Medical Diagnostics Laboratories in India: A Strategic Reference, 2007

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1 INTRODUCTION & METHODOLOGY

1.1 WHAT DOES THIS REPORT COVER?

The primary audience for this report is managers involved with the highest levels of the strategic planning process and consultants who help their clients with this task. The user will not only benefit from the hundreds of hours that went into the methodology and its application, but also from its alternative perspective on strategic planning relating to medical diagnostics laboratories in India.

As the editor of this report, I am drawing on a methodology developed at INSEAD, an international business school (**www.insead.edu**). For any given industry or sector, including medical diagnostics laboratories, the methodology decomposes a country's strategic potential along four key dimensions: (1) latent demand, (2) micro-accessibility, (3) proxy operating pro-forma financials, and (4) macro-accessibility. A country may have very high latent demand, yet have low accessibility, making it a less attractive market than many smaller potential countries having higher levels of accessibility.

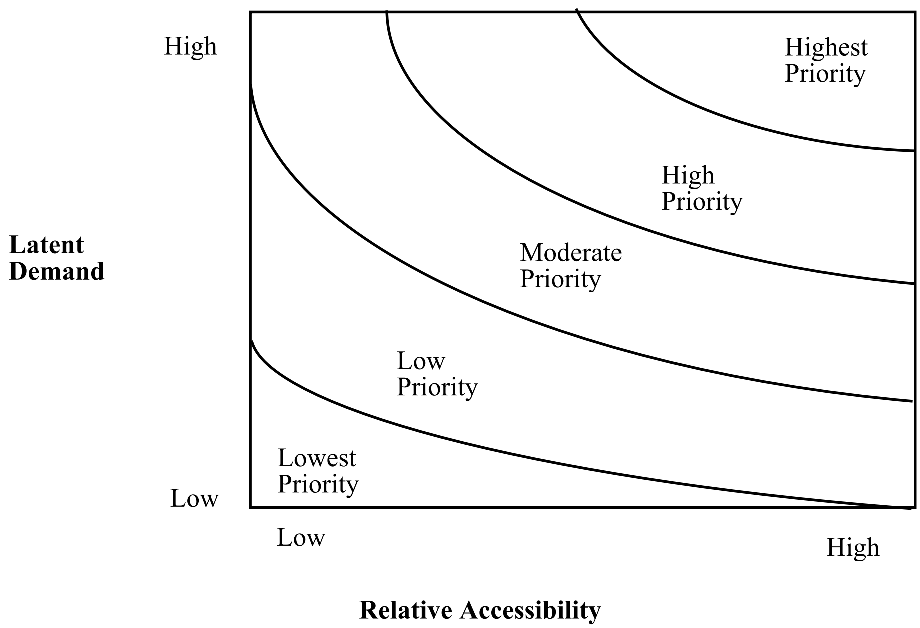
With this perspective, this report provides both a micro and a macro strategic profile of medical diagnostics laboratories in India. It does so by compiling published information that directly relates to latent demand and accessibility, either at the micro or macro level. The reader new to India can quickly understand where India fits into a firm's strategic perspective. In Chapter 2, the report investigates latent demand and micro-accessibility for medical diagnostics laboratories in India. In Chapters 3 and 4, the report covers proxy operating pro-forma financials and macro-accessibility in India. Macro-accessibility is a general evaluation of investment and business conditions in India.

1.2 HOW TO STRATEGICALLY EVALUATE INDIA

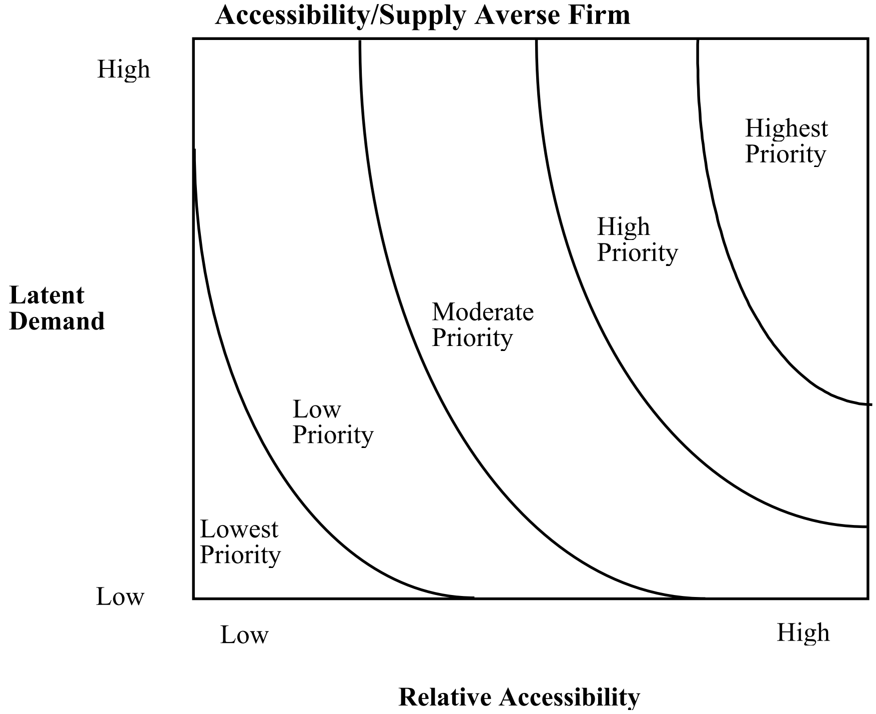
Perhaps the most efficient way of evaluating India is to consider key dimensions which themselves are composites of multiple factors. Composite portfolio approaches have long been used by strategic planners. The biggest challenge in this approach is to choose the appropriate factors that are the most relevant to international planning. The two measures of greatest relevance to medical diagnostics laboratories are "latent demand" and "market accessibility". The figure below summarizes the key dimensions and recommendations of such an approach. Using these two composites, one can prioritize all countries of the world. Countries of high latent demand and high relative accessibility (e.g. easier entry for one firm compared to other firms) are given highest priority. The figure below shows two different scenarios. Accessibility is defined as a firm's ease of entering or supplying from or to a market (the "supply side"), and latent demand is an indicator of the potential in serving from or to the market (the "demand side").

Framework for Prioritizing Countries

Demand/Market Potential Driven Firm



Accessibility/Supply Averse Firm



In the top figure, the firm is driven by market potential, whereas the bottom figure represents a firm that is driven by costs or by an aversion to difficult markets. This report treats the reader as coming from a "generic firm" approaching the global market – neither a market-driven nor a cost-driven company. Planners must therefore augment this report with their own company-specific factors that might change the priorities (e.g. a Canadian firm may have higher accessibility in Canada than a German firm).

1.3 LATENT DEMAND AND ACCESSIBILITY IN INDIA

This report provides a detailed overview of factors driving latent demand and accessibility for medical diagnostics laboratories in India. Latent demand is largely driven by economic fundamentals specific to medical diagnostics laboratories. This topic is discussed in Chapter 2 using work carried out in India on behalf of American firms and authored by the United States government (typically commercial attachés or similar persons in local offices of the U.S. Department of State). I have included a number of edits to clarify the information provided. Latent demand only represents half of the picture. Chapter 2 also deals with micro-accessibility for medical diagnostics laboratories in India. I use the term "micro" since the discussion is focused specifically on medical diagnostics laboratories.

Chapter 3 is also a stand-alone report that I have authored. It covers proxy pro-forma financial indicators of firms operating in India. I use the word "proxy" because the provided figures only cover a "what if" scenario, based on actual operating results for firms in India. The numbers are only indicative of an average firm whose primary activity is in India. It covers a vertical analysis of the maximum likelihood balance sheet, income statement, and financial ratios of firms operating in India. It does so for a particular Standard Industrial Classification (SIC) code. That code covers "laboratory analytical instruments", as defined in Chapter 3. Again, while "laboratory analytical instruments" does not exactly equate to "medical diagnostics laboratories", it nevertheless gives an indicator of how India compares to other countries for a proxy adjacent category along various dimensions.

Chapter 4 deals with macro-accessibility and covers factors that go beyond medical diagnostics laboratories. A country may at first sight appear to be attractive due to a high latent demand, but it is often less attractive when one considers at the macro level how easy it might be to serve that entire potential and/or general business risks. While accessibility will always vary from one company to another for a given country, the following domains are typically considered when evaluating macro-accessibility in India:

- Openness to Trade in India
- Openness to Direct Investment in India
- Local Marketing and Entry Strategy Alternatives
- Local Human Resources

- Local Risks

Across these domains, a number of not-so-obvious factors can affect accessibility and risk. These are covered in the Chapter 4, which is a general overview of investment and business conditions in India. Chapter 4 is also presented from the perspective of an American firm, though is equally applicable to most firms entering India. This chapter is also authored by local offices of the U.S. government, as is Chapter 2. Likewise, I have included a number of edits to clarify the provided information as it relates to the general strategic framework mentioned earlier.

2 MEDICAL DIAGNOSTICS LABORATORIES IN INDIA

2.1 LATENT DEMAND AND ACCESSIBILITY: BACKGROUND

The Indian medical diagnostics laboratory is expanding rapidly to meet the growing demand. Existing hospitals are upgrading the medical laboratory facilities and new hospitals projects and stand-alone medical laboratories are incorporated in the country. These developments continue to contribute for the growth of the medical laboratory reagents. Both Indian firms and imported reagents meet the expanding local demand for reagents. The GOI allows imports of medical laboratory reagents under "Open General License". Technically trained Indian agents and distributors sell reagents to hospitals and stand-alone laboratories.

2.2 LATENT DEMAND: MARKET COMPOSITION

This report highlights business and export opportunities in the expanding medical laboratory industry sector. This report covers reagents of all types used in the medical diagnostic laboratories and does not cover consumables.

The Indian medical laboratory sector is on a fast-track growth and the trend is likely to continue for the next five years and beyond. An estimated over 40,000 medical laboratories are successfully operating in the country. About 70% of the treatment decisions are made based on the laboratory reports. This sector accounts for an estimated 2.5% of the total health care delivery revenue in India.

Both the government and private sector hospitals co-exist in the country. However, the private sector enjoys a major share in the healthcare delivery system. Several multi-specialty hospitals are operating successfully and many new hospital projects are at various stages of developments. These hospital projects are expected to continue to support the growth of medical laboratories and reagents in India for the next five years and beyond.

Governments continue to add hospital facilities in the country. Between 1981 and 2000, dispensaries and hospitals increased from 23,555 to 43,322; the number of hospital beds from 569, 495 to 870,161; the number of doctors from 268,700 to 503,900; and the nursing personnel from 143,887 to 737,000. Medical laboratories continue to support these hospitals.

Several state government hospitals offer basic health care services through primary health care centers and through secondary and specialty (tertiary) hospitals in major towns and cities. Several state governments have started upgrading the specialty hospitals and medical laboratories to offer latest healthcare services to the population. A major part of the government's health budget is used for curative medical care.

The Indian population of one billion is growing at a rate of 2.5% per year. Of that total, about 100-150 million have the demand for, and the discretionary income to purchase, private health care services. Many in the growing "middle income" segment look for international quality medical services in private super-specialty hospitals and this trend is likely to continue for the next five years and beyond.

The World Health Organization report, projected that India needs to create at least 80,000 hospital beds per year for the next five years to meet the expanding demand (Source: **www.ciionline.org/sectors/60/default.asp**).

Similarly, the demand for all medical technologies, including medical laboratory reagents, will also show a significant increase.

2.3 LATENT DEMAND: DYNAMICS

Large Indian business groups have established medical laboratory chain across the country. With 17 state-of-the-art laboratories and over 125 collection centers across the country, Chennai based Lister Metropolis Laboratory and Research Center performs over 30,000 diagnostic tests per day. It also maintains branches in Sri Lanka, UAE, and Seychelles. Lister has active plans to further expand the laboratory network in the country. Please visit the Web site for further information (**www.metropolisindia.com/chennaimetropolis.asp**).

Several large hospitals including Apollo group (**www.apollohospitals.com/**), Fortis Healthcare Limited (Web site: **www.fortishealthcare.com/index.html**), the Wockhardt Hospital and Heart Institute (**www.whhi.com/**), P.D. Hinduja National Hospital and Medical Research Center (**www.hindujahospital.com/**), Dr. Lal Pathlab (**www.lalpathlabs.com/**), Thyrocare (**www.thyrocare.com/thyroindex.htm/**), and Escort Heart Institute and Research Center (**www.ehirc.com/**) are major hospitals groups in the country maintaining medical diagnostic laboratories with latest instrument and using reagents. Indian Railways (**www.rb.railnet.gov.in/**), Bhabha Atomic Research Center (**www.barc.ernet.in/**), Hindustan Aeronautics Limited (**www.hal-india.com/**), Steel Authority of India Limited (**www.sail.co.in/**), and Employee State Insurance Corporation (**esic.nic.in/**) also maintain multiple hospitals and medical diagnostic laboratories in the country. All these laboratories use reagents.

SRL Ranbaxy (**www.srlranbaxy.com/index.htm**) is a specialty medical diagnostic laboratory maintaining collection centers in Mumbai, New Delhi, Bangalore and Kolkata. Using latest medical diagnostic technology and instruments, SRL Ranbaxy offers comprehensive medical diagnostic services to the population. It also acts as a referral center for special tests.

Reliance Life Sciences (**www.relbio.com/**) is a research-driven, biotechnology-led, life sciences organization, managed by the India's major Reliance group. Reliance Life offers a wide range of diagnostic services.

Large medical laboratory chains are also establishing collection centers at several sites to increase the coverage and penetration. Large laboratories have started acquiring small labs to increase the market share.

Indian healthcare industry has been recording an average annual growth of about 15% during the last five years and this trend is likely to continue for the next five years and beyond. Many Indian corporate hospitals are preparing for attracting the medical tourism. During 2004-05, an estimated 150,000 international patients came to Indian hospitals as medical tourists for treatment. According to a study on healthcare by the Confederation of Indian Industry, medical tourism has a potential to generate $2.2 billion by 2012, accounting for an estimated 3-5% of the total industry revenue. These developments will sustain the demand for latest medical laboratory equipment in the country.

Molecular diagnostics and pharmacogenomic testing are expected to be future drivers of the Indian diagnostics industry. Molecular diagnostics is the fastest growing segment of the "In-Vitro Diagnostics" with an estimated growth potential of 25% per year. Molecular diagnostics will play a major role in the viral diagnostics, immune system disease diagnostics, bacterial, viral identification, and cancer diagnostics and monitoring. Pharmacogenomics will focus on personalized medicine for each patient. These technology developments are expected to support the growth of the medical laboratory industry segment.

2.4 ACCESSIBILITY: THE STRUCTURE OF COMPETITION

India manufactures a range of medical laboratory reagents. Small and medium sized firms manufacture low range of reagents including biochemistry, pathology, and microbiology reagents. Large Indian firms manufacture a range of medical laboratory reagents for local market. Indian agents and distributors market imported laboratory reagents to the medical laboratories and hospitals. Reagents used in the biochemistry, clinical pathology, virology, microbiology, immunology, invetro fertilization, genetics, blood banks, and semen banks are imported. Indian hospitals and medical laboratories also use spectrophotometers, HPLC systems, RIA analyzers, electron microscopes, multi chemistry analyzers, clinical chemistry analyzers, batch analyzers, random assay analyzers, fully automated continuous/random analyzers, ELISA readers, electrophoresis instruments, liquid chromatograph, blood bank screening instruments, and blood gas analyzers and import the reagents for these laboratory instruments. The U.S. continues to be the single largest supplier of medical laboratory instruments to the Indian market with an estimated 35 to 40% market share. Several major U.S. firms are present in India either directly or through Indian partners.

2.5 LATENT DEMAND: TARGET BUYERS

Specialty and super specialty hospitals in the government and private sectors are the major end users of medical laboratory reagent chemicals, and supplies. Stand-alone, medical laboratories and medical laboratory chains also operate in the country offering a variety of clinical testing facilities to patients. Large Indian business houses such as the Tata group, Reliance, Birla, which maintain specialty hospitals for the benefit of their employees, also are major end users of medical laboratory reagents.

2.6 ACCESSIBILITY: MARKET ENTRY

The Government of India's import policy allows imports of medical laboratory reagents. Imports of medical laboratory instruments, reagents, spares, components and supplies are listed under the "Open General" category of the import regulations which does not require any government approval. Currently, medical diagnostic reagents attract import duties with a range of 5-20%. Please visit **www.chennaicustoms.org/for** further information on import procedures and duty details.

Price, and quality are major factors in purchase decisions. Letter of credit is the usual payment mechanism for imports. Importers are required to find foreign exchange from their export earnings, or to buy foreign exchange from government approved foreign exchange dealers. Technically trained and qualified agents and distributors sell scientific, analytical, and laboratory reagents to Indian end users. These agents are generally familiar with import regulations and procedures.

2.7 TRADE EVENT

HospiMedica India is the major health care products trade exhibition held in India. CIDEX Trade Fairs Private Limited, a joint venture between Messe Düsseldorf GmbH and Koelnmesse International GmbH, organizes the show. Please visit the official show Web site **www.hospimedica-india.com** for further information and registration procedures.

3 FINANCIAL INDICATORS: LABORATORY ANALYTICAL INSTRUMENTS

3.1 OVERVIEW

Is India competitive? With the globalization of markets, the increased mobility of corporate assets, and the need for productive human resources, this question has become all the more complex to answer. The financial indicators section was prepared to tackle this question by focusing on certain fundamentals: financial performance and labor productivity. Rather than focus on the economy as a whole, the analysis presented here considers only one sector: laboratory analytical instruments.

We are essentially interested in the degree to which firms operating in India have fundamentally different financial structures and performance compared to firms located elsewhere. With respect to this view of competitiveness, if one were to invest or operate in India, how would the firm's asset structure likely vary compared to a firm operating in some other country in Asia or average location in the world? In India, do firms typically hold more cash and other short term assets, or do they concentrate their assets in physical plant and equipment? On the liability side, do firms operating in India have a higher percent of payables compared to other firms operating in Asia, or do they hold a higher concentration of long term debt? The structure of the income statement is also telling. Do firms operating in India have relatively higher costs of goods sold, operating costs, or income taxes compared to firms located elsewhere in the region or the world in general? Are returns on equity higher in India? Are profit margins greater? Are inventories held longer? The financial indicators section was designed to answer these and similar questions that naturally affect one's decision to invest or operate in India. Again, we are particularly interested in laboratory analytical instruments, and not the economy as a whole.

In many instances, people make all the difference. In addition to financial competitiveness, we consider the extent to which labor deployment and productivity in India differs from regional and global benchmarks. In this case, we are interested in the amount of labor required to operate a typical business in India and the likely returns on this human investment. What is the typical ratio of short-term and long-term assets to employee (employed in laboratory analytical instruments operations)? What are typical capital-labor ratios? How different are these ratios to those in Asia in general and the world as a whole? What are the average sales and net profits per employee in India compared to regional benchmarks?

The goal of this section is to assist managers in gauging the competitive performance of India at the global level for laboratory analytical instruments. With the globalization of markets, greater foreign competition, and the reduction of entry barriers, it becomes all the more important to benchmark India against other countries on a worldwide basis. Doing so, however, is not an obvious task.

This report generates international benchmarks and measures gaps that might be revealed from such an exercise. First, data is collected from companies across all regions of the world. For each of these firms, data are standardized into comparable categories (assets, liabilities, income and ratios), by country, region and on a worldwide basis. From there, we eliminate all currency effects by standardizing within each category. Global benchmarks are then compared to those estimated for laboratory analytical instruments in India.

Though we heavily rely on historical performance, the figures reported are not historical but are forecasts and projections for the coming fiscal year.

3.1.1 Financial Returns and Gaps in India

The approach used in this report to evaluate operating performance for laboratory analytical instruments in India is called "vertical analysis." For those unfamiliar with this type of analysis, frequently taught in graduate schools of business, the reader is recommended Jae K. Shim and Joel G. Siegel's recent book titled *Financial Management*.[1] In their discussion of financial statement analysis and ratios, Skim and Siegel (p. 42-43), describe common-size statement (vertical analysis) as follows:

> A common-size statement is one that shows each item in percentage terms. Preparation of common-size statements is known as *vertical analysis*, in which a material financial statement item is used as a base value and all other accounts on the financial statement are compared to it. In the balance sheet, for example, total assets equal 100 percent, and each individual asset is stated as a percentage of total assets. Similarly, total liabilities and stockholders' equity are assigned a value of 100 percent and each liability or equity account is then stated as a percentage of total liabilities and stockholders' equity, respectively. … For the income statement, a value of 100 percent is assigned to net sales, and all other revenues and expense accounts are related to it. It is possible to see at a glance how each dollar of sales is distributed among various costs, expenses, and profits.

The authors suggest that vertical analyses involve industry-based comparisons. Such a comparison "allows you to answer the question, 'How does a business fare in the industry?' You must compare the company's ratios to… industry norms." (p. 43-44) This approach is extended to country competitiveness (in this case India) for a particular sector (in this case laboratory analytical instruments). This involves calculating country, regional and global norms. This introduction will describe the seven-stage methodology used to perform this analysis. Each stage should be seen as a working assumption behind the numbers presented in later chapters.

Stage 1. Industry Classification. This stage begins by classifying the company into an industry. For this, we have relied on a combination of the North American Industry Classification System (NAICS pronounced "Nakes"), a relatively new system for classifying business establishments, and the older Standard Industrial Classification (SIC) system. Adopted in 1997, NAICS codes are the new industry classification codes used by statistical agencies of the United States. NAICS was developed jointly by the U.S., Canada, and Mexico to provide comparability in statistics about business activity across North America. After 60 years of service, the outdated SIC system was retired on October 1, 2000, leaving only the NAICS codes for official use. The NAICS classification system adds some 350 new industries and represents a revision to over 60% of the previous SIC industries. Despite its official retirement, the SIC system is still commonly used (and often reported in firm's financial statements).

For most companies in the world, classification within either the new NAICS or older SIC systems is a rather straight forward exercise. For some, however, it can be problematic. This is true for several reasons. The first being that the SIC or NAICS classification systems are rather broad for many product and industry categories (a firm's products or services may be only a minor aspect of the classification's definition). The second is that some firms' activities span multiple codes. Finally, it is possible that a firm is classified by one source using its SIC code, and by another using its NAICS code, and by a third using both. Furthermore, some sources do not report either code, but instead use qualitative statements of the firm's activities. Nevertheless, if one wishes to pursue a vertical analysis, some classification needs to take place which selects a peer group. In making this classification, one can rely on a number of sources. In some countries, firms must "self" classify in official periodic reports (e.g. annual reports, 10Ks, etc.) to public authorities (such as the Securities and Exchange Commission). These reports are then open for public scrutiny (e.g. EDGAR filings). In other cases, commercial data vendors or private research firms provide SIC/NAICS codes for specific companies. These include:

- Bloomberg - **www.bloomberg.com**
- Datastream (Thomson Financial) - **www.datastream.com**

[1] Skim and Siegel (2000), *Financial Management* published by Barron's Educational Series, Inc. (BARON'S BUSINESS LIBRARY Series), ISBN: 0-7641-1402-6.

- Dun & Bradstreet - **www.dnb.com**
- Hoovers - **www.hoovers.com**
- HarrisInfoSource - **www.HarrisInfo.com**
- InfoUSA - **www.infousa.com**
- Investext (Thomson Financial) - **www.investext.com**
- Kompass International Neuenschwander SA. – **www.kompass.com**
- Moody's Investors Service - **www.moodys.com**
- Primark (Thomson Financial) - **www.primark.com**
- Profound (The Dialog Corporation – A Thomson Company) - **www.profound.com**
- Reuters - **www.reuters.com**
- Standard & Poor's - **www.standardandpoors.com**

It is interesting to note that commercial vendors often report different qualitative descriptions and industrial classifications from one to another. These descriptions and classifications may also be different from those reported by the firm itself. Anyone hoping to perform a benchmarking study, therefore, has to make a judgment call across these various sources in order to determine a reasonable classification. In this report, we have decided a meta-analytic process, by combining various sources (including linking a classification's keywords to qualitative descriptions of the firm's product line). In cases of inconsistency, the most recent or globally comparable available is chosen. Again, the overall goal is to classify firms, which either produce similar products, offer similar services, or are in the same stage of the value chain for a particular industrial classification. In the case of this report, the SIC code selected is: 3826 which is defined as "laboratory analytical instruments". This classification should be seen as a working assumption. In order to obtain a more detailed discussion of this classification, the reader is referred to the Web sites developed by the U.S. Census Bureau: **http://www.census.gov/epcd/www/naics.html**. Basic definitions and descriptions are provided at: **http://www.census.gov/epcd/www/drnaics.htm#q1**. A full correspondence table between SIC and NAICS codes, and detailed definitions are given at **http://www.census.gov/epcd/www/naicstab.htm**.

Stage 2. Firm-Level Data Collection. A global search was conducted across over 20,000 companies in over 40 major economies, including India, for those that report financials (balance sheet and income statements) and that are involved in laboratory analytical instruments. It should be noted that the public-domain financials can be either historic or projections. It should also be noted that even historic figures can be modified in the future and often represent "estimates" of performance.

Stage 3. Standardization. Once collected, public domain financial figures of firms identified in Stage 2 are standardize into comparable categories (assets, liabilities, and income). Again, these are limited to firms involved in some aspect of laboratory analytical instruments (i.e. are members of the value chain). From there, we eliminate all currency effects by standardizing within each category (creating ratios). In order to maintain comparability over time and across countries, vertical analysis is used. In the case of a firm's assets, we treat the total assets as equaling 100, irrespective of the value of the local currency. All other assets are then calculated as a percent of total assets. In this way, the structure of the firm's assets can be easily interpreted and compared with international benchmarks. For liabilities, total liabilities and equity are indexed to equal to 100. For the income statement, total revenue is indexed to equal 100, and all other figures are calculated as a percent of these figures.

Stage 4. Filtering. Not all the firms selected in Stage 2 or the ratios calculated in Stage 3 are used for the country, regional or global benchmarks, as a number of companies are purposely dropped from the analysis. This is justified by the "outlier" phenomenon that plagues such analysis. The problem lies in that any given company in the benchmarking pool may be facing some exceptional event or may be organized in an exceptional way so as to make its ratios vastly different from the norm. By including such firms, the global benchmarks can be overly skewed. In many countries, firms are organized into holding groups. These groups nominally have very few employees (e.g. 4

to 25 employees), but have extremely large assets, liabilities, or revenues. As such, the inclusion or exclusion of firms having this form of management can affect the ratios and benchmarks reported. Likewise, some firms have no net sales, no assets, no liabilities, or ratios. Others have ratios that appear implausible for a normal or viable company. In order to not allow these firms to affect the global benchmarks, only those firms with reasonable financials have been chosen. Finally, in some countries, detailed financials are not available or are not comparable to either the company in question or the global norm (e.g. various forms of depreciation). In this case, only those which exist and are comparable are reported. The details, therefore, that comprise a given ratio or set of ratios may not be reported. This may lead to the addition of several ratios, not summing to the whole.

Stage 5. Calculation of Global Norms. Once the filtering process has eliminated outliers, a final list of companies included is compiled. Based on this list, the ratios discussed in Stage 3 are calculated for every firm, and then averaged to create country, regional and global benchmarks. The world average is calculated using each country's population as a weight.

Stage 6. Projection of Deviations. The goal of this report is not only to estimate raw ratios or averages, but also to present the difference between India and projected global averages for that same ratio. Furthermore, it can be insightful to know the location of each ratio within the distribution of the countries represented in Stage 5. These deviations, in fact, can be seen as projections or likely scenarios for the future. This is often true for two reasons. First, while a company's financials change from year to year, its ratios are often stable. This is especially true for the country, regional and global benchmarks which represent averages across companies. From a purely Bayesian sense, the difference between the company's recent ratios and the benchmarks are a reasonable prior for future deviations. This is true, even if the entire industry is hit by an external or exogenous shock, such as an oil crisis or economic slowdown. In other words, we assume that the structure of the variance in the industry's financials remains stable. Second, many of the data are based on preliminary reports that might be changed in future filings. As forecasts, therefore, the numbers derived from these are also forecasts of past and future performance (with associated uncertainties). The calculation of the difference between a country's ratios and the global benchmarks is meant to yield roughly approximate forecasts, or "useful measures". Within Asia, the reliability of estimates varies from one country to another for those ratios given in tables that report national averages. This is true because reliable source statistics are not available for all countries in Asia. Countries with the highest reliability, or sample sizes after filtering in Stage 4, include Japan. Others are generally econometrically extrapolated using models that use country characteristics (e.g. income per capita) as independent variables (i.e. countries having similar economic structures are assumed to have similar operating ratios). Again, the forecasts are based on the assumption of relative stability. This assumption has proven extremely robust in previous applications of this methodology (i.e. today's weather is a good predictor of tomorrow's weather, but not the weather three years from now). The results reported should be viewed as those for a "proto-typical" firm operating in India whose primary activity is laboratory analytical instruments.

Stage 7. Projection of Ranks and Percentiles. Based on the calculation of deviations, relative ranks and percentiles are calculated across the firms used in the benchmarks. The percentile estimates the percent of a representative sample of countries in the world having values of the ratio lower than India. It is important to note that a percentile being high (or low) does not mean good (or bad) past, present or future financial performance. The reader must draw this conclusion on their own. The estimates provided were created to provide managerial insight, and not a recommendation with respect to particular investments within any country.

We graphically report, for each part of the financial statement, the larger structural differences between India and the regional and global benchmarks, and provide a summary table of ranks and percentiles. These are estimates for firm which would be involved in laboratory analytical instruments. A deviation from the global norm need not be a bad sign. Rather, it is simply a substantial difference that might merit further attention or perhaps signal a country's relative strength or weakness for the coming fiscal year.

3.1.2 Labor Productivity Gaps in India

In the case of labor productivity measures, this report maintains comparability over time and across countries by using a common currency (the US dollar) and relates each measure to a "per employee basis". Ratios are projected using raw financial statistics and, as ratios, are therefore comparable. Given a country's human resource ratios, the resulting figures are benchmarked across regional and global averages. The seven stage approach given above is used in a similar manner.

We then report, for each part of the financial statement, the larger labor productivity gaps that India has vis-à-vis the worldwide average (for laboratory analytical instruments). Again, a gap need not be a bad sign. Rather, it is simply a substantial difference that might merit further attention or signal a firm's relative incentive to invest locally. All figures are projections, so due caution is required.

3.1.3 Limitations and Extensions

Shim and Siegal (p. 60) stress that "while ratio analysis is an effective tool for assessing a company's financial condition," operating India or any other country, "its limitations must be recognized." They find that (p. 59) "no single ratio or group of ratios is adequate for assessing all aspects of a company's financial condition" operating in a particular country. The authors note the following limitations associated with ratio analyses which apply to the global benchmarking and vertical analysis presented here (p.60):

- Accounting standards or policies may limit useful comparisons across companies
- Management accounting practices across companies and countries may not be performed in the same style
- Ratios are static and do not reveal future trends
- Ratios do not indicate the quality of the components used to calculate the ratios (i.e. ratios have ambiguous interpretations)
- Reported ratios may not reflect real values
- Companies may be highly diversified, limiting the comparability of their ratios to others
- Industry averages or norms are approximate; finer industry definitions may be required for certain interpretations or comparisons
- Financial statements and resulting ratios often mean different things to different people depending on their points of view or motivations.

Again, all figures reported here are estimates, so due caution is required. The above caveats, and the fact that statements made in this report are forward-looking, requires that this point be emphasized. A number of intervening factors can have material effect on the ratios and variances forecasted. These include changes in a company's management style, exchange rate volatility, changes in accounting standards, the lack of oversight or comparability in accounting standards, changes in economic conditions, changes in competition, changes in the global economy, changes in source data quality, and similar factors.

3.2 FINANCIAL RETURNS IN INDIA: ASSET STRUCTURE RATIOS

3.2.1 Overview

In this chapter we consider the asset structure of companies involved in laboratory analytical instruments operating in India benchmarked against global averages. The chapter begins by defining relevant terms. A common-size statement, or vertical analysis of assets is then presented for companies operating in India and the average global benchmarks (total assets = 100 percent). For ratios where there are large deviations between India and the benchmarks, graphics are provided (sometimes referred to as a financial "gap" analysis). Then the distribution of ratios is presented in the form of ranks and percentiles. Certain key vertical analysis asset ratios are highlighted across countries in the comparison group.

3.2.2 Assets – Definitions of Terms

The following definitions are provided for those less familiar with the asset-side of financial statement analysis. As this chapter deals with the vertical analysis and global benchmarking of assets, only definitions covering certain terms used in this chapter's tables and graphs are provided here . The glossary below reflects commonly accepted definitions across various countries and official sources.

- **Accumulated Depreciation - Buildings.** Accumulated depreciation is commonly understood as a contra asset account used to report the accumulation of periodic credits to reflect the use of the estimated service life of a fixed asset. Buildings are fixed assets which represent the acquisition and improvement costs of permanent structures owned or held by the company. Such structures typically include office buildings, storage quarters, or other facilities and also associated items such as loading docks, heating and air-conditioning equipment, refrigeration equipment, and all other property permanently attached to or forming an integral part of the structure. However, it generally does not include furniture, fixtures, or other equipment which are not an integral part of the building.

- **Accumulated Depreciation – Property, Plant & Equipment Under Capitalized Leases.** Accumulated depreciation of property, plant and equipment under capitalized leases is commonly understood as a contra asset account used to report the accumulation of periodic credits to reflect the use of the estimated service life of property, plant and equipment under capitalized lease obligations.

- **Accumulated Depreciation - Transportation Equipment.** Accumulated depreciation of transportation equipment is commonly understood to be contra asset account used to report the accumulation of periodic credits to reflect the use of the estimated service life of transportation equipment.

- **Accumulated Depreciation -Machinery & Equipment.** Accumulated depreciation of machinery and equipment is commonly understood to be contra asset account used to report the accumulation of periodic credits to reflect the use of the estimated service life of machinery and equipment.

- **Buildings.** Buildings are defined as fixed assets which represent the acquisition and improvement costs of permanent structures owned or held by the company. Such structures include office buildings, storage quarters, or other facilities and also associated items such as loading docks, heating and air-conditioning equipment, refrigeration equipment, and all other property permanently attached to or forming an integral part of the structure. However, it does not include furniture, fixtures, or other equipment which are not an integral part of the building.

- **Cash.** Cash is typically defined as money on hand, on deposit with chartered bank, or held in the form of eligible securities.

- **Current Assets.** Current assets are generally defined to be resources which are available, or can readily be made available, to meet the cost of operations or to pay current liabilities.

- **Deferred Charges.** Deferred charges are generally understood to represent the amount which has been paid for services already received by the company but has not been charged to operations.

- **Finished Goods.** Finished goods generally comprise the ready-for-sale inventory.

- **Intangible Other Assets.** Intangible assets are generally understood to be nonphysical assets such as legal rights (patents and trademarks) recorded at their historical cost then reduced by systematic amortization.

- **Investments in Unconsolidated Subsidiaries.** Investments in unconsolidated subsidiaries are typically defined as investments for the purpose of generating revenue in subsidiaries whose financial statements are not combined with the company's.

- **land.** Land is generally considered to be a fixed asset. If land is purchased, its capitalized value typically includes the purchase price plus costs such as legal fees, filling and excavation costs which are incurred to put the land in condition for its intended use. If land is acquired by gift, its capitalized value typically reflects its appraised value at the time of acquisition. Land typically does not include depletable resources.

- **Machinery & Equipment.** Machinery and equipment is commonly defined as a fixed asset classification which typically includes tangible property (other than land, buildings, and improvements other than buildings) with a life of more than one year. Such assets typically include office equipment, furniture, machine tools, and motor vehicles. Equipment may be attached to a structure for purposes of securing the item, but unless it is permanently attached to an integral part of the building or structure, it will generally be classified as equipment and not buildings. Equipment is generally defined as tangible property other than land, buildings, or improvements other than buildings, which is used in operations. Examples include machinery, tools, trucks, cars, furniture, and furnishings.

- **Progress Payments.** Progress payments are commonly defined as periodic payments to a supplier, contractor, or subcontractor for work as it is completed as desired, in order to reduce working capital requirements.

- **Property Plant & Equipment Under Capitalized Leases.** Property plant & equipment under capitalized leases generally consists of the gross book value (rather than the more commonly-used measures of fixed capital stocks in current or real value), of all commercial buildings, associated land and equipment used therein that are owned by the company and that are either used or operated by the company or leased or rented to others (under capitalized leases).

- **Property Plant and Equipment - Gross.** Gross property, plant and equipment generally consists of the gross book value (rather than the more commonly-used measures of fixed capital stocks in current or real value), of all commercial buildings, associated land and equipment used therein that are owned by the company and that are either used or operated by the company or leased or rented to others.

- **Property Plant and Equipment - Net.** Net PP&E equals the original cost of property, plant, and equipment (PP&E), less accumulated depreciation, depletion and amortization (DD&A).

- **Raw Materials.** Raw materials are materials which will be converted by a manufacturer into a finished product.

- **Receivables (Net).** Net receivables are defined as the net amount due to the company from private persons, businesses, agencies, funds, or governmental units which is expected to be collected in the form of moneys, goods, and/or services.

- **Short Term Investments.** Short-term investments are investments which can be typically liquidated in less than one year.

- **Total Assets.** Total assets are defined as the financial representation of economic resources, the beneficial interest in which is legally or equitably secured to a particular organization as a result of a past transaction or event.

- **Total Inventories.** Total inventories are defined as the total amount of goods on hand.

- **Transportation Equipment.** Transportation equipment is equipment used for the transportation of goods for sale.

- **Work in Process.** Work in progress includes goods which have been started but are not yet ready for sale.

3.2.3 Asset Structure: Outlook

Using the methodology described in the introduction, the following table summarizes asset structure benchmarks for firms involved in laboratory analytical instruments in India. To allow comparable benchmarking, a common index of Total Assets = 100 is used. All figures are current-year projections for companies operating in India based on latest financial results available.

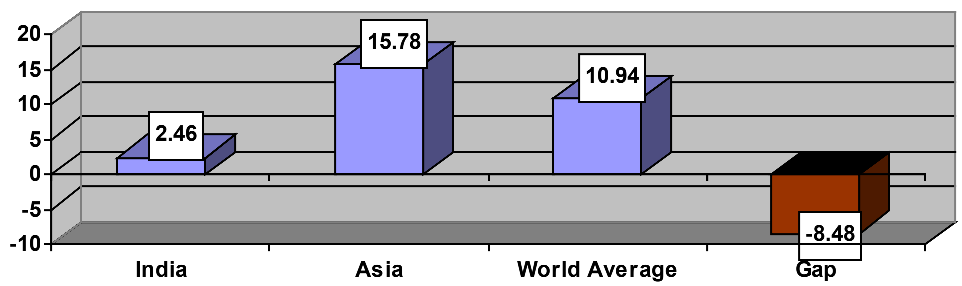
Asset Structure	India	Asia	World Avg.
Cash & Short Term Investments	2.46	15.78	10.94
Cash	2.10	5.56	3.80
Short Term Investments	0.35	10.00	6.87
Receivables (Net)	45.82	17.51	20.04
Total Inventories	17.23	12.87	15.52
Raw Materials	4.80	2.84	2.71
Work in Process	4.78	2.26	2.58
Finished Goods	7.00	5.82	3.10
Progress Payments & Other	0.66	0.18	0.22
Other Current Assets	0.04	0.92	1.27
Current Assets - Total	**65.54**	**47.00**	**47.75**
Investments in Unconsolidated Subsidiaries	0.05	0.18	0.22
Other Investments	0.18	2.84	2.61
Property Plant and Equipment - Net	26.64	17.09	19.10
Property Plant and Equipment - Gross	50.61	30.15	35.42
Land	0.09	2.27	1.56
Buildings	6.12	5.51	5.93
Machinery & Equipment	40.47	17.43	21.96
Transportation Equipment	0.34	1.12	0.95
Other Property Plant & Equipment	3.53	4.17	4.72
Property Plant & Equipment Under Capitalized Leases	0.06	1.61	0.68
Accumulated Depreciation - Total	23.97	13.09	16.32
Accumulated Depreciation - Buildings	1.22	1.58	1.64
Accumulated Depreciation -Machinery & Equipment	21.18	10.09	12.75
Accumulated Depreciation - Transportation Equipment	0.11	0.69	0.59
Accumulated Depreciation - Other Prop & Equip	1.46	2.36	2.40
Accumulated Depreciation - PP&E Under Capitalized Leases	0.00	0.23	0.12
Other Assets	7.59	5.54	7.03
Deferred Charges	3.11	1.35	2.04
Intangible Other Assets	4.48	2.96	3.92
Total Assets	**100.00**	**100.00**	**100.00**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

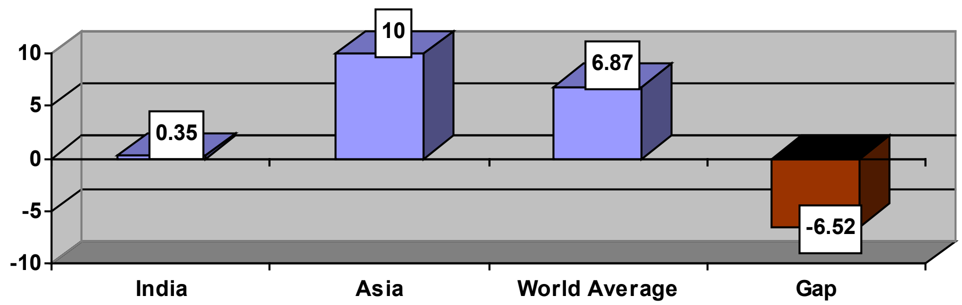
3.2.4 Large Variances: Assets

The following graphics summarize for laboratory analytical instruments the large asset structure gaps between firms operating in India and the world average. A gap cannot necessarily be interpreted as a positive or negative reflection on performance. Gaps may signal areas of specialization, market focus, or expertise. More contextual information is required to fully interpret these gaps. The gaps highlighted here are simply those that are large.

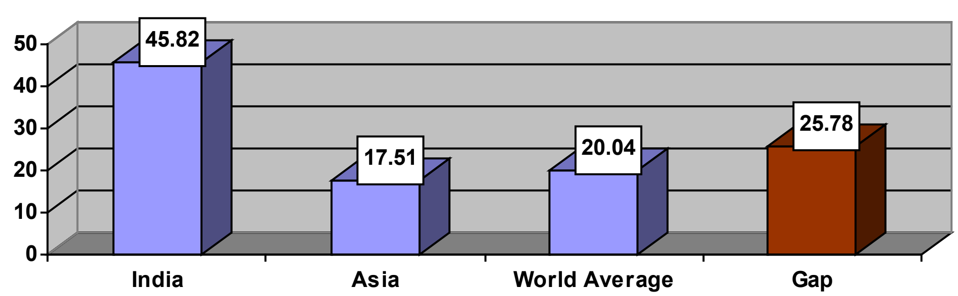
Gap: Cash & Short Term Investments



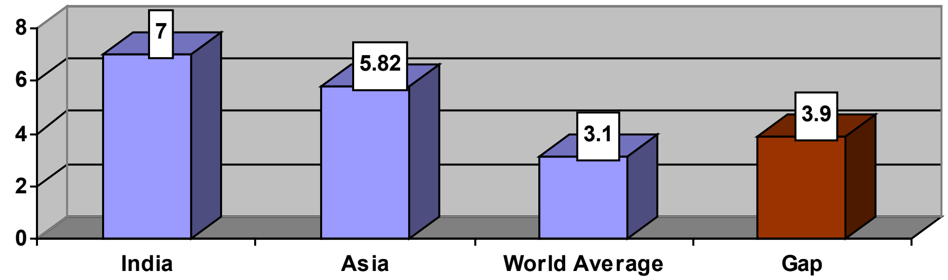
Gap: Short Term Investments



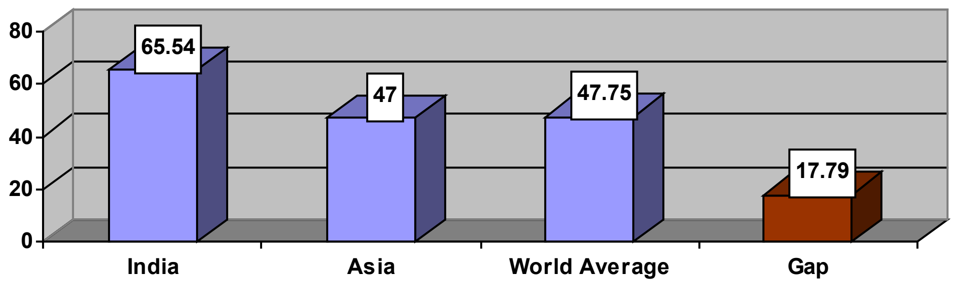
Gap: Receivables (Net)



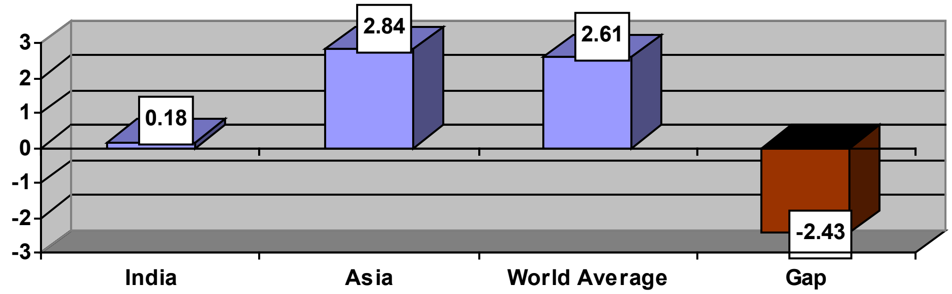
Gap: Finished Goods



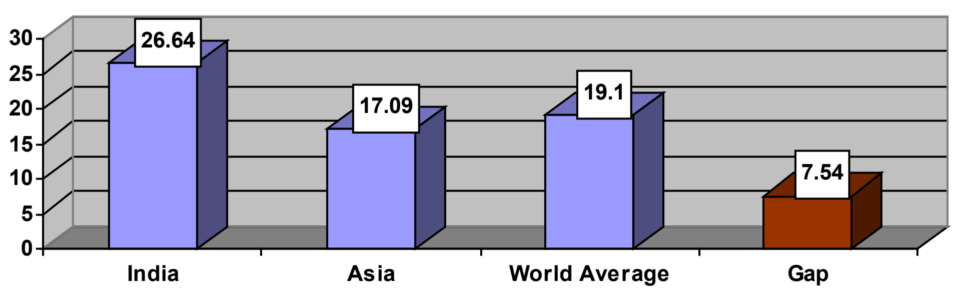
Gap: Current Assets - Total



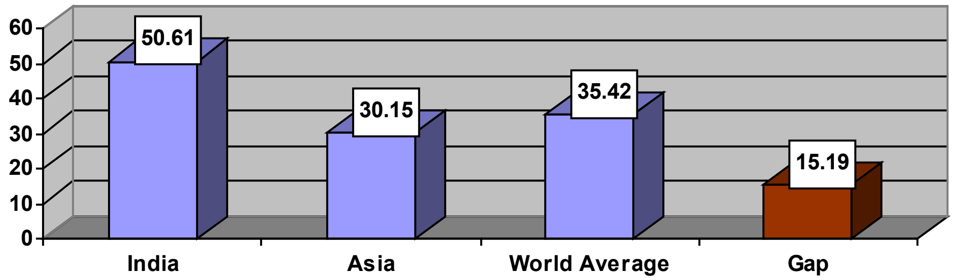
Gap: Other Investments



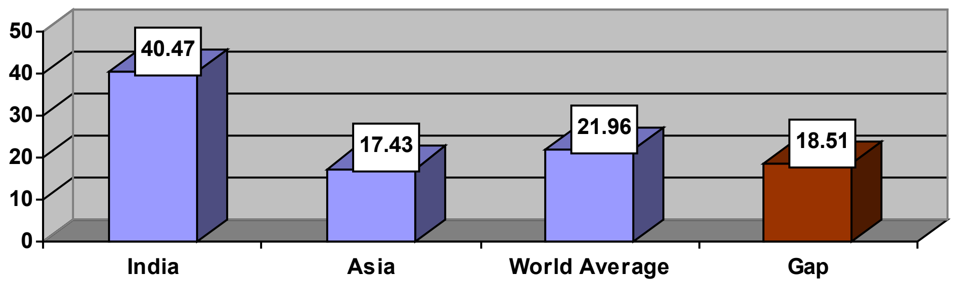
Gap: Property Plant and Equipment - Net



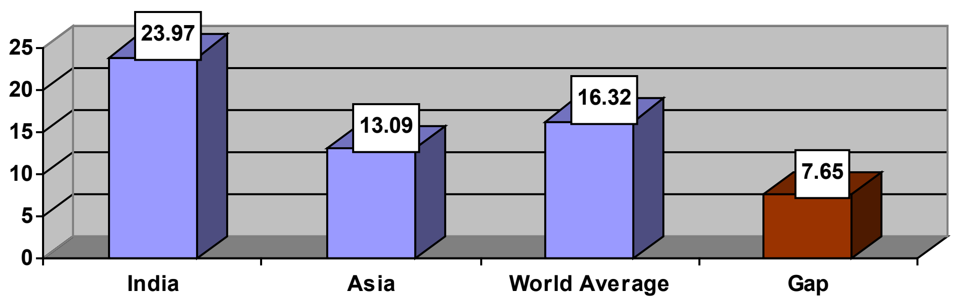
Gap: Property Plant and Equipment - Gross



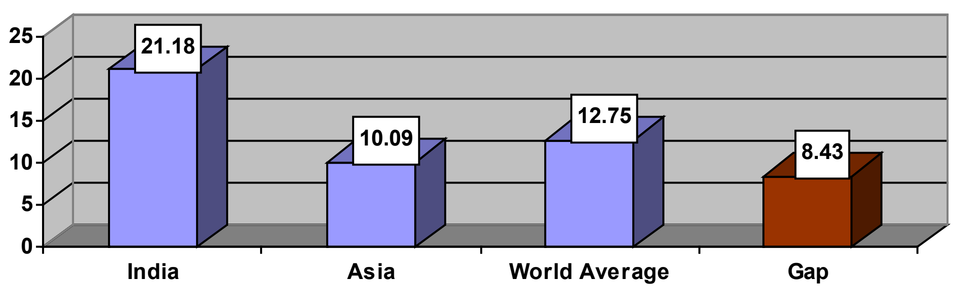
Gap: Machinery & Equipment



Gap: Accumulated Depreciation - Total



Gap: Accumulated Depreciation -Machinery & Equipment



3.2.5 Key Percentiles and Rankings

We now consider the distribution of asset ratios for laboratory analytical instruments using ranks and percentiles. What percent of countries have a value lower or higher than India (what is the ratio's rank or percentile)? The table below answers this question with respect to the vertical analysis of asset structure. The ranks and percentiles indicate, from highest to lowest, where a value falls within the distribution of all countries considered in the global benchmark (the number of countries in the benchmark per line item may vary, as indicated in the Rank). Again, a high or low figure does not necessarily indicate good or bad performance. After the summary table below, a few key vertical asset ratios are highlighted in additional tables.

Asset Structure	**India**	**Rank of Total**	**Percentile**
Cash & Short Term Investments	2.46	53 of 53	0.00
Cash	2.10	37 of 52	28.85
Short Term Investments	0.35	31 of 43	27.91
Receivables (Net)	45.82	2 of 53	96.23
Total Inventories	17.23	20 of 53	62.26
Raw Materials	4.80	15 of 46	67.39
Work in Process	4.78	5 of 46	89.13
Finished Goods	7.00	14 of 47	70.21
Progress Payments & Other	0.66	6 of 24	75.00
Other Current Assets	0.04	34 of 34	0.00
Current Assets - Total	**65.54**	**18 of 53**	**66.04**
Investments in Unconsolidated Subsidiaries	0.05	24 of 24	0.00
Other Investments	0.18	41 of 42	2.38
Property Plant and Equipment - Net	26.64	10 of 53	81.13
Property Plant and Equipment - Gross	50.61	7 of 53	86.79
Land	0.09	26 of 26	0.00
Buildings	6.12	26 of 45	42.22
Machinery & Equipment	40.47	1 of 51	98.04
Transportation Equipment	0.34	31 of 42	26.19
Other Property Plant & Equipment	3.53	24 of 45	46.67
Property Plant & Equipment Under Capitalized Leases	0.06	34 of 36	5.56
Accumulated Depreciation - Total	23.97	10 of 53	81.13
Accumulated Depreciation - Buildings	1.22	27 of 45	40.00
Accumulated Depreciation -Machinery & Equipment	21.18	4 of 51	92.16
Accumulated Depreciation - Transportation Equipment	0.11	32 of 41	21.95
Accumulated Depreciation - Other Prop & Equip	1.46	24 of 44	45.45
Accumulated Depreciation - P P & E Under Capitalized Leases	0.00	34 of 34	0.00
Other Assets	7.59	30 of 42	28.57
Deferred Charges	3.11	7 of 29	75.86
Intangible Other Assets	4.48	25 of 42	40.48
Total Assets	**100.00**		

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cash & Short Term Investments

Countries	Value (total assets = 100)	Rank	Percentile	Region
Malaysia	67.25	1	98.11	Asia
South Africa	67.21	2	96.23	Africa
Brazil	60.89	3	94.34	Latin America
Chile	57.94	4	92.45	Latin America
Israel	44.41	5	90.57	the Middle East
Ireland	44.04	6	88.68	Europe
Thailand	44.03	7	86.79	Asia
Taiwan	36.70	9	83.02	Asia
Portugal	33.03	11	79.25	Europe
Peru	32.54	12	77.36	Latin America
Greece	30.09	13	75.47	Europe
Czech Republic	26.79	14	73.58	Europe
Argentina	24.96	15	71.70	Latin America
Belgium	23.57	17	67.92	Europe
New Zealand	23.22	18	66.04	Oceana
Hong Kong	22.75	19	64.15	Asia
Sweden	21.67	20	62.26	Europe
Philippines	19.54	21	60.38	Asia
Japan	17.09	22	58.49	Asia
Norway	16.84	23	56.60	Europe
USA	16.50	25	52.83	North America
Switzerland	14.97	26	50.94	Europe
France	14.20	27	49.06	Europe
Netherlands	13.82	28	47.17	Europe
Canada	13.51	29	45.28	North America
Luxembourg	12.95	30	43.40	Europe
the United Kingdom	11.80	31	41.51	Europe
Italy	11.75	32	39.62	Europe
Denmark	10.74	33	37.74	Europe
South Korea	9.37	34	35.85	Asia
Finland	9.31	35	33.96	Europe
Russia	8.45	37	30.19	Europe
Austria	7.66	38	28.30	Europe
Hungary	7.59	39	26.42	Europe
Poland	6.21	40	24.53	Europe
Singapore	6.17	41	22.64	Asia
Germany	5.98	42	20.75	Europe
Indonesia	5.29	43	18.87	Asia
Turkey	5.18	44	16.98	the Middle East
Mexico	5.16	45	15.09	Latin America
Australia	4.46	48	9.43	Oceana
China	3.24	50	5.66	Asia
Pakistan	3.19	51	3.77	the Middle East
Spain	2.84	52	1.89	Europe
India	**2.46**	**53**	**0.00**	**Asia**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cash & Short Term Investments
(Laboratory Analytical Instruments)

Countries in Asia	Value (total assets = 100)	Rank	Percentile
Malaysia	67.25	1	96.15
Thailand	44.03	2	92.31
Mongolia	39.28	3	88.46
Taiwan	36.70	4	84.62
North Korea	31.58	5	80.77
Macau	24.59	6	76.92
Hong Kong	22.75	7	73.08
Papua New Guinea	22.08	8	69.23
Burma	19.61	9	65.38
Philippines	19.54	10	61.54
Japan	17.09	11	57.69
Brunei	13.52	12	53.85
South Korea	9.37	13	50.00
Seychelles	7.88	14	46.15
Singapore	6.17	15	42.31
Indonesia	5.29	16	38.46
Maldives	4.82	17	34.62
Sri Lanka	3.80	18	30.77
China	3.24	19	26.92
India	**2.46**	**20**	**23.08**
Cambodia	1.87	21	19.23
Laos	1.80	22	15.38
Vietnam	1.63	23	11.54
Bangladesh	1.40	24	7.69
Bhutan	1.33	25	3.85
Nepal	1.19	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Receivables (Net)

Countries	Value (total assets = 100)	Rank	Percentile	Region
Austria	51.50	1	98.11	Europe
India	**45.82**	**2**	**96.23**	**Asia**
Australia	38.97	3	94.34	Oceana
Spain	37.04	4	92.45	Europe
Denmark	36.84	5	90.57	Europe
Norway	35.29	6	88.68	Europe
Germany	31.95	7	86.79	Europe
Italy	31.33	8	84.91	Europe
France	31.22	9	83.02	Europe
Israel	31.09	10	81.13	the Middle East
Ireland	30.83	11	79.25	Europe
Finland	30.65	12	77.36	Europe
Netherlands	28.23	13	75.47	Europe
Belgium	27.83	14	73.58	Europe
Japan	26.86	15	71.70	Asia
the United Kingdom	25.98	16	69.81	Europe
Taiwan	25.69	17	67.92	Asia
Sweden	24.66	18	66.04	Europe
New Zealand	24.46	19	64.15	Oceana
Singapore	24.03	20	62.26	Asia
Hong Kong	23.96	21	60.38	Asia
Portugal	23.12	22	58.49	Europe
Canada	22.40	23	56.60	North America
Switzerland	21.26	24	54.72	Europe
USA	21.13	25	52.83	North America
Greece	21.07	26	50.94	Europe
Czech Republic	18.75	27	49.06	Europe
Luxembourg	18.39	28	47.17	Europe
Argentina	17.47	29	45.28	Latin America
Indonesia	15.54	30	43.40	Asia
South Korea	11.73	32	39.62	Asia
Russia	10.57	35	33.96	Europe
China	9.53	36	32.08	Asia
Hungary	9.49	37	30.19	Europe
Pakistan	9.37	38	28.30	the Middle East
Malaysia	7.93	39	26.42	Asia
South Africa	7.93	40	24.53	Africa
Poland	7.76	41	22.64	Europe
Brazil	7.18	42	20.75	Latin America
Chile	6.83	43	18.87	Latin America
Turkey	6.48	44	16.98	the Middle East
Mexico	6.46	45	15.09	Latin America
Thailand	5.19	47	11.32	Asia
Peru	3.84	50	5.66	Latin America
Philippines	2.30	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Receivables (Net)
(Laboratory Analytical Instruments)

Countries in Asia	Value (total assets = 100)	Rank	Percentile
India	**45.82**	**1**	**96.15**
Cambodia	34.76	2	92.31
Laos	33.52	3	88.46
Vietnam	30.42	4	84.62
Japan	26.86	5	80.77
Bangladesh	26.07	6	76.92
Taiwan	25.69	7	73.08
Bhutan	24.83	8	69.23
Singapore	24.03	9	65.38
Hong Kong	23.96	10	61.54
Nepal	22.22	11	57.69
Brunei	19.20	12	53.85
Macau	17.21	13	50.00
Indonesia	15.54	14	46.15
Maldives	14.17	15	42.31
South Korea	11.73	16	38.46
Sri Lanka	11.18	17	34.62
Seychelles	9.86	18	30.77
China	9.53	19	26.92
Malaysia	7.93	20	23.08
Thailand	5.19	21	19.23
Mongolia	4.63	22	15.38
North Korea	3.72	23	11.54
Papua New Guinea	2.60	24	7.69
Burma	2.31	25	3.85
Philippines	2.30	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Inventories

Countries	Value (total assets = 100)	Rank	Percentile	Region
Singapore	38.39	1	98.11	Asia
Italy	33.78	2	96.23	Europe
Indonesia	33.29	3	94.34	Asia
Australia	30.91	5	90.57	Oceana
Austria	29.24	6	88.68	Europe
Germany	27.38	7	86.79	Europe
Spain	25.36	8	84.91	Europe
France	23.51	10	81.13	Europe
Norway	22.95	11	79.25	Europe
Belgium	22.06	12	77.36	Europe
Canada	21.48	13	75.47	North America
China	20.41	14	73.58	Asia
Pakistan	20.07	15	71.70	the Middle East
USA	18.65	16	69.81	North America
Denmark	18.30	17	67.92	Europe
Finland	18.02	18	66.04	Europe
the United Kingdom	17.57	19	64.15	Europe
India	**17.23**	**20**	**62.26**	**Asia**
Switzerland	17.15	21	60.38	Europe
Japan	16.10	22	58.49	Asia
South Korea	15.95	23	56.60	Asia
Netherlands	15.89	24	54.72	Europe
Luxembourg	14.83	25	52.83	Europe
New Zealand	14.78	26	50.94	Oceana
Hong Kong	14.49	28	47.17	Asia
Russia	14.37	29	45.28	Europe
Sweden	13.76	30	43.40	Europe
Hungary	12.91	31	41.51	Europe
Poland	10.56	32	39.62	Europe
Turkey	8.81	33	37.74	the Middle East
Mexico	8.79	34	35.85	Latin America
Israel	7.06	36	32.08	the Middle East
Ireland	7.00	37	30.19	Europe
Malaysia	5.86	38	28.30	Asia
South Africa	5.86	39	26.42	Africa
Taiwan	5.84	40	24.53	Asia
Brazil	5.31	41	22.64	Latin America
Portugal	5.25	42	20.75	Europe
Chile	5.05	43	18.87	Latin America
Greece	4.79	44	16.98	Europe
Czech Republic	4.26	45	15.09	Europe
Argentina	3.97	46	13.21	Latin America
Thailand	3.84	47	11.32	Asia
Peru	2.84	50	5.66	Latin America
Philippines	1.70	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Inventories
(Laboratory Analytical Instruments)

Countries in Asia	Value (total assets = 100)	Rank	Percentile
Singapore	38.39	1	96.15
Indonesia	33.29	2	92.31
Maldives	30.35	3	88.46
Sri Lanka	23.94	4	84.62
China	20.41	5	80.77
India	**17.23**	**6**	**76.92**
Japan	16.10	7	73.08
South Korea	15.95	8	69.23
Brunei	15.49	9	65.38
Hong Kong	14.49	10	61.54
Seychelles	13.41	11	57.69
Cambodia	13.08	12	53.85
Laos	12.61	13	50.00
Vietnam	11.44	14	46.15
Bangladesh	9.81	15	42.31
Bhutan	9.34	16	38.46
Nepal	8.36	17	34.62
Malaysia	5.86	18	30.77
Taiwan	5.84	19	26.92
Macau	3.91	20	23.08
Thailand	3.84	21	19.23
Mongolia	3.42	22	15.38
North Korea	2.75	23	11.54
Papua New Guinea	1.93	24	7.69
Burma	1.71	25	3.85
Philippines	1.70	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Assets - Total

Countries	Value (total assets = 100)	Rank	Percentile	Region
Austria	89.72	1	98.11	Europe
Israel	83.93	2	96.23	the Middle East
Ireland	83.24	3	94.34	Europe
Malaysia	81.34	4	92.45	Asia
South Africa	81.29	5	90.57	Africa
Italy	77.94	6	88.68	Europe
Belgium	75.20	7	86.79	Europe
Norway	75.08	8	84.91	Europe
Australia	74.78	9	83.02	Oceana
Brazil	73.65	10	81.13	Latin America
Spain	70.44	11	79.25	Europe
Chile	70.08	12	77.36	Latin America
Singapore	69.57	13	75.47	Asia
Taiwan	69.36	14	73.58	Asia
France	69.24	15	71.70	Europe
Germany	68.31	16	69.81	Europe
Denmark	67.05	17	67.92	Europe
India	**65.54**	**18**	**66.04**	**Asia**
Sweden	65.10	19	64.15	Europe
Japan	63.11	20	62.26	Asia
Finland	63.04	21	60.38	Europe
New Zealand	62.53	22	58.49	Oceana
Portugal	62.43	23	56.60	Europe
Hong Kong	61.27	24	54.72	Asia
USA	61.10	25	52.83	North America
Netherlands	59.97	26	50.94	Europe
Canada	58.55	27	49.06	North America
the United Kingdom	58.20	28	47.17	Europe
Indonesia	57.97	29	45.28	Asia
Greece	56.88	30	43.40	Europe
Switzerland	54.94	31	41.51	Europe
Thailand	53.26	33	37.74	Asia
Czech Republic	50.64	34	35.85	Europe
Luxembourg	47.51	35	33.96	Europe
Argentina	47.17	36	32.08	Latin America
Peru	39.35	40	24.53	Latin America
South Korea	37.38	41	22.64	Asia
China	35.55	42	20.75	Asia
Pakistan	34.95	43	18.87	the Middle East
Russia	33.69	45	15.09	Europe
Hungary	30.27	46	13.21	Europe
Poland	24.75	48	9.43	Europe
Philippines	23.63	49	7.55	Asia
Turkey	20.65	50	5.66	the Middle East
Mexico	20.59	51	3.77	Latin America

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Assets - Total
(Laboratory Analytical Instruments)

Countries in Asia	Value (total assets = 100)	Rank	Percentile
Malaysia	81.34	1	96.15
Singapore	69.57	2	92.31
Taiwan	69.36	3	88.46
India	**65.54**	**4**	**84.62**
Japan	63.11	5	80.77
Hong Kong	61.27	6	76.92
Indonesia	57.97	7	73.08
Thailand	53.26	8	69.23
Maldives	52.85	9	65.38
Cambodia	49.73	10	61.54
Brunei	49.61	11	57.69
Laos	47.96	12	53.85
Mongolia	47.51	13	50.00
Macau	46.47	14	46.15
Vietnam	43.52	15	42.31
Sri Lanka	41.69	16	38.46
North Korea	38.20	17	34.62
South Korea	37.38	18	30.77
Bangladesh	37.30	19	26.92
China	35.55	20	23.08
Bhutan	35.52	21	19.23
Nepal	31.79	22	15.38
Seychelles	31.44	23	11.54
Papua New Guinea	26.71	24	7.69
Burma	23.72	25	3.85
Philippines	23.63	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Property Plant and Equipment - Net

Countries	Value (total assets = 100)	Rank	Percentile	Region
South Korea	40.77	1	98.11	Asia
Russia	36.74	3	94.34	Europe
Hungary	33.01	4	92.45	Europe
New Zealand	30.63	5	90.57	Oceana
Hong Kong	30.02	6	88.68	Asia
Indonesia	28.80	7	86.79	Asia
Poland	27.00	9	83.02	Europe
India	**26.64**	**10**	**81.13**	**Asia**
Japan	26.06	11	79.25	Asia
Singapore	25.34	12	77.36	Asia
the United Kingdom	25.22	13	75.47	Europe
Switzerland	24.99	14	73.58	Europe
Denmark	23.25	15	71.70	Europe
Turkey	22.52	16	69.81	the Middle East
Mexico	22.46	17	67.92	Latin America
Canada	21.97	18	66.04	North America
Luxembourg	21.61	19	64.15	Europe
Germany	19.75	22	58.49	Europe
Finland	19.11	23	56.60	Europe
Norway	18.41	24	54.72	Europe
USA	17.71	25	52.83	North America
China	17.66	26	50.94	Asia
Netherlands	17.57	27	49.06	Europe
Pakistan	17.36	28	47.17	the Middle East
Australia	15.32	29	45.28	Oceana
Belgium	14.95	30	43.40	Europe
Sweden	14.91	31	41.51	Europe
Spain	12.69	32	39.62	Europe
France	11.23	33	37.74	Europe
Malaysia	11.14	34	35.85	Asia
South Africa	11.13	35	33.96	Africa
Brazil	10.08	36	32.08	Latin America
Italy	10.06	37	30.19	Europe
Chile	9.59	38	28.30	Latin America
Thailand	7.29	39	26.42	Asia
Peru	5.39	42	20.75	Latin America
Austria	5.09	43	18.87	Europe
Israel	3.55	45	15.09	the Middle East
Ireland	3.52	46	13.21	Europe
Philippines	3.24	47	11.32	Asia
Taiwan	2.93	48	9.43	Asia
Portugal	2.64	50	5.66	Europe
Greece	2.41	51	3.77	Europe
Czech Republic	2.14	52	1.89	Europe
Argentina	2.00	53	0.00	Latin America

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Property Plant and Equipment - Net
(Laboratory Analytical Instruments)

Countries in Asia	Value (total assets = 100)	Rank	Percentile
South Korea	40.77	1	96.15
Seychelles	34.29	2	92.31
Hong Kong	30.02	3	88.46
Indonesia	28.80	4	84.62
India	**26.64**	**5**	**80.77**
Maldives	26.26	6	76.92
Japan	26.06	7	73.08
Singapore	25.34	8	69.23
Brunei	22.56	9	65.38
Sri Lanka	20.71	10	61.54
Cambodia	20.22	11	57.69
Laos	19.49	12	53.85
Vietnam	17.69	13	50.00
China	17.66	14	46.15
Bangladesh	15.16	15	42.31
Bhutan	14.44	16	38.46
Nepal	12.92	17	34.62
Malaysia	11.14	18	30.77
Thailand	7.29	19	26.92
Mongolia	6.51	20	23.08
North Korea	5.23	21	19.23
Papua New Guinea	3.66	22	15.38
Burma	3.25	23	11.54
Philippines	3.24	24	7.69
Taiwan	2.93	25	3.85
Macau	1.97	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accumulated Depreciation - Total

Countries	Value (total assets = 100)	Rank	Percentile	Region
Germany	38.22	1	98.11	Europe
Spain	35.06	2	96.23	Europe
Japan	32.39	3	94.34	Asia
Indonesia	30.06	4	92.45	Asia
the United Kingdom	28.15	6	88.68	Europe
Norway	25.61	7	86.79	Europe
Switzerland	24.76	8	84.91	Europe
Denmark	24.40	9	83.02	Europe
India	**23.97**	**10**	**81.13**	**Asia**
Netherlands	21.67	11	79.25	Europe
Luxembourg	21.41	13	75.47	Europe
USA	19.61	14	73.58	North America
New Zealand	18.96	15	71.70	Oceana
Hong Kong	18.58	16	69.81	Asia
China	18.43	17	67.92	Asia
France	18.36	18	66.04	Europe
Pakistan	18.12	19	64.15	the Middle East
Finland	17.45	20	62.26	Europe
Belgium	15.06	21	60.38	Europe
Canada	14.29	22	58.49	North America
Sweden	13.03	23	56.60	Europe
Italy	12.21	24	54.72	Europe
South Korea	12.08	25	52.83	Asia
Singapore	12.02	26	50.94	Asia
Australia	11.52	27	49.06	Oceana
Russia	10.88	29	45.28	Europe
Hungary	9.78	30	43.40	Europe
Poland	8.00	31	41.51	Europe
Turkey	6.67	32	39.62	the Middle East
Mexico	6.65	33	37.74	Latin America
Austria	6.49	34	35.85	Europe
Israel	5.14	36	32.08	the Middle East
Ireland	5.10	37	30.19	Europe
Taiwan	4.25	38	28.30	Asia
Malaysia	3.93	39	26.42	Asia
South Africa	3.93	40	24.53	Africa
Portugal	3.83	41	22.64	Europe
Brazil	3.56	42	20.75	Latin America
Greece	3.49	43	18.87	Europe
Chile	3.39	44	16.98	Latin America
Czech Republic	3.10	45	15.09	Europe
Argentina	2.89	46	13.21	Latin America
Thailand	2.58	47	11.32	Asia
Peru	1.90	50	5.66	Latin America
Philippines	1.14	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accumulated Depreciation - Total (Laboratory Analytical Instruments)

Countries in Asia	Value (total assets = 100)	Rank	Percentile
Japan	32.39	1	96.15
Indonesia	30.06	2	92.31
Maldives	27.41	3	88.46
India	**23.97**	**4**	**84.62**
Brunei	22.36	5	80.77
Sri Lanka	21.62	6	76.92
Hong Kong	18.58	7	73.08
China	18.43	8	69.23
Cambodia	18.19	9	65.38
Laos	17.54	10	61.54
Vietnam	15.91	11	57.69
Bangladesh	13.64	12	53.85
Bhutan	12.99	13	50.00
South Korea	12.08	14	46.15
Singapore	12.02	15	42.31
Nepal	11.63	16	38.46
Seychelles	10.16	17	34.62
Taiwan	4.25	18	30.77
Malaysia	3.93	19	26.92
Macau	2.85	20	23.08
Thailand	2.58	21	19.23
Mongolia	2.30	22	15.38
North Korea	1.85	23	11.54
Papua New Guinea	1.29	24	7.69
Burma	1.15	25	3.85
Philippines	1.14	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Intangible Other Assets

Countries	Value (total assets = 100)	Rank	Percentile	Region
USA	19.69	1	97.62	North America
Netherlands	17.78	2	95.24	Europe
Switzerland	15.77	3	92.86	Europe
France	15.28	4	90.48	Europe
Sweden	14.87	5	88.10	Europe
Finland	14.18	6	85.71	Europe
Luxembourg	13.64	7	83.33	Europe
Canada	13.12	8	80.95	North America
the United Kingdom	11.81	9	78.57	Europe
Israel	11.71	10	76.19	the Middle East
Ireland	11.61	11	73.81	Europe
Australia	10.29	12	71.43	Oceana
Taiwan	9.68	13	69.05	Asia
Belgium	9.09	14	66.67	Europe
Portugal	8.71	15	64.29	Europe
Denmark	8.22	16	61.90	Europe
Spain	8.01	17	59.52	Europe
Greece	7.94	18	57.14	Europe
Italy	7.45	19	54.76	Europe
Czech Republic	7.06	20	52.38	Europe
Germany	6.82	21	50.00	Europe
Argentina	6.58	22	47.62	Latin America
South Korea	4.95	23	45.24	Asia
India	**4.48**	**25**	**40.48**	**Asia**
Russia	4.46	26	38.10	Europe
Hungary	4.01	27	35.71	Europe
New Zealand	3.74	28	33.33	Oceana
Hong Kong	3.67	29	30.95	Asia
Poland	3.28	30	28.57	Europe
Indonesia	3.17	31	26.19	Asia
Austria	2.83	33	21.43	Europe
Norway	2.75	34	19.05	Europe
Turkey	2.73	35	16.67	the Middle East
Mexico	2.72	36	14.29	Latin America
China	1.95	39	7.14	Asia
Pakistan	1.91	40	4.76	the Middle East
Japan	1.16	41	2.38	Asia
Singapore	0.95	42	0.00	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Intangible Other Assets
(Laboratory Analytical Instruments)

Countries in Asia	Value (total assets = 100)	Rank	Percentile
Brunei	14.24	1	94.74
Taiwan	9.68	2	89.47
Macau	6.48	3	84.21
South Korea	4.95	4	78.95
India	**4.48**	**5**	**73.68**
Seychelles	4.16	6	68.42
Hong Kong	3.67	7	63.16
Cambodia	3.40	8	57.89
Laos	3.28	9	52.63
Indonesia	3.17	10	47.37
Vietnam	2.97	11	42.11
Maldives	2.89	12	36.84
Bangladesh	2.55	13	31.58
Bhutan	2.43	14	26.32
Sri Lanka	2.28	15	21.05
Nepal	2.17	16	15.79
China	1.95	17	10.53
Japan	1.16	18	5.26
Singapore	0.95	19	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

3.3 FINANCIAL RETURNS IN INDIA: LIABILITY STRUCTURE RATIOS

3.3.1 Overview

In this chapter we consider the liability structure of firms operating in India benchmarked against global averages. The chapter begins by defining relevant terms. A common-size statement, or vertical analysis of liabilities and shareholder equity is then presented for the proto-typical firm operating in India and the average global benchmarks (sometimes referred to as a financial "gap" analysis). The figure reflect firms involved in laboratory analytical instruments in India. For ratios where there are large deviations between India and the benchmarks, graphics are provided (total liabilities and equity = 100 percent). Then the distribution of ratios is presented in the form of ranks and percentiles. Certain key vertical analysis liability ratios are highlighted.

3.3.2 Liabilities and Equity – Definitions of Terms

The following definitions are provided for those less familiar with the liability-side of financial statement analysis. As this chapter deals with the vertical analysis and global benchmarking of liabilities and equity, only definitions covering certain terms used in this chapter's tables and graphs are provided here . The glossary below reflects commonly accepted definitions across various countries and official sources.

- **Accounts Payable.** Accounts payable are defined as amounts owed on open account to private persons or organizations for goods or services received.

- **Capital Surplus.** Capital surplus is commonly defined as an amount of equity which is directly contributed capital in excess of the par value.

- **Common Equity.** Common equity is defined to equal the company's net worth. It typically comprises capital stock, capital surplus, retained earnings, and, in some cases, net worth reserves. Common equity is the portion of total net worth belonging to the common stockholders. Synonyms which are often used for common equity are "common stock" and "net worth".

- **Common Stock.** Common stock is defined as the securities which represent the company's ownership interest. Common stockholders typically assume greater risk than preferred stockholders; although common stockholders maintain greater control and generally greater dividends and capital appreciation. Common stock can be used interchangeably with the term capital stock when the company has no preferred stock.

- **Current Liabilities - Total.** Total current liabilities are defined as the total amount of obligations which would require the use of current assets or other current liabilities to pay.

- **Current Portion of Long Term Debt.** The current proportion of long term debt is typically defined as debt which is payable in more than one year.

- **Deferred Taxes.** Deferred taxes are compulsory charges from a previous accounting period which are yet unpaid.

- **Deferred Taxes - Credit.** Deferred tax credits are defined as credits against compulsory charges from a previous accounting period which are yet unpaid.

- **Dividends Payable.** Dividends payable