seeking activities seeking new and damaging rents in response to the fear that the traditional bank rents protected by the financial restraint policy might be reduced sooner or later.

Many economists attempt to explain the bubble economy in terms of a 'moral hazard effect' as a result of which the Japanese banks took on

greater risk in the expectation that even if they suffered losses, the MOF would not allow them to go bust. They argue that the larger Japanese banks believed in the 'Too Big To Fail' (TBTF) legend, resulting in imprudent credit risk management in the period of the bubble economy (see Patrick 1998, for instance). However, as Chang (2000) points out, there is a confusion in the TBTF story between the rescue of a bank and the rescue of the owners or managers who are responsible for the creation of the situation which creates the need for a rescue.

> To the manager, it is not much of a consolation that his/her firm is saved by the government due to its large size, if the rescue operation involves the termination of his/her contract. So, if a manager knows that his/her job would be in jeopardy if the firm performs badly, there is little moral hazard. The same goes for the owners. If the owners know that the rescue operation requires the ceding of their corporate control, they cannot afford to be lax in management (in case they are owner-managers) or in supervising the hired managers. (Chang 2000, p. 782)

Although this has been a controversial issue, this book emphasizes that the changes in the economic environment surrounding Japanese banks and regulators gradually undermined the rent-based 'convoy' mode of monitoring, allowing most Japanese bank managers to free-ride on their traditional tasks of monitoring. It is also worth noting that in the late 1980s (prior to the bubble economy), the Japanese banks were also required to invest heavily on enhancing the infrastructure of their electronic banking operations. Developing a computerized accounting and clearing system and an information and simulation system for dealing with foreign exchanges and derivatives were considered necessary for surviving financial deregulation because these strategies were apparently revitalizing the US banks under US financial deregulation.

This book does not directly address the stock market and real estate bubble that began in the late 1980s. However, our analysis provides an institutional understanding of the prelude to the stock market and real estate bubble and the accumulation of NPL in the Japanese banks after the bursting of the bubble. As was argued, the Japanese economy shifted from a 'catching-up' economy to a 'frontier' economy around the mid-1970s. Accordingly, the nature of uncertainty in client firms' success became a more fundamental concern. Meanwhile, more large manufacturing firms which financially matured accelerated 'disintermediation'

in terms of reducing bank loans as sources of their funding. As a result, the Japanese banks were increasingly forced to monitor new and relatively risky projects and associated credit risks involved in lending to the small and medium-sized manufacturing and non-manufacturing firms which were also exposed to stiffer competition, leading to a higher level of uncertainty. Moreover, Japanese SME were no longer learning existing technologies from western firms; they were becoming increasingly innovative in respect of new technologies and products. The financing problem was now one dealing with Schumpeterian innovation rather than catching up. But Japanese banks possessed neither enough experience of monitoring these firms nor the dense networks of interpersonal relationships with them that had existed with their major clients. This challenge of having to deal with these 'unfamiliar' firms meant a dramatic increase in the monitoring cost for the lenders. To avoid these costs, many Japanese banks opted to concentrate on mortgage loans underpinned by steadily rising real estate values. And even here, shortcuts were taken to keep the flow of lending going as there was a curtailing of traditional lending activities.

The political argument in favour of deregulation attacked financial restraint policy for creating unnecessary rent opportunities for banks by controlling deposit rates. In spite of the adverse situation of the banking industry following the collapse of the financial bubble, Japanese regulators did very little to arrest the decline of the Japanese banking system between 1990 and 1995 (see section 6.2). In fact, Japanese regulators completed deposit rate deregulation in 1994 and abolished all rules relating to bond issues in 1996. We argue that this accelerated deregulation paradoxically reduced Japanese banks' incentives to monitor their lending efforts and encouraged damaging forms of rent-seeking activities in speculative lending. For instance, we see Japanese banks behaving opportunistically by relaxing their credit conditions, in particular in weakly capitalized banks, to counter their eroding margins. Kanaya and Woo (2000) report a steady increase in *unsecured* loans as a percentage of total loans until the mid-1990s even after the collapse of the bubble economy. They also report that the 'gamble for resurrection' actually promoted a relaxation of credit conditions for most of the 1990s, in particular, until 1995. Additionally, in dealing with depressed firms (most of them engaged in real estate projects) after the collapse of the bubble economy, rescue operations by main banks simply prolonged the life of many inefficient firms, resulting in the accumulation of NPL by the main bank. The LTCB case study in chapter 5 demonstrates some of these tendencies.

4.3 Limitation of the Anglo-American methods of screening and monitoring

Throughout this period, Japan had been encouraged to abandon its traditional financial system and to move to the adoption of the Anglo-American type of financial deregulation, in part as a response to the deepening financial crisis. Pressure for movement in that direction came primarily from the US. In particular, Japan was under pressure to move towards the Anglo-American monitoring system as an alternative institution for avoiding the higher transaction costs of monitoring. That is, in the midst of the crisis in its traditional banking system, Japan was also transforming its Japanese traditional system (block I in Figure 4.4), towards the Anglo-American system (block II in the same figure). We have already summarized some of the distinct characteristics of each monitoring system. The important question is whether the movement resolved any of the problems that confronted the traditional Japanese monitoring system or make matters worse. In particular, we raise two questions:

1 To what extent was it an effective Japanese response to adopt the Anglo-American mode of monitoring which used criteria such as risk-adjusted returns on capital to quantify credit risks?
2 To what extent was it feasible to create a securities market in Japan that was backed by a large and diversified base of investors as a method of financing long-term investment in its economy? The answer to this question would also reveal the feasibility of downgrading the critical role of Japanese banks as financial intermediaries.

We discuss question 1 in this section and question 2 in the next section.

To what extent was it feasible for Japan to adopt the Anglo-American financial monitoring system based on specialized monitoring tasks? The key features of this system, from our perspective, involved the reduction of bank monitoring to relatively limited classes of loans, which could be monitored using algorithmic methods such as the use of formulae for calculating risk-adjusted returns on capital using credit risks quantified by external agencies. In the late 1980s or, at the latest, following the collapse of the financial bubble, Japanese bank managers began to adopt the Anglo-American style of financial intermediation, monitoring and risk management that has also been described as a 'securities-based' financial system. For example, Miyoda (1994), who was a member of staff at the IBJ, argues that concepts like risk-adjusted returns had been

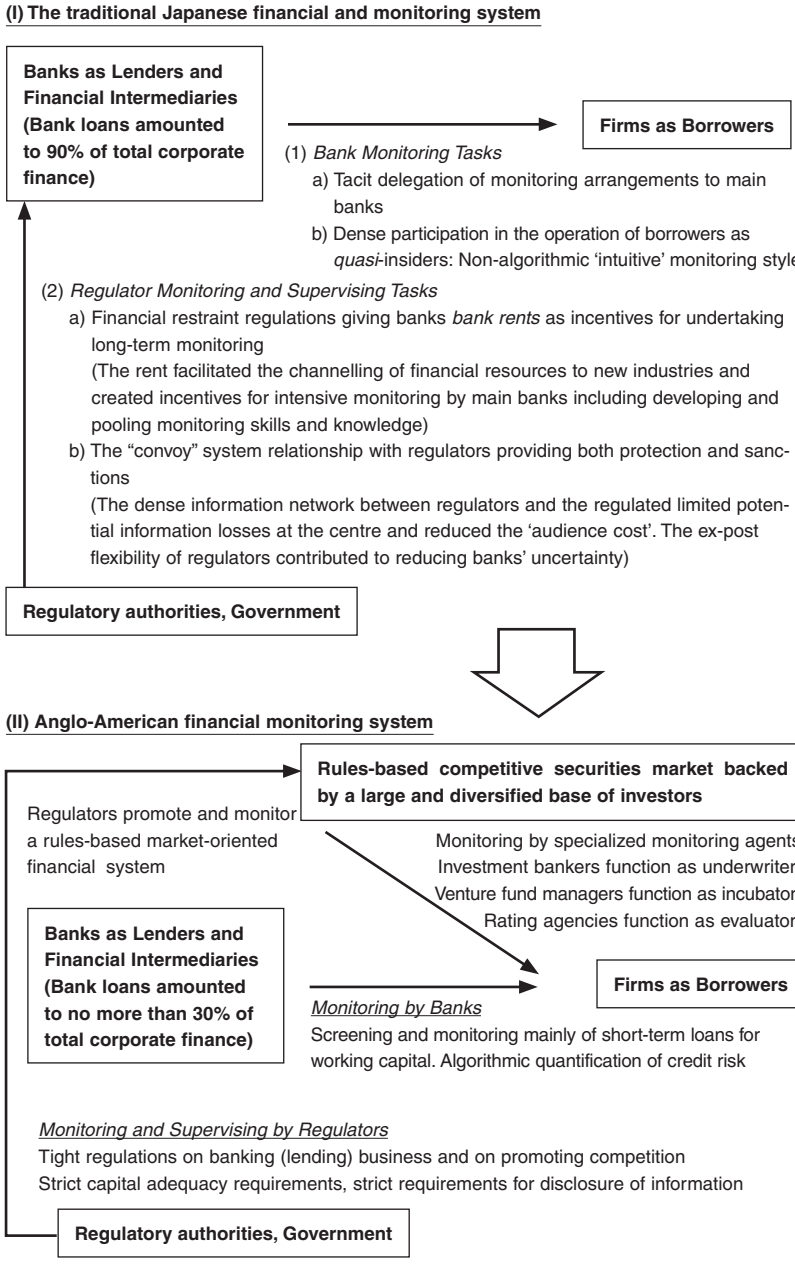

Figure 4.4 Comparison of the Japanese traditional monitoring system with the Anglo-American system

critical for the revitalization of US banks. The LTCB was quite typical in this respect. They retained the Bankers Trust Company, a US investment bank that developed the concept of Risk Adjusted Returns on Capital in the early 1980s as their consultant to introduce algorithmic systems for evaluating risk and profitability. Meanwhile, the Basel Capital Accord influenced by the Anglo-American banking experience increasingly became a normative standard for solvency regulation and a further constraint on the behaviour of Japanese bank managers.

Some researchers have insisted that Basel II was not so closely related to the Japanese banking crisis in the 1990s and the subsequent financial slump until its implementation in March 2007. We do not agree with such an analysis because from the author's experience as a Japanese bank insider, most Japanese bank managers had begun to change their mode of credit risk monitoring as early as the 1990s, in anticipation of the proposed Basel II regulations and methods of credit risk monitoring would be introduced sooner or later.

The BCBS urged banking regulators to adopt an internationally accepted model for quantifying and aggregating credit risks (see BCBS 1999a, p. 8). At the same time, standard Credit Risk Modelling became increasingly important in banks' risk management and performance measurement processes, including performance-based compensation, customer profitability analysis, and risk-based pricing (ibid.; Summary). Although there are a range of practices in conceptual approaches to modelling risk, the BCBS's focus is on models that estimate a portfolio's current value and the probability distribution of its future value at the end of the planning time horizon. In general, a portfolio's expected credit loss can be defined as the difference between the two, and the key issue is how to determine the expected probability of default (often termed the expected default frequencies or EDF) which is a critical model variable.

The internal credit risk rating for each client firm of a bank is determined by the bank's credit staff and this is used in calculations of EDF. Thus, the EDF adopted in each bank may vary according to its own circumstances and credit strategy. But the Basel regime has encouraged lenders to utilize external rating systems, such as Standard & Poor's or Moody's ratings for corporate bonds, to justify their own EDF. The BCBS has decided, in its New Accord (Basel II) proposal, to promote the replacement of existing approaches with a system that would use external credit assessments for determining risk weights. The committee wants to ensure that the regulatory capital charge under the internal rating-based approach is determined in a manner that ensures accuracy

and consistency with the standardized approach based upon external credit assessments (BCBS 1999b, pp. 37–40). The standardization of the basic methodology in credit risk models promoted by the BCBS has been driven by US regulators' pursuit of a 'level playing field' for US banks subjected to the constraints of Anglo-American financial rules (see section 3.2).

To see how the algorithmic approach works, consider the credit rating transition matrix in Table 4.4 provided by Standard & Poor's, which shows the percentage probability of migrating to another rating within one year. S&P calculates this probability and also the EDF, which is the probability of a particular credit facility defaulting during a time horizon based upon historical statistical data available at a particular point in time. An EDF can be interpreted as a loan's probability of *migrating* from its current rating grade to default within the credit model's time horizon. This likelihood is frequently expressed in terms of a rating transition matrix similar to that depicted in the table. Given the customer's current credit rating (in each row), the probability of migrating to another grade (shown in the columns) is shown in the intersecting cell. Thus, in the table, the likelihood of a B-rated loan migrating to a default state within one year would be 4.93 per cent (see BCBS 1999a, p. 20).

The most crucial limitation of the EDF is that it is inappropriate for the calculation of the probability of default in a long-term loan. The author interviewed an ex-LTCB staff member who surveyed the so-called 'KMV model', which was provided by KMV Co. and was used widely as a model for calculating the EDF. The KMV Co. was established in 1989 by three key individuals: Stephen Kealhofer (K), John McQuown (M), Oldrich Vasicek (V) and it has now merged with Moody's. The model defines a situation where the asset value of a firm falls below the nominal amount of debt as constituting a default. The KMV model calculates the firm's probability of default based on the trend of the firm's stock price as an indicator of the firm's value. According to the ex-LTCB staff, KMV provided banks using the model with a one-year EDF estimate. KMV was confident of the significance of their one-year EDF, but admitted that it would be difficult to use even a three-year EDF in real applications. In an interview with KMV, Daisuke Nakazato, an ex-IBJ staff member, reports an almost identical problem with the model (Ohno and Nakazato 2004, pp. 182–90; see also FISC 1999).

Another key input in algorithmic monitoring models is the external ratings provided by rating agencies such as S&P's and Moody's. These inputs are provided at the discretion of the ratings agencies and the

Table 4.4 Sample credit rating transition matrix (Average One-Year Global Corporate Transition Matrix, 1981–2009)

From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	NR
Global (1981–2009)									
AAA	88.21	7.73	0.52	0.06	0.08	0.03	0.06	0.00	3.31
	(5.09)	(4.84)	(0.87)	(0.18)	(0.26)	(0.20)	(0.40)	(0.00)	(2.41)
AA	0.56	86.60	8.10	0.55	0.06	0.09	0.02	0.02	4.00
	(0.54)	(4.87)	(3.99)	(0.75)	(0.26)	(0.25)	(0.07)	(0.08)	(1.92)
A	0.04	1.95	87.05	5.47	0.40	0.16	0.02	0.08	4.83
	(0.14)	(1.16)	(3.47)	(2.13)	(0.50)	(0.36)	(0.07)	(0.12)	(1.96)
BBB	0.01	0.14	3.76	84.16	4.13	0.70	0.16	0.26	6.68
	(0.07)	(0.24)	(2.34)	(4.44)	(1.80)	(1.05)	(0.25)	(0.27)	(1.86)
BB	0.02	0.05	0.18	5.17	75.52	7.48	0.79	0.97	9.82
	(0.06)	(0.16)	(0.40)	(2.44)	(4.94)	(4.78)	(0.93)	(1.06)	(2.92)
B	0.00	0.04	0.15	0.24	5.43	72.73	4.65	4.93	11.83
	(0.00)	(0.13)	(0.38)	(0.34)	(2.59)	(5.25)	(2.64)	(3.27)	(3.07)
CCC/C	0.00	0.00	0.21	0.31	0.88	11.28	44.98	27.98	14.37
	(0.00)	(0.00)	(0.74)	(1.05)	(1.34)	(7.86)	(12.81)	(12.90)	(7.57)

Note: Numbers in parentheses are standard deviations.
Source: Table is reproduced with kind permission from Diane Vazza, Devi Auroa and Jacinto Torres, *Default Transition and Recovery: 2009 Annual Asian Corporate Default Study and Rating Transitions,* published by Standard & Poors Financial Services LLC. © Standard & Poor's 2010.[4]

detailed criteria for credit risk assessments and ratings are not disclosed in full. An investigation by Nikkei Research in collaboration with the Japan Investor-Relations Association in 2003 reveals that 53.8 per cent of 1,344 valid responses (of the 3,615 publicly listed companies as of December 2002) in their sample have not been rated. Moreover, only 11.8 per cent of companies have made a deliberate request to have their companies rated. According to this survey, in assessing credit risk, credit rating agencies have relied mainly on: (i) consolidated as well as unconsolidated financial statements; (ii) prospective operating profits for the next fiscal year or later including medium- and long-term business plans; (iii) business strategy and management strategy statements; and (iv) information from operating units. Interestingly, around 59 per cent of respondents revealed that they did not fully disclose information to the agency mainly because of their own internal rules about confidentiality. This shows that some critical information was not fully reflected in the credit assessment by the external agencies. In addition, a substantial number of companies believe that the rating evaluation criteria were vague and, thus, are dissatisfied with the rating. Further, some companies believe that rating agencies do not have competency in rating their companies and claim that the competition among rating agencies is constrained. These findings clearly highlight the inherent limitations associated with rating agencies and process.

Undoubtedly, some risk management instruments become necessary as economies become more complex. Intensified internationalization and technological change make it more difficult for lenders to undertake the role of monitoring investments, for instance because lending, in the frontier economy, involves making judgements about the viability of different firms to carry out innovations and develop new products. Bounded rationality (see section 2.2.3) accordingly encourages lenders to use *codes* for measuring credit risks and to use external sources of risk assessment whenever possible, instead of trying to relying on in-house skills and knowledge for monitoring. But the codified assessment of credit risks under the Anglo-American system does not necessarily solve the problem of uncertainty. As a complete set of risk markets is necessarily absent, it is impossible in theory to determine a definite value of the EDF without risk of error, even using all available data sets. Thus, even if the credit rating transition matrix (Table 4.4) provided by external rating agencies is statistically significant, it cannot indicate in which direction a particular customer will be migrating. As Simon (1983) reminds us, our

existing knowledge cannot provide a basis for the precise calculation of mathematical expectation:

> No number of viewings of white swans can guarantee that a black one will not be seen next. … Reasoning processes take symbolic inputs and deliver symbolic outputs. The initial inputs are axioms, themselves not derived by logic but simply induced from empirical observations, or even more simply posited. ... The processes that produce the transformations of inputs to outputs are also introduced by fiat and are not the products of reason. (Simon 1983, p. 190)

When it comes to evaluating innovations as opposed to observing swans, the indeterminacy is increased significantly. Nevertheless, regardless of the arbitrariness of the rules of inference applied to financial data sets, lenders may be persuaded to use statistical EDF and external ratings based upon such EDF for measuring credit risk. This is mainly because of the fact that they are required by their banking regulators to adopt normative procedures for calculating capital adequacy requirements as well as for risk-based pricing. In the past, bankers were considered professionals in screening and monitoring, and banks played important roles in mediating stable flows of long-term funds to new industries and enterprises. External rating agencies played only a very limited role in providing credit profiles of bond issuers for non-professional investors who had limited capacities to assess credit information. As lenders started increasingly to rely on the statistical EDF provided by external rating agencies for publicly rated corporate bonds, bank lending began to conform to investors' behaviour in bond markets driven by external risk assessment.

In the US securities market, regulators favour a competitive and less protective framework, based on the neoclassical belief that a market-oriented mechanism backed by a large and diversified base of investors would allocate financial resources efficiently (see section 3.2). The existence of a large and diversified base of investors with quite different animal spirits, appetites for risk and judgements about the future is essential for providing relatively stable finance for the entire range of economic activities in a growing and changing economy. As long as this base has the capacity to absorb many different types of risks and uncertainty, the investment market functions efficiently. But this also implies that the Anglo-American financial system is not universally applicable, since other countries may not possess this large and diversified base of investors which is a critical foundation of the system. We will examine this condition in section 4.4.

A critique of the new regulatory framework

The fundamental definition of capital in Basel II remains unchanged from that of the original Accord as amended and clarified since 1988. The BCBS, however, proposes to clarify and broaden the scope of application of the current Accord to improve the way in which capital adequacy requirement (CAR) reflects underlying risks (BCBS 1999b) and sets forward various approaches for making the Accord more sensitive to credit risks. The new risk-weighting scheme increases the reliance of regulators on external credit assessment institutions. The BCBS specifies objectivity, independence, transparency, credibility, international access, resources and recognition (BCBS 1999b, p. 34) as criteria for eligibility of external assessment agents. The BCBS seems to have endorsed the effective power of the external rating houses that already have a vested interest in the industry and a track record in credit assessments.

The risk-weighting system in the 1988 Accord aimed in part at ensuring that banks were not deterred from holding low-risk assets (for example, sovereign debt) by risk-weighting loans according to the institutional nature of the borrowers (BCBS 1999b, p. 8). At the same time, the immediate concern of banking regulators was to discipline internationally active banks to set a *buffer* to cover expected as well as unforeseen losses. Therefore, the risk weighting of assets has been arbitrary, at best, resulting in a crude measure of economic risk. The most salient feature in the new framework is to suggest a more extensive use of external credit rating and standardized approaches for applying the risk weights to respective exposures. In particular, the ratings offered by S&P using its methodology (as an example, where rating structure of some other agencies could be equally used) are emphasized by the BCBS as useful for extracting risk weights of booking assets (BCBS 1999b). The subscription of the IMF's Special Data Dissemination Standards is described as another important method for applying risk weights to exposure to *sovereign* debt. A summary of illustrative risk weights prepared by BCBS (2006) based on S&P credit assessment scheme is shown in Table 4.5.

The BCBS points out the possible negative incentive effects on the agencies themselves of a more extensive use of external assessments (BCBS 1999b). However, the BCBS seems to leave the problem behind without offering any suggestions about how to deal with potential negative effects, implicitly expecting each banking regulator to devise systems to prevent banks from using external assessments in a problematic or mechanical fashion. Meanwhile, the New Accord encourages a number of arbitrary developments.

Table 4.5 Risk weights used in standardized approach for credit risk in Basel II

Claim	**Assessment**					
	AAA to AA−	**A+ to A−**	**BBB+ to BBB−**	**BB+ to B−**	**Below B−**	**Unrated**
Sovereign	0%	20%	50%	100%	150%	100%
Bank option 1	20%	50%	100%	100%	150%	100%
Bank option 2	20%	50%	50%	100%	150%	50%
Bank option 2 (short term)	20%	20%	20%	50%	150%	20%
	AAA to AA−	**A+ to A−**	**BBB+ to BB−**		**Below BB−**	**Unrated**
Corporate	20%	50%	100%		150%	100%
	AAA to AA−	**A+ to A−**	**BBB+ to BBB−**	**BB+ to BB−**	**B+ and below, Unrated**	
Securitization	20%	50%	100%	350%[a]	Deduct from Capital	

Notes: [a]Investors only. Originating banks must deduct from capital.
Source: BCBS (2006).

Even though the risk weighting for exposures to corporation have been slightly revised in the new accord, as shown in Table 4.5, the 100 per cent weight for unrated corporations still remains unchanged. In contrast, the risk weightings for *asset securitizations* (collateralized debt obligations) as proposed are more sensitive to external credit ratings. This proposal may create an externality of enhancing the presence of major external rating houses in the business of loan securitization and secondary loan trading. According to the BCBS, the securitization market is a global one which is participated in by a significant number of internationally active banks. Furthermore, asset-backed securities issued in the international market typically have a credit rating.

According to the *Financial Times*, up to the final moment there was a conflict between the US and Germany over the proposals in relation to two key questions: 'To what extent external ratings and assessments should be applied for the calculation of an adequate *buffer*?' and 'How should we deal with commercial mortgages for capital purposes in the new framework?' Each regulator was motivated to protect its own practices in supervising. The final proposal seems to have been reflected the political conflicts and compromises between the two countries. The revised consultative paper published in 2001 proposes alternative approaches – a *comprehensive* and a *simple* one. Under the former approach, the underlying risk exposure is reduced by a conservative estimate of the value of the collateral (see Cornford 2001, pp. 17–19 for details).

The BCBS does not propose to take the *maturity* of claims into account for capital purposes (BCBS 1999b, p. 33). In principle, an exposure to one borrower with a longer final maturity (for instance, three years) should be considered more risky than that to another with a shorter final maturity (for instance, three months) given the two borrowers have the same credibility. Needless to say, the maturity or remaining period of claims is an important factor for banks to make decisions for granting credits.

The BCBS does not take the portfolio effect by concentration or diversification into account for capital purposes. In portfolio theory, a portfolio concentrating its investment in particular firms (for example, granting $100 million each to ten firms) would be considered riskier than a diversified portfolio (for example, granting $1 million each to a thousand firms), given these firms have the same credit ranking.

The Basel Accord involves possible effects on regulatory arbitrage (Cornford 2001), leading to a vicious circle. For instance, the 1988 Accord has given lenders the incentive to arrange collateralization with

securities or getting guarantees by selected OECD public-sector entities for reducing the risk weights of their exposures.

These types of arbitrage, in turn, led the BCBS to expand the scope of application of the Accord so that it could capture residual risks. However, the New Accord unavoidably becomes a source of new opportunities for arbitrage, in particular, in the field of loan securitization or credit derivatives. The BCBS recognizes, on the one hand, that asset securitization can serve as an efficient way to redistribute credit risks of a bank to other banks or non-bank investors. On the other hand, the BCBS is concerned with some banks' use of structured financing or asset securitization to avoid maintaining capital commensurate with their risk exposures. Therefore, BCBS proposes to revise the Accord that makes use of ratings by eligible external credit assessment institutions for setting capital charges for asset securitizations (see Table 4.5). The BCBS proposes risk weights for claims on securitization tranches that may result in a special purpose vehicle issuing papers secured on a pool of assets (BCBS 1999b, p. 36). The BCBS also claims that bank guarantees in the form of credit derivatives have gained widespread usage. These developments have had important effects on the credit risk profile of many banks (BCBS 1999b, p. 42). This is a never-ending *vicious circle*. Although the regulation has an aspect of encouraging financial innovation in mitigating and hedging risks, more accuracy would be at the cost of more complexity.

4.4 Changes in the financial structures through the 1990s: Comparative financial structures of Japan and the US

Does Japan have a large and diversified base of investors to sustain an Anglo-American financial system? To what extent is it possible to devolve the tasks of financial intermediaries that have traditionally been undertaken by Japanese banks? Here, we discuss how the demand for a 'level playing field' (see section 3.2) – the deregulation of deposit rates and financial commissions – have changed Japan's financial structure. We discuss this issue mainly using the empirical data provided by the BOJ, titled 'Japan's Financial Structure – a Perspective using Flow of Funds Accounts' (BOJ 2000). Their analysis of the Flow of Funds Accounts (FFA)[5] is very informative for comparing features of the financial structures of Japan and the United States through the 1990s (see also Suzuki 2002).

4.4.1 Comparison of household preferences in portfolio selection

Throughout the 1990s the household sector has been the largest fund provider in Japan. Table 4.6 shows that the outstanding financial assets

Table 4.6 Financial assets held by households (comparison between Japan and the US)

Category of financial assets	March-1990		March-2000		March-2007	
Japan						
Currency and deposits	449	(48.5%)	748	(53.8%)	775	(52.9%)
Bonds	69	(7.5%)	57	(4.1%)	36	(2.5%)
Investment trusts	36	(3.9%)	35	(2.5%)	63	(4.3%)
Shares and other equities	123	(13.3%)	117	(8.4%)	128	(8.7%)
Insurance and pension reserves	191	(20.6%)	384	(27.6%)	403	(27.5%)
Others	57	(6.2%)	49	(3.5%)	59	(4.1%)
Total (Trillion yen)	926	(100.0%)	1,390	(100.0%)	1465	(100.0%)
USA						
Currency and deposits	3.3	(22.8%)	4.4	(13.2%)	7.3	(14.7%)
Bonds[a]	1.8	(12.4%)	2.9	(8.7%)	4.8	(9.7%)
Investment trusts[b]	0.5	(3.5%)	2.7	(8.1%)	4.9	(9.8%)
Shares and other equities[c]	5.0	(34.2%)	12.8	(38.7%)	17.6	(35.4%)
Insurance and pension reserves[d]	3.7	(25.3%)	10.0	(30.1%)	14.4	(29.0%)
Others	0.3	(1.7%)	0.4	(1.1%)	0.7	(1.4%)
Total (US$ Trillion)	14.6	(100.0%)	33.2	(100.0%)	49.8	(100.0%)

Notes:
[a] includes Open-market paper, Treasury securities, Agency and Government-sponsored enterprises-backed securities, Municipal securities, Corporate and foreign bonds, Mortgages
[b] Mutual fund shares
[c] Corporate Equities, equity in noncorporte business
[d] Life insurance reserves, Pension fund reserves
Source: Author based on BOJ 2000, Statistical Year Book 2010, Federal Reserve statistical releases

held by the household sector increased from ¥926 trillion at the end of March 1990 to ¥1,390 trillion[6] at the end of March 2000.

A salient feature of the breakdown of household holdings is that most holdings are 'safety assets' such as currency and deposits, while the weight of 'risk assets' such as shares, equities and securities was small. This effectively reflects the *risk-averse* preferences of households in portfolio selection. Noticeably, their *risk aversion* has intensified throughout the 1990s. The weight of 'safety assets' rose from 48.5 per cent (¥449 trillion) to 53.8 per cent (¥748 trillion) and the weight of 'risk assets' declined from 24.6 per cent (¥228 trillion) to 15 per cent (¥209 trillion); these changes are influenced in part by the decline in the market value of shares that followed the fall in stock prices. The BOJ (2000) analysis using flows of financial investment in each fiscal year shows that a majority of household savings was in currency and deposits (including postal savings) and insurance and pension reserves.

In contrast, in the US, the weight of 'safety assets' was small while that of 'risk assets' was large. Notably, during the 1990s, the weight of safety assets was declining (from 22.8 per cent of the total financial assets to 13.2 per cent) and the weight of risk assets increased (from 50.1 per cent to 55.6 per cent). This could have been due in part to changes in the valuation of stock markets. However, we should take into consideration that the rate of increase in 'currency and deposits' (approximately 33.3 per cent, from $3.3 to $4.4 trillion) was relatively marginal in comparison with the growth of total assets (approximately 2.27 times, from $14.6 to $33.2 trillion). This is, at least, a sharp contrast with Japanese households' *risk-averse* portfolio selection. Furthermore, we should note that the risk preference of portfolio selection by Japanese households also remained unchanged, although the 'Big Bang' financial reform (see section 6.2) aimed to respond to the rapidly ageing society by redeploying the funds held by households and transforming from an indirect financing system to a direct financing one (see section 6.6). We will discuss this in chapter 6.

4.4.2 Changes and features of financial intermediation structure

The BOJ classifies financial intermediaries into three distinct categories:

1 *Depository corporations* including banks, post offices and collectively managed trusts,
2 *Insurance and pension funds*, and

3 *Other financial intermediaries* including securities investment trusts, non-banks, the Trust Fund Bureau and government financial institutions.

Looking at the liability composition of financial intermediaries shown in Table 4.7, depository corporations continue to represent a large share of financial intermediaries in Japan (BOJ 2000), although their weight has declined over ten years (from 60.1 per cent at the end of March 1990 to 51.7 per cent at the end of March 2000). However, the weight of deposits with depository corporations to total financial liabilities remains almost unchanged throughout the 1990s (ranging between 37.1 per cent and 36.9 per cent). The weight actually increased to 40.0 per cent as at the end of March 2004. In contrast, in the US, depository corporations used to be the largest financial intermediary ten years ago (at 37.0 per cent), but declined to become the least important (21.5 per cent), in accordance with a sharp decline in deposits as a source of funding.

On the asset side, Table 4.8 shows that the weight of 'loans' (depository corporation's loans, insurance and pension funds' loan, and other financial intermediaries' loans) to total assets of financial intermediaries remains over half of assets (54.4 per cent at the end of March 1990 and 51.2 per cent at the end of March 2000) in Japan. However, the weight of loans in depository corporations declined over ten years (from 31.1 per cent to 24.5 per cent), while the weight of loans in other financial intermediaries, particularly in public financial institutions, increased from 20.1 per cent to 23.4 per cent. According to the BOJ (2000), the weight of public financial institutions in terms of the outstanding assets of financial intermediaries increased from 15.4 per cent at the end of March 1990 to 22.0 per cent at the end of March 2000. By and large, governmental financial institutions rely for their funding on deposits with the Trust Fund Bureau which are in turn transferred from Postal Savings. In contrast, in the US, the weight of loans in depository corporations declined over the past ten years (from 22.7 per cent to 12.8 per cent), while the weight of shares and other equities of other financial intermediaries and insurance and pension funds increased (from 10.6 per cent to 27.0 per cent).

In summary, the above discussion shows that during the 1990s, the US intensified its 'securities-based' financial structure, while the financial structure in Japan continues to rely on indirect financing. For the past decade in the US, the weight of other financial intermediaries such as non-banks[7] and securities investment trusts has been increasing rapidly

Table 4.7 Liability composition of financial intermediaries (comparison between Japan and the US)

Categories of financial institutions	March 1990	March 2000
Japan		
Depository corporations	*JPY 1,357 Trillion (60.1 %)*	*JPY 1,528 Trillion (51.7%)*
Deposits	37.1%	36.9%
Borrowings	8.4%	7.3%
Bonds	5.8%	4.2%
Shares and other equities	4.9%	1.7%
Insurance and pension funds	*JPY 220 Trillion (9.7%)*	*JPY 422 Trillion (14.3%)*
Insurance and pension reserves	8.5%	13.0%
Other financial intermediaries	*JPY 681 Trillion (30.2%)*	*JPY 1,005 Trillion (34.0%)*
Deposits with the Trust Fund Bureau	10.2%	15.0%
Borrowings	11.8%	10.9%
Bonds	3.2%	3.0%
Investment trusts	2.3%	1.9%
Shares and other equities	1.2%	1.4%
US	**March 1990**	**March 2000**
Depository corporations	*$4.8 trillion (37.0%)*	*$7.4 trillion (21.5%)*
Deposits	27.5%	13.2%
Borrowings	3.5%	4.0%
Bonds	1.6%	0.9%
Insurance and pension funds	*$4.2 trillion (32.6%)*	*$11.6 trillion (33.5%)*
Insurance and pension reserves	21.0%	29.5%
Other financial intermediaries	*$4.0 trillion (30.4%)*	*$15.6 trillion (45.0%)*
Borrowings	1.9%	2.8%
Bonds	17.1%	19.8%
Investment trusts	8.5%	18.9%

Source: BOJ 2000; Chart 18, etc.

Table 4.8 Asset composition of financial intermediaries (comparison between Japan and the US)

Categories of financial institutions	**March 1990**	**March 2000**
Depository corporations	*JPY 1,317 trillion (58.1%)*	*JPY 1,521 trillion (51.3%)*
Currency and deposits	6.6%	5.0%
Deposits with the Trust Fund Bureau	5.8%	8.7%
Loans	31.1%	24.5%
Bonds	7.0%	8.4%
Shares and other equities	3.3%	2.2%
Insurance and pension funds	*JPY 273 trillion (12.0%)*	*JPY 450 trillion (15.2%)*
Loans	3.2%	3.3%
Bonds	2.6%	6.3%
Share and other equities	3.8%	2.6%
Other financial intermediaries	*JPY 677 trillion (29.9%)*	*JPY 995 trillion (33.5%)*
Loans	20.1%	23.4%
Bonds	4.3%	5.2%
Shares and other equities	3.2%	1.5%
US	**March 1990**	**March 2000**
Depository corporations	*$4.9 trillion (35.0%)*	*$7.6 trillion (20.8%)*
Loans	22.7%	12.8%
Bonds	7.2%	4.4%
Insurance and pension funds	*$4.4 trillion (31.5%)*	*$12.1 trillion (33.2%)*
Loans	3.2%	1.3%
Bonds	15.3%	13.1%
Shares and other equities	7.4%	15.5%
Other financial intermediaries	*$4.7trillion (33.5%)*	*$16.8 trillion (46.0%)*
Loans	15.8%	15.6%
Bonds	10.8%	13.3%
Shares and other equities	3.2%	11.5%

Source: BOJ 2000; Chart 19, etc.

in comparison with traditional depository corporations. In contrast, throughout the 1990s in Japan, although the weight of depository corporations has declined slightly, the public sector such as postal savings and public financial institutions as financial intermediaries absorbed 'safety' funds from the households sector. The critical feature of Japan's financial structure is thus that while there is a huge surplus of 'safety' funds, there is a scarcity of 'risk' funds due to the *risk aversion* of the household sector in Japan. This is in sharp contrast with the financial structure of the US.

4.4.3 Structural problems in Japan's financial structure

The most important problem related to the Japanese financial structure is that the preference in portfolio selection by the Japanese household sector, the largest provider of funds, remained *risk averse* during the 1990s, and the financial structure continued to rely on *indirect financing*. Therefore, Japanese banks still need to transform the savings of *risk-averse* Japanese households into long-term investments. However, this long-term intermediation is possible only if Japanese banks could have developed their monitoring capacities to meet the challenges of new monitoring responsibilities as Japanese firms approached the technology frontier. In addition, Japanese banks could play this function only if they could simultaneously meet short-term portfolio quality conditions under the Basel Accord (see section 4.3). This condition was required after deregulation and made it difficult for Japanese banks to perform their traditional role of converting funds from *risk-averse* savers into long-term industrial investments.

The structural problem we want to focus on here is that if Japanese bank managers were to succeed in their attempt to adjust to a securities-based financial system, they would require a sufficient and diversified base of 'risk' fund providers in the Japanese household sector. While Japan clearly had a huge surplus of 'safety' funds such as currency and deposits, there were few providers of 'risk' funds such as shares, equities and securities that is required for incubating new enterprises and industries. Unsurprisingly, their strategy of pursuing fee-based business opportunities related to investment banking or fund management without the preconditions of a thriving stock market driven by other types of investors ultimately proved to be futile. The case study of LTCB's gradual decline is instructive in this respect (see chapter 5). Indeed, the badly planned and imprudent transition towards an Anglo-American securities-based system was a crucial contributor to Japan's deepening financial slump because it did not address the problems of financial

disintermediation without which the recovery of the real economy was unlikely.

At a macro level, the transition to the securities-based and arm's-length Anglo-American mode of monitoring underestimated the impact of the abandonment of the role of Japanese banks as financial intermediaries. In turn, this could only be sustained if the traditional role of Japanese banks as monitors of flows and allocations of funds could be maintained and strengthened in the traditional Japanese *indirect financing* structure. As referred to earlier, Japanese banks have been allocating funds mainly in the form of bank loans that have historically contributed to around 90 per cent of total corporate financing in Japan (according to Cabinet Office 2003, the loans outstanding in 2002 provided by the Japanese banks decreased to 82 per cent of the outstanding amount in 1991). The FFA (BOJ 2000) shows that the non-financial sector still remains the largest net debtor on a stock basis, with outstanding assets in the non-financial corporations sector standing at ¥739 trillion and outstanding liabilities at ¥1,469 trillion as of March 2000. On a flow basis, the FFA (BOJ 2000) shows a financial surplus in non-financial corporations amounting to ¥21.7 trillion in fiscal 1999. According to the BOJ, real investment in plant and equipment remained restrained in 1999 despite the recovery in corporate profits. Surpluses were used for debt repayments and investments in financial assets. The breakdown of liabilities shows that borrowings (loans) were ¥566 trillion while shares and other equities amounted to ¥500 trillion.[8] Interestingly, industrial securities (the total of corporate bonds, commercial papers and external securities issued by residents) accounted for a relatively small share – ¥78 trillion (BOJ 2000).

On the one hand, the accumulated NPL, which may still not be fully provisioned, have partly hampered the effective flows and allocations of resources for new industries and projects. The IMF (2000) estimated that the true extent of cumulative bad loans of the 17 major banks totalled about ¥65 trillion as at March 2000. The uncovered losses were estimated to be within a range of ¥6.2 trillion (baseline) to ¥21.2 trillion (severer case).[9] Reportedly, the outstanding NPL held by the 11 major banks (including Resona Bank but excluding Shinsei Bank and Aozora Bank) amounted to ¥26.8 trillion as of March 2002, decreasing to ¥20.2 trillion or by 24.4 per cent compared to the previous year (Cabinet Office 2003).

On the other hand, during the 1990s, there was something of a decline in the weight of depository corporations as financial intermediaries in Japan. The decrease in the demand for funds in the private non-financial

corporations sector could be attributed not only to the overhang of the financial crisis but also to the cautious lending attitude on the part of the Japanese banks. In particular, the credit rationing that caused a public outcry from the second half of fiscal 1997 to the first half of fiscal 1998 coincided with a change in the mode of screening and monitoring by Japanese banks. This change was led in part by the Basel Accord under which the role of Japanese banks as long-term intermediaries and monitors was redefined through the requirement of meeting strict short-term portfolio quality conditions. Thus, the failure to develop and institutionalize financial intermediation routes appropriate for mediating the *risk-averse* funds from the Japanese household sector to new ventures and industries contributed to the Japanese financial crisis, and prolonged the associated economic stagnation. It is worth noting that loans by public financial institutions, adding postal life insurance to public financial institutions, showed high growth throughout the 1990s. The loans by public financial institutions were channelled to: (1) central government (¥42.5 trillion, 13.9 per cent); (2) local government (¥58.3 trillion, 19.1 per cent); (3) public non-financial corporations (¥67.4 trillion, 22.1 per cent); (4) private non-financial corporations (¥46.4 trillion, 15.2 per cent); and (5) households sector (¥90.8 trillion, 29.7 per cent). Their portfolio selection has been conservative hitherto. Meanwhile, in the general government sector, the financial deficit expanded from fiscal year 1993. Further research may be necessary to examine how the loans from public financial institutions have been used to incubate new industries. Reportedly, the outstanding loans of Japanese SME with limited access to capital markets decreased from ¥345 trillion in 1998 to ¥260 trillion in 2003 (SMEA 2004; see also Figure 1.2).

Many gigantic private equity funds owned by US investment banks or non-banks such as GE Capital or Ripplewoods have shown an interest in investing in Japanese venture firms and distressed firms, targeting management buyouts and looking for capital gains from restructuring. However, to what extent can we expect them to take over the role of long-term intermediaries channelling Japanese household savings into infant industries? Rodrik (1997) points out that 'globalization' is exposing social fissures between those with the skills and mobility to flourish in an unfettered world market – the apparent 'winners' – and those without such attributes. The former category includes owners of capital and many professionals, who are free to place and retrieve their resources to maximize their returns. Their long-term commitment to solving the structural problems of particular financial markets cannot be relied on to any great extent.

4.5 Concluding comments

This chapter argued that Japanese banks naively adopted the Anglo-American 'rules-based' approach to the management of credit risk in the face of new challenges of monitoring 'frontier firms' and the pressure on rents as a result of the internationalization of financial markets. The neoclassical arguments for the adoption of Basel-type pragmatism and the adoption of Anglo-American financial norms assume wrongly that such systems have a universal validity. However, for a number of structural reasons, this prescription was not only inappropriate, but also contributed to the deepening of Japan's prolonged financial and economic slump. First, the structure of the Japanese financial market was not appropriate for the redefinition of the financial tasks of banks away from the intermediation of household savings into long-term industrial financing. Secondly, this meant that Japanese institutional lenders had to adapt and learn to manage uncertainty in a context in which these tasks could not be privatized to a large and heterogeneous body of risk-absorbing investors. In such a context, the ill-planned transition to the Anglo-American approach to the management of credit risk, without institutional preconditions for diversifying risk and uncertainty, served only to deepen Japan's structural failures in financial intermediation and monitoring activities.

Of course, some risk management instruments are necessary as economies become more complex, but the rules-based assessment of credit risks under the Anglo-American system does not appear to have a universal applicability. Indeed, important and valuable components of the Japanese traditional mode of allocating financial resources to new enterprises and industries have been lost in the ill-planned transition to an Anglo-American financial system. If Japanese banking regulators and bankers had sought to preserve these elements of the traditional system, perhaps in a modified form, some of the difficulties encountered by the Japanese economy, and in particular its financial markets, might have been less severe. This leads to the following questions:

1 Given that it is extremely difficult to adapt the Anglo-American monitoring system to the structure of financial markets in Japan, it is very unlikely that Japan will achieve a smooth transition to the Anglo-American mode of monitoring. But at this stage, can Japan resuscitate aspects of its traditional banking system in order to address these issues?

2 If Japan cannot return to the traditional mode of monitoring, will it be able to find a better alternative mode? Why have participants in the convoy system failed to identify alternatives, in spite of the fact that during the post-war period the system used to work effectively for the allocation of financial resources for reconstruction?

Based on our discussions in this and earlier chapters, our response to question 1 is not straightforward. In the period when the Japanese economy was still catching up in terms of its technological capability, one important component of the screening and monitoring activity of Japanese banks was simply to monitor the managerial ability and efforts of the borrowing firm to absorb technology and improve on the engineering know-how that was largely developed overseas. During this period the assessment of the commercial and engineering values of an emergent technology per se was less important for banks. The lender's confidence in the borrower's credibility depended more upon whether the borrower would put in full effort or shirk. This information could be provided through the dense participation networks that the main bank established as a *quasi*-insider. Not only did this information allow main banks to select firms for lending, but it also made it very difficult for the borrower to shirk on its duties. However, in the 'frontier economy' when more Japanese industries were reaching the international technology and marketing frontier, their business and investment was increasingly exposed to fundamental uncertainty. As more and more of the investments and R&D activities of firms were decided under conditions of uncertainty, the main banks were also exposed to greater fundamental uncertainty. Even if the main bank is deeply involved as a *quasi*-insider in the operation of the firm, it cannot mitigate the problems caused by fundamental uncertainty associated with investments in innovations to the same extent as it could during the catching-up period. In this respect, sticking to the traditional mode of monitoring or trying to resuscitate it would be futile.

However, it is possible that network monitoring could have been adapted to deal with a higher level of fundamental uncertainty if main banks had a better understanding of the problem and adapted to the situation by investing in different innovative trials with the expectation that only some would be successful. This would have meant restructuring margins with the assistance of regulators to allow higher average margins to deal with some failed trials, rather than attempting to compensate for lower margins by expanding the volume of low-margin business. The great advantage of such an evolutionary development

would have been that it would build on Japanese banking strengths and, in addition, would have been consistent with the requirements of intermediation in the Japanese economy.

Our response to question 2 is more pessimistic. Although a full and successful transition to the Anglo-American system is hardly to be expected, the cost to Japan of abandoning the experiment must now be judged extremely high. The problem faced by Japan is caused not only by the inefficiency of the existing system (technically the higher transaction costs of this system) but also by the higher *transition costs* of transforming to an alternative system. In this regard, we would say that Japan suffers from all the symptoms of 'transition failure'. Not only formal institutions but also informal ones are of significant importance when we want to explain the direction and pace of institutional change. We will discuss the issues of transition in chapter 7.

5
The LTCB Collapse: A Case Study

5.1 Introduction

What effect did the change in the economic environment surrounding the Japanese financial and monitoring system actually have on the economic performance of Japanese banks? As we said in chapter 1, in the 1980s, Japan's financial system – and, in particular, its banking system – was the world's largest. Nine of the world's top ten banks in terms of total loan assets were Japanese, including the Long-Term Credit Bank of Japan, Limited (LTCB). In contrast, its 'bank-led' financial system slipped into a deep slump in the 1990s from which it has yet to recover at the time of writing. The LTCB collapsed in October 1998.

The LTCB collapse demonstrates important features of the crisis affecting the Japanese banking system in general. This case study examines the change in the profitability and financial position of the LTCB, aiming to improve the link between theory and empirical data.

A chronology of events related to the LTCB[1]

1897: The Nippon Kangyo Bank is created by the Japanese government to help Japan's catch up with the West in the *Meiji* era.

1952: The United States hands power back to the Japanese government. The Ikeda council draws up a post-war financial plan, including the creation of the long-term credit bank system. In December the LTCB is created out of part of Nippon Kangyo Bank.

1953: Japan's period of high economic growth begins.

1973: The oil shock slows growth; LTCB steps up its overseas expansion.

1975: The Japanese government starts to create a bond market in Japan, effectively undermining the old long-term credit banking system.

1985: LTCB draws up a reform plan calling for the bank to move away from traditional lending to new investment banking businesses.
The yen strengthens after the 'Plaza Accord'. Japan's asset price 'bubble' becomes entrenched.
1989: LTCB is ranked ninth largest in the world in terms of total assets.
1993: LTCB moves to lavish new headquarters.
1995: The government uses public money to rescue Tokyo Kyowa and Anzen, the first such step in Japan since the Second World War. The ensuing scandal by the over-lending to the EIE group forces the LTCB president to resign.
1996: The Hashimoto cabinet unveils 'Big Bang' reforms to make the Tokyo markets 'free, fair and global'.
1997: The government tightens fiscal policy, pushing the economy bank into recession.
Asian financial crisis begins.
The financial system experiences its first serious turmoil and Hokkaido Takushoku, Sanyo Securities, and Yamaichi collapse.
1998: The Asian financial crisis intensifies.
Rumours about LTCB's problems triggers a share price collapse in Japan.
A merger plan with Sumitomo Trust for rescuing LTCB is finally rejected.
LTCB collapses and is nationalized.
The government appoints Goldman Sachs to find a new owner for LTCB.
1999: The government announces that LTCB is to be sold to the Ripplewood group.
2000: Ripplewood takes control of LTCB. The bank changes its name to Shinsei Bank.

5.2 Changes in the LTCB's profitability

Here, it is worth noting that long-term credit banks such as the IBJ and LTCB played an instrumental role in the qualitative, personalized and intensive *ex ante* monitoring that allowed accelerated industrial development through long-term lending. In the post-war period when Japan's economy was taking off, the weight of funding by long-term credit banks and financial institutions including the Japan Development Bank (JDB) reached a peak of over 50 per cent of all new

investments in 1955. During the 1950s, JDB loans were concentrated in public utilities, in particular, electric power and marine transportation. Loans for these two industries accounted for 83 per cent of JDB's total outstanding loans at the end of fiscal year 1960 (Aoki 1994, p. 114). Among the industries targeted by the JDB and IBJ, electrical power occupied a particularly strategic position in Japan's takeoff period. Even in the subsequent period of rapid growth until the mid-1980s, its share remained over 25 per cent. Meanwhile, the share of city banks in total investment lending has also been increasing since the mid-1960s (Aoki 1994, p. 115).

According to Aoki, the *ex ante* monitoring by traditional Japanese city banks was complemented in critical ways by government financial institutions and long-term credit banks. In particular, the IBJ's capacity of offering industrial-strategic and engineering-related judgements improved the city banks' capacity as co-financiers in a de facto consortium to assess the managerial competence of their client firms. At the height of the main bank system, many Japanese firms maintained good relationships not only with the main bank selected within city banks (or sometimes regional banks) from whom they borrowed their working capital, but also with long-term credit banks from whom they borrowed their long-term investment funds (Aoki *et al.* 1994, pp. 33–5).

Aoki emphasizes that the *ex ante* monitoring capacity of city banks was nurtured at the beginning of the high-growth period within a government–industry–bank framework for coordinating the investment decisions of strategic industries. Once a development path was established, investment decisions by the industry and credit decisions by the banking sector were increasingly decentralized. The inter-industry and intertemporal complementarities among strategic investments made investment in strategic industries more profitable and less risky. The other private financial institutions, composed of insurance companies, trust banks and banks for small businesses, excluding 'non-bank' financial institutions, supplied relatively large shares of equipment funding during the above period. For trust banks and insurance companies too, monitoring tasks were delegated to their main banks (Aoki 1994, p. 114).

As we argued in section 4.2, the ROA achieved by Japanese banks was already declining since the 1970s, due mainly to severer lending competition fuelled by 'internationalization' and 'disintermediation'. In addition, the Japanese government started to create a bond market in 1975, which began to undermine the bank-centred financial system in which long-term credit banks were privileged to issue the debentures or bank bonds (see also section 3.4.2).

Table 5.1 shows the LTCB's net revenue from the fiscal year 1981 (March 1982) to the fiscal year 1997 (March 1998).[2] The gross revenue (the current revenue) earned by banks, which is equivalent to the total sales figure in firms, is clearly not appropriate for assessing economic performance (The bank recorded the gross revenue of ¥1.45 trillion in FY 1987, an increase of 14.1 per cent in comparison with the previous year, ¥1.52 trillion in FY 1988, an increase of 5.1 per cent, ¥1.98 trillion in FY 1989, an increase of 30.2 per cent, and ¥2.21 trillion in FY 1990, an increase of 11.4 per cent. It is worth noting that the gross revenue continued to increase steadily until FY 1996, even though the interest earned from loans was declining since March 1991).

The net interest revenue remained roughly flat from FY 1981 to FY 1985. For responding to financial deregulation (see section 4.2.2), LTCB retained the Bankers Trust Company as a consultant. This US investment bank developed the Risk Adjusted Return on Capital (RAROC) concept in the early 1980s. The LTCB's Fifth Long-Term Strategic Plan which was announced and titled as 'innovative' in 1985 reflected the Bankers Trust Company's strategy, in which the quality of loan assets should outweigh the expansion of their quantity by effectively managing financial risks. However, the Sixth plan of 1988 showed a return to the strategy of expansion of loan assets in domestic market for maximizing nominal profits.

It was in this context of change that the relation-based non-algorithmic monitoring style (see section 3.4.1) appeared to wither after the late 1980s. To compensate for the decline of their ROA and to maintain their nominal profits, many Japanese banks had to reduce their monitoring costs or expand their loan assets using leverage. At the same time, financial deregulation was undermining the foundations of the critical rents that motivated the rent-based mode of monitoring (see section 4.2.3, 4.2.4). Deposit rate deregulation had steadily progressed since its initiation in 1984 and was completed in 1994.

In 1986, LTCB changed its credit analysis/approval policy, shifting the focus from the analysis of cash flow projections to the evaluation of collateral values. This change reflected: (i) the bank's consciousness of losing its effective power to discipline client firms (in particular, the difficulty of getting borrowers to disclose more information than what is contained in financial statements); and (ii) the internal demand to speed up the credit approval process in order to increase loan assets. In 1988, the bank installed computer software that analyzed a borrower's financial statements and which gave loan officers warnings based on

Table 5.1 Changes in the LTCB's net revenue (Unit: JPY Billion)

Fiscal Year	(1) Net interest revenue	(2) Net fee revenue	(3) Net revenue from dealing[a]	(4) Other revenue[b]	(5) Revenue from selling stocks	(6) Total net revenue (1+2+3+4)
FY 1981	108.0	1.3	−4.9	0.9	NA	105.3
FY 1982	126.2	3.1	3.1	1.1	NA	133.5
FY 1983	108.3	5.1	10.4	0.8	NA	124.5
FY 1984	112.1	4.4	4.4	1.2	NA	122.1
FY 1985	120.9	4.9	19.1	1.1	NA	146.0
FY 1986	169.6	2.6	16.7	1.1	NA	190.0
FY 1987	218.4	4.8	4.5	1.2	NA	228.9
FY 1988	169.3	9.5	−63.4	153.1	80.5	268.5
FY 1989	137.4	10.2	−11.4	173.3	144.3	309.5
FY 1990	118.8	14.9	−1.9	136.4	112.9	268.1
FY 1991	151.3	13.4	2.6	178.1	168.8	345.5
FY 1992	152.6	26.7	39.3	86.2	74.0	304.8
FY 1993	73.7	14.9	88.0	292.1	267.0	468.7
FY 1994	50.2	15.5	27.8	456.0	427.5	549.5
FY 1995	96.6	21.5	115.9	468.5	441.2	702.5
FY 1996	179.2	14.9	49.4	346.4	319.8	589.9
FY 1997	178.0	35.0	−1.9	231.8	219.4	442.9

Notes: [a]Mainly composed of income from dealing in treasury bonds. Figure in FY 1997 includes net revenue from financial derivatives. [b]Mainly composed of realized capital gains from selling stocks, which is shown separately in (5).
Source: Author, based on LTCB financial statements.

mechanical calculations of financial ratios and earning trends showing the borrower's liquidity or profitability based on available documentation rather than the type of intensive interaction and judgement which could no longer be justified financially. This change in the style of monitoring was intended in part to avoid the increased monitoring costs associated with internationalization and disintermediation. The adoption of the monitoring software may, in turn, have had an adverse effect on the bank's capacity to monitor, by giving the impression that there was no need to preserve or further develop the 'intuitive' monitoring skills based on personalized and intensive participation of bankers in the businesses they financed. Not surprisingly, it was around this time that the credit policy of focusing on collateral evaluation was strengthened.

Impact of the bubble economy

Table 5.2 shows the changes in outstanding loan exposures to the top five sectors in which the LTCB had large loan exposures in March 1998,

just before it went bankrupt. These are: (1) non-bank financial institutions; (2) real estate; (3) services; (4) manufacturing; and (5) wholesale and retailers. The share of loan exposure to these five sectors exceeded 78 per cent since 1990. The share of loan exposure to the manufacturing sector, which had exceeded 20 per cent in March 1985, declined to 9 per cent in March 1998. However, it is worth noting that the outstanding amount of loans to the manufacturing sector remained at a certain level (see also Table 4.1).

In contrast, the share of lending going to the non-bank, real estate and services sectors increased. Additionally, we should note that most of the loans to non-bank financial institutions were reinvested ultimately in the real estate sector and real estate companies.

The LTCB's net interest revenue jumped in FY 1986, increasing by 40.3 per cent over the previous year. By FY 1987, interest revenue jumped to ¥218.3 billion, a growth of a further 28.7 per cent (see Table 5.1). The income from employing funds continued to increase until FY 1990, reaching ¥1,973.8 billion (see Table 5.3). This expansion of lending business partly contributed to the deepening 'bubble' economy that emerged over this period. As we argued in section 4.2.4, at the root of this phenomenon was the drive by Japanese banks to expand their loan assets with leveraging to compensate for the decline of returns in their traditional activities by moving aggressively into high-yielding (but risky) loans in the real estate and construction sectors. The net interest revenue reached a peak in FY 1987. It is noteworthy that even at the height of the bubble economy LTCB profits coming from net interest revenue began to decline by FY 1988 (see Table 5.1). The growth rate of the cost of funds to the bank began to exceed the rate of increase of income from the funds invested between FY 1988 and FY 1990 (see Table 5.3). The associated decline in profitability was an important feature of the final stages of the crisis facing the bank.

We can see that the net interest revenue of the LTCB dropped steeply in FY 1993, decreasing by 51.7 per cent in comparison with the previous year (see Table 5.1). In fact, the decline in bank profitability was even more severe than is suggested by these figures. Our interviews with key ex-LTCB staff reveals that the bank began to rapidly expand 'interest swap' deals, which were a mechanism for transferring incomes to headquarters using debt-credit transactions between the Head Office in Japan and overseas branches/subsidiaries of the bank. Table 5.4 shows that the Head Office enjoyed high net incomes from the interest swap deals after the 1992 fiscal year, suggesting substantial transfers of profits from overseas branches/subsidiaries. This implies that the true reduction

Table 5.2 Changes in the share of loan exposures to major sectors

Fiscal Year	Manufacturing		Retailers		Non-banks		Real estate		Services	
	(JPY billions)	Share (%)	(JPY billions)	Share (%)	(JPY billions)	Share (%)	(JPY billions)	Share (%)	(JPY billions)	Share (%)
FY 1984	1,959	21.9	935	10.4	1,537	17.2	809	9.0	1,126	12.6
FY 1985	1,931	19.4	958	9.6	1,785	17.9	1,020	10.2	1,449	14.5
FY 1986	1,805	16.6	962	8.9	2,140	19.7	1,306	12.0	1,725	15.9
FY 1987	1,726	14.2	1,115	9.2	2,600	21.4	1,544	12.7	2,099	17.2
FY 1988	1,584	12.1	1,233	9.4	2,878	21.9	1,776	13.5	2,465	18.8
FY 1989	1,503	10.4	1,466	10.1	3,138	21.7	2,029	14.0	3,015	20.9
FY 1990	1,796	11.3	1,717	10.8	3,524	22.1	2,171	13.6	3,314	20.8
FY 1991	1,847	11.1	1,712	10.3	3,747	22.5	2,276	13.7	3,457	20.8
FY 1992	1,943	11.5	1,631	9.6	3,724	22.0	2,284	13.5	3,713	21.9
FY 1993	2,030	11.9	1,587	9.3	4,029	23.6	2,542	14.9	3,341	19.5
FY 1994	1,950	11.6	1,577	9.4	4,027	24.0	2,662	15.9	3,132	18.7
FY 1995	1,858	11.2	1,537	9.3	3,766	22.7	2,748	16.6	3,114	18.8
FY 1996	1,649	10.0	1,414	8.5	4,018	24.3	2,827	17.1	3,043	18.4
FY 1997	1,311	9.0	1,183	8.1	3,704	25.3	2,703	18.5	2,674	18.3

Source: Author, based on the LTCB's financial statements.

of interest revenue in the domestic lending market was much more severe. The final column in Table 5.4 shows the net interest revenue excluding the net revenue from the interest swap deals. This shows how severely the interest revenue in domestic markets had been eroded between FY 1993 and FY 1995. We can presume that NPL were an important contributor to the reduction of interest earnings during the period.

Figure 5.1 shows the change in the spread margin that we estimate as a ratio of the net interest revenue (see Table 5.1) to the outstanding loan portfolio (see Table 5.7). The amount of net interest revenue excludes the net income from interest swap transactions[3] (see Table 5.4). Our estimation shows that the spread margin stayed at around 1.5 per cent in FY 1981–82, and then decreased to around 1 per cent in FY 1984 and 1985 just before the onset of the bubble economy. The margin increased in FY 1986 and 1987, but then declined in FY 1988 at the peak of the financial bubble. Afterwards, the margin stayed below 1 per cent through the 1990s.

According to a survey by BOJ (2001b), the average spread margin across all Japanese banks in our sample period from FY 1981 to FY 1988 was estimated at 1.74 per cent. One of the unique characteristics of this survey was that they obtain the lending and fundraising spreads by splitting the overall margin into two parts using a short-term money-market interest rate and the 3-month average interest rates on Certificates of Deposits as the reference rates. According to the survey,

Table 5.3 Changes in interest revenue and funding costs

Fiscal Year	Revenue from employing funds		Funding costs	
	(JPY billions)	Change (%)	(JPY billions)	Change (%)
FY 1987	1,280	8.13	1,062	4.68
FY 1988	1,315	2.71	1,146	7.89
FY 1989	1,725	31.16	1,587	38.55
FY 1990	1,974	14.43	1,855	16.86
FY 1991	1,971	–0.13	1,820	–1.89
FY 1992	1,934	–1.91	1,781	–2.15
FY 1993	1,762	–8.86	1,688	–5.19
FY 1994	1,803	2.33	1,753	3.83
FY 1995	1,994	10.57	1,897	8.23
FY 1996	1,771	–11.18	1,592	–16.1
FY 1997	935	–47.23	757	–52.47

Source: Author based on LTCB's financial statements.

Table 5.4 LTCB: Interest swap and revised net interest revenue (Unit: JPY Billions)

Fiscal Year	Revenue from Employing Funds	Funding Costs	Net Interest Revenue	(Income from Interest Swaps)	(Interest Swap Cost)	Interest Swap profits[a]	Revised net Interest Revenue[b]
FY 1987	1,280.4	1,062.0	218.4	NA	NA		
FY 1988	1,315.1	1,145.8	169.3	26.7	20.7	6.0	163.2
FY 1989	1,724.9	1,587.5	137.4	48.3	42.0	6.3	131.2
FY 1990	1,973.9	1,855.1	118.8	70.7	79.9	–9.2	128.0
FY 1991	1,971.3	1,820.0	151.3	169.4	174.5	–5.1	156.4
FY 1992	1,933.6	1,780.9	152.6	332.3	301.7	30.7	122.0
FY 1993	1,762.2	1,688.5	73.7	433.7	384.5	49.2	24.5
FY 1994	1,803.3	1,753.1	50.2	483.2	440.3	42.9	7.3
FY 1995	1,994.0	1,897.4	96.6	841.0	778.5	62.5	34.1
FY 1996	1,771.0	1,591.8	179.2	858.3	846.7	11.6	167.6
FY 1997	934.6	756.6	178.0	190.4	170.3	20.1	158.0

Notes: [a]Interest Swap Profit = Income from Interest Swaps − Interest Swap Cost. [b]Revised net Interest Revenue = Net Interest Revenue − Interest Swap Profits.
Source: Author based on LTCB's financial statements.

0.13 per cent of the margin was the lending spread and 1.61 per cent was the fundraising spread, jointly contributing to the average overall margins of 1.74 per cent on average during FY 1981–FY 1988. This result shows that Japanese banks in the 1980s were not yet pricing in order to ensure an appropriate lending spread in accordance with the appropriate credit risk. Rather, their profitability relied more on the 'rents' that existed due to prevailed control on the ceiling of deposit interest rates.

Although the coupon rate of the debenture and bond that long-term credit banks could issue to raise funds was somewhat higher than the deposit rate offered by ordinary commercial banks, the fundraising spread contributed substantially to the LTCB's net interest revenue. Our argument is that the decline in the fundraising spread due to the deregulation of deposit interest rate control in the mid-1980s created incentives for Japanese banks to seek other rent opportunities. As mentioned earlier, the funding cost for the LTCB, and for Japanese banks in general, was growing during the emergence of the financial bubble. Their expansion of lending to the real estate and construction sectors were precisely the rent-seeking activities through which they sought to increase their interest incomes and spread margins. Seeking these rents by banks substantially contributed to the creation of the financial bubble. Thus, the LTCB, like many other Japanese banks, expanded its loan exposures to

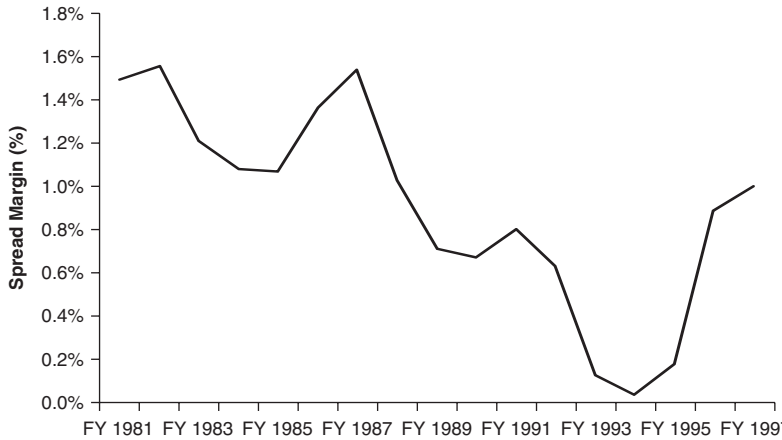

Figure 5.1 Changes in the estimated spread margins (net interest revenue/outstanding loans × 100)
Source: Author based on LTCB's financial statements.

riskier projects as funding costs increased, squeezing the rents they could earn on the side of fundraising. Meanwhile, the change in monitoring strategy that shifted away from the intensive analysis of feasibility, profitability and expected cash flows to the evaluation of the value of collateral was deeply related to the rapid growth of NPL in the LTCB. The failure of Japanese banks to effectively screen and monitor their loans was crucial for explaining the rapid accumulation of NPL during this period.

5.3 Responses to the collapse of the financial bubble

According to Fujii (2000), when Katsunobu Onogi became the last president of the pre-nationalization LTCB in 1995, he announced three new pillars of the LTCB's corporate strategy: (1) to strengthen the bank's profit base through seeking higher rates of return on assets rather than expanding the asset base; (2) to expand its business in Asia, where there was an expectation of rapid economic growth; and (3) to earn profits from the securities, dealing and financial derivative businesses in which the bank had invested a great deal. From 1995, the bank also increased reserve provisions for possible loan losses and sought to write off NPL. However, despite these efforts, the bank failed to create an alternative profit base to compensate for the decreasing profits as a result of the declining margins on fundraising. The LTCB attempted to survive by going into a strategic alliance with the Swiss Banking Corporation (SBC) announced in July 1997 in order to strengthen its profit base in the investment banking business. At the same time, the LTCB hoped to get finance from SBC to ease its liquidity problem. However, this attempt failed. Figure 5.2 shows the changes in LTCB's current profits.

Attempts to strengthen the interest profit base

To make matters worse, the LTCB's attempts to improve its credit policy and its rate of return on its loans coincided with the gradual implementation of the 1988 Basel Accord, which began to be implemented since FY 1993. The Accord gave Japanese lenders new ways of managing risk, but in ways that also turned out to have damaging effects. For instance, it created incentives for collateralization of loans using securities or guarantees by selected OECD public sector entities as a way of reducing the risk weights of their exposures (see section 4.3). The financial statements of the LTCB show that the share of loans whose security was 'guaranteed' in these ways increased as shown in Table 5.5. These loans contributed to maintaining the return on risk-weighted assets. However, these loans' contribution to strengthen the profit base was limited because

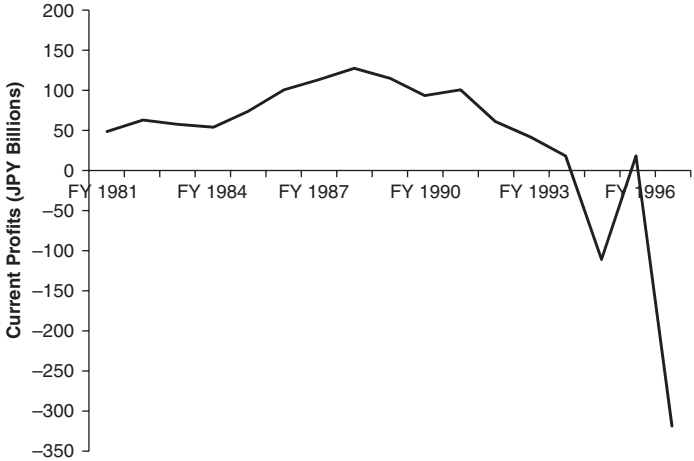

Figure 5.2 Changes in current profits
Source: Author, based on LTCB's financial statements.

the spread margins (earned profit) of these guaranteed loans were very thin, reflecting the guarantor's high credibility. Meanwhile, the LTCB increased the percentage of outstanding loans to SME since the late 1980s (see Figure 5.3. See also see section 4.2.1). These loans were expected to bring in relatively higher margins. The net interest revenue of the LTCB increased in FY 1996 and 1997 partly because of these measures (see Table 5.1). Nevertheless, in its financial statement for FY 1997, the LTCB reported that it suffered an accumulation of NPL that amounted to ¥1,378.5 billion on a newly applied criterion for loan classification.

Loan business in Asia

According to ex-LTCB staff interviewed by the author, it was around the mid-1990s when the LTCB's International Credit Division initiated the preparation and adoption of its new credit policy and procedure. A key component of this was the introduction of a codified assessment procedure (a computer software package) that enabled the bank to measure credit risks based upon EDF and the assessments of external rating agencies that were applied to its internal business. Initially, the LTCB's marketing and loan syndication staff, in particular those in Asian loan syndication markets where Japanese banks played a major role, resisted the codified assessments. This was because the risk-weighted spread margin recommended by the software package was much higher

Table 5.5 Share of LTCB loans whose security is 'guaranteed'

Fiscal Year	Amount (JPY Million)	Share (%)
FY 1990	2,641.6	13.91
FY 1991	2,676.7	13.76
FY 1992	2,675.5	13.86
FY 1993	2,771.5	14.47
FY 1994	2,793.1	14.79
FY 1995	3,392.8	17.87
FY 1996	3,873.5	20.54
FY 1997	3,274.6	20.77

Source: NEEDS, LTCB's Annual Reports.

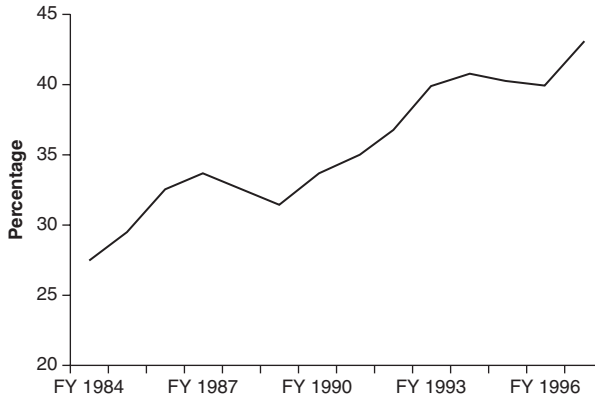

Figure 5.3 Percentage of outstanding loans to small-middle sized corporations
Source: Author based on LTCB's financial statements.

than the market would support in 1996 and 1997. However, the codified assessment based upon the EDF provided by Standard & Poor's and Moody's gradually became the benchmark in meetings for negotiating loan spreads or security conditions.

Also according to ex-LTCB staff, the projected earnings from participating in syndicated loans as a loan provider did not cover the required risk-weighted spread as calculated by the codified assessment. However, Japanese banks were keen to seek the business opportunities as arrangers or agents in loan syndication. This business had mainly been undertaken by major US or European banks prior to that time and these banks had enjoyed greater fee incomes with a relatively smaller loan exposure.

The 1997–98 Asian Financial Crisis also played a critical role in changing the lending behaviour of Japanese banks from one of being major loan providers for long-term investments in Japanese industry to one of seeking fee incomes for improving ROA using more streamlined loan assets.

Net fee revenue and net revenue from dealing

Japanese banking insiders knew that the LTCB was the leading Japanese bank in terms of pursuing the strategy of seeking greater fee incomes from its investment banking business. However, it seems that the LTCB was not sufficiently successful in expanding its investment banking business. Its net fee revenue did not reach a level that could contribute to reverse the pressures on the bank's profitability.

A major part of the bank's net revenue from dealing (see Table 5.1) came from dealing in government bonds. Approximately 85 per cent of the revenue on average depended upon dealing in government bonds (including trading and redemption profits/losses) since 1988. The only exception was in FY 1990 when the revenue from dealing in foreign exchanges contributed around 50 per cent of the total revenue from dealing in that fiscal year.

The LTCB began to implement the strategic prioritization of its dealings business since the mid-1980s and soon became the leading bank dealing in government bonds. The bank recorded net profits from dealing of ¥17,125 million for FY 1983, ¥12,831 million for FY 1984 and ¥16,969 million for FY 1985. However, in spite of increasing the volume of its dealing business, profitability declined to ¥4,453 million in FY 1986 and ¥7,363 million in FY 1987. Then the bank recorded a loss of ¥53,884 million in FY 1988 and a loss of ¥21,498 million in FY 1990 in its dealing business (see Figure 5.4).

The third column in Table 5.6 shows the yield on the barometer ten-year government bond that was secondarily traded and listed in the Tokyo Stock Exchange. The last column shows the year-to-year change in the bond yield. The decreasing bonds yields imply an increasing bond price. During 1984 and 1987, decreasing bond yields reflected falling market interest rates. From around FY 1986–1987, the interest rate began to rebound, resulting in falling bond prices. In this underlying context, LTCB started making losses in its bond dealing operations from FY 1988.

In the fiscal year 1990, although the bank lost ¥21,498 million in its bond dealing, the trend changed to one of falling market interest rates, leading to an increase in bond values. During the fiscal year 1989–90, the MOF began to implement a lending ceiling to the real estate sector

and the BOJ began to adopt a tighter monetary policy in order to restrain the price inflation of stocks and real estate. The tight monetary policy induced a bearish mood in the bond market. Overall, healthy bank revenue from dealing in government bonds depended on increasing bonds prices. In other words, the bank's capacity of controlling and managing the market risk (price volatility risk) associated with dealing in bonds in volatile or falling markets was not sufficiently developed.

Since the mid-1990s, regulators continued to relax the money supply in response to the prolonged financial slump and economic recession, in part aiming to improve the profitability of Japanese banks by reducing their funding cost. With the decrease in market interest rates, the LTCB's earnings from bond dealing increased. However, it should be noted that even then, the revenue remained quite volatile.

Revenue from selling stocks (realizing capital gains)

The bank began to rely upon additional revenues from realizing capital gains through selling part of its portfolio of stocks, in particular, since the fiscal year of 1993–94, in order to compensate for the rapid decline in net interest revenue, and in response to the accumulation of NPL and the requirements of gradual writing these off. Table 5.1 shows that the revenue from realizing capital gains exceeded 50 per cent of the bank's total revenue by FY 1993. After that, the bank continued to rely heavily upon this source of revenue.

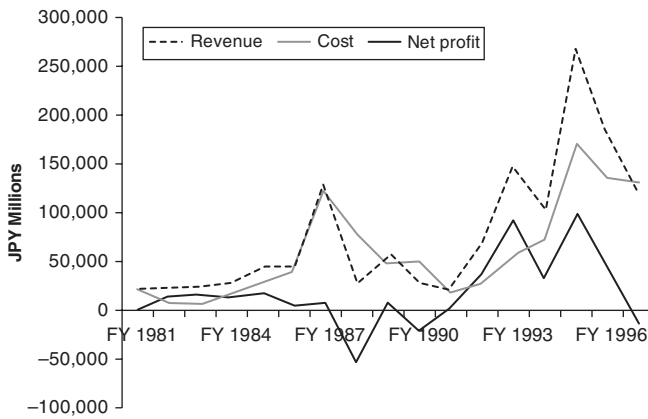

Figure 5.4 Changes in revenue and cost from dealing (unit: ¥ milion)
Source: Author based on LTCB's financial statements.

Table 5.6 LTCB's net profit from dealing and changes in the bond yield on the barometer 10 year government bond

Fiscal Year	LTCB's net profit from dealing (JPY million)	Yield on the barometer 10 year government bond[a] (%)	Year-to-year Changes in the bond yield (%)
FY 1981	721	n.a.	n.a.
FY 1982	13,971	7.36	n.a.
FY 1983	17,125	6.46	–0.90
FY 1984	12,831	5.55	–0.91
FY 1985	16,969	5.26	–0.29
FY 1986	4,453	4.51	–0.75
FY 1987	7,363	4.75	0.24
FY 1988	−53,884	5.72	0.97
FY 1989	7,535	7.10	1.38
FY 1990	−21,498	5.38	–1.72
FY 1991	2,884	4.51	–0.87
FY 1992	36,705	3.04	–1.47
FY 1993	92,015	4.58	1.54
FY 1994	31,428	2.90	–1.68
FY 1995	98,565	2.57	–0.33
FY 1996	40,036	1.65	–0.92
FY 1997	−13,280	2.01	0.36

Notes: [a]Based on closing price.
Source: Author based on LTCB's financial statements and Cabinet Office statistics 2002.

In March 1989 the LTCB held unrealized capital gains of ¥3.82 trillion in its stock portfolio. By March 1994, the outstanding unrealized capital gains had fallen to ¥1.26 trillion and the bank came under heavy pressure to realize some of these gains. As a result of its continuous realization of capital gains and prolonged stagnation of stock prices in general, the unrealized capital gains completely disappeared by March 1998, when there was a recorded unrealized capital loss of ¥247.1 billion for FY 1997 (see Figure 5.5).

As was argued earlier, the interest spread margin realized by the LTCB stayed at a low level throughout the 1990s (see Figure 5.1). The low and declining profitability was mainly the result of the increase of NPL with overdue and delayed interest repayments. However, some argue that the bank failed to expand its lending spread to reflect different credit risks. The survey mentioned earlier conducted by the BOJ (2001b) points out that the change in lending spreads is attributable in part to a rising consciousness of credit risk among the Japanese banks since the early 1990s.

According to the survey, the average spread margin earned by the Japanese banks in the 1990s (1990–99) stayed at around 1.83 per cent, of which 0.90 per cent was the lending spread and 0.93 per cent was the fundraising spread. However, raising the lending spread only offset the contraction of the fundraising spread and remained well short of covering loan losses. This suggests that banks like the LTCB regarded soaring credit costs since the early 1990s as temporary losses, not part of a structural change that needed a restructuring of overall margins (BOJ 2001b). However, as the BOJ points out, even if the Japanese banks thought of some increase in credit costs as ordinary losses, it would have been quite difficult for them to expand their lending margins unilaterally given their preferences for long-term relationships with clients. As a result, Japanese banks including the LTCB were forced to realize some of their unrealized capital gains on their holdings of stocks for provisioning or writing off NPL.

5.4 Changes in the LTCB's financial position

The bank's loan assets increased from the late 1980s until the fiscal year 1991, that is, during the period of the financial bubble (see Table 5.7). The annual increase in loan assets was ¥1.14 trillion at the end of FY

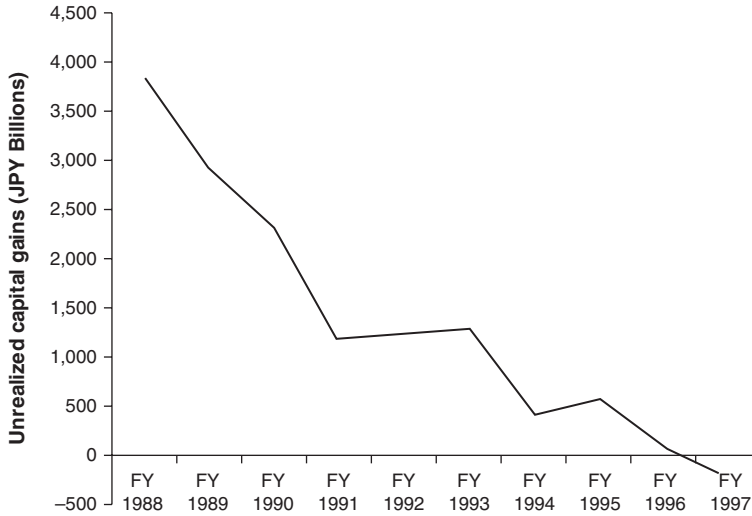

Figure 5.5 Changes in unrealized capital gains (unit ¥ billion)
Source: Author based on LTCB's financial statements.

Table 5.7 LTCB assets by major categories (Unit: JPY Billions)

Fiscal Year	Total Assets	Loan Assets	Cash/Deposits	Securities	Treasury bonds	Stocks	Guarantee
FY 1981	12,499	7,214	1,480	1,974	805	444	958
FY 1982	14,430	8,095	2,055	2,090	857	484	1,126
FY 1983	15,763	8,940	2,071	2,270	827	537	1,108
FY 1984	18,496	10,332	2,473	2,810	830	590	1,724
FY 1985	19,370	11,270	2,241	3,001	710	610	1,690
FY 1986	20,792	12,412	1,861	3,675	1,020	649	1,843
FY 1987	22,689	14,143	2,141	3,583	860	842	1,764
FY 1988	24,850	15,797	1,878	3,746	1,004	1,096	1,896
FY 1989	30,339	18,339	2,838	4,612	1,230	1,495	2,634
FY 1990	30,697	18,992	2,640	4,710	1,017	1,643	2,488
FY 1991	31,583	19,453	2,790	4,819	1,003	1,714	2,141
FY 1992	30,866	19,299	3,234	4,608	1,024	1,737	1,722
FY 1993	29,762	19,154	2,968	4,587	1,079	1,992	1,263
FY 1994	31,720	18,890	4,860	4,915	1,180	2,241	1,116
FY 1995	29,515	18,982	1,572	5,400	1,209	2,577	1,187
FY 1996	29,165	18,861	1,583	5,172	1,212	2,249	1,244
FY 1997	26,190	15,765	1,482	4,135	1,196	1,756	1,107

Source: Author based on LTCB's financial statements.

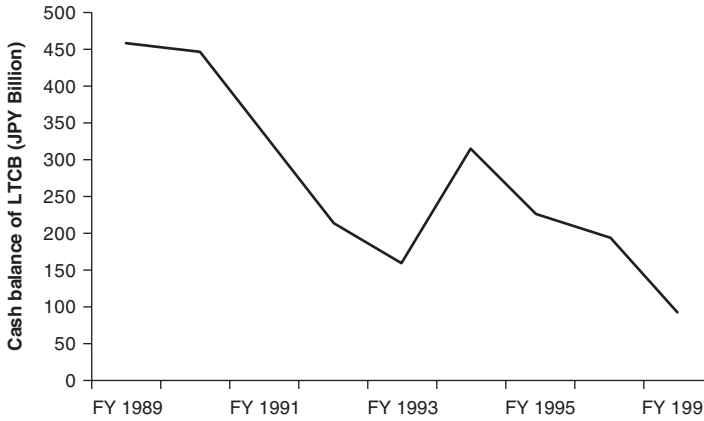

Figure 5.6 Changes in cash balance (unit: ¥ billion)
Source: Author based on LTCB's financial statements.

1986 (compared to the previous year), ¥1.73 trillion at the end of FY 1987, ¥1.65 trillion in March 1989, ¥2.54 trillion in March 1990, ¥0.65 trillion in March 1991, and ¥0.46 trillion in March 1992. The outstanding balance of loan assets reached ¥19.45 trillion in March 1992, an increase of ¥8.18 trillion from March 1986 just before the onset of the financial bubble. Meanwhile, the net interest revenue increased from ¥120.9 billion in March 1986 to ¥151.3 billion in March 1992, an increase of ¥30.3 billion. Thus, the margin on lending declined from a low starting point of 1.07 per cent to a derisory 0.78 per cent.

It is also worth noting that the bank's cash balance was declining throughout this period, with the exception of FY 1994, ever since the collapse of the financial bubble (see Figure 5.6). In particular, the bank's outstanding cash balance fell below ¥100 billion by March 1998, reflecting growing problems with liquidity. Meanwhile, the outstanding balance of marketable securities including treasury bonds and stocks remained more stable. However, the liquidity in some marketable securities was limited in part because the possibility of selling them was limited due to mutual shareholding relationships or because some securities had already been pledged to back funding. These marketable securities could not contribute to solving the serious liquidity problems facing the bank.

The LTCB relied largely upon debentures as its source of funding (see Table 5.8). The share of Certificates of Deposit, with their higher funding costs, increased in FY 1988 and 1989, at the peak of the financial bubble. This reflected the declining net interest revenue since FY 1988, and the attempt to enhance income by increasing loan volume by any means

Table 5.8 Liabilities of LTCB by major categories (Unit: JPY Billion)

Fiscal Year	Total Liabilities	Deposits	CDs	Debenture	Borrowing	Other Liabilities	Loan loss provision	Guarantee Liability
FY 1981	12,209	2,872	467	6,968	179	43	64	958
FY 1982	14,121	3,227	818	7,707	192	27	71	1,126
FY 1983	15,437	3,289	838	8,661	188	25	76	1,108
FY 1984	18,153	4,269	804	9,632	217	74	82	1,724
FY 1985	19,008	3,988	493	10,520	183	44	124	1,690
FY 1986	20,400	4,019	555	11,466	104	49	131	1,843
FY 1987	22,179	4,798	922	12,223	184	61	149	1,764
FY 1988	24,179	5,178	1,656	12,802	222	114	169	1,896
FY 1989	29,370	7,406	1,799	14,391	262	144	135	2,634
FY 1990	29,678	6,518	1,088	16,477	372	151	126	2,488
FY 1991	30,521	6,130	713	18,382	533	285	134	2,141
FY 1992	29,797	6,324	418	18,177	837	284	162	1,722
FY 1993	28,687	5,774	437	17,895	824	150	315	1,263
FY 1994	30,644	7,159	229	17,674	934	161	397	1,116
FY 1995	28,572	5,628	1,321	16,005	1,010	691	498	1,187
FY 1996	28,213	6,013	2,060	15,155	1,304	608	458	1,244
FY 1997	25,403	4,504	1,408	11,939	1,609	1,412	738	1,107

Note: CD denotes Certificates of Deposit.
Source: Author based on LTCB's financial statements.

Table 5.9 Share of each funding source in total liability

Fiscal Year	Deposits (%)	CDs (%)	Debentures (%)	Borrowings (%)
FY 1981	23.5	3.8	57.1	1.5
FY 1982	22.9	5.8	54.6	1.4
FY 1983	21.3	5.4	56.1	1.2
FY 1984	23.5	4.4	53.1	1.2
FY 1985	21.0	2.6	55.4	1.0
FY 1986	19.7	2.7	56.2	0.5
FY 1987	21.6	4.2	55.1	0.8
FY 1988	21.4	6.9	53.0	0.9
FY 1989	25.2	6.1	49.0	0.9
FY 1990	22.0	3.7	55.5	1.3
FY 1991	20.1	2.3	60.2	1.8
FY 1992	21.2	1.4	61.0	2.8
FY 1993	20.1	1.5	62.4	2.9
FY 1994	23.4	0.8	57.7	3.1
FY 1995	19.7	4.6	56.0	3.5
FY 1996	21.3	7.3	53.7	4.6
FY 1997	17.7	5.5	47.0	6.3

Note: CD denotes Certificates of Deposit.
Source: Author based on LTCB's financial statements.

possible. The share of CDs increased after FY 1995 (which declined again in FY 1997, see Table 5.9), in addition to the higher share in borrowings around this time, which shows that the bank was facing serious liquidity problems.

As mentioned earlier, the financial statements for FY 1997 reported that the LTCB suffered the accumulated NPL amounting to ¥1,378.5 billion on a newly applied method for loan classification. The outstanding reserves for possible loan losses amounted to only ¥738.3 billion in FY 1997 (see Table 5.8). This means that the NPL balance of ¥640.1 billion was not covered by any reserves (provisions). As we have also mentioned, the LTCB did not retain any unrealized capital gains. Even worse, by then the bank held unrealized capital losses amounting to ¥247.1 billion. These developments meant that the value of the bank's equity capital was reduced to ¥787.2 billion at the end of FY 1997 (see Table 5.9). By then the value of equity capital did not cover the still uncovered NPL and unrealized capital losses. If the uncovered NPL were written off or the unrealized capital losses were realized, the bank would have negative net worth.

Finally, the LTCB was nationalized in October 1998. This was the first case of the 'bridge bank' scheme in the Financial Revitalization Law

Table 5.10 Equity capital by major categories (Unit: JPY Billion)

Fiscal Year	Equity Capital	Reserve 1	Reserve 2	Accumulated funds	Net profit appropriations	Total capital account	Total Liability + Capital account	Capital Ratio (%)
FY 1987	140.2	49.8	22.5	241.6	55.88	510.0	22,689	2.3
FY 1988	192.8	102.3	25.4	271.5	79.24	671.2	24,850	2.7
FY 1989	318.5	228.1	28.8	321.4	72.47	969.3	30,339	3.2
FY 1990	321.9	231.5	32.7	362.3	70.76	1,019.1	30,697	3.3
FY 1991	322.2	231.7	36.5	402.1	69.20	1,061.8	31,583	3.4
FY 1992	322.2	231.8	40.3	440.0	34.18	1,068.5	30,866	3.5
FY 1993	322.2	231.8	44.2	443.0	34.08	1,075.2	29,762	3.6
FY 1994	322.2	231.8	48.0	446.0	27.99	1,076.0	31,720	3.4
FY 1995	322.2	231.8	51.9	445.9	(107.92)	943.9	29,515	3.2
FY 1996	322.2	231.8	54.3	314.6	28.67	951.6	29,165	3.3
FY 1997	387.2	296.8	57.1	317.6	(271.62)	787.2	26,190	3.0

Note: Reserve 1 is Legal capital reserve and Reserve 2 is Legal reserve of retained earnings.
Source: Author based on LTCB's financial statements.

enacted, after much controversy, in the Japanese Parliament. We will further argue the process to the nationalization of LTCB in sections 6.2 and 7.3. The nationalized LTCB was later denationalized in March 2000. It was renamed as 'Shinsei' Bank in June 2000.

5.5 Conclusion

This chapter aimed to improve the link between theory and empirical data, including the LTCB case. To sum up, the following characteristics of the LTCB are noteworthy:

1 The LTCB, in common with other long-term credit banks such as the Industrial Bank of Japan (IBJ), was an important 'main bank'. As such, it played a key role as a monitor and intermediary of long-term funds. In particular, the LTCB played an important role in mediating long-term investment funds to electric power generation as well as key manufacturing sectors in the post-war reconstruction and high growth period until the mid-1980s. However, financial deregulation and internationalization of the economy (see section 4.2.2) started to undermine the *raison d'être* of the bank.
2 The LTCB's Fifth Long-Term Strategic Plan, described as 'innovative', in 1985 was based on the investment strategy of US-based banks, in which profitability was to be maintained by managing various financial risks rather than simply expanding loan assets. However, it was later replaced in 1988 with the Sixth one which was based on a return to the expansion of loan assets in domestic market as a way of enhancing profits.
3 The share of LTCB's loan exposure to the manufacturing sector has declined since the mid-1980s. In contrast, there was an increase in the share of its loan exposure to non-bank financial institutions and the real estate sectors. At the same time, there were changes in internal strategies of screening and monitoring, away from analysing the feasibility, profitability and expected cash flows generated by projects, to an evaluation of the mortgaged securities provided as collateral for the loan. Thus, in 1986 the LTCB changed its credit analysis/approval forms for internal use, shifting their focus from an analysis of cash flow projections to evaluations of pledged collateral values. In 1988, the bank adopted a software program for analyzing a borrower's creditworthiness that could give loan officers warnings based on mechanical calculations of financial ratios and earning trends.

4 The LTCB started to shift its strategic priorities from the mid-1980s by giving greater weight to the dealing business and acquired a reputation for being the leading bank dealing in government bonds. However, the bank's revenue from dealing in government bonds was substantially vulnerable to fluctuations in bond values. In other words, the bank's capacity of controlling and managing the market risk (price volatility risk) was insufficiently developed.
5 Their procedures for writing off non-performing loans were very limited until the mid-1990s and this exacerbated the quality of their loan portfolio in 1994–96.
6 The bank introduced vendor's software for quantifying credit risks mainly for its international lending business. The software was introduced around 1996 for lending operations in Asia.
7 Since 1995, the bank reverted to a strategy of searching for profitability but failed to create an alternative and secure profit base to compensate for the decreasing nominal profits from its traditional lending business. Meanwhile, the bank lost its unrealized capital gains as of March 1998.

6

Intensified Uncertainty: The Political and Economic Reality of the 1997–98 Financial Crisis and Prolonged Financial Stagnation in Japan

6.1 Introduction

We have argued that the traditional mode of banking and monitoring had once functioned relatively smoothly in Japan in the post-war and 'catching-up' period (see chapter 3 and BOJ 2001b). However, the environment that had supported the traditional mode of screening and monitoring changed dramatically over time. The changes include the intensified financial differentiation which provided prominent Japanese borrowers with more opportunities to tap diversified financial sources, the increased difficulty in managing credit risks in accordance with the internationalization and specialization of the banking business, and the financial deregulation which reduced the opportunity to capture bank rents.

This chapter provides an overview of Japan's political and economic reality of the 1997–98 financial crisis in which the LTCB was nationalized, and the prolonged financial slump after the bubble economy collapsed. Section 6.2 surveys key events in the Japanese financial crisis ranging from the collapse of the bubble economy to the nationalization of the LTCB and the Nippon Credit Bank (NCB). It also provides a critique of the 'Big Bang' reform of the Japanese financial system. Section 6.3 surveys aspects of Japan's lingering financial slump even after the Big Bang. A key element of the persistent slump is the dilemma faced by the Japanese financial reformers making it difficult to resolve the crisis of financial intermediation without worsening the credit crunch faced by SME.

As New Institutional Economists emphasize, a precipitate increase in transaction costs may lead to a structural failure in the economic system.

However, the transaction cost concept does not sufficiently explain the pace of the structural failure in Japan. For instance, it does not adequately explain why Japanese banks increased their loan exposure to the real estate and construction sectors very rapidly. It also does not sufficiently explain the transition failure – why the system with increasing transaction costs did not reform into an alternative system with lower transaction costs and why Japan continued to suffer a prolonged credit crunch and financial slump for over a decade. Section 6.4 examines the process of herd behaviour in lending and lender mood swings from speculative euphoria à la Minsky in upturns to negative spirals in reversals. Additionally, section 6.5 analyses ShinGinko Tokyo to assess how poorly this new and unique challenge of financing to cash-strapped SME has processed as another case study. Section 6.6 concludes.

6.2 A survey of the process from the collapse of the financial bubble to the LTCB's bankruptcy

Demand-side economists emphasize that the root cause of Japan's prolonged economic slump has been its demand-deficient economy (Yoshikawa [an economic advisor to the Koizumi cabinet] 1999, 2003; Patrick 1998), and that the fundamental force, as was argued in section 4.2.2, includes the transformation of the Japanese economy in the mid-1970s when Japanese growth slowed and Japan shifted from being an economy in which private investment demand outstripped private saving to one in which *ex ante* private saving became greater than *ex ante* private investment. They emphasize that this change has had a dramatic effect on the traditional banking system and has fundamentally undermined the highly regulated and controlled yet stable post-war financial system. They critically assess the macroeconomic policy mismanagement by the government for responding to its demand-deficient economy during the so-called 'Lost Decade (1990s)', because Japan's poor economic performance made the bad loan problem worse over time. Patrick (1998) points out that between 1988 and 1998 the Japanese government (the MOF) made five major macroeconomic policy mistakes.

1 The 1988–90 expansionary monetary policy continued for too long, at least fuelling and some would argue creating the stock market and real estate bubbles.
2 In 1992–93 (after the hard landing of puncturing the bubbles), the failure to ease monetary and fiscal policy promptly and more forcefully.

3 The reliance on excessively easy monetary policy in the mid-1990s, so that interest rates since 1995 have been at undesirably low levels. While the low interest rates helped banks and borrowers, in effect, they simply postponed the resolution of the bad loan and corporate bankruptcy problems, but at a high economic and political cost.
4 The fiscal stimulus provided through a supplementary budget in the mid-1990s was too little, too late and too unwilling on the part of the government. The MOF's fiscal policy since 1980 had been based on the single-minded reduction of budget deficits and creating budget surpluses, the responsibility for compensatory macro policy fell heavily and excessively on the use of monetary policy instruments. It was not until the supplementary budget in autumn 1995 that the fiscal stimulus finally became effective, generating a good recovery, with 3.4 per cent GDP growth, in FY 1996.
5 The government decision in late 1996, beguiled by excessively optimistic economic forecasts for 1997 and beyond, to shift its top policy priority 180 degrees from sustaining economic recovery to tackling the long-run structural problem of budget deficit reduction.

In the stage just after the collapse of the bubble economy (point 2 above), the authorities saw the downturn as primarily being a business cycle. Patrick (1998) criticizes authorities for their underestimation of the cumulative effect of the structural problems, and the lasting and profound effects of the huge and ongoing decline in asset values. Other economists emphasizing the monetary aspects of policy insist that, for instance, the increases in money supply by 0.1 per cent in 1992 and 1.5 per cent in 1993, then the stable increment of money supply by 3 per cent p.a. were insufficient, and the BOJ should have increased money supply by around 5 to 6 per cent p.a. during these years just after the collapse of the financial bubble (Harada 1999; Iwata 2001). They argue that tight monetary policy after the collapse of the bubble was a cause of the rapid accumulation of NPL in the Japanese banks. However, Nishimura (1999), who was then the director of the Banking Bureau in the MOF, points out, 'in my real feeling, public opinion at the time had a decisive effect on policy-making… Tight monetary policy for puncturing the "bubble" in real estate and stock markets was affirmatively supported by the public' (Nishimura 1999, p. 70).

According to Nishimura (1999), it was around mid-1992 that the authorities become clearly conscious of the NPL problem. However, from a historical perspective, the Japanese banking regulators did very little to arrest the decline in the conditions of the banking system between 1990

and 1994, while the credit ratings of some major city banks started to decline in 1992. The full-scale implementation of the 1988 Basel Accord started in April 1993 and the deregulation of deposit interest control was completed in 1994. Meanwhile, it was as early as in 1993 that the net profit of the LTCB sharply dropped (see Tables 5.1 and 5.4).

Steadily eroding profitability in Japanese banks after the collapse of the financial bubble shook their credibility and their reputation in financial and interbank markets. As the credit ratings of major Japanese banks were further downgraded, there was increased turmoil in the banking and credit system. This was because lower-rated banks faced an increasing cost of funding in interbank markets, particularly in the US dollar money market, and then the higher funding cost started to further reduce their profitability.

Although one problem facing the *jusen* companies (housing loan corporations) was publicly recognized at a relatively early stage, most of the ordinary banks providing loans to the *jusen* companies still managed to hang on until at least 1995 (see Hall 1998, pp. 167–71; Patrick 1998; Kanaya and Woo 2000 for details on the *jusen* issue). The postponement of action by the authorities was due in part to false hopes that the economy would soon turn the corner and that a full economic recovery would buoy up the Japanese banks. Meanwhile, the regulators had no other choice but to close insolvent financial institutions when the MOF ordered a regional bank, the Hyogo Bank, to suspend new deposit taking and lending operations in 1995. This was because none of Japanese major banks could any longer afford to undertake the 'white knight' role (see section 3.3) of bailing out troubled financial institutions. The Fitch credit ratings of nearly all the major city banks, except the Bank of Tokyo Mitsubushi and the Sumitomo Bank, fell into D category in 1998.

The following chronology summarizes the main events relating to banking supervision after the collapse of the bubble economy until mid-1999, as referred to by Nishimura (1999).

1989

Midyear: The price of land in Tokyo bloc begins to cool.

December: Stock prices reach a peak.

1990

March: Regulations controlling the total loan amount allocated to the real estate sector comes into effect.
(Land prices reach a peak in 1991)
A Nikkei average of ¥30,000 is broken.

August: The official discount rate rises to 6.0 per cent and this high discount rate is maintained until July 1991.

1991

Spring: Demands for deregulation arise from the real estate sector.
'Ito-man' scandal, a hidden business relationship between the Japanese Mafia and Sumitomo Bank, comes to light.

June: A scandal of loss covering for particular clients by Nomura Securities comes to light.

July: Scandals of illegal loans by Fuji Bank, Kyowa-Saitama Bank and Tokai Bank, respectively come to light.

Summer: Government announces 'our economy is in expansion mode' in the monthly economic report

August: A scam of receiving forged deposits by Toyo Credit comes to light. Their operation, which is ordered to be closed, is taken over by the Industrial Bank of Japan and Sanwa Bank.

November: Miyazawa cabinet formed

1992

January: Land-holding tax is introduced.

March: Monthly economic report states; 'the economy is in an adjustment process, a feeling of economic slowdown is becoming widespread'.

April: The outstanding NPL held by 21 major banks is publicly announced to be around ¥8 trillion.

June: Deregulation of the scope of business of banks and securities firms, allowing their subsidiaries to participate in each other's business.

August: A Nikkei average ¥15,000 is broken.
(According to Nishimura (1999), it is not until around this time that the authorities become clearly conscious of the non-performing loan problem, and they come to take concrete actions for dealing with it.)
Deposit insurance is used to deal with the bankruptcy of Toho Sogo Bank.

1993

April: *The full-scale implementation of the 1988 Basel Accord comes into effect.*

August: Hosokawa coalition cabinet formed.
A vice-president of Hanwa Bank is assassinated.

1994

February: A guideline is announced by the government, encouraging banks to deal with NPL in a planned and gradual way. (Note: The conventional 'convoy' system works until the bankruptcies of Toyo Sogo, Toyo Credit, Osaka-Fumin Credit are settled by mergers with city banks acting as white knights.)

June: Murayama coalition cabinet formed

Summer: Preparation for 'Heisei bank' plan (an official fund injection scheme for recapitalizing banks.

September: The management difficulties of Tokyo Kyowa Credit and Anzen Credit are reported.

A branch manager in Sumitomo Bank is shot and killed.

October: Deregulation of deposit interest control is completed.

The management difficulties at Nippon Trust Bank are settled through its recapitalization by Mitsubishi Bank.

December: Tokyo Kyowa Credit and Anzen Credit are bankrupted.

Tokyo Kyodo Bank, a bridge bank for taking over their operations, is established with public funds. The Bank of Japan injects ¥20 billion into the bridge bank.

After, a series of scandals, the bribery of the President of Tokyo Kyowa Credit comes to light, resulting in a public outcry against the rescue operation.

1995

June: 'Prompt Corrective Action' Law is proposed by the government to strengthen prudential regulation (it is executed in 1998).

Outstanding NPL announced to be about ¥40 trillion. This jump from around ¥13 trillion in the previous announcement is partly due to a change in definition of non-performing loans, but this further discredits the banking system and the regulators.

Guidelines for 'the recovery of the financial system' are set for dealing with bank failures. Meanwhile, a policy of ignoring the ceiling on deposit guarantees (known as the 'payoff' system in Japan) for five years, to guarantee the full value of all deposits in the case of bank failures, is announced.

Tokyo Metropolitan Government formally announces it will not provide financial support of ¥30 billion for rescuing Tokyo Kyowa Credit and Anzen Credit.

(Reports of management difficulties in housing loan companies increase.)

July: Management difficulties in Cosmo Credit are reported.

August: Tokyo Metropolis Government gives an order for suspension of business to Cosmo Credit.
Kizu Credit is bankrupted.

Summer: A scam of covering up US$1.1 billion loss in Daiwa Bank New York Branch comes to light. This case leads to criticisms of Japanese banking regulators and the banking industry, leading to the so-called 'Japan Premium'.

October: The collapse of Hyogo Bank is dealt with through the establishment of Midori Bank, a bridge bank.
(Around Autumn, criticism of easy money policy arises.)
Hashimoto cabinet formed.

1996

January: *The management problems and problems of 'Jusen' housing loan companies are discussed in parliament under newly formed Hashimoto government.* Outcry against a proposal of injecting public funds in a rescue operation results in disarray in parliament.

April: *Laws to ensure sound management, special laws to assist the resolution process and a revised deposit insurance law are proposed and subsequently passed in the parliament in June.*

September: Tokyo Kyodo Bank is reorganized to become the 'Resolution and Collection Bank'.
(Around this time, the public opinion intensifies in favour of reforming or subdividing the MOF. See section 7.3)

November: *The Japanese financial Big Bang proposal is announced* and becomes the key policy issue for the second Hashimoto cabinet.

1997

March: A scandal of covering losses of particular clients by Nomura Securities comes to light. This unfair compensation is related to imprudent loan extension by Dai-Ichi Kangyo Bank. That too comes to light. Some executive directors in both companies are arrested in June.
(Around this time, the reported excessive hospitality accorded to the financial inspector of the MOF by the regulated causes a public outcry.)

May: Amendment to Foreign Exchange Law.

June: *A financial system reform plan is proposed.*
Fiscal Structural Reform Law, aiming at pre-determined fiscal balance by 2003 is proposed.
Autumn: Laws related to the establishment of holdings companies are enacted.
November: Sanyo Securities asks for advice on proceeding with an application under the Corporate Rehabilitation Law.
Hokkaido Takushoku Bank and Yamaichi Securities collapse.
Tokuyo City Bank collapses.
(Fiscal Structural Reform Law is passed in the parliament.)
(Asian currency turmoil and crisis extends.)

1998
February: Deposit Insurance Law revised and new law to stabilize financial situation on an emergency basis are formulated. Public funds of ¥30 trillion are allocated for use under these laws.
April: *'Prompt Corrective Action' law is executed.* Under this law, regulators would take action, which could include bank shutdown, if a bank's capital to asset ratio fell below a prescribed level.
(Around this time, some of the MOF staff members who received excessive hospitality are arrested or resigned.)
June: *Laws related to the financial Big Bang are invoked.*
Financial Supervision Agency starts operation.
The stock price of the LTCB suddenly drops. A merger plan with Sumitomo Trust & Banking Co. is announced.
July: A plan for a revamped Financial Rehabilitation Law, aiming to create a system for establishing a bridge bank, is proposed.
October: The Financial Rehabilitation Law and the Financial Early Strengthening Law are passed in parliament under the new government of Prime Minister Obuchi who was elected after Hashimoto's defeat in the Upper House election and resignation in July.
LTCB collapses, and is then temporarily nationalized.
December: NCB collapses and is then nationalized.

1999
April: The management failure of Midori Bank comes to light again. Based upon financial support of ¥1.056 trillion by

the deposit insurance scheme, the bank is absorbed by Hanshin Bank and makes a fresh start as Minato Bank.

June: A consultative paper on a new capital adequacy framework (Basel II) is proposed.

July: The outstanding NPL in the system announced to be ¥80 trillion.

Financial 'Big Bang'

The Japanese financial 'Big Bang' announced in November 1996 opted for a policy package based on the extensive deregulation and liberalization of the financial sector, addressing not only individual issues such as foreign exchange rules and accounting standards, but the entire industry consisting of banks, securities companies and insurance companies (Toya 2003). The financial system reform package (Financial Big Bang Plan) proposed by the MOF in June 1997 addressed the following five concerns:

1 The necessity of effectively employing the ¥1,200 trillion held by the household sector for responding to the needs of a rapidly ageing society.
2 The necessity of facilitating the flow of funds to indigenous growth industries as engines of economic growth, partly also as a response to the needs of the aging society. This would involve a transformation from an indirect financing system to a direct financing one.
3 To prevent the hollowing out of Japan's financial markets and to enhance the international competitiveness of Japan's financial intermediaries.
4 To complete the deregulation and liberalization in the financial sector that had begun in the 1970s.
5 To deal with the NPL problem.

The above factors provided the background for the Big Bang reform. In addition, Hall (1998) and Toya (2003) point out 'financial scandals' and the evidence of wide-scale corruption and misconduct within the MOF and the banking industry as a source of pressure for reform resulting in the transformation of Japanese banking supervision. We will discuss these issues further in chapter 7.

The concrete policies of financial Big Bang reform are substantially broad in scope. The policies related to 'monitoring' and 'supervising' that we are concerned about in this book are as follows:

1 In addition to the deregulation of the deposit rate ceiling that had been completed in 1994, a set of initiatives designed to deregulate

the mutual barrier to entry (demarcation) among banks, trust banks, securities and insurance companies for facilitating competition.
2 A set of initiatives designed to enhance intermediaries' risk management capabilities for promoting the issue of asset-backed securities (ABS), securitization and credit derivatives.
3 A set of disclosure rules designed to increase transparency.
4 The transformation of banking supervision from the traditional mode based on *ex ante* informal administrative guidance to a rules-based system based on benchmarks, higher transparency, and the threat of *ex post* legal actions.

The financial 'Big Bang' reform removed incentives for Japanese banks to undertake 'main bank' roles in the way they had done during the main bank system. First, 'bank rent' opportunities were reduced with the deregulation of the deposit rate ceiling. In addition, the reform aimed to promote competition within the banking industry as well as with players in the direct-financing system. Second, the reform aimed to transform the mode of supervising to a rules-based system, which discouraged Japanese banks from expecting any flexibility by the regulators in the creation, change or interpretation of banking regulations. Third, Japanese banks were required to adopt screening and monitoring methods appropriate for monitoring a short-term loan portfolio based upon Basel standards, which primarily meant looking for short-term profits. As a whole, therefore, the Big Bang reform completely undermined the 'relation-based banking' or 'main bank' mode of monitoring which despite its emergent shortcomings had clearly functioned at an earlier time to smooth out the impact of the business cycle on borrowers and occasionally to resolve problems of temporal financial difficulties.

The real problem was that the transition to a rules-based system faced specific problems in Japan. First, as we argued in section 4.4, structural features of Japan's financial industry meant that Japan could not transit smoothly to a direct-financing system. As a result, Japan could not develop a new profit base to compensate the banks for losing their profits in their traditional lending business. The securitization of loans and the promotion of ABS could have contributed to the diversification of credit risk held by the Japanese banks. However, the issue here was how to develop the diversified base of investors who would want to buy the risk implicit in these securities. Second, since it remains difficult to absorb credit risk in the Japanese financial structure due to lack of a diversified base of investors, the Japanese banks had to continue to play the role of absorbing risks. This structure exposed Japanese banks to the risk of potentially holding even more NPL, as

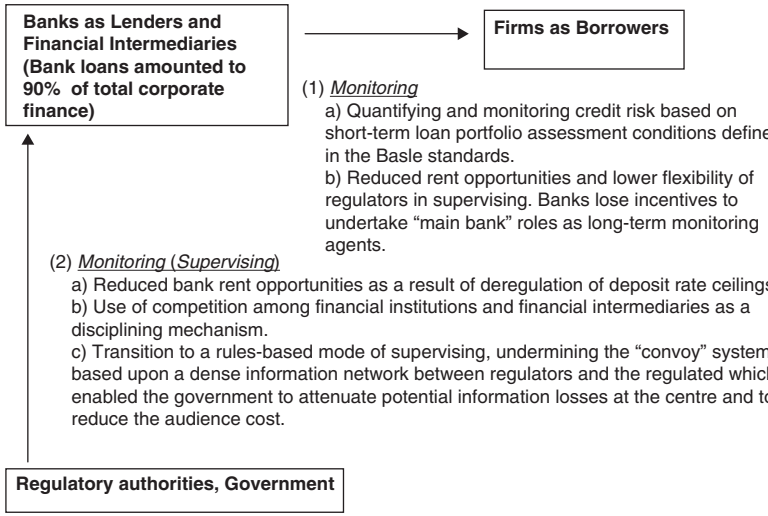

Figure 6.1 The transformed Japanese financial and monitoring system

the uncertainty about the economic environment intensified. In fact, the outstanding balance of NPL held by Japanese banks hit an all-time high of about ¥32.5 trillion in March 2001, after the bursting of the bubble economy. After this, the outstanding balance continued to climb and stood at ¥43.2 trillion by March 2002 (Cabinet Office 2002). Third, while dealing with NPL would take time, the severe regulations on disclosure and transparency possibly amplified public anxiety about the banking system. In addition, the transition to a rule-based system of supervision made it difficult for regulators to deal with the audience effect (see section 3.4.4) during a period of financial turmoil. The Big Bang reforms should be critically assessed from the perspective of these problems (see Figure 6.1).

Financial crisis

There is little doubt that the creation and collapse of the stock and real estate market bubbles led to the accumulation of huge NPL in the Japanese banking sector and these were a major cause of the subsequent banking crisis. Many economists also suggest that the Japanese economy was the victim of macroeconomic policy errors of regulators (in particular, the MOF) throughout the 1990s, causing Japan's banking crisis and subsequent economic stagnation (Yoshikawa 1999; Patrick 1998; Cabinet Office 2001; Harada 1999). In other words, they point

out that Japan's poor economic performance during the 1990s made the NPL problem worse over time and made it more difficult to resolve the existing banking and financial slump. However, this economic literature does not explain why the policy errors continued over such a long period. We will discuss about this in chapter 7.

In 1997, the Japanese regulators introduced, under the Law to Ensure the Soundness of Financial Institutions, the Prompt Corrective Action (PCA) framework, which was loosely modelled on the Anglo-American supervisory framework. This PCA framework introduced a 'rules-based' mode of monitoring (supervising), setting up guidelines for banks to strictly classify their outstanding loans and also to strictly keep an equity capital buffer, the required level of which is calculated using the same formula specified in the Basel Accords (the 8 per cent capital adequacy ratio). The PCA was to take full effect in April 1998, allowing the regulators to order banks to take remedial actions ranging from a reduction of branches, to a reduction of dividends and to liquidations in the case of insolvency. For instance, if a bank's capital adequacy ratio falls below 8 per cent on the BIS risk-adjusted basis[1] (below 4 per cent for those banks without overseas branches or subsidiaries on an adjusted national basis), regulators would now intervene to order management to formulate and implement a management improvement plan (see Hall 1998, p. 179). Once the ratio falls below the 4 per cent (below 2 per cent for internationally inactive banks) threshold, the regulators are obliged to order the banks' management to implement a variety of remedial measures and to impose a variety of restrictions on their activities. Once the ratio passes the 0 per cent threshold, the regulators are usually obliged to suspend all or part of the bank's operation (ibid.).

Some IMF economists regard it as an important milestone because it significantly narrows the scope for regulatory forbearance by placing pressure on regulators to act when a bank weakens (Kanaya and Woo 2000, p. 29). However, the PCA framework had an adverse effect on the credibility and reputation of Japanese major banks, in the sense that the 'too big to fail' belief seemed less credible. The immediate results were very negative. The interbank money market, in particular, the US dollar money market responded by increasing the so-called 'Japan Premium' which referred to a premium required in the money transactions with Japanese banks as well as Japanese financial institutions. According to Hanajiri (1999), foreign banks' money dealers were considering a higher default probability than Japanese banks' dealers with respect to Japanese banks, by as much as 45–50 basis points (bp) in 1997 and 66–82 bp in 1998. The increasing premium gradually drove the market sentiment

to sell off shares of Japanese banks and financial institutions in the Tokyo Stock Exchange. This negative signal in the stock market began to restrain even home currency money dealers in the interbank market from providing liquidity for some financial institutions. In November 1997, Sanyo Securities, one of the second-tier securities firms, defaulted on its borrowing in the call market, the first of such occurrences in Japanese history. In the same month, the MOF ordered the Hokkaido Takushoku Bank, a major city bank, and Yamaichi Securities, one of the top-tier securities firms, to suspend their operations.

In March 1998, many banks experienced difficulties in meeting the capital requirement in the PCA framework. Almost all major banks requested regulators (ultimately, the government) to inject public funds for re-capitalization. Some banks, including NCB and the Yasuda Trust Bank, announced their plans to restructure and to withdraw from overseas banking operations because the PCA framework relaxed the capital adequacy requirement to a lower level (4 per cent) for those banks which had no international operations. The regulator's response to Japan's banking crisis thus led to a deepening negative spiral of declining share prices and even worse funding and liquidity problems in interbank markets. These problems continued and become worse during 1998.

Although the Democratic Party of Japan (DPJ), an opposition party at that time, attacked the so-called 'bridge bank' plan (temporary nationalization) that aimed to finance healthy borrowers in failed financial institutions, it appears that the LTCB executives hoped that the Keizo Obuchi cabinet (the Liberal Democratic Party, LDP) would sort out the Japanese banking crisis. A merger plan between LTCB and Sumitomo Trust Bank, presumably arrived at after consulting with government, was announced. However, the slow-burning banking crisis due mainly to the government's reluctance to expose the full extent of the LTCB's bad debt problem resulted in a rumour that the merging of the healthy parts of LTCB with Sumitomo Trust was not going to be easy. Sumitomo Trust showed how far it would trust the government by requiring an independent audit of LTCB by Arthur Andersen – unprecedented behaviour in the process of rescuing a troubled bank by the regulators. Finally, the merger plan was rejected by Sumitomo Trust. Then, the LTCB was sacrificed, being nationalized in October 1998 after the establishment of a controversial legal resolution framework. The enactment of the Financial Revitalization Law and the Financial Early Strengthening Law provided the broad framework for the resolution of banking problems. The new laws augmented the procedures available

for dealing with bank failures by introducing management by financial resolution administrators and temporary nationalization or special public management. The NCB was also nationalized in December 1998. The Deposit Insurance Company, a governmental agency, acquired all the outstanding shares of LTCB and NCB and provided financial support to allow them to continue their operations. According to the IMF (2000), the total cost to the taxpayer of resolving the LTCB and NCB crisis was estimated to be around ¥7 trillion.

After nationalizing LTCB and NCB, which had been the subject of much controversy, the banking regulators were allowed to pump additional public funds into major Japanese banks for their re-capitalization. By the end of March 1999, the banks' application for the second round of government capital injection amounted to ¥7.5 trillion, four times as much as in the first round in 1998. At that time (March 2000), the IMF estimated that the true cumulative bad loans in the 17 major banks (excluding those of LTCB and NCB) totalled about ¥65 trillion.

6.3 Characteristics of Japan's prolonged financial slump

6.3.1 The depth of Japan's recession and its causes (particularly until 2002)

Aggregate statistics on the Japanese economy can help to give us some indication of the depth of Japan's prolonged recession and the simultaneous deflation of its economy. We have seen that the Japanese economy stagnated with a growth rate below 3 per cent since 1991 and recorded negative growth rates in 1993, 1998 and 2001 (Cabinet Office 2009). In order to cope with the economic stagnation after the collapse of the stock market and real estate bubbles in the early 1990s, the Japanese government repeatedly implemented macroeconomic policies that expanded public investment and other government spending. The expansion of public spending, however, did not bring about a sustainable recovery of private demand and failed to shore up the stagnant economy, despite substantial increases in budget deficits (Cabinet Office 2002, p. 1). Meanwhile, the Japanese economy also went into a deflation reflected by a persistent decline of prices. Japan's general price level (excluding fresh food) as estimated in the Consumer's Price Index (CPI) has been staying below year-earlier levels since autumn 1999. The index fell into a year-on-year decline of 0.9 per cent in fiscal year 2002 (Cabinet Office 2003), after having remaining flat in 1999 and posting a decline of 0.4 per cent in 2000 (Cabinet Office 2001, p. 39). Japan's GDP deflator also indicated that the Japanese economy

had been in a mild deflationary phase since the mid-1990s. The GDP deflator posted a negative year-on-year growth of 1.6 per cent and 1.1 per cent in 2000 and 2001, respectively (Cabinet Office 2001). This was an unprecedented experience in post-war Japan, while no other developed country had ever experienced such a lingering deflation during the same period.

The Japanese government analysed the deflation as partly caused by 'supply-side structural factors' (Cabinet Office 2001) such as an increase in low-priced imports from China and other countries. The government also drew attention to 'demand factors' due to the weaknesses of the economy as another set of factors behind the deflation. According to an analysis by the Cabinet Office (2001, p. 41), the Japanese GDP gap was on an expansionary trend throughout the 1990s. With demand remaining depressed and the inflation rate on a downward trend for a long time after the collapse of the bubble economy, expectations of deflation have also increased gradually (ibid., p. 43). According to another analysis by the Cabinet Office (2001, p. 17), the expected rate of economic growth assumed by the Japanese corporate sector remained at around *zero* per cent since the second half of the 1990s. This conservative and pessimistic expectation made the corporate sector feel that they had excess capacity and constrained substantial new investment. In fact, the BOJ short-term survey of business sentiment (*BOJ Tankan*) showed that there had been an intensification of the tendencies to permanence. The pessimistic expectation also encouraged the corporate sector to restructure their business to adjust their capacity to weaker demand, with an attempt to reduce their numbers of employees. Corporate strategies of this type soon had the effect of reducing employees' confidence in the future, and therefore affected their spending. The unemployment rate increased to 5.0 per cent in 2001 (it reached 5.4 per cent in 2002 and 5.3 per cent in 2003), almost 2.5 times higher than the rate in 1990. Because of the general air of uncertainty, the Japanese household sector began to reduce its levels of consumption. Weaker demand from the household sector reinforced the pessimism of the corporate sector and made it increasingly uncertain about the expected rate of growth. This vicious circle was a classic 'spiral of deflation' – with depression producing a bearish mood in the markets and the bearish mood in turn causing a further deepening of the depression.

In addition, we should note that a structural failure in the intermediation of financial resources has been recognized as being a root cause of Japan's prolonged economic slump. The government has maintained a consistently relaxed monetary policy since the mid-1990s in order to

stimulate the economy after the bursting of bubbles. In theory, the expansive approach to the money supply should have had a measurable impact in terms of countering the deflationary state. The growth rate of the monetary base (the total of currency in circulation and the outstanding balances at the BOJ) rose from an average of about 7 per cent in 1999–2000 to 14 per cent in September 2001 (Cabinet Office 2001, p. 53). In spite of this, the spiral of deflation persisted. Here, we should note that lending by private banks, on the one hand, decreased by about 2 per cent in 1999–2000, while the money supply ($M_2 + CD$) was increasing by about 2–3 per cent p.a. (ibid., pp. 53–4). On the other hand, the outstanding balance of treasury bonds held by Japanese banks doubled in comparison with the end of 1998. Why did the relaxed monetary policy not lead to increases in bank lending? Not only were firms suffering from excessive debt unable to raise funds, but the role of financial intermediation played by the Japanese banks has apparently diminished in line with the banks' reduced capacity of absorbing credit risks due to the overhang of NPL (particularly until 2003) and the tighter short-term portfolio quality conditions under the Basel Accord. The Cabinet Office (2004, p. 260) reports the decrease in the outstanding loan assets held by the banks including ordinary banks, foreign banks, specialized banks serving the agricultural, forestry and fisheries industries, and the small business finance corporation since fiscal year 1998. This trend remains unchanged even at the end of the 2000 decade (see Cabinet Office 2009, p. 15).

The 'demand factors' and 'financial factors' mentioned above are mutually related, because corporate bankruptcies are likely to increase as banks dispose of their NPL. According to BOJ (2001a), as at the end of March 2001 a total of 54 per cent of the outstanding balance of risk-management loans were accounted for by real estate, construction and wholesale and retail industries. Since the problem of NPL was concentrated in specific industries, the corporate failures might also have had serious effects on banks' performance. At that time, loans to the three industries accounted for about 33 per cent of banks' total loans outstanding. Cabinet Office (2001) points out that the profits of the three industries have remained low, falling into negative territory during the period from FY 1998 to FY 2000. Besides, we should note that even loans to Japanese firms that were less influenced by the bubble economy have become non-performing due to the prolonged economic stagnation and intensifying industrial structural adjustment pressures (Cabinet Office 2001, p. 87).

NPL and their write-offs were directly related to banks' capital. As was mentioned earlier, while the Japanese banks were required to

write off their non-performing assets, banks engaging in international operations were required to meet the Basel 8 per cent capital adequacy requirement. When equity capital was used to write off NPL, banks had to raise more capital. However, as their credit ratings were downgraded, raising capital was more difficult and expensive. Otherwise, banks had to reduce total assets or shift their portfolio from loans with high risk weights to government bonds with low risk weights in the calculation of Basel capital requirements. Even now, the Japanese banks are required by the regulators to implement stricter assessments of their loans and classification of borrowers. Banks must put into practice the three principles ('tightening the assessment of assets', 'enhancing the capital adequacy' and 'strengthening the governance') as embodied in the 'framework of new financial administration' under the 'Program for Financial Revival' that was announced in October 2002. Banks' assessment of loans must be even stricter because if banks were to write off NPL steadily while maintaining their financial soundness, they would have to pay capital costs in order to recapitalize themselves as necessary.

6.3.2 Impact on the corporate financing of small and medium-sized enterprises

Unarguably, NPL erode the profitability of banks. NPL incur not only heavy disposal expenses but also high opportunity costs (in the form of transaction costs for monitoring) because banks have to allocate labour and other managerial resources to deal with the NPL. The erosion of profitability and an increase in transaction costs also lead to a downward pressure on banks' equity capital (net worth). A decline in equity capital, which acts as a managerial buffer for banks' risk-taking, lowers banks' ability to take risks, such as acquiring new customers and investing in new industries. Cabinet Office (2001) and SMEA (2004, 2005, 2008, 2009) are worried that the decline in banks' risk-taking capacity would lead to a restraint on corporate business investment as a result of the banks' cautious lending activities. In particular, they are worried that it has a large impact on SME that do not have major funding sources other than bank borrowing. Cabinet Office (2001) points out that there was a tangible 'credit crunch' during the 1997–98 period, when banks' lending attitude suddenly became severe, leading to a decrease in loans to SME. It states that a decrease in business investment caused by the change in lending attitudes of banks lowered the GDP growth rate by about 1.3 per cent in 1998 (Cabinet Office 2001, p. 96). As referred to

earlier, the loans outstanding in Japanese SME with little access to direct finance has decreased from ¥345 trillion in 1998 to ¥253 trillion in 2009 (SMEA 2005, 2010, see Figure 1.2).

According to the BOJ National Short-Term Economic Survey of Enterprises in Japan (referred to as the BOJ Tankan), the business conditions DI for SME had continued to improve after bottoming out in the first quarter of 2002, with the manufacturing sector leading the way. However, confidence has been deteriorating since entering into 2007. Furthermore, the Survey on SME Business Conditions, which surveyed about 19,000 SME, including enterprises with capital of less than ¥20 million that were not covered by the BOJ Tankan, indicated that the SME's Business conditions DI continued to decline for 12 consecutive quarters, from the second quarter of 2006 to the first quarter of 2009. The Business conditions DI in the fourth quarter of 2008 had been the worst since the revision of the survey contents in 1994, until a new record was recorded in the first quarter of 2009 (SMEA 2009). With SME sales decreasing and a worsening of the financing situations, the number of SME bankruptcies has been on the rise, especially since the second half of FY 2008.[2]

Figure 1.2 shows the trend in the balance of loans from financial institutions to SME. In general, a continuous year-on-year decline can be observed. SMEA (2009) refers to a survey by Mizuho Research Institute (Survey on the Business Environment and Management Status of SME, December 2008). This survey shows that many of the SMEs who responded believed that financial institutions have become increasingly negative in their lending attitude as was reflected in the tightening of loan screening.[3]

> The expected role of banks with regard to companies having profitable businesses is to support them when they are financially in trouble and, with regard to companies not having profitable businesses, the role of banks is to collect past loans at an appropriate time and reconstruct such companies. In the 1990s, such an appropriate selection may not have been made. (Cabinet Office 2001, p. 98)

Their view is understandable as a basic principle. However, in the competitive 'frontier' economy with intensified uncertainty, is it possible to expect banks to undertake such a role? And is it desirable?

How have Japanese banks performed in terms of lending to growth companies? The Cabinet Office studies this point by comparing the average productivity growth of corporate borrowers with that of the economy (Cabinet Office 2001, pp. 100–1). Here, productivity growth of corporate

borrowers of bank loans is obtained by weighting industry-by-industry productivity growth (real GDP growth rate) with the industry-by-industry outstanding balance of bank lending. Results of this interesting analysis show that although 'the productivity growth of corporate borrowers as a whole' was higher than 'the productivity growth of the economy as a whole' in the first half of the 1980s, the former has been lower than the latter since the mid-1980s. Cabinet Office points out that behind the decline in productivity of corporate lenders is the fact that inefficient firms have survived as a result of the postponement of disposal. However, we should note that the decline in productivity had started before the bubble economy, which means that the productivity of the industrial sectors selected as client firms by banks had already been falling. This observation is consistent with our hypothesis that the traditional mode of monitoring was coming under stress as Japan became a frontier economy.

The Japanese SME play an important role in the economy. In 2004 the SME sector accounted for 99 per cent of the Japanese economy in terms of the number of firms (SMEA 2005) and 72.6 per cent in terms of the number of employees (METI 2005). In the manufacturing sector the SME accounted for around 50.5 per cent of overall industrial output and around 56.8 per cent of the overall value-added (METI 2005). According to SMEA (2004), an examination of the growth rate of 'total factor productivity' in present-day Japanese manufacturing sector by size reveals that, on average, growth is higher in SME than in large enterprises. The survey reports that the growth rate of total factor productivity of SME (50–300 workers) was 1.14 per cent on average between 1995 and 2001, while that in large enterprises (those with 301 or more workers) was just 0.88 per cent. Thus, SMEA (2004) reports that SME are playing an active role in the technological progress. Nagahama (2002) has estimated the contribution of SME to the change in the composition of value-added by industry and by size of firms. According to this survey, the SME contributed no less than 75 per cent to structural change in the 1990s after the collapse of the bubble economy.

Ensuring the supply of sufficient financial resources to innovative SME is the most important issue for the Japanese economy and would be a key requirement in its revitalization. At the same time, innovative SME are exposed to severe competition and their future has become more uncertain. SMEA (2005) reports an interview/hearing based research which finds that the life cycle of SME's hit products (best-selling products/products of marketable goods) has been shortened (see Figure 6.2). This report shows that although the life cycle of about 60 per cent of hit products was more than five years in the 1970s, the percentage of hit

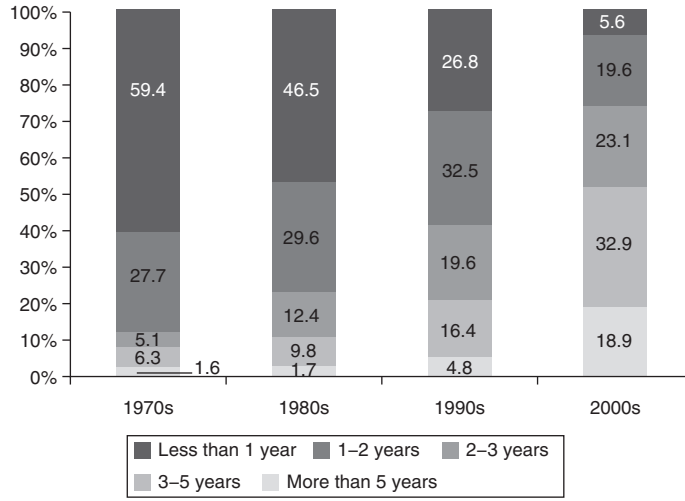

Figure 6.2 Life cycle of 'hit' products
Source: Created by the author upon SMEA (2005).

products that were marketable for more than five years has since dropped radically – to only about 5.6 per cent in the 2000s. Recently, the life cycle of more than 50 per cent of hit products has been shortened to '1 to 2 years' or 'less than 1 year'. As a result, firms have been exposed to higher business risks associated with product obsolescence. Rapid product obsolescence is due partly to the result of being on the technological frontier of micro-electronics and electronic products, and also due partly to the change and diversification in customers' tastes. However, it is mainly due to severer competition in which rival firms are accelerating the introduction of competitive products to the market. For banks which basically employ funds from depositors, it is much more difficult to monitor the credit risk of SME and to provide them with medium- and long-term loans. Although short-term credit risk can be absorbed, long-term financial intermediation to SME has become more difficult. This is the biggest dilemma facing the contemporary Japanese financial system.

6.4 Credit crunch seen as a result of herd behaviour in lending

Why did Japan continue to suffer a prolonged credit crunch and financial slump for more than a decade? This section examines the

process of herd behaviour in lending (lender mood swings) falling into negative spirals in reversals, referring to Minsky's financial fragility hypothesis (see section 2.2.4). As was argued earlier, credit markets deal not only with intertemporal trade but also with promises whose fulfilment is uncertain. In general, uncertainty in the process of credit risk management is likely to drive lenders to watch others and seek a shared standard for justifying their decisions.

Bikhchandani and Sharma (2000) suggest several reasons why a profit-maximizing investor should be influenced by the behaviour of others. First, investors believe that others may know something about the return on a particular investment, and their actions reveal this information. Second, individuals may have an intrinsic preference for conformity. Third, the compensation schemes and terms of employment of money managers may be such that imitation is rewarded. According to Bikhchandani and Sharma (2000, p. 10), if an investment manager and his employer are uncertain about the manager's ability to pick the right stocks, conformity with other investment professionals preserves the fog – that is, the uncertainty regarding the ability of the manager to manage the portfolio. This benefits the manager and if other investment professionals are in a similar situation then herd behaviour occurs. Keynes (1963, p. 176) observed, 'a "sound" banker, alas!, is not one who foresees danger and avoids it, but one who, when he is ruined, is ruined in a conventional and orthodox way, along with his fellows, so no one can really blame him.' A protective institutional framework in the Japanese traditional 'convoy' monitoring system may have created 'lock-step mentality' among the Japanese banks, in terms of having a habit of following the crowd under the regulator's administrative guidance.

As was mentioned in chapter 4, the Japanese banks have been encouraged to attempt to adjust to the new style of monitoring and risk management, reflected in the practices and applications of the Anglo-American financial system, which has been simultaneously standardized by the BCBS. We have argued that the 'credit crunch' faced by Japanese banks, and, in particular, the credit crunch affecting SME, is related to the change in the mode of monitoring. In addition, the overreliance on rules of thumb, ratings services and analysts' reports can amplify the volatility of market sentiment, causing euphoric over-lending in upturns and severe credit rationing in reversals, as in Minsky's financial fragility hypothesis.

The mechanism by which homogenized credit information flows lead to financial fragility can be described as follows. When external

rating agencies such as Standard & Poor's provide a rating category for a particular borrower (or country), the codified assessment of credit risk (the statistical EDF, or the external ratings based upon it) may cause lenders to adjust their subjective probabilities towards the statistical or codified ones. As a result, lenders may be more inclined to take risks even if subjective *ex ante* risk premiums are not fully reflected in pricing. Needless to say, herd behaviour in lending does not necessarily reduce the asymmetric information problem typically observed between lenders and borrowers. In addition, uncertainty is not the result solely of asymmetric information but has a fundamental component that affects all investments with returns in the future. In this context, the codified assessment of credit risks with homogenized information flows may reduce lenders' incentives to monitor borrowers on their own. The stronger their confidence in the external information, the weaker their incentive to collect and process information by themselves through involving in direct relationships with borrowers.

When external rating agencies offer a positive outlook or move towards an upgraded category, the codified assessment of credit risks may drive lenders to further reduce risk premiums. Expectations of better ratings may encourage competition for greater loan exposure, because the expected risk-adjusted return on the current EDF can be expected to shift favourably. This process may lead to euphoric speculations à la Minsky. There also ensues a game of chicken in which players assume that they can exit just before the bubble crashes.

When external rating agencies assume a negative outlook, in particular when they unexpectedly downgrade a borrower, this may lead to panics in which all lenders call in their loans. To the extent that codified assessment with homogenized external information attenuates lenders' incentives to monitor borrowers on their own, sudden reversals in external risk assessment ratings may amplify panics. This is because the actions of other lenders may have negative feedback effects on the financial viability of borrowers that lead to a further reduction in their creditworthiness. Lender panics may also be explained in terms of loss aversion. If a sudden reversal causes actual losses to banks, lenders may act sharply to reduce their exposure; the result may be a negative spiral or trap in which no lender is willing to take risks in that sector even if a very high risk premium is offered (see also Suzuki 2005).

As early as the 1930s Keynes (1936) had pointed out that certain classes of investment are governed by the average expectation of those

who deal on the Stock Exchange as revealed in the prices of shares, rather than by the genuine potential of entrepreneurs. The inducement to invest is more dependent on waves of optimistic and pessimistic sentiment fluctuating according to the highly volatile mass psychology in the market. The professionals in banks could be expected to be in possession of better knowledge and capability in risk assessment and monitoring than average investors. The competition among expert professionals could then be an objective of financial deregulation, to play a role in correcting the volatility of fund allocation. However, in reality, 'the energies and skills of the professionals are occupied otherwise'. 'Most professionals are concerned, not with making superior long-term forecasts of the probable yield of an investment over its whole life, but with foreseeing changes in the conventional basis of valuation a short time ahead of the general public' (Keynes 1936, p. 154).

Financial innovations, such as loan securitization, secondary loan dealing and credit derivatives, use the methods of quantifying and trading credit risks which have further fuelled a convergence of opinion in loan (debt) markets. On the one hand, this trend may have given some professionals in Japanese banks an incentive to prefer short-run speculative profit-making and opportunistic trading. On the other hand, it has diverted resources from long-term and stable debt markets, which used to provide funds for Japanese firms with the underlying rationale of improving the possibilities for long-run production.

While the Anglo-American model has problems that critics from Keynes onwards have identified, its appropriateness for Japan when it was facing a financial crisis is even more questionable. At least in those countries where the Anglo-American model was developed, there has been a broad investor base with some diversity of opinions and appetite for risk, and this has made the financial model generally workable. But the Japanese regulators and the regulated banks tried to adopt this mode of lending and monitoring without the preconditions or alternatives for diversifying risks and uncertainty. This attempted transition therefore exacerbated the 'crowd psychology in lending', and has had a deleterious effect on the mediation of financial resources. SME suddenly found that they have limited access to loan markets until they acquire external ratings. And firms that fail to be rated may be forced to accept loan conditions severe enough to compensate for the banks' uncertainty about their creditworthiness and the effects of these loans on their capital requirements. Higher pricing can, in turn, be expected to lead borrowers to pursue riskier projects – a moral hazard problem identified by Stiglitz and Weiss (1981).

6.5 ShinGinko Tokyo: another case study

The ShinGinko Tokyo, Limited (SGT)[4] was set up as a bank with the primary aim of extending loans *without collateral* to medium-risk SME *using a scoring model*. This section looks at this new type of bank, as a case study, to assess how poorly this new and unique challenge of financing cash-strapped SME has functioned. This case study also sheds light on the biggest dilemma facing the contemporary Japanese financial system.

The bank was established by the Tokyo Metropolitan Government (TMG) under the initiative of Tokyo's Governor Shintaro Ishihara, with the intention of providing swift financing to cash-strapped SME, including even those whose liabilities exceed their assets, as long as they are projecting stable future cash flows. The unique bank commenced operations in April 2005 after obtaining approval from the Financial Services Agency (FSA). The TMG contributed capital to the bank fully.

The FSA was established in July 2000 under the jurisdiction of the Financial Reconstruction Commission (FRC) through reorganization of the Financial Supervisory Agency which had been established in June 1998. With this change, the FSA became responsible for planning of the financial system for which the MOF had been responsible. In January 2001, with concurrent abolishment of the FRC, the FSA took over the business concerning disposition of failed financial institutions.

In February 2004, the TMG announced its 'Master Plan for a New Bank', which provided a more concrete summary of the relevant operations at the SGT. The 'Master Plan' suggested that the mission of the new bank should be to create a reliable path to economic recovery and to contribute to an environment that would enable such SME to demonstrate their full potential (TMG 2004). Interestingly, the TMG encouraged the SGT to be a region-based *transaction* bank. Meanwhile, the FSA had been promoting region-based *relationship* banking, with the aims of (i) promoting the revitalization of regional economies within a competitive environment; (ii) the facilitation of SME financing, fo example, by encouraging new business in the region; and (iii) the strengthening of the management functions of regional financial institutions, thereby ultimately producing active and vital regional societies (FSA 2004).

The SGT was expected to play a role in complementing the small business policy being implemented by the TMG. At the same time, the plan referred to the unique positioning of the SGT as a new 'regional and transaction bank' which would not target to expand its business nationwide like major city banks, but would instead focus on regional banking

in Tokyo Metropolitan, with Anglo-American type 'arm's-length' banking practices and governance.

It is a tendency in Japan for mega *city* banks to operate nationwide with many branches spreading across almost all regions. By contrast, *regional* banks and *Shinkin* banks are perceived to serve the financing needs of specific regions and they therefore operate with less extensive branch networks than do mega city banks. Moreover, they care about nurturing bank–client relationships which provide them with a competitive business edge to keep screening and monitoring costs to a minimum. Since the purview of business of those banks is smaller because of their concentrated regional focus, they are supposed to cater to the needs of SME and in this way to between good and bad borrowers.

The banking system in Japan is typically characterized as 'relationship banking'. This implies that bank–client relationships are supposed to play a crucial role in attenuating the asymmetry of information between them and reducing the screening and monitoring cost in banks as lenders. This type of banking practice differs from that of Anglo-American-style banking where considerations in relation to screening and extending loans are influenced by short-term gains, arm's-length relationships, selection criteria dominated by codified methods of risk assessment based on statistically EDF and so on. Scoring or credit ratings reflecting clients' financial positions are fundamental building blocks for undertaking any lending activities by banks. Thus, the system is characterized as 'transaction-based' 'arm's-length' banking.

Large numbers of Anglo-American-style financial institutions are present to satisfy the various financing needs of both foreign and domestic firms. They are located in general on several big cities where large-scale business activities are taking place. Even though they are very selective in the expansion of their branches, and business activities are limited to a small scale, services are open to customers from both the national and regional levels. They basically opt to serve 'wholesale' or 'transaction-based' type financial products using skills and techniques of quantifying various risks. Obviously, they are away from building the long-term bank–client relationships exemplified with typical Japanese banks. Thus, it is not unusual that some banks in the Japanese-German style of banking system are more comfortable with transaction-based business than building traditional bank–client relationships.

From this perspective, the establishment of SGT was unique because its business strategy was driven away from the traditional relationship banking embedded in the Japanese financial system. With a branch network centred only on the Tokyo Metropolitan region, the bank was

intended to conform to the arm's-length or transaction-based banking practices. This marked a sharp question relating to how far the strategic view of SGT could make it viable even to break the long-lasting banking tradition in Japan. While the national planning was to 'promote region-based relationship banking' in order to revitalize and enhance the competitiveness of SME, the SGT's move ran counter to the broad-based national planning and rather construed a seemingly bold endeavour, the success of which would undoubtedly promote a new dimension of the banking industry in Japan.

A particular firm's credit ratings and statistical EDF for its credit category allow us to make a rough estimate of a range of expected interest-rate spreads, in which the firm would be able to raise funds in the market. The *required margin curve* in Figure 6.3 illustrates the relation between expected spread and credit ranking of each borrower (see also Figure 3.3).

In the loan (debt) market, borrowers are required to keep a certain level of credit to ensure the availability of sufficient sources of funds. In Japan there exists the so-called 'Commercial and Industrial Loan' as a marginal funding source. Some firms with lower credibility have no choice but to borrow at very high interest rates of around 15 per cent p.a. The conceptual domain of the commercial and industrial loan provider is assumed as the domain (*I*) in Figure 6.3. In contrast, the conventional loan providers such as 'city banks' and 'regional banks'

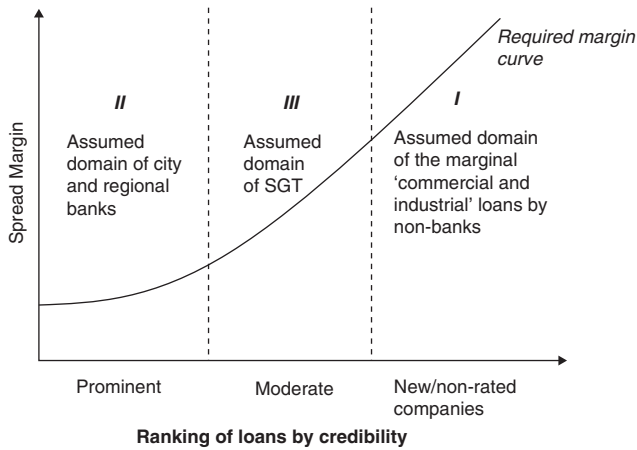

Figure 6.3 Required margin curve and conceptual assumed domains

are in the conceptual domain (*II*) in the figure, where they prefer to extend softer loans (the interest rate condition is around 1 to 5 % p.a.) to prominent large and middle-sized firms with higher credibility. The targeted domain of SGT is considered the domain (*III*) in the figure, a lacuna which is not fully coverred by eigher commecial and industrial loan providers or conventional loan providers. The SGT estimated the market size of the lacuna at several trillion yen.[5]

The SGT prepared the following financial products of providing swift financing to SME: (1) Portfolio Financing (PF) and (2) Financing Emphasizing Technical Capabilities and Future Potential (FETCFP). Table 6.1 provides an overview of these two products.

According to an SGT staff (an interview with an Executive Officer of SGT on 23 August 2006), the automated screening process based on scored on client cash flows in the PF, referred essentially to its scoring upon the last two years' financial statements of clients. At the same time, it also referred to additional qualitative information on clients to be collected with some transaction costs.

Based upon the scoring from quantitative data and also the additional qualitative information, the SGT undertook credit risks of clients including those who were falling into negative net worth. In addition, the screening process included the cash flow analysis by confirming the contracts received by clients, and also referred to checking the personal credit information on CEO as well as the flows and balance in clients' account in their main line banks. At the point in the interview on August 2006, the average final maturity of PF was around 3.5 years and the average interest rate was around 6.5 per cent. Basically, the SGT was not aggressive in providing loans to 'start-ups'. In fact, the access of PF was limited to the firms having at least two years' settlements of accounting. As of August 2006, no loan had been made to start-ups under the FETCFP scheme.

In the first financial statement for the year ending in March 2006, the SGT recorded a loss of ¥18.6 billion from ordinary business operations and a final net loss of ¥20.9 billion. Since their full operation was started in July 2005, the outstanding balance of loans and guarantees stayed at around three-quarters of the initial plan. The initial infrastructure development investments, such as information system and call-centre facility led to the negative earnings. However, because the writing-off of NPL[6] was not required earlier than expected in the plan, the final deficit was within the projections made in the plan.

As of September 2006, the SGT recorded current income (revenue) of ¥4.7 billion including interest income of ¥3.5 billion, while paying

Table 6.1 Features and conditions of financial products prepared by SGT

(1) PF	(2) FETCFP
i) Features	
a) Swift screens and answers within 3 business days to loan applications.	*a)* Finances challenging but financially troubled SME with a certain level of technical capacities and future potential.
b) Automated screening process based on a scoring model put importance on clients' cash flows.	*b)* Make use of the skills and know-how of providing unsecured loans and guarantees to SME, held by collaborated companies and consulting firms.
c) Efficient operation by centralization of transactions.	*c)* Supports clients by issuing "certificate of technical capacities and future potential" for enhancing their credibility.
d) Disclosure of screening process.	
ii) Eligibility	
SME even though they are falling in negative worth.	Periodically accepts loan applications through collaborated financial institutions and organizations.
iii) Final Maturity/ Tenor	
Up to 5 years (7 years in case of secured loans).	Up to 3 years (5 years in case of secured loans).
iv) Average Interest rate	
In principle, 2 to 8 per cent in accordance with credit risks.	In principle, 2 to 8 per cent in accordance with credit risks.
v) Loan amount	
Up to JPY 50 million.	Up to JPY 100 million.
vi) Security conditions	
In principle, unsecured condition (no mortgage, no guarantee).	In principle, unsecured condition (no mortgage, no guarantee).

Source: Created by the author based on TMG 2004 and an interview with SGT

expenses of ¥20.1 billion including the reserve for losses from loans of ¥9.9 billion, resulting in a net loss of ¥15.4 billion. At the same time, the outstanding balance of loans and guarantees stayed at ¥281.9 billion. The SGT was required to seek economies of scale in their loan business and to improve spread margins with proper risk-taking. According to SGT (based on an interview in August 2006), the bank changed their marketing target to *micro* enterprises with annual sales of below ¥500 million. However, in the second financial statement for the year ending in March 2007, the SGT recorded a loss of ¥20.6 billion from its ordinary business operations and a final net loss of ¥54.7 billion. The ratio of NPL to total assets in the SGT jumped from 0.90 per cent in the previous fiscal year to 6.42 per cent.

The bank disclosed at a press conference that as at the end of September 2007 it had accumulated losses of ¥93.6 billion, of which ¥8.6 billion had been accrued in just the past six months, according to Kyodo News. These losses were largely attributable to the glaring mismatch between the high interest rates the SGT was paying on taking deposits and the low interest rates it charged on loans. In February 2008, the SGT sought a TMG bailout of ¥40 billion after incurring massive losses resulting from unsound business practices. The bank was counting on a local government bailout to bring it back to profitability by the fiscal year ending March 2012. It unveiled a restructuring plan to cut more than 70 per cent of its staff, downsizing to 120 from 450, and is mulling over the possibility of shutting down all of its six city outlets, keeping open only its headquarters as reported in Forbes.com on 20 February 2008. It is better to admit that the unique business model of SGT as 'regional' and 'transaction' banking using scoring model has proved unsuccessful. In the restructuring plan, the bank abandoned its *transaction* banking strategy and introduced a monitoring method based on *relationship* banking. While the SGT faces difficulties in finding and maintaining its '*raison d'être*' in the market, the bank recorded the final net loss of ¥16.7 billion in its 3rd financial statement as of March 2008, and the final net loss of ¥10.5 billion in the 4th financial statement as of March 2009.

6.6 Concluding comments

The viewpoints of Cabinet Office economists (the Japanese government) and Harada (1999), an ex-Economic Planning Agency (EPA) economist, emphasize the importance of the supply side and argue that the US's competitive advantage over Japan was the result of its policy of banking *deregulation* since the late 1970s. They suggest that higher

labour costs and the regulations for protecting vested interests may have caused Japan to lose its competitive edge in international markets (Cabinet Office 2002; Harada 1999). Supply-side approaches insist that Japan's potential growth is in decline. In this context, it is unsurprising that many, including the IMF (2000), would applaud Japan's 'Big Bang' financial deregulation and reforms. Japanese regulators appeared to make rapid progress in implementing their framework for revitalizing the financial system. As part of the reforms, the major banks were re-capitalized, their reported capital adequacy ratios were improved, several mega-mergers of major banks were concluded (see section 7.4), two nationalized banks were re-privatized, and new funds for depositor protection were created. However, from the evidence on growth it is not clear that the deregulation towards an Anglo-American financial system made a substantial contribution to change the growth potential of the Japanese economy. Our aim has been to explore some of the doubts about the appropriateness of these reforms for Japan.

As for the NPL, the pace of dealing with the problem by the Japanese regional banks has been relatively slow (see Figure 6.4), although they had a smaller NPL problem to begin with in comparison with the major banks. The major banks reduced the outstanding NPL by 44.7 per cent between March 1999 and September 2004, while the regional banks reduced theirs only by 0.03 per cent during the same period. According to SMEA (2004), regional banks play the 'main bank' role for 57 per cent of the small enterprises with between 1 and 20 employees, while city banks play this role for 23 per cent of such enterprises. In addition, regional banks play the main bank role for 57 per cent of the SME with 21 to 100 employees, while city banks do so for 28 per cent. Regional banks play the main bank role principally for relatively small enterprises. The pace of dealing with the NPL of SME may therefore be even slower than for the big corporations. In fact, the NPL ratio has been improving. But, as was argued, this improvement did not necessarily lead to ensuring the intermediation of financial resources towards SME.

Meanwhile, BOJ (2004) shows that the 'fee profit' (including transaction fees for exchanges and trustee management) and 'other profit' (including profits from dealing foreign exchanges and treasury bonds) did not changed radically after the Big Bang. In particular, regional banks still relied mainly upon 'interest profit'. As a whole, the composition of the profit base in Japanese banks remained unchanged. Meanwhile, Table 4.6 shows that the risk preference of portfolio selection by Japanese households also remained unchanged, although the 'Big Bang' aimed to respond to the rapidly aging society by re-deploying the funds held by households

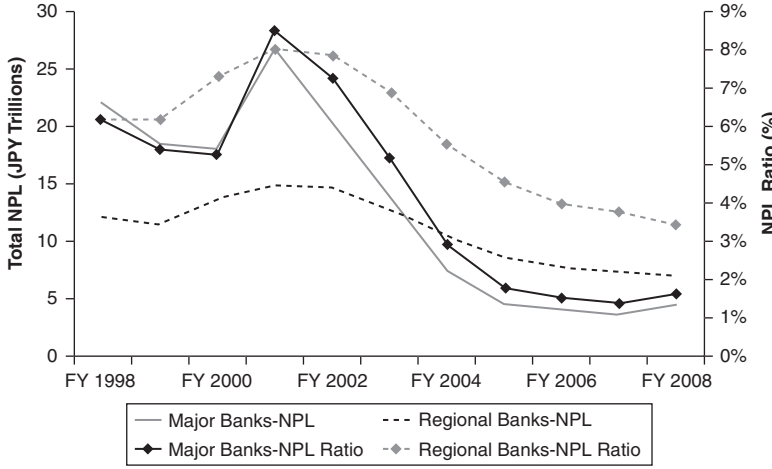

Figure 6.4 Changes in outstanding non-performing loans (unit: ¥ trillion)
Source: Financial Services Agency (2010).

and transforming from an indirect financing system to a direct financing one. While the outstanding financial assets held by the households sector increased to ¥1,465 trillion at the end of March 2007, the weight of 'safety assets' stayed at 52.9 per cent. Meanwhile the weight of 'risk assets' stayed at 15.5 per cent (see Table 4.6).

The difficulty of dealing with uncertainty means that financial institutions are subject to swings of mood and herd behaviour. This type of herd behaviour was responsible in part for the Japanese banks' overlending to the real estate sector in the bubble economy at a time when hitting the technological frontier made the monitoring of productive enterprises more difficult. However, the Anglo-American system of spreading some of this uncertainty amongst a broader investor base could not be properly implemented in Japan because of a number of structural problems, particularly in the absence of a broad potential investor base willing to absorb this risk in the form of different forms of equity. The adoption of the Anglo-American system in the Japanese context therefore made no contribution to managing the uncertainty inherent in lending in frontier economies, but on the other hand, accentuated a 'credit crunch' because banks were now subject to a convergence in risk assessment while still remaining the main source of long-term industrial financing.

Arguably, the most important issue for the Japanese economy is how to ensure the supply of sufficient financial resources to innovative SME. This would be a key requirement for the revitalization of the stagnant Japanese economy. Such innovative SME are exposed to severe competition and their probability of success is subject to intensified uncertainty as more Japanese SME are forced to operate at the technological frontier. For those banks which are basically required to employ funds from depositors at low levels of risk, although short-term credit risk can be absorbed, it is much more difficult to assess the risk (or rather the uncertainty) involved in lending to particular SME and in providing them with medium and long-term loans. In our assessment, the crisis of financial intermediation of long-term funds towards SME and other potential growth industries is the root cause of Japan's prolonged economic slump.

7
Transition Failure

7.1 Introduction

This chapter looks at a number of deeper questions that follow from the discussion in earlier chapters. These questions relate to the nature of the transition through which the Japanese financial system was going in the period under discussion. Clearly, there had been problems in the Japanese financial structure before the reforms began, but it is also clear that the reforms left many questions unanswered and that the appropriateness of these reforms for Japan could also be called into question. The broad question we want to raise, if only to explore the types of answers that may be relevant, is why this particular strategy of reform was chosen. In particular, we face a number of critical and quite puzzling questions.

(I) The issues that we need to answer for the period from the collapse of the bubble economy to the nationalization of the collapsed LTCB (in 1998) are as follows:
   1 Many of the commonly accepted theories for the emerging crisis of this period focus on the regulator's (MOF) repeated failures of omission and commission. However, they do not sufficiently explain why these egregious errors continued and were sustained over such a long period.
   2 When the crisis finally led to reform, why did Japanese regulators change over so conclusively to an attempt to develop an Anglo-American rules-based system of supervising in Japan? This is a particularly important question because their decisions had immediate and adverse effects on the banks the regulators had long been working with. The immediate effects included, for

example, the sudden bankruptcy of banks like the LTCB which had been *quasi*-insiders in the convoy system.

(II) A further set of questions are relevant for the prolonged recession following the 'Big Bang' in 1998.

1 Can the financial deregulation that rapidly followed the 'Big Bang' contribute to the resolution of the problems of Japanese banks and help to take the Japanese economy out of its prolonged stagnation? We have argued that the ill-considered transition that attempted to introduce every aspect of the Anglo-American financial system contributed to Japan's prolonged financial slump.

2 If the comprehensive adoption of the Anglo-American monitoring system was inappropriate in the case of Japan, can Japan grope its way to a more appropriate alternative system?

As was argued in section 6.2, many economists suggest that the Japanese economy has been the victim of the macroeconomic policy errors of regulators throughout the 1990s, causing Japan's banking crisis and subsequent economic stagnation. However, only a few economists have addressed the question of why the policy errors continued. For instance, according to Saito (1998) the continuation of economic policy errors occurred because there was a lack of a 'control tower' (a strong political leadership) when it was most needed after the malfunction of the 'convoy' system. However, his argument lacks any explanation of why Japan has continuously failed to create a 'control tower' over such a long period. Takeda (2001) criticizes the regulator's insufficient *accountability* in terms of the disclosure of information, in particular, about the process of policy making. He criticizes the opaque process through which the *easy-money* policy was introduced by the BOJ during the bubble economy and then the transition to a tight monetary policy after the collapse of the bubble. Takeda points to these opaque processes and argues that *transparency* would be required to improve their policy making. However, as was argued earlier in section 3.4.4, transparency would not always be efficacious as it is conditional on what Elster calls 'audience effects' and a relatively closed channel for sharing information between regulators and the banking industry is occasionally required for ensuring financial stability. The loss of informal channels of sharing information may have been even more critical in explaining the persistence of Japan's banking crisis and prolonged financial slump.

An alternative explanation is provided by Kanaya and Woo (2000) and Patrick (1998) who point to the impact of competing regulatory

authorities. Patrick (1998) points out that one dimension of governmental policy mistakes was the growing imbalance between the use of fiscal policy and monetary policy, as was argued in section 6.2. Patrick (1998) also points out a dilemma underlying seemingly inconsistent macroeconomic policy errors throughout the 1990s. For instance, on the one hand, the MOF as the Banking Bureau depended upon the restoration of economic growth to halt and reverse the declines in urban real estate prices and to convert marginal bank loans into good loans, and otherwise to ease the persistent NPL problem. On the other hand, the MOF as Budget and Tax Bureau persistently pursued budget deficit reducing measures which thwarted economic recovery. Toshida (2001), ex-EPA economist, points out that government's recognition of the structural *demographic* problem that Japan faced influenced its policy of budget deficit reduction. However, the effect of these macroeconomic decisions on the regulators' decision to abandon major banks ruthlessly without examining all of the economic implications is not established.

This chapter explores a new hypothesis that can help to shed light on why the Japanese financial system has fallen into a unique 'transition failure'. Both Francis Fukuyama in his book *Trust: The Social Virtues and the Creation of Prosperity*, and Ronald Dore, in many of his writings on Japan (Dore 1998, 2000), argue that Japan has been a 'high-trust', 'group-oriented' society. Interestingly, there is a difference in their categorization of the US, which is not directly relevant for our narrative. According to Dore (2000), the US can be categorized as an individualistic country at one extreme while Japan is a group-oriented one at the other. In contrast, Fukuyama regards both of countries as high-trust and group-oriented.

> If people who have to work together in an enterprise trust one another because they are all operating according to a common set of ethical norms, doing business costs less. Such a society will be better able to innovate organizationally, since the high degree of trust will permit a wide variety of social relationships to emerge. Hence highly sociable Americans pioneered the development of the modern corporation in the late nineteenth and early twentieth centuries, just as the Japanese have explored the possibility of network organizations in the twentieth. By contrast, people who do not trust one another will end up cooperating only under a system of formal rules and regulations, which have to be negotiated, agreed to, litigated and enforced, sometimes by coercive means. This legal apparatus, serving as a substitute for trust, entails what economists call 'transaction

> costs'. Widespread distrust in a society, in other words, imposes a kind of tax on all forms of economic activity, a tax that high-trust societies do not have to pay. (Fukuyama 1995, pp. 27–8)

As was argued in section 3.4, there existed deep but intangible and informal institutional arrangements in the traditional Japanese financial and monitoring system. In particular, (1) the dense networks of communication in the 'main bank' system, where the main banks (lenders) were deeply involved as *quasi*-insiders in the operation of client firms (borrowers), and (2) the dense information networks in the 'convoy' monitoring system between the regulators and the regulated banks, both contributed to stabilising irrational swings of uncertainty and to the effective allocation of financial resources during Japan's high growth.

In this group-oriented financial monitoring system which was part of the system described as 'Japan Incorporated', the main bank had the task of assessing client firms' credit risk and the degree of uncertainty to which they were exposed. At the same time, the main bank's role was supported by the whole system, including firms and regulators. One problem with this system was that when the system became exposed to a higher degree of risk and uncertainty that was beyond the capacity of the main banks to absorb, the fragility of the 'group-oriented' system increased dramatically. We argue that this was the most crucial driver behind the emergence of the financial crisis.

Section 7.2 aims to discuss the characteristics of 'trust' observed in the traditional Japanese monitoring system, and to survey the theories exploring the relationship between transaction costs and informal institutions. We use this to examine the nature of the 'transition failure' into which the Japanese monitoring system has fallen. Section 7.3 examines how intensified audience effects could induce regulators to ruthlessly allow banks to go bust. In other words, this was the transition cost paid by the regulators. Section 7.4 discusses recent changes in the system of mediating financial resources in Japan. Section 7.5 concludes.

7.2 Costs of abandoning the traditional mode – the transition cost

We have looked at an institutional perspective on 'trust' (see section 2.4). To understand the Japanese financial system in its traditional mode, the problems it faced and the subsequent transition failure, we need to examine in greater detail the type of trust which was underpinning the

mode of monitoring in the traditional Japanese banking system. The key characteristics of trust in this mode appear to be as follows:

1 Trust between banks and firms: (i) The deep involvement of the main bank in the operation of the client firms contributed to a strengthening of the lender's confidence and the relationships of trust between borrower and lender. Repeated transactions and a long-term relationship enhanced the 'trust' of the lender in the credibility of the borrower, in the sense that the borrower would not shirk from efforts at running its business and would not take opportunistic actions against the lender. Based upon the creation of such 'trust', there was a significant reduction in the cost of monitoring through formal institutional arrangements. (ii) The firm put a great deal of effort into running its business to sustain the trust of the main bank. The lender's trust was a valuable 'commodity' that enabled the firm to expect financial support from the main bank, including stable credit lines for investment and working capital as well as rescue operations if the firm got into temporary trouble. (iii) Both parties realized that a failure to meet the other's expectations would hurt its 'reputation' not only bilaterally, but also in the broader financial world. The enforceability of formal and informal contracts in this monitoring system based upon mutual trust was strong precisely because of the high costs of losing reputation and franchise value (Hellmann *et al.* 1997; Stiglitz 1994).
2 Trust between regulators and banks: In the 'convoy' monitoring system based upon a protection and sanction mechanism, (i) The dense information network between banks and regulators contributed to create regulators' trust in the banks, at least, in the sense that the banks in trouble could be expected to promptly report the situation through a non-public route for sharing information. On the one hand, prompt responses by regulators had an effect of ensuring financial stability. On the other hand, this mode of information sharing based on the preservation of trust prevented the banks, in particular, the main banks from shirking on their monitoring efforts as long-term monitoring agents of client firms. Their failure to sustain regulators' trust would have an economic cost if the loss of reputation and relationship with regulators deprived them of bank rent opportunities coming from their role as a main bank. (ii) The banks also trusted the regulators to play a guiding role and to display *ex post* flexibility in making new policies and enforcing them to sustain the financial system and thereby the trust that had been developed

on both sides. As a result, there was an expectation in the banking industry that the regulators would be benevolent to the banks even in unexpected adverse situations.

The important point was that in the traditional Japanese 'relation-based' financial system mutual trust played an important role as a lubricant restraining the transaction costs of contracting and monitoring. It follows that the outcomes observed in the Japanese 'relation-based' financial system were sensitive to the degree or changing nature of *trust*, a commodity that is fundamentally non-quantifiable. Dore (1998) refers to 'systemic cohesion' as a feature of the Japanese model that comes from what one might call 'psychological consonance'. He identifies the following behavioural dispositions within the system: (i) the willingness to enter binding long-term commitments, implying a very moderate degree of liquidity preference; (ii) greater concern for long-term stable rewards than for short-term gains; (iii) a concern for the emotional and moral quality of the social relationships involved in economic transactions, the friendships and the mutual obligations they generate, as well as their material profitability; (iv) a tendency to view group solidarity as an important ingredient of that emotional and moral quality – the relevant 'group' being, depending on context, one's department, one's firm, one's industry, one's nation, Japan; and (v) the egalitarian perception that group solidarity becomes impossible if inequalities, either of material reward or of respect, become too wide (Dore 1998, p. 777).

The recent changes in the economic environment faced by Japanese firms intensified their uncertainty and could have contributed to an undermining of the traditional trust relationships that underpinned economic activities. Nevertheless, the system depended upon a particular set of relationships of mutual *trust*, and a new system based on a different set of formal and informal rules for monitoring would require a different but effective set of constraints for controlling opportunistic behaviour. A fundamental source of the transition failure experienced by Japan was the accelerated collapse of the old system before the introduction of new rules or systems of informal constraints or trust to restrain the emergence of opportunistic behaviour and high transaction costs in the new system.

We are not arguing that the traditional Japanese system was viable or that it collapsed solely as a result of policy errors. We have argued that Japan went through an economic transition from the 'catching-up' period when uncertainty for lenders was based primarily on the possibility of shirking by borrowers to a 'frontier' economy when most

uncertainty is fundamental and based on the uncertainty related to the future marketability of investments in innovation. As the Japanese economy matured into a frontier economy, the relationships of trust between main banks and client firms were no longer sufficient for making the system work. Rather, these trust relationships became a key contributor to increasing the systemic risk by enabling banks to undertake excessive credit risks. The old system of trust-based monitoring was not well suited for limiting exposure when most loans were subject to fundamental uncertainty. What is significant for our assessment of the transition is that while the traditional system had become inappropriate, the Anglo-American system was not necessarily an appropriate transition goal either. The relationships of trust on which the Japanese system was based made it difficult to transform into the Anglo-American system of monitoring in which banks can resort to the legal process for liquidation or corporate reorganization of firms in trouble. The fundamental problem in the Japanese transition was that there was an inadequate understanding of the systemic requirements of the Anglo-American financial system.

When institutions of monitoring do not work efficiently, why do they not change rapidly? The general answer is that the emergence of new institutional arrangements that can reduce transaction costs can be constrained by higher-level transition costs of organizing the change process itself. Khan (1995) points out that transition can also be blocked by political constraints if change in particular directions is strongly resisted by powerful groups who fear that they may lose out. According to Khan (1995, pp. 72–3), institutional failure can therefore occur at two levels: 'structural failure' and 'transition failure'. The former refers to the performance of an existing set of institutions and the latter to the efficiency of the process through which inefficient institutions are changed. 'Structural failure' occurs if a particular institutional structure results in lower net benefits for society compared to an alternative structure. 'Transition failure' occurs when the process for changing the structure of institutions achieves a lower cumulative set of net benefits for society compared to an alternative process over a given period. Khan points out from a political-economy viewpoint that a possible and important reason for transition failure is that classes or groups that fear losing out can threaten transition costs that are too high for those proposing the institutional change and the result is that potential institutional changes may not happen (Khan 1995, p. 84). We would add that informal or intangible constraints can also determine high transition costs.

Institutions have been distinguished as either formal or informal. The former are enforced by third parties (such as the state) and include the structure of laws – the rules under which governments, local governments and all types of financial and economic organizations operate. Informal institutions are rules that are not enforced by third parties but are either self-enforcing or are enforced informally. These include conventions, customary practices, norms, and rules that emanate from culture, religion and so on. Endowments of 'social capital', trust and spontaneous sociability referred to earlier are related in principle to the enforcement of informal institutions, but they also affect the operating and enforcement costs of formal ones.

North (1990) hints at the problems that can emerge in cases where formal rules (institutions) change but the informal institutions underpinning these institutions do not. As a result, tensions can emerge between informal constraints and new formal rules that may be inconsistent with each other.

> Such change is sometimes possible, in particular in a partial equilibrium context, but it ignores the deep-seated cultural inheritance that underlies many informal constraints. Although a wholesale change in the formal rules may take place, at the same time there will be many informal constraints that have great survival tenacity because they still resolve basic exchange problems among the participants, be they social, political, or economic. The result over time tends to be a restructuring of the overall constraints – in both directions – to produce a new equilibrium that is far less revolutionary. (North 1990, p. 91)

In general, the informal institutions constituting the foundation of society as conventions and norms stabilize social expectations and structure social life. 'Because they are self-enforcing, the efficacy of these rules depends on the extent to which social actors find it in their self-interest to comply with them' (Knight 1992, p. 171).

Informal constraints are potentially important factors determining the direction and pace of institutional changes, because formal institutions are, in general, designed and created on the foundation of informal conventions and norms. But do we have the capacity to predict the precise direction and pace of change? Our bounded rationality (see section 2.2.3) is one factor that constrains us in our understanding of the particular informal constraints at work as stabilizers in a particular context. This type of analysis warns us that there are possibly important

informal constraints working to underpin a formal institutional system of which we may not be fully aware. By the same token, formal institutions may be created that lack an appropriate informal structure of norms to make them effective, and they may further weaken a pre-existing informal institutional framework rather than strengthening it.

The assumption that economic agents are rationally self-interested can drive a misleading analysis that suggests that institutional change will be driven in directions that make everyone better off (see Knight 1992, p. 109). However, the Prisoner's Dilemma framework in game theory, for example, tells us that the dominant strategy of rational self-interested agents can easily be such that the mutually beneficial outcome does not emerge. Equally importantly, institutional changes are often pursued under conditions of bounded rationality or procedural rationality. We are often incapable of giving a satisfactory evaluation of the collectively beneficial nature of particular social rules, because we have a limited knowledge of the informal constraints that are important for making them work. Transition failure may therefore be related to the cost of changing not only the formal institutions but also the uncertain relationship between formal and informal institutions. Under conditions of uncertainty, imperfect information and high transaction costs, the subjective models of economic agents modified both by imperfect feedback and by ideology shapes the path of transition (North 1990).

Apart from the question of the compatibility of particular formal institutions with underlying informal institutions, the sudden abandonment of a system of formal institutions based upon particular relationships of trust can also result in a sudden collapse of trust in the system as a whole that is itself relatively costly. When trust in general is eroded in the system this can make the transition paths (in any direction) more costly because there can be a collapse in the collaboration between agents and organizations over the bringing about of any transition. The result can be a failure that manifests itself as a trap of 'collective inaction' where all agents opt to simply maintain the status quo, whatever it is, because they are unwilling to cooperate with other agencies in a context of collapsing trust. Thus, the collapse of trust in a pre-existing system can actually result in narrowing the path to find alternative institutions.

These insights help to explain why Japanese banks continued to operate as if the old system was still in place even when the formal rules of a new system began to be introduced by the regulators. As we have argued earlier, when Japan became a 'frontier' economy Japanese firms were exposed to greater fundamental uncertainty, and Japanese banks

were exposed to potentially much higher monitoring costs to limit their exposure. Meanwhile, the 'formal' institutions setting the context for the Japanese banks, such as the introduction of the Basel capital adequacy requirements and drive to quantify credit risks emerged as strategies to prevent Japanese banks undertaking excessive credit risks. But in spite of these attempts, Japanese banks including the LTCB continued to play the role of 'main banks' in the traditional 'main bank' framework. For instance, the outstanding balance of loans from the LTCB to EIE International (a real-estate developer) jumped to more than ¥200 billion in 1993, from ¥35 billion at the end of 1990, as a result of an attempted rescue operation (Harada 1999). As was referred in chapter 5, the LTCB continued to support its client firms in trouble to the end,[1] using all the bank's unrealized capital gains amounting to ¥1.26 trillion in March 1994.

Furthermore, as we argued in chapter 5, the change in lending spreads was attributable in part to a rising consciousness of credit risk among banks since the early 1990s. However, as BOJ (2001b) points out, the increase in lending spreads only offset the contraction in the fundraising spread and stopped short of covering loan losses. Japanese banks could not sufficiently improve the spread margin. BOJ (2001b) contrasts the overall margins and realized credit costs of US banks with those of Japanese banks. While the average margin earned by the Japanese banks in the 1990s stayed below 2 per cent, US banks expanded the spread margin to between 3.5 to 4.0 per cent. The overall margins of German and French banks were between 3 and 4 per cent, the average of EU banks about 4 per cent, highlighting the extremely low level of overall margins of Japanese banks. Some may see this as a weakness in the credit risk management and pricing behaviour of Japanese banks. However, as BOJ (2001b) points out, the real problem was that it was difficult for Japanese banks to expand lending margins unilaterally given their preference for a long-term relationship with their customers.

It is also said that the overwhelming presence of the public sector in housing loans, which is one of the major profit centres for both US and European banks, made it difficult for Japanese banks to diversify their profit structure. BOJ (2001b) points out that US banks improved their profitability significantly in the early 1990s and this was explained in part by their aggressive promotion of housing loans. The ratio of real estate loans (those on residential properties) to total loans in the US reached almost 25 per cent while that in Japan remained at around 15 per cent in 1999 (ibid., p. 18). Presumably, the reduction of the presence of public financial institutions in housing loans in Japan would have

contributed to an enhancement of the profit base of Japanese banks and allowing them to enjoy higher spread margins without the serious adverse selection or moral hazard effects identified by Stiglitz and Weiss (1981). This was because the conventional housing loans to prime borrowers brought high profits to banks and their exposures were secured by mortgages on residential properties.

Consequently, like the LTCB, many banks compensated for their low margins by using the unrealized capital gains of their stock portfolio to cover the increasing costs of provisioning and writing off. If these banks had attempted to transfer their higher credit costs to their clients, the consequences for borrowers would have been suddenly very adverse. According to the Cabinet Office (2004, p. 260), the outstanding loan assets held by the banks (including ordinary banks, foreign banks, specialized banks serving the agricultural, forestry and fisheries industries, and the small business finance corporation) was estimated at around ¥698.7 trillion in FY 2000. If the Japanese banks expanded their lending margin by 1.5 per cent, the additional interest revenue would be around ¥10.5 trillion. If they expanded the margin by 2 per cent, around ¥14 trillion would be generated. The outstanding NPL at the end of March 2001 was recorded at ¥32.5 trillion. Raising the margins could therefore have immediately covered one-third of the NPL provided the higher interest rates did not result in significant additional bankruptcies. What is interesting is that Japanese banks made little attempt to raise margins.

In a similar vein, a number of other aspects of the transition failure were based on agents continuing to behave informally in ways that no longer made sense in terms of the new structure of formal rules. In addition to the aspects discussed above, the following 'transition failures' can also be considered as aspects of the general problem at issue:

1 The established relationships between the main banks and their client firms deterred the main banks in interest respects from dealing with NPL. There is little evidence that main banks put adequate pressure on their clients to recover loans. This was rational at the macro level because if main banks had begun proceedings of filing or liquidating *all* troubled firms, this would have caused an unbearable loss to the banks. If they had triggered the hard-landing strategy for dealing with NPL in the 1990s, it would have caused a serious adverse effect on the corporate sector, resulting in higher unemployment and a deteriorating macro economy. Nevertheless, the failure of any main bank to initiate proceedings against their clients in ways

now encouraged by the new regulatory system can be explained as a continuation of informal relationships that persisted because trust in the new system being created was far from adequate.

2 On the one hand, as was argued in section 4.4, portfolio selection by Japanese households continues to exhibit 'risk-averse' preferences, which makes it extremely difficult for Japan to smoothly transit to a securities-based direct finance system as an alternative to the main bank system. Indirect finance is still required in Japan, but only if the Japanese banks meet the Basel standards of short-term portfolio quality (see section 4.3). As argued in chapter 6, these requirements resulted in a credit crunch for SME. Consequently, the Japanese banks faced a difficult choice, 'to ration credits' or 'to absorb higher credit risks'. Here, Japanese banks were expected to construct new relationships with SME borrowers, where risks to be covered by new rules to be enforced by regulators. The absence of trust in these new relationships resulted in Japanese banks choosing credit rationing and this was an important factor explaining the persistence of the recession in Japan.

3 Under the traditional 'convoy' system, banks facing difficulties expected regulators to come up with initiatives for resolving the NPL problem. These expectations continued and the attempt of regulators to enforce a different set of rules resulted in a loss of trust. One consequence of the loss of trust was that main banks continued to act as if the old system was still in operation, creating a hold-up situation for the regulators. Regulators could respond to the decisions of main banks in ways that would re-establish trust, but if they let main banks collapse according to new rules, trust would be further eroded and main banks would be less willing to accept losses for the collective interest. An aspect of the continuing Japanese financial crisis can be explained in terms of games that were being played between regulators and main banks as each tried to test the intentions and commitment of the other in a context where the traditional system of monitoring had collapsed together with its relationships of trust.

7.3 Intensified 'audience' effects

This section examines the political affairs surrounding the regulators' decision to ruthlessly abandon major banks without examining all of the economic implications, to argue why Japanese regulators shifted conclusively to an attempt to develop an Anglo-American rules-based system of supervising in Japan. We argue that the regulators' failure to

properly respond to Japan's financial crisis can be explained according to the logic of 'audience effects' detailed in section 3.4.4. This logic focuses that the regulator's decision was increasingly constrained by public opinion. In particular, general public distrust in financial system intensified in the 1990s by a series of their performance failures and scandals mentioned below.

The traditional Japanese 'convoy' system where regulators and the banking industry enjoyed closed channels for privately sharing information (see section 3.4.4) has been controversial. Because this structure could in theory explain unproductive rent-seeking and therefore the crisis of the Japanese financial structure. In fact, there were 'the long-established conventions of entertainment of the regulators by the regulated – "relational regulation", as it were, paralleling relational banking' that limited unproductive rent seeking (Dore 2000, pp. 158–9). However, after the collapse of the 'bubble' economy, the populist media, including intelligentsia and opinion leaders, began to attack the relationships between banks, the MOF and the political establishment. These attacks, since around 1991, focused on exposing a series of scandals related to illegal loans by Japanese banks. Examples were the scandal of illegal loans by Sumitomo Bank (later the Sumitomo-Mitsui Financial Group) to the Itoman Corporation around Spring 1991, suspicions over illegal loans by Fuji Bank (Mizuho), Kyowa-Saitama Bank (Resona) and Tokai Bank (Mitsubishi-UFJ) in July 1991 respectively, suspicions about illegal deposits by Toyo Credit, involving the IBJ (Mizuho) in August 1991.

In addition, in around June 1991 a scandal was exposed relating to cover-ups and market manipulation by Nomura Securities, the top securities house. Initially, the media accused banks of incompetence. But soon, the 'claim to elite incorruptibility [was] badly dented, in part by one or two spectacular revelations of personal corruption on the part of senior officials – clear examples of personal enrichment or the enrichment of friends, through the abuse of power' (Dore 2000, p. 158). Needless to say, any corrupt official illegally leaking secrets leading to the abuse of power is to be blamed. However, the manipulative reports by the media and intelligentsia resulted in a public outcry that failed to calmly assess the essential benefits and defects of the relation-based financial system in the context of Japan.

> Newspapers report the size of the restaurant bills turned up by the prosecutors investigating cases of bank fraud, but rarely relay the bureaucrat's defence: 'Our decisions are not swayed by feasting and golf course treats, which we receive in moderation from all

> participants equally; but they are essential ways in which we get to learn informally the problems of the industry; they serve to establish the relations of trust which enables Japan to have reasonably honest banking with only 400 bank inspectors, a tenth of the number in the United States…' (ibid., p. 159)

The media and intelligentsia focused on the negative aspects that occasionally surfaced due to the exclusiveness of the relationships underpinning the convoy system. They did not consider the positive aspects which resulted in an effective monitoring system based on low aggregate monitoring costs. The challenge for Japan was to reform this system and build on aspects that were appropriate for the new monitoring and regulatory challenges as Japan changed from a catching up economy to a frontier economy. Instead, the public outcry simply concluded that deregulation in terms of a transition to an Anglo-American financial system was the answer.

The more the media dramatized the stories of 'the few bad apples in every barrel which were always there' (Dore 2000), the higher was the 'audience cost' (see section 3.4.4) in Japan. Nishimura (1999) quotes a senior colleague's comment when he was appointed as Chief Director of the Banking Bureau in the MOF in 1994: 'In the past, the public supported whatever the MOF did, because the public trusted that the MOF protected the national interest. After the exposure of a series of scandals over cover-ups and market manipulation by major securities companies in 1991, the public would no longer accept that whatever the MOF did was in the national interest.' Nishimura further points out that this was a turning point for the MOF.

The old relationships between the MOF and the banking sector that had enabled efficient monitoring at relatively low monitoring cost began to unwind rapidly. The MOF publicly stated that it would not provide rescue options for financial institutions that could not survive the process of deregulation. The audience effect in the process of financial deregulation in Japan intensified after the arrival, in 1993, of the first coalition government of Prime Minister Hosokawa. It was in 1993 when Japan's ruling LDP, lost power after a 38-year reign. The Hosokawa government had to tackle a range of difficult political issues, including the conclusion of the GATT Uruguay Round of trade negotiations that resulted in the opening up of the Japanese rice market despite strong resistance from the powerful agricultural interest groups and politicians who represented rural areas. The government also had to address issues of electoral reform at home while trying to lead an unprecedented

coalition of eight political groups with a wide range of conflicting political ideas. In this context, dealing with NPL problem was not the most important priority on the political agenda.

The deregulation of the deposit rate ceiling was completed on schedule in October 1994. As late as autumn 1994, the retiring president of the BOJ announced publicly that the bankruptcy of some small banks with financial difficulties would be unavoidable and possibly desirable (see Okuno-Fujiwara 1997, p. 375). Two credit cooperatives soon fell into this category in 1994: the Tokyo Kyowa Credit Cooperative and the Anzen Credit Cooperative. Instead of enabling one of the major Japanese banks to take over the smaller banks, the Tokyo Kyodo Bank was established through a capital injection by the BOJ. This signalled the end of the role of the major Japanese banks as 'white knights' even under initiatives of the MOF, a role that had been significant for resolving collapsed medium-sized financial institutions though the merger and acquisition process under the 'convoy' system. Another example of new approaches which challenged old relationships was the suspension of new deposit-taking and lending operations for Cosmo Credit Cooperative and Kizu Credit Cooperative in 1995.

Then, in June 1996 the Diet passed six laws establishing the Housing Loan Administration Corporation and the Resolution Collective Bank to cope with the liquidation of failed *jusen* (housing loans) companies and credit cooperatives. The growing public dissatisfaction with the injection of ¥685 billion of public funds for resolving the *jusen* problem, together with their pessimistic sentiments under the prolonged recession made MOF officers as well as the *MOF-tan* in banks hesitate in revitalizing this sector using the existing institutional arrangements and relationships. Okuno-Fujiwara (2002, pp. 77–9) criticizes the public and media response as misleading, and argues that economists including himself should have articulated the necessity of a quick resolution of the *jusen* problem because delays here held back the government and the banking industry from dealing with the NPL problem. Nishimura, the ex-Chief Director of the Banking Bureau in the MOF, makes an interesting comment in this context:

> the MOF did not intentionally postpone its response to the collapse of the bubble economy, but it is better to admit that the MOF had little capacity of taking pre-emptive action. Such a policy would possibly result in serious criticisms and strong political leadership would be required to support the policy as a necessity for Japan's future. The political leadership would have to deal with the public

> outcry and agitation. However, who could put up with this? Foreign pressure has been one political-economy device for executing these types of difficult policies because no-one [in Japan] could be blamed. However, this case was too big and complicated to use such a political-economy device. (Nishimura 1999, p. 89)

Meanwhile, in March 1998 a series of earlier scandals was revealed in which MOF officials had warned banks about forthcoming inspections. Four officers of the ministry were arrested, and their superior, Yoichi Otsuki, committed suicide in humiliation in January of that year (Kindleberger 2000, p. 87).

By mid-1998 when the issue of how to bail out the collapsed LTCB became controversial in the parliament as a political rather than an economic issue, the MOF had been sidelined as the core agency dealing with financial problems. While the LDP did propose a plan to recapitalize weak banks and in early July 1998 put forward a proposal to create so-called 'bridge banks' that would take direct control over the operations of failed institutions, the Hashimoto cabinet was unable to translate these proposals into concrete legislative action. Nishimura (1999) points out that the reduced presence of the MOF was the result mainly of a series of scandals involving MOF officials fuelling a public outcry against the MOF. Uriu (1999) points out that with public attention focusing on their past failures, bureaucrats had strong incentives to avoid further policy mistakes: in the absence of strong political leadership and direction, bureaucrats were reluctant to advocate bold actions or solutions. Toya (2003) insists that the political economy situation related to the Japanese financial Big Bang (financial deregulation) can be most properly explained by the rationale of each actor seeking the survival of their organization. In particular, he points out that when an actor lost the public trust, receiving trust became the main motivation for the actor. This claim implied that actors would respond to public opinion even if this had drastic and adverse effects on the relationships of trust between agencies on which the financial system was based. A series of policy errors and scandals meant the MOF lost public trust in its role of designing and monitoring the Japanese financial system. In addition, a series of scandals over the banking industry (for instance, illegal compensations for corporate extortionists (*so-kai-ya*) by Nomura Securities and Dai-ichi Kangyo Bank exposed around March 1997) also meant that the banking industry also lost the public's trust. This resulted in higher audience costs, which prevented the restoration of appropriate relations between the regulators and the regulated.[2] This

is the background of collapsing trust in which we have to understand the regulators' apparent abdication during the 1997–98 financial crisis and the subsequent prolonged financial slump, and also their headlong acceleration of the financial 'Big Bang' deregulation, causing a further adverse effect on the Japanese financial sector.

7.4 Actions by the Japanese banks after the crisis

Following the injection of public funds into the banking system in 1999, the Japanese major banks were merged into the so-called 'Big Four': the *'Mizu-Ho' Financial Group* combined Dai-Ichi Kangyo Bank, Fuji Bank, and the Industrial Bank of Japan (they set up the new financial holding company, Mizuho Holdings, in September 2000); *United Financial Group of Japan or 'UFJ'* combined Sanwa Bank, Tokai Bank and Toyo Trust Bank; *Sumitomo Mitsui Banking Corporation* combined Sumitomo Bank and Sakura Bank (they were merged in April 2001); and the *Mitsubishi Tokyo Financial Group* combined Bank of Tokyo-Mitsubishi, Mitsubishi Trust and Nippon Trust. Meanwhile, the nationalized banks were re-privatized. The LTCB was sold in March 2000 to a group of investors led by the US-based investment firm, Ripplewood Holdings, and was renamed 'Shinsei' Bank (meaning rebirth). After halting negotiations, a basic agreement to sell the NCB to a group of investors led by Softbank was reached in June 2000. The NCB was renamed 'Aozora' (meaning blue sky) in January 2001.

On 30 May 2003, Resona Bank, Ltd (which combined Daiwa Bank and Asahi Bank) made an application under Article 105.1 of the Deposit Insurance Law for 'recapitalization'. On 10 June, the FSA agreed to recapitalize Resona Bank to the tune of ¥1.96 trillion, requiring the bank to reduce its capital to compensate for losses carried forward as a condition for implementing this recapitalization.

The 'Big Four' mergers[3] were often said to aim at creating mega-banks to achieve international competitiveness. However, the main purpose is perhaps better explained in terms of a strategy to clear the enormous burden of bad loans by restructuring and cutting costs through integration. In a political sense, these mergers appear to have been necessary as the quid pro quo restructuring in exchange for the injection of public funds which had been the subject of much controversy. The fact that the CEO and senior directors of the former LTCB and NCB were arrested and held responsible for their bankruptcies, including fraudulent accounting and false disclosure, also created a mood for changing the management of many banks through mergers.[4]

The accumulation of a huge volume of NPL in the Japanese banking sector casts doubt on their ability to monitor the corporate sector. However, we have argued that the accumulation of problems before the financial crisis was due in part to a change in the nature of uncertainty facing the Japanese corporate and financial sector, and an appropriate adjustment could have been built on foundations that already existed. Essentially, the problem was to drastically revise the inherent risk in investments that were no longer based on catching-up strategies but rather represented investments in innovation. In principle, this could have been achieved by main banks and regulators adjusting their evaluation strategies and allowing for significantly higher probabilities of default in these new investments compared to what they had been used to. This direction of reform might not have worked, but we do know it was never tried. Instead, the entire abandonment of the relationship-based banking structure resulted in a transition attempt that became mired in new problems as the different sectors failed to act in coordinated ways given the collapse of overall trust in the system.

The Japanese 'main bank' system was part of a system of corporate governance. The main bank would seldom sell its shares in the market unless it abandoned its main bank positions. However, since the 1997 financial crisis in Japan, the Japanese banks accelerated the sale of shares and reduced cross-shareholdings. Initially, the sale of shares by banks during the financial turmoil and eventually during crisis of 1997–98 was driven by the need to seek funding and to realize capital gains for writing off NPL. Subsequently, sales of shares were further accelerated by the government's policy of establishing a system for limiting the shareholdings of banks (see the Government's Economic Measures in April 2001). The FSA also set a new limit on shareholdings of banks in line with external measures of risk management capacities of banks. This was based on definitions of Tier I equity capital as defined in the Basel Accord, in order to reduce the price fluctuation risk, that is, the risk of capital inadequacy due to marking to lower market values (see Press release on 26 June 2001 by the FSA).

The aforementioned 'mega-mergers' which were encouraged for the survival of the respective *keiretsu* groups may have the intentional or unintentional effect of regaining some of the eroded functions of mediating financial resources and pooling monitoring skills within the group. Given the lack of direction coming from the banking regulators in the decade after the Big Bang reforms, this was one option, perhaps the only practical alternative left for ensuring a more efficient financial intermediation and monitoring in the Japanese corporate

sector and the banking industry. Each 'keiretsu' group has promoted inter-/intra-group collaborations and mergers, symbolizing sequential mega-mergers among major Japanese banks. The new framework involving not only the banking industry but also other industries made it much easier for former rival firms to merge together and seek new scale economies for greater competitiveness. Some relevant examples of these include the following: the two non-life insurance companies of the Sumitomo-Mitsui group, Sumitomo Marine and Mitsui Marine, merged into Sumitomo-Mitsui Marine in October 2001. Sumitomo Chemical and Mitsui Chemical agreed to merge by organizing a holding company between the two in October 2003. Two *sogo-shosha* (general trading houses), Sumitomo Co. and Mitsui & Co. made tie-ups in various fields. The Mizuho group (IBJ, DKB and Fuji) had three non-life insurance companies, Yasuda, Nissan, and Taisei Fire and these merged into Sompo Japan in April 2002. Kawasaki Steel and NKK were large steel firms affiliated with former Daiichi-Kangyo group (DKB) and Fuyo group (Fuji) respectively. They merged through a holding company in October 2002. These movements can be construed as follows:

1 Each *keiretsu* group has large bank(s), insurance companies, general trading houses (*sogo shosha*) and various manufacturing and service businesses. Even if its core bank can no longer undertake the role as financial intermediary and prudent monitor of all activities in the group, other core companies in the group are attempting to absorb entirely or share the role of mediating and monitoring the allocation of scarce 'risk' funds within the group.
2 General trading houses and prominent manufacturing companies have enhanced their skill and knowledge base for monitoring related industries through direct investment resulting in the diversification of their business or by internalizing some supporting industries. The inter/intra-group investment can be seen as an attempt to acquire and capitalize upon accumulated skills in monitoring.

These moves can be seen as a spontaneous movement by the private sector actors attempting to overcome the current crisis of financial intermediation and the failure of the core bank to acquire or deploy effective credit risk management skills. Although these developments can also be interpreted as a strategy to develop oligopolies that can per se have a potential negative effect on the overall economy, we should also investigate these changes to see whether these developments can help to overcome Japan's prolonged financial slump.

7.5 Conclusions

The traditional Japanese mode of financial intermediation and monitoring (including banking supervision) should have been overhauled or replaced with an alternative mode, because the performance of the traditional mode had resulted in *ex post* lower efficiency of monitoring for financial regulatory purposes when Japan fully emerged as a frontier economy. Instead, the wholesale adoption of the Anglo-American approach and the convergence towards the Basel rules as the solution to this problem proved to be an ineffective and potentially very risky prescription which, we argue, ultimately contributed to Japan's lingering financial slump.

In the process of responding to these structural failures, we consider that the fragility of the 'group-oriented' system of finance and monitoring based on dense networks of trust was fully revealed. On the one hand, apart from the monitoring of firms, the Japanese group-oriented system had contributed to a stabilization of lenders' swings of mood and had led to Japan's rapid economic growth through their effective allocation of financial resources. On the other hand, ironically, a system based on dense networks of trust led to higher 'transition costs' in terms of the costs of abandoning the existing system when the Japanese main banks were exposed to higher risk and uncertainty that was beyond their capacity to absorb. Their strategy of maintaining the status quo (continuously supporting client firms in trouble) while leaving the NPL problem unsolved (particularly until the first half of 2003) resulted in tragic results. We have attempted to shed some analytical light on the 'informal' institutional settings and constraints that contributed to this transition failure and led to Japan's extraordinarily prolonged financial stagnation.

Japan should instead have changed its monitoring system at a moderate pace while clarifying the direction of institutional change (towards maintaining financial stability), taking Japan's high cost of abandoning existing institutions into consideration. Rapid deregulation including the financial Big Bang and rapid transition to a rules-based banking supervision system resulted in a sharp deterioration during the 1997–98 financial crisis and significantly prolonged the subsequent financial stagnation. We have described this as a significant 'transition failure' in which the overall cost of the transition far exceeded any possible benefits from the radical changes in supervising. The regulators' strategy of regaining *their* reputation, and prioritization of their own survival under intensified audience effects and populist media resulted

in the sudden and ruthless abandonment of the convoy system. These phenomena further accelerated the collapse of mutual trust in the 'trust-based' system of sharing information. The collapse of trust in the regulators (seen from the perspective of the major banks) resulted in evasive action by the latter and their unwillingness to expose themselves to new risks at the cost of the very start-up enterprises on which Japan's future was dependent.

At the time of writing, banks and regulator have still not overhauled or reformed the appropriate relationship between regulators and the banking industry in a way that is effective given the Japanese corporate structure, its investor base and its appetite for risk, and which capitalizes on pre-existing (but attenuating) relationships of trust. We have argued that the failure to evolve an appropriate relationship between banks, regulators and firms has prevented effective financial intermediation and monitoring and has also slowed down transition in the direction chosen by the regulators. We reiterated that simply resurrecting the financial structure and practices of the post-war and catching-up period is no longer feasible, not only because the traditional system had its own defects, but fundamentally because, in its old form, this system was inappropriate for a frontier economy. However, our main argument is that the reformed system should have sought to build on some of the most effective informal institutional elements prevailed in Japan. This would not only have resulted in a more feasible structure, it may also have resulted in a more rapid transition as opposition would not have come from all quarters. The hopeful signs are that spontaneous changes in the corporate and financial structure are indeed building on these historic capabilities and relationships. The challenge for reformers is to recognize these strengths and to undertake to use and build on dimensions of the traditional financial structure that can be useful given the new tasks and challenges facing the Japanese economy.

8
Conclusions

8.1 Summarized conclusions

This book has analysed the relationship between the institutional changes in the Japanese financial system and its prolonged financial slump from the 1990s to mainly the first five years of the new century. It has done this primarily from the perspective of the institutional requirements of a financial system to perform its monitoring functions. This book attempted to answer the following questions:

1 Why did the traditional Japanese mode of financial monitoring, which had proved to be so effective during the high-growth period, stop working effectively in the run-up to the financial reforms of 1998? What institutional characteristics of the traditional mode were effective during the high-growth period until the Oil Shock of 1974 which put an end to this period and what were the factors hindering effective monitoring in the subsequent period? How do we analyse the relationship between the financial institutional structure and the associated costs of monitoring that it faces?
2 We describe how the enhanced cost of monitoring in the traditional mode as the Japanese economy became a frontier economy resulted in pressures to transform the financial structure in the direction of the Anglo-American one using Basel-type transparent and algorithmic modes of monitoring. We ask to what extent such a transition was feasible. What are the foundations and institutional settings necessary for the transition to the Anglo-American and Basel-type mode? Did Japan possess these foundations?
3 We also ask why Japan's financial slump following the collapse of the financial bubble in 1991 was so prolonged and deep. Commonly

accepted theories explain this in a number of ways, but primarily by pointing out the repeated failures of both omission and commission of the regulator (the Ministry of Finance) from the time of the collapse of the bubble economy to the nationalization of the LTCB. However, they do not offer a sufficient explanation of why the policy errors continued over such a long period. Why did the regulator change its stance radically to adopt a financial reform policy tied to the adoption of Anglo-American rules-based supervision? This is a particularly important question given that the immediate effect was to have an adverse impact on those banks that were in financial trouble. As a case study we examined how regulators allowed a major Japanese bank (the LTCB) that had played a leading role in the convoy system go bust.

4 Japan's financial deregulation was almost completed relatively soon after the financial 'Big Bang' of 1998. Did this contribute to bailing the Japanese banks and the Japanese economy out of the prolonged stagnation or did it make matters worse? If it proves difficult to fully adopt the Anglo-American monitoring system in Japan to an extent that makes it an effective institutional alternative to address the problems faced by the Japanese economy, is it possible to go back to the traditional monitoring system? And if a reversion to the latter is not possible either, is it possible for Japan to find its way to a better alternative system? Why has Japan struggled so hard in its transition?

The conclusions and contributions of the book are summarized as follows:

1 The book argued that a structural failure emerged in the traditional Japanese financial system as a result of its failure to provide an adequate response to the qualitatively different types of 'uncertainty' that the system faced as a result of changes in the economic environment accelerated by internationalization, financial deregulation and, in particular, technical changes within the Japanese economy that made it a frontier economy from the mid-1970s. These changes resulted in the Japanese traditional monitoring system becoming less effective.
2 However, we also argued that the response to this problem was ill considered and ill planned. This was the plan for a rapid transition to an Anglo-American financial monitoring system using Basel-type transparent and algorithmic monitoring. The transition attempt

neglected the conditions necessary for the successful implementation of this strategy. In particular, it neglected the ways in which Japanese investors and lenders had managed their own risk aversion and managed uncertainty. We argued that the transition actually intensified the uncertainty faced by critical players and did not even achieve to a full extent an abandonment of relationship-based lending to the large corporate groups. The major impact was that these changes hindered the sound intermediation of financial resources and had an adverse effect on the macro-economy and on start-ups which relied on a sharing of uncertainty with institutional or individual investors who were willing and able to do so. The changes in the Japanese system left a large gap in this critical area. The transition therefore had dangerous consequences for the Japanese financial system.

3 The book traced how changes in the Japanese monitoring system affected the operation of Japanese banks and exacerbated the 1997–1998 financial crisis using the collapse of the LTCB as a case study.

4. The book also argued that the Japanese financial system fell into a unique 'transition failure'. Transition failure includes first, the case in which the cost of abandoning the existing institution and creating a new one is so high that it cannot transition smoothly to an alternative institution in which relatively lower transaction costs are expected but this is largely because an inappropriate alternative has been selected under conditions of uncertainty. Second, it also includes the case where an ill-planned or misconceived transition proceeds in spite of the fact that the cost of abandoning the existing system is extremely high, causing a net loss during a long and possibly indefinite transition period. We argued that the Japanese case corresponded closely to the second case.

5. The book suggests but does not definitively establish a number of policy implications that are worthy of further exploration. The analysis supports a policy option of exploring and improving a 'hybrid' system that seeks to develop the 'direct-finance' market for venture capital and start-ups along the Anglo-American and western financial model while recognizing important structural differences in the Japanese retail investment market that also suggest that the 'indirect finance' market based on a significant role of banks in intermediating long-term lending will remain complementary in Japan for a long time. The policy implication is to expend considerably more efforts to seek the appropriate balance and not to seek a wholesale but impossible transition as has been the implicit approach in the period after the financial crisis.

The smooth circulation of financial resources is clearly a necessary condition for vitalizing economic activities. Accordingly, the effective screening and monitoring of financial intermediation is essential for economic growth. However, perfect monitoring cannot be expected nor can monitoring at zero cost be realized. Therefore, it is important for the economy to ensure the effective absorption and diversification of a business unit's credit risk and associated uncertainty and when required respond to changes in the economic environment such as changes in the business cycle. Looked at separately, the Basel 8 per cent capital adequacy requirement perhaps makes sense as an instrument for ensuring the solvency of banks. However, in the context of the financial flows that were being intermediated in Japan, the Basel Accords limited the scope and capacity of Japanese banks to act as institutions that could absorb and spread the credit risk and uncertainty faced by the corporate sector. The additional limitations that were placed on banks as a result of attempting to implement the Accords further limited their capacity to adapt to absorb new uncertainties. Without any other alternative institutional structure being available that could intermediate financial flows in this context, the reform actually hindered the smooth circulation of sufficient financial resources. Besides, as argued in section 6.2, there was little intention of implementing the Big Bang reforms and of introducing guidelines for banks to strictly keep an equity capital buffer in the Prompt Correction Action (PCA) framework to address the current problems of 1997–98 financial turmoil. These policy changes were considered part of the long-run institution building for a new market-based and rules-based financial system. Ironically, introducing them right in the middle of the financial turmoil was a very unwise move that exacerbated the financial slump. In general, a critique of the Basel capital adequacy requirements is that they work in a pro-cyclical way and introducing them in the middle of an economic slump was clearly a very unwise move in itself.

Our analysis suggests that it was not feasible for the Japanese financial system to transform into the Anglo-American system for a number of reasons. In particular, in the latter system, individual investors and households have demonstrated a willingness to absorb the risk and uncertainty implicit in investments in the corporate sector in a frontier economy. This broad investor base was absent in the Japanese economy. The types of financial institutions that may work better in the Japanese frontier economy entails further institutional analysis and practical experimentation. Meanwhile, it is very important to recognize the importance of improving the 'hybrid' system that characterizes

the Japanese financial sector, consisting of both an emerging 'direct-finance' market and a predominant 'indirect-finance' market. In particular, an efficient indirect-finance mechanism run by banks is still critical for the overall Japanese financial system. It follows that Japanese banks have to develop and adapt their monitoring system for the corporate sector because this type of long-term lending is not amenable to a fully codified and algorithmic mode of monitoring as was implicitly attempted in the Big Bang reforms in Japan and subsequently. The book recognizes that the traditional system of monitoring by lead banks had run into trouble and could not be continued. But we believe that lead banks could have developed substantially more effort in collaboration with regulators to use the network relationships that they enjoyed to develop new ways of classifying and monitoring uncertainty and risk. A reform attempt that built on the strengths of the Japanese financial system rather than attempting to abandon it wholesale would probably have had a greater chance of success and would have been more consistent with Keynes and post-Keynesian heterodox analysis of the non-quantifiability of uncertainty in frontier investments. The book does not propose an alternative financial structure because such a structure can only be constructively adapted through a process of trial and error. Our policy conclusion is rather that the direction of experimentation in Japan has not been the most effective one.

8.2 Lessons from Japan's financial stagnation

We conclude by summarizing a few of the main lessons that the Japanese experience has for a broader analysis of financial institutions and financial reform processes.

1 It is not feasible to simply adopt the financial systems of some countries to others. Our detailed examination has focused on the problems of attempting to transfer the Anglo-American model to the Japanese context. But equally, the reverse argument holds if one were to attempt a transfer of the traditional Japanese bank-centred and indirect financial system to other developing countries without recognition of specificities of their financial markets and network relationships.

Gerschenkron (1962) had pointed out that Japan, as a late-industrializer, could neither rely on the internal reserves or surpluses of firms nor did she possess sufficiently developed direct financial markets for

channelling savings directly to investment. Such a late-industrializer had to rely on banks' credit creation to direct finances into industry. The Japanese financial system has traditionally been characterized as a bank-centred, indirect finance system. This system brought successful economic growth and industrialization not only to Japan but also to a number of Asian emerging countries.

It is widely recognized that the Japanese traditional bank-based system of finance and monitoring greatly contributed to Japan's rapid economic growth. However, to what extent is the Japanese model applicable for other developing countries during early industrialization? As was argued in section 3.4 and chapter 7, we observe some unique informal institutional conditions underpinning the traditional system of finance and monitoring in Japan, which were essential for ensuring its relative efficiency in monitoring activities. In particular, a dense network between main banks and client firms where lenders were deeply involved in the operation of borrowers, as well as dense information networks between the regulators and the banking industry, contributed to keeping the overall transaction costs of the system relatively low. Thus, Japanese endowments of 'social capital' or 'voluntary sociability' (see section 2.4) underpinning these 'dense networks' were arguably related to the efficient outcomes observed in the Japanese model during its catching-up phase. In other Asian economies where the Japanese model of financing appears to have worked there were different local factors that enabled the bank-based financing system to operate without excessive moral hazard and losses (see Khan 2000b; Hellmann *et al.* 1997). In this sense, a simple transfer of the formal institutional settings and rules of the Japanese model to other countries would not always promise a successful result.

In chapter 7, we discussed the potential fragility implicit in the Japanese model. This fragility was actualized in an economic environment where the system was exposed to a higher level of fundamental uncertainty that could not be absorbed by the existing operating rules. In particular, the conditions of the frontier economy required that as a rule, when investments in innovation were being made, some investors would win while others would lose without any compensation. The traditional system of finance and monitoring based on sharing and absorbing all risks on relatively low margins worked in a context of catching up but had to adapt to a new situation where the number of failures would be larger. The adjustment required both new rules of thumb for spreading investments across sectors and technologies and possibly also higher operating margins to absorb greater average losses. There is no

theoretical reason why a system based upon dense networks of monitoring could not have adapted to these challenges but in fact it did not. This potential fragility in the Japanese system should be addressed by other countries creating a bank-based financial system for early stage industrialization. It is worth understanding the challenges that open up as the system approaches the technological frontier and the Japanese case demonstrates the importance of early and appropriate action.

2 Japan should have opted for a transition to an alternative system which could socialize and diversify credit risk and uncertainty when the Japanese economy shifted from its 'catching-up' phase to becoming a 'frontier' economy. In the 'frontier' economy, the bank-based indirect finance system now has to provide financing for innovation, which is exposed to a different level of uncertainty. However, we have argued that potentially this could have been achieved by adapting rules of thumb and operating margins. This argument will not necessarily be accepted by all analysts. While emphasizing 'social capital' and 'spontaneous sociability' as an important factor for the economic organization and growth, Francis Fukuyama points out that social solidarity is not always beneficial from the standpoint of economic well-being (Fukuyama 1995, p. 139). He refers to Schumpeter's phrase, 'capitalism is a process of "creative destruction"', where inefficient organizations have to be modified or eliminated and new ones created in their place. Economic progress demands the constant substitution of one kind of group for the other. Our argument that this process could in principle be mediated through a banking system would have to be tested in practice through a process of experimentation and adaptation. We cannot definitively prove our case. But we can say with a lot of evidence that no attempt was made to adapt the Japanese banking system in this direction to test whether this direction of reform would have been feasible. In our analysis, this represents a major failure for Japan and represents significant lost opportunities for a potentially viable reform path.

In contrast, mainstream economists and analysts suggest that Japan's persistent problems were due to its slow rate of progress towards the Anglo-American system and the correct response should have been to accelerate the Anglo-American type of financial deregulation. For instance, IMF (2000) insists that the recent mega-mergers of Japanese major banks (see section 7.4) should contribute to shifting their core

business more rapidly from low-yielding corporate lending (bank loans) to the securities business. In this context, the acquisition of the nationalized LTCB by Ripplewood Holdings, an American investment firm, was welcomed by the IMF as a milestone in the opening up of the Japanese market to foreign competitors. 'If this trend were to continue, it will reinforce the introduction of modern banking practices in Japan' (Kanaya and Woo 2000, p. 34). However, these assessments based upon neoclassical perspectives do not take into consideration the limitations of the Anglo-American model for Japan, and in particular for the intermediation of financial resources that we have discussed. We believe that the failure to take these effects into account can help to explain some of the dire effects observed for industrial start-up investments and the macro economy.

There is some room for optimism in a number of recent developments in the Japanese corporate and financial sector. As was argued in section 7.4, the movement towards greater inter- and intra-*keiretsu* group integration can be seen as a spontaneous movement by the private sector to overcome the current crisis of financial intermediation. One aspect of this adaptation has been an attempt to concentrate skills in credit risk management in the core bank in each *keiretsu*. Even if the core bank no longer has the skills or the risk absorption capacity to undertake a role as sole financial intermediary and monitor, the other core companies in its group are implicitly attempting to share the role of mediating scarce 'risk' funds within the group. This could be the kernel from which an alternative system more appropriate for Japanese conditions could be developed that would respond to the specific problems and build on the specific strengths of the Japanese system. The emergent financial structure would be different from an Anglo-American system. The main question is whether the Japanese regulators and political leadership still have the capacity to explore these possibilities and pursue an alternative route of experimentation and adaptation appropriate for Japan.

Notes

1 Introduction and Summary

1. On 1 October 2005, Mitsubishi UFJ Financial Group (or MUFG), which combined the Mitsubishi Tokyo Financial Group and UFJ Holdings, became one of the world's largest banks with assets of around US$1.7 trillion. The core banking units of the group, Bank of Tokyo-Mitsubishi and UFJ Bank, were merged on 1 January 2006 to form The Bank of Tokyo-Mitsubishi UFJ, Ltd.
2. Small and medium-sized enterprises (SME) were defined by law as those manufacturing corporations whose installed capital was less than ¥300 million or whose employees numbered less than 300, as well as those manufacturing unincorporated enterprises (individually-owned companies), who had less than 300 people working for them. In case of the non-manufacturing, for instance, wholesale sector, they were defined as those corporations whose installed capital was less than ¥100 million or the number of whose employees was less than 100.
3. For instance, see Yoshikawa (1999, 2003), Patrick (1998), Saito (1998), Takeda (2001), Harada (1999), Hoshi and Kashyap (2001).

2 Theoretical Framework and Basic Analysis of Monitoring Activities

1. I owe this definition to Aoki (1994).
2. I develop this survey of the general equilibrium model based on the work of Freixas and Rochet (1997).
3. I owe this analysis partly to Freixas and Rochet (1997, pp. 272–9).
4. Narrow banking would restrict banks to holding liquid and safe government bonds. Loans would instead made by other financial intermediaries. Narrow banks are often cited as banks that specialize in deposit-taking/payment activities and are prohibited from lending activity. See Kobayakawa and Nakamura (2000) for the details of history of narrow banking proposals.
5. 'Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction' (North 1990, p. 3).
6. Cohen and Knetch (1992) refer to his definition.

3 Characteristics of the 'Traditional' Japanese and Anglo-American Financial Systems

1. It usually meets at the Bank for International Settlements (BIS) in Basel, where its permanent secretariat is located (BCBS 1999d, p. 3).
2. However, the competition intensified in the US financial market after the repeal of the Glass–Steagall Act (in 1999) which allowed commercial banks affiliates to underwrite up to 25 per cent of revenue in previously ineligible

securities of corporate equity or debt. Needless to say, separation of commercial and investment banking by enacting the Glass–Steagall Act in 1933 yielded investment banking with enormous room to underwrite corporate equity and bonds. In such restricted markets investment banking used to enjoy a good return on investment. For instance, Mester (1997) reports that the average return on equity for investment banks was about 17.5 per cent and 11 per cent for commercial banks from 1990 to 1993. With the deregulation of financial markets, commercial banks have faced increased competition of core business of deposit-taking and lending. In this sense, repeal of the Glass–Steagall Act would provide commercial banks with the opportunity to spread the business in a new area i.e. underwriting activities. Surely, the competition in the investment banking has intensified as a result which has been heightened further by the presence of foreign financial institutions in the same business.

3. According to Shackle (1972), a code, a set of terms or symbols, and a set of operations or transforms producing one of these entities out of one or more others, can be a working formula or a rule of thumb, a technique. He pointed out that the code is thus an instruction for practice.
4. In 1999, having lifted the restriction on charging the commitment fee for unused credit lines, the syndicated type loans were launched in the Tokyo loan market.
5. City bank (*toshi ginko*) is one of three types of domestic ordinary banks (City, Regional Bank and Regional Bank II) in Japan. They lent primarily to large customers and received most of their deposits from corporations. Their large branch networks (an average of over 170 per bank) were located primarily in the major urban areas (Hoshi and Kashyap 2001, p. 131).
6. The term comes from the fact that in *convoys*, all ships have to match the speed of the slowest ship, so that all reach their destination together. It also alludes to the fact the MOF provided escort (protection), the point of forming a convoy being so that the cargo ship could be protected efficiently by warships (Hoshi and Kashyap 2001). Under the convoy system (*goso sendan hoshiki*), even the most inefficient financial institutions were led to grow at the same speed, and protection was provided against failure, for the purpose of maintaining financial stability (see Aoki et al. 1994, pp. 27–30).
7. Poincaré, a French scientist and mathematician, insisted that mathematical reasoning is not based upon logical understanding such as the syllogism but is a kind of creative virtue. See Poincaré (1952, p. 3).
8. It is notable that early twentieth-century Japanese philosophers and intellectuals such as Nishida Kitaro and Kobayashi Hideo were strongly influenced by French philosophers like Henri Bergson and Henri Poincaré. Bergson criticized efforts to make all of the phenomena in the world subject to 'causality', a typical viewpoint of modern natural science. Rather, he insisted on the role of the creative mind and emphasized the internal point of view for understanding reality. See Bergson (1992). Bergson's focus on how *real time*, whose essence is to flow, eludes mathematical treatment, points to the limitations of algorithmic monitoring solutions. His perspective has much in common with G.L.S. Shackle's argument that 'time is the denial of the omnipotence of reason' (see Shackle 1972, p. 27).
9. Japanese corporate conglomerates, the so-called '*keiretsu*', are characterized by presidential meetings, cross-shareholdings and preferential transactions.

10. It is apparent that higher-rated credible firms could raise funds with lower costs in international financial markets. According to the data provided by a London-based investment bank (through an interview with the staff), the average *swap spread* for the Japanese AAA-rated firms, which is considered as a justifiable borrowing margin against the London Inter-Bank Offered Rate or 'LIBOR', was −0.348 per cent (sub-LIBOR) in 1996 and −0.219 per cent in 1997. The average swap spread for the Japanese BBB-rated firms was 0.477 per cent in 1996 and 0.845 per cent in 1997, respectively. Meanwhile, we have to admit that there is no credible estimate of the magnitude of the costs borne by firms that were forced to rely on bank financing in the heyday of *keiretsu* financing in the 1970s. As Hoshi and Kashyap (2001, pp. 201–2) point out, the cost of market financing is likely to depend on the size and maturity of capital markets, which makes it hard to measure how much market financing would have cost from the 1950s to the 1970s if capital markets had been allowed to develop without so many restrictions. But it is clear that some firms must have experienced higher costs by reason of being forced to borrow from banks. Certainly, when capital market or offshore loan market financing options were being expanded in the 1980s, as discussed in section 4.2.1, many large and profitable firms started to move away quite aggressively from bank financing.
11. Unproductive rent seeking refers to activities that are profitable for the parties involved without being productive for the economy because these activities lead to the contraction of the available set of goods and services entering the utility function of society. Esteban and Ray (2006) point out that the US is a hotbed of licensing activities, presumably influenced by a host of business interests. Similarly, business interests deploy much lobbying expertise to influence regulatory design and implementation. According to them, every state in the US has a 'division of occupational licensing' charged with the role of setting the conditions to qualify for a license. In New Jersey, for instance, there are 41 different commissions regulating different professional activities. Also in the financial sector, as a factor causing the S&L debacles within in the US, Stiglitz (1994) points out that in an attempt to help the failing S&Ls, the Reagan administration had, in the early 1980s, actually loosened regulations, allowing those who wished to gamble on their resurrection to do so.

4 Economic Environmental Changes and Institutional Changes

1. Schaberg (1998) uses this term to describe the declining importance of domestic bank lending as a source of funds.
2. The ratio of sales of overseas manufacturing subsidiaries to sales of Japanese manufacturing firms (including those firms without any overseas subsidiary).
3. This terminology is based on Freixas and Rochet (1997, pp. 1–2).
4. Standard & Poor's Financial Services LLC (S&P) does not guarantee the accuracy, completeness, timeliness or availability of any information, including ratings, and is not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, or for the results obtained from the use of ratings. S&P GIVES NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. S&P SHALL NOT BE LIABLE

FOR ANY DIRECT, INDIRECT, INCIDENTAL, EXEMPLARY, COMPENSATORY, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, COSTS, EXPENSES, LEGAL FEES, or LOSSES (INCLUDING LOST INCOME OR PROFITS AND OPPORTUNITY COSTS) IN CONNECTION WITH ANY USE OF RATINGS. S&P's ratings are statements of opinions and are not statements of fact or recommendations to purchase, hold or sell securities. They do not address the market value of securities or the suitability of securities for investment purposes, and should not be relied on as investment advice.

5. The FFA is a set of comprehensive financial statistics that shows the movements of funds among economic entities such as enterprises, households, and the government, and the claim/debt relationships between them. In July 1999, the BOJ conducted a fundamental revision of the FFA for the first time in nearly 40 years and started releasing the new data. Retroactively revised data for the past 10 fiscal years were also released in March 2000 (BOJ 2000, Introduction).
6. The outstanding financial liabilities was ¥393 trillion. Thus, the households sector was a net creditor with outstanding net assets of ¥997 trillion (BOJ 2000, p. 4).
7. Non-banks in the FFA are defined as private financial institutions that raise funds through methods other than deposits and deposit-like instruments and invest such funds as loans including the purchase of structured-financing instruments.
8. The high value of outstanding shares and other equities reflects the rise in stock prices. In fiscal year 1999, the growth rate of outstanding shares and other equities was high, the year-to-year increase being 41.6 per cent (BOJ 2000).
9. In the baseline estimate, conservatively assuming a true loss rate of 90 per cent, based on historical trends in loss rates and an estimated current loss rate of about 85 per cent, leads to an estimate of potential loan losses of about ¥58.5 trillion. The uncovered losses are calculated as the gap with the major banks' cumulative provisions and write-offs of about ¥52.3 trillion (IMF 2000, p. 196).

5 The LTCB Collapse: A Case Study

1. Some parts of the chronology owe to Tett (2003).
2. The LTCB went bust and was temporarily nationalized in October 1998.
3. Detailed breakdown of income from and the associated costs of interest swap transactions were not available until 1989. The LTCB started earning significant amounts from interest swap transactions only after 1993, in other words, the contribution of the revenue from interest swap transactions was very marginal until 1992.

6 Intensified Uncertainty: The Political and Economic Reality of the 1997–98 Financial Crisis and Prolonged Financial Stagnation in Japan

1. See section 4.3 for the details.
2. In part, the fall of Lehman Brothers, a major US investment bank, in the summer of 2008 triggered a global financial crisis which caused the global economic slowdown and, accordingly, a rapid deterioration of the Japanese economy.

3. While the ratio of ordinary profit to sales for enterprises with capital between ¥10 and ¥100 million and enterprises with capital of less than ¥10 million has improved slowly during the economic recovery since 2002, the gap in the profit ratio between these enterprises and large enterprises with capital of ¥100 million or more has expanded (SMEA 2008). The profit ratio of small enterprises with capital of less than ¥10 million is particularly sluggish; the gap in the ratio of ordinary profit to sales between these enterprises and large enterprises with capital of ¥100 million or more was 2.1 per cent on average for the 10 years between FY1992 and FY2001, but widened to an average of 3.6 per cent for the five years from FY2002 to FY2006. In FY2006, the gap expanded to 4.3 per cent, the highest level in the past 30 years.
4. The meaning of Shinginko is 'New Bank'.
5. From an interview with an Executive Officer of SGT on 23 August 2006.
6. According to SGT, their NPL were finally sold in bulk to loan servicers.

7 Transition Failure

1. An interview with Tsuneo Suzuki, the last president of the bank at the 'bridge bank' stage towards the nationalization, by NHK, in May 2005.
2. A former Executive Vice President of the LTCB, Mr Takashi Uehara, committed suicide in February 1999. According to a newspaper, *Mainichi Shimbun*, Mr Uehara was called in for questioning by prosecutors in relation to the bank's alleged window-dressing of its settlements in 1998. The newspaper stated that Mr Uehara, who had assumed the position in charge of account settlements for the bank in March 1998, reportedly approved payment of illegal dividends totalling some 7.1 billion yen to shareholders, despite the fact that the LTCB was making a huge loss. He, however, was less responsible for the accumulation per se of non-performing loans in domestic real estate and construction sectors, which seriously damaged the bank's loan portfolio, because he had long been engaged in international business including as General Manager of the New York Branch since the late 1980s. Mr Uehara assumed the top management job in charge of negotiating with potential 'white knights' as well as regulators for the LTCB's survival. Many former LTCB staff knew that he fought it out to the very end. It is difficult to understand what drove him to kill himself. However, something must have led to his fatal loss of *trust* in the regulators.
3. Further, Mitsubishi UFJ Financial Group or MUFG combined Mitsubishi Tokyo Financial Group and UFJ Holdings on 1 October 2005.
4. They were found guilty by the Tokyo District Court in 2002, and the Tokyo High Court supported the district court's ruling, turning down an appeal in 2005. But on 18 July 2008, the Supreme Court reversed the lower courts' decision and acquitted each of the defendants. According to *the Nikkei Weekly* on 28 July 2008, the top court ruled that failing to comply with the ministry's guideline did not constitute a violation of the Securities and Exchange Law, as the guideline itself lacked established authority at that time.

Bibliography

Alchian, A. and Demsetz, H. (1972) 'Production, Information Costs, and Economic Organization', reprinted in L. Putterman (ed.), *The Economic Nature of the Firm: A Reader*, Cambridge: Cambridge University Press, pp. 193–216.

Antoniewicz, R.L. (2000) 'A Comparison of the Household Sector from the Flow of Funds Accounts and the Survey of Consumer Finances', http://www.federalreserve.gov/pubs/.

Aoki, M. (1994) 'Monitoring Characteristics of the Main Bank System: An Analytical and Developmental View', in M. Aoki and H. Patrick (eds), *The Japanese Main Bank System*, New York: Oxford University Press.

Aoki, M. (2001) *Toward a Comparative Institutional Analysis*, Cambridge, MA: MIT Press.

Aoki, M., Patrick, H. and Sheard, P. (1994) 'Introduction', 'The Japanese Main Bank System: An Introductory Overview', in M. Aoki and H. Patrick, *The Japanese Main Bank System*, Oxford: Oxford University Press.

Arrow, K.J. (1974) *The Limits of Organization*, New York: W.W. Norton.

BCBS (Basle Committee on Banking Supervision) (1999a) 'Credit Risk Modelling: Current Practices and Applications', Basel Committee's Models Task Force, http://www.bis.org/.

BCBS (1999b) 'A New Capital Adequacy Framework', Basel Committee's Models Task Force.

BCBS (2006) *International Convergence of Capital Measurement and Capital Standards: A Revised Framework Comprehensive Version, Basel Committee on Banking Supervision*, June 2006, Basel: Bank for International Settlements.

Bergson, H. (1992) *The Creative Mind, An Introduction to Metaphysics*, translated by M.L. Andison, New York: Citadel Press.

Bikhchandani, S. and Sharma, S. (2000) 'Herd Behavior in Financial Markets: A Review', *IMF Working Paper,* WP/00/48, IMF Institute.

BOJ (Bank of Japan) (1960) *Hompo Keizai Tokei* (National Economic Statistics), Tokyo: BOJ.

BOJ (1970) *Keizai Tokei Nempo* (Annual Economic Statistics), Tokyo: Bank of Japan.

BOJ (1975) *Keizai Tokei Nempo* (Annual Economic Statistics), Tokyo: Bank of Japan.

BOJ (1980) *Keizai Tokei Nempo* (Annual Economic Statistics), Tokyo: Bank of Japan.

BOJ (2000) 'Japan's Financial Structure in View of the Flow of Funds Accounts, Research and Statistic Department', Working paper, Bank of Japan.

BOJ (2001a) 'Zenkoku Ginko no Heisei 12 nendo Kessan to Keiei Jyo no Kadai', Working paper, Bank of Japan.

BOJ (2001b) 'Insights into the Low Profitability of Japanese Banks: Some Lessons from the Analysis of Trends in Banks' Margin', *Discussion Paper* No.01-E-1, Tokyo: Bank of Japan.

BOJ (2004) *Zenkoku Ginko no Kessan Jyokyo*, Tokyo: Bank of Japan.

BOJ Time Series data.
Boot, A.W.A. and Greenbaum, S. (1993) 'Bank Regulation, Reputation and Rents: Theory and Policy Implications', in C. Mayer and V. Xavier (eds), *Capital Markets and Financial Intermediation*, Cambridge: Cambridge University Press.
Cabinet Office (2001) *Heisei 13 nendo-ban, Keizai Zaisei Hakusho* (Annual Report on Japan's Economy and Public Finance 2000–2001), Tokyo: Government of Japan.
Cabinet Office (2002) *Heisei 14 nendo-ban, Keizai Zaisei Hakusho* (Annual Report on Japan's Economy and Public Finance 2001–2002), Tokyo: Government of Japan.
Cabinet Office (2003) *Heisei 15 nendo-ban, Keizai Zaisei Hakusho* (Annual Report on Japan's Economy and Public Finance 2002–2003), Government of Japan.
Cabinet Office (2004) *Heisei 16 nendo-ban, Keizai Zaisei Hakusho* (Annual Report on Japan's Economy and Public Finance 2003–2004), Tokyo: Government of Japan.
Cabinet Office (2008) *Heisei 20 nendo-ban, Keizai Zaisei Hakusho* (Annual Report on Japan's Economy and Public Finance 2007–2008), Tokyo: Government of Japan.
Cabinet Office (2009) *Heisei 21 nendo-ban, Keizai Zaisei Hakusho* (Annual Report on Japan's Economy and Public Finance 2008–2009), Tokyo: Government of Japan.
Cabinet Office Statistics. Accessed online at http://www5.cao.go.jp/keizai/index-e.html.
Campbell, T., Chan, Y.-K. and Marino, A. (1992) 'An Incentive-Based Theory of Bank Regulation', *Journal of Financial Intermediation*, vol. 2, pp. 255–76.
Chan-Lau, J.A. (2001) "Corporate Restructuring in Japan: An Event-Study Analysis", *IMF Working Paper*, WP/01/202.
Chang, H-J. (2000) 'The Hazard of Moral Hazard: Untangling the Asian Crisis', *World Development*, Vol. 28, No.4, pp. 775–88.
Cohen, D. and Knetsch, J.L. (1992) 'Judicial Choice and Disparities between Measures of Economic Values', in D. Kahneman and A. Tversky (eds), *Choices, Values, and Frames,* Cambridge: Cambridge University Press.
Cornford, A. (2001) 'The Basel Committee's Proposals for Revised Capital Standards: Mark 2 and the State of Play', *Discussion Papers*, no. 156, UNCTAD.
Davis, E.P. (1995) *Debt Financial Fragility and Systemic Risk*, Oxford: Clarendon Press.
Diamond, D.W. (1984) 'Financial Intermediation and Delegated Monitoring', *Review of Economic Studies*, vol. 51, pp. 393–414.
Dore, R. (1998) 'Asian Crisis and the Future of the Japanese Model', *Cambridge Journal of Economics*, vol. 22, pp. 773–87.
Dore, R. (2000) *Stock Market Capitalism: Welfare Capitalism, Japan and Germany versus the Anglo-Saxons*, Oxford: Oxford University Press.
Dymski, G. (1993) 'Keynesian Uncertainty and Asymmetric Information: Complementary or Contradictory', *Journal of Post Keynesian Economics*, Fall 1993, Vol. 16, No. 1, pp. 49–54.
Dymski, G. (1999) *The Bank Merger Wave: The Economic Causes and Social Consequence of Financial Consolidation*, Armonk, NY: M.E. Sharpe, Inc.
Eichengreen, B. (1999) *Toward a New International Financial Architecture, A Practical Post-Asia Agenda*, Washington, DC: Institute for International Economics.
Ellsberg, D. (1961) 'Risk, Ambiguity, and the Savage Axioms', reprinted in P.K. Moser, *Rationality in Action: Contemporary Approaches*, Cambridge: Cambridge University Press.
Elster, J. (2000) *Ulysses Unbound: Studies in Rationality, Precommitment, and Constraints*, Cambridge: Cambridge University Press.

EPA (Economic Planning Agency) (1999) *Heisei 12 Nendo Keizai Hakusho*, Tokyo: Government of Japan.
ESRI (Economic and Social Research Institute) (2008) *Statistics*, Tokyo: Cabinet Office, Government of Japan.
Esteban, J. and Ray, D. (2006) 'Inequality, Lobbying and Resource Allocation', *American Economic Review*, vol. 96, no. 1, pp. 257–79.
Federal Reserve statistical release, various. Accessed online at http://www.federalreserve.gov/econresdata/releases/statisticsdata.htm.
FISC (Financial Information System Centre) (1999) *Risk Kanri Model ni kansuru Kenkyu-kai Hokoku-sho*, FISC.
Fujii, Y. (2000) *Todori tachi no ketsudan*, Tokyo: Nihon Keizai Shimbun-Sha.
Fukuyama, F. (1995) *Trust: The Social Virtues and the Creation of Prosperity*, New York: Free Press.
Freixas, X. and Rochet, J.-C. (1997) *Microeconomics of Banking*, Cambridge, MA: The MIT Press.
FSA (Financial Services Agency) (2004) 'Program for Further Financial Reform – Japan's Challenge: Moving Toward a Financial Services Nation', December.
FSA (2010) 'Status of Non-perming Loans-released on 5 February 2010', accessed on 30 June 2010 from http://www.fsa.go.jp/en/regulated/npl/20100205.html.
Gerschenkron, A. (1962) *Economic Backwardness in Historical Perspective*, Cambridge, MA: Harvard University Press.
Hall, M.J.B. (1998) *Financial Reform in Japan: Causes and Consequences*, Cheltenham: Edward Elgar.
Hamazaki, M. and Horiuchi, A. (2001) 'Can the Financial Restraint Hypothesis Explain Japan's Postwar Experience?', NBER/CIRJE/CEPR Japan Project Meeting, September.
Hanajiri, T. (1999) 'Three Japan Premiums in Autumn 1997 and Autumn 1998', *Research Paper*, Bank of Japan.
Harada, Y. (1999) *Nihon no Ushinawareta 10 nenn*, Tokyo: Nihon Keizai Shimbun Sha.
Hargreaves Heap, S. (1992) 'Rationality', in S. Hargreaves Heap, M. Hollis, B. Lyons, R. Sugden and A. Weale, *The Theory of Choice: A Critical Guide*, Oxford: Blackwell.
Hellmann, T., Murdock, K., and Stiglitz, J. (1997) 'Financial Restraint: Toward a New Paradigm', in M. Aoki, H.-K. Kim and M. Okuno-Fujiwara (eds), *The Role of Government in East Asian Economic Development: Comparative Institutional Analysis*. Oxford: Clarendon Press.
Hellmann, T., Murdock, K., and Stiglitz, J. (2000) 'Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?', *American Economic Review*, vol. 90, no. 1, pp. 147–65.
Hoshi, T. and Kashyap, A. (2001) *Corporate Financing and Governance in Japan: The Road to the Future*, Cambridge, MA: The MIT Press.
Ikeo, K. (2006) *Kaihatsu Shugi no Boso to Hosin*, Tokyo: NTT Shuppan.
Iwata, K. (2001) *Defure no keizai-gaku*, Tokyo: Toyo Keizai Shimpo-sha.
IMF (International Monetary Fund) (2000) 'Progress in Financial and Corporate Restructuring in Japan', *The 1999 International Capital Markets Report*. IMF Publication.
Japan Statistical Year Book 2010. Accessed online at http://www.stat.go.jp/english/data/nenkan/index.htm.

Kahane, Y. (1977) 'Capital Adequacy and the Regulation of Financial Intermediation', *Journal of Banking and Finance*, vol. 1, pp. 207–18.
Kanaya, A. and Woo, D. (2000) 'The Japanese Banking Crisis of the 1990s: Sources and Lessons', *IMF Working Paper*, WP/00/7.
Keynes, J.M. (1936) *The General Theory of Employment, Interest and Money*, vol. 7, Cambridge: Macmillan, Cambridge University Press.
Keynes, J.M. (1937) 'The General Theory of Employment', *Quarterly Journal of Economics*, vol. 51, pp. 209–23.
Keynes, J.M. (1963) *Essays in Persuasion*, New York: W.W. Norton.
Khan, M. (1995) 'State Failure in Weak State: A Critique of New Institutionalist Explanations', in J. Hunter, J. Harriss and C. Lewis (eds), *The New Institutional Economics and Third World Development*, London: Routledge.
Khan, M. (1999) 'Financial Institutions', 'Collective Actions', 'Transaction Costs and Firm Theory', *Political Economy of Institutions, MSc Lecture Notes 1999*. SOAS, University of London.
Khan, M. (2000a) 'Rents, Efficiency and Growth', in M. Khan and K.S. Jomo, *Rents, Rent-Seeking and Economic Development*. Cambridge: Cambridge University Press.
Khan, M. (2000b) 'Rent-Seeking as Process', in M. Khan and K.S. Jomo, *Rents, Rent-Seeking and Economic Development*. Cambridge: Cambridge University Press.
Kim, D. and Santomero, A. (1988) 'Risk in Banking and Capital Regulation', *Journal of Finance*, vol. 43, pp. 1219–33.
Kindleberger, C. (2000) *Manias, Panics and Crashes*, 4th edition, London and Basingstoke: Macmillan.
Knight, F. (1921) 'From Risk, Uncertainty and Profit', in L. Putterman (eds), *The Economic Nature of the Firm, A Reader*, 2nd edition, Cambridge: Cambridge University Press.
Knight, J. (1992) *Institutions and Social Conflict*, Cambridge: Cambridge University Press.
Kobayakawa, S and Nakamura, H. (2000) 'A Theoretical Analysis of Narrow Banking Proposals', *Monetary and Economic Studies*, vol. 18, pp. 105–18.
Koehn, M. and Santomero, A. (1980) 'Regulation of Bank Capital and Portfolio Risk', *Journal of Finance*, vol. 35, no. 5, pp. 1235–44.
Koppl, R. (2002) *Big Players and the Economic Theory of Expectations*, Basingstoke: Palgrave Macmillan.
Krol, R., and Svorny, S. (1996) 'The Effects of the Bank Regulatory Environment of State Economic Activity', *Regional Sceince and Urban Economics*, vol. 26, pp. 531–41.
Meltzer, A.H. (1982) 'Rational Expectations, Risk, Uncertainty, and Market Responses', in P. Wachtel (ed.), *Crisis in the Economic and Financial Structure*, Series on Financial Institutions and Markets, Lexington: Salmon Bros.
Mester, L.J. (1997) 'Repealing Glass–Steagall: The Past Points the Way to the Future', *Business Review – Federal Reserve Banks of Philadelphia* (July/August).
METI (Ministry of Economy, Trade and Industry) (2000) *Kaigai Jigyou Katsudou Kihon Chosa Gaiyo*, Tokyo: Government of Japan.
METI (2003) *Kaigai Jigyou Katsudou Kihon Chosa Gaiyo*, Tokyo: Government of Japan.
METI (2005) *Heisei 15 nen Kogyo Tokei Hyo* (Industrial Statistics in 2003), Tokyo: Government of Japan.

Minsky, H.P. (1975) *John Maynard Keynes*, New York: Columbia University Press.
Minsky, H.P. (1977) 'A Theory of Systemic Fragility', in E.I. Altman and A.W. Sametz (eds), *Financial Crises; Institutions and Markets*, New York: Wiley.
Minsky, H.P. (1984) *Can 'It' Happen Again?*, Armonk, NY: M.E. Sharpe, Inc.
Miyoda, M. (1994) *Revival of US Banks – Merchant Bank, Investment Bank, Money-center bank, Super-regional bank*, Tokyo: Nihon Keizai Shimbun Sha.
Nagahama, T. (2002) 'Sangyo Kozo Henka, Kibo no Henka nado no Gaikan', *Financial Review,* June. Ministry of Finance, Policy Research Institute.
Nishida, K. (1958) *Intelligibility and the Philosophy of Nothingness*, translated and introduced by Robert Schinzinger, Tokyo: Maruzen.
Nishimura, Y. (1999) *Kinyu-Gyosei no Haiin*, Tokyo: Bunshun
North, D.C. (1981) *Structure and Change of Economic History*, New York: W.W. Norton.
North, D.C. (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
North, D.C. (2005) *Understanding the Process of Economic Change*, Princeton, NJ: Princeton University Press.
Ohno, K. and Nakazato. D. (2004) *Kinyuu Gijyutsu Kakumei Imada Narazu*, Tokyo: Kinzai.
Okazaki, T. (1995) 'Sengo nihon no kinyu shisutemu', in H. Morikawa and S. Yonekura, *Nihon Keiei-shi 5*, Tokyo: Iwanami.
Okuno-Fujiwara, M. (1997) 'Toward a Comparative Institutional Analysis of the Government–Business Relationship', in M. Aoki, H.-K. Kim and M. Okuno-Fujiwara (eds), *The Role of Government in East Asian Economic Development: Comparative institutional Analysis*, Oxford: Clarendon Press.
Okuno-Fujiwara, M. (2002) 'Baburu Keizai to Sono Hatan Shori', in M. Okuno-Fujiwara (eds), *Heisei Baburu no Kenkyu (Jyou)*, Tokyo: Toyo Keizai Shimpo Sha.
Osugi, K. (1990) 'Japan's Experience of Financial Deregulation Since 1984 in an International Perspective', *BIS Economic Paper,* no. 26, January, Basel: Bank for International Settlements.
Patrick, H. (1998) 'The Causes of Japan's Financial Crisis', prepared for Conference on Financial Reform in Japan and Australia, The Australia National University.
Poincaré, H. (1952) *Science and Hypothesis*, New York: Dover Publications.
Rodrik, D. (1997) *Has Globalization Gone Too Far?*, Washington, DC: Institute for International Economics.
Saito, S. (1998) *10 nen Defure*, Tokyo: Nihon Keizai Shimbun Sha.
Satyanath, S. (1999) 'Accommodating Imprudence: The Political Economy of Information in the Asian Banking Crisis', unpublished manuscript, Department of Political Science, Columbia University.
Schaberg, M. (1998) 'Globalization and Financial Systems: Policies for the New Environment', in D. Baker (eds), *Globalization and Progressive Economic Policy*, Cambridge: Cambridge University Press.
Shackle, G.L.S. (1957) 'Expectation in Economics', in C.F. Carter, G.P. Meredith and G.L.S. Shackle (eds), *Uncertainty and Business Decisions*, Liverpool: Liverpool University Press.
Shackle, G.L.S. (1972) *Epistemics & Economics: A Critique of Economic Doctrines*, Cambridge: Cambridge University Press.
Simon, H.A. (1983) 'Alternative Visions of Rationality', in P.K. Moser, *Rationality in Action: Contemporary Approaches*, Cambridge: Cambridge University Press.

Simon, H.A. (1996) *The Sciences of the Artificial*, 3rd edition, Cambridge, MA: MIT Press.
SMEA (Small and Medium Enterprise Agency) (2004) *2004 Nendo Chusho Kigyo Hakusho* (White Paper).
SMEA (2005) *2005 Nendo Chusho Kigyo Hakusho* (White Paper).
SMEA (2006) *2006 Nendo Chusho Kigyo Hakusho* (White Paper).
SMEA (2008) *2008 Nendo Chusho Kigyo Hakusho* (White Paper).
SMEA (2009) *2009 White Paper on Small and Medium Enterprises in Japan* (translated by Japan Small Business Research Institute).
SMEA (2010) *2010 Nendo Chusho Kigyo Hakusho* (White Paper).
Standard & Poor's (2009) '2009 Annual Asian Corporate Default Study And Rating Transitions', [online], available: http://www2.standardandpoors.com/spf/csv/equity/2009_Annual_Asian_Corporate_Default_Study_And_Rating_Transitions.pdf (accessed 26 May 2010).
Stiglitz, J. (1988) 'Why Financial Structure Matters', *Journal of Economic Perspectives*, vol. 2, no. 4, pp. 121–6.
Stiglitz, J. (1994) *Whither Socialism?*, Cambridge, MA: The MIT Press.
Stiglitz, J. and Greenwald, B. (2003) *Towards a New Paradigm in Monetary Economics*, Cambridge: Cambridge University Press.
Stiglitz, J. and Weiss, A. (1981) 'Credit Rationing in Markets with Imperfect Information', *American Economic Review*, vol. 71, no. 3, pp. 393–410.
Stiglitz, J. and Weiss, A. (1992) 'Asymmetric Information in Credit Markets and Its Implications for Macro-Economics', *Oxford Economic Papers*, New Series, vol. 44, no. 4, Special Issue on Financial Markets, Institutions and Policy, pp. 694–724.
Suzuki, Y. (2002) 'The Crisis of Financial Intermediation; Understanding Japan's Lingering Economic Stagnation', in N. Sabri, *International Financial Systems and Stock Volatility: Issues and Remedies*, *International Review of Comparative Public Policy*, vol. 13, pp. 213–43.
Suzuki. Y. (2005) 'Uncertainty, Financial Fragility and Monitoring: Will the Basel-type Pragmatism Resolve the Japanese Banking Crisis?', *Review of Political Economy*, vol. 17, no. 1, pp. 45–61.
Takeda, S. (2001) *Shinyo to shinrai no keizai gaku*, Tokyo: NHK Books.
Tanaka, T. (2002) *Contemporary Japanese Economy (Gendai Nihon Keizai)*, Tokyo: Nihon Hyoron Sha.
Tett, G. (2003) *Saving the Sun*, New York: Harper Business.
TMG (Tokyo Metropolitan Government) (2004) *Master Plan for New Bank*, Tokyo: Tokyo Metropolitan Government.
Toshida. S. (2001) *Nihon Keizai no Shokudai*, Tokyo: Diamond.
Toya, T. (2003) *Kinyuu Big Bang no Seiji Keizai Gaku* (The Political Economy of the Japanese Financial Big Bang), Tokyo: Toyo Keizai Shimpou-Sha
Tsuru, K. (2006) *Nihon no Keizai Shisutemu Kaikaku*, Tokyo: Nihon Keizai Shimbun Sha.
Uriu, R. (1999) 'Japan in 1998: Nowhere to Go But Up?', *Asian Survey*, vol. 39, no. 1, pp. 114–24.
Wade, R. and Veneroso, F. (1998) 'The Asian Crisis: The High Debt Model Versus the Wall Street–Treasury–IMF Complex', *Current History*, November.
Weale, A. (1992) 'Homo Economicus, Homo Sociologicus', in S. Hargreaves Heap, M. Hollis, B. Lyons, R. Sugden and A. Weale (eds), *The Theory of Choice: A Critical Guide*, Oxford: Blackwell, pp. 62–72.

White, L.J. (2002) 'Bank Regulation in the United States: Understanding the Lessons of the 1980s and 1990s', *Japan and the World Economy*, vol. 24, 137–54.
Williamson, O.E. (1985) *The Economic Institutions of Capitalism*, New York: The Free Press.
Yokoi, S. (1985) *Project Finance*, New York: Yuhikaku Business.
Yoshikawa, H. (1999) *Tenkanki no Nihon Keizai*, Tokyo: Iwanami.
Yoshikawa, H. (2003) *Kozo Kaikaku to Nihon Keizai*, Tokyo: Iwanami.

Index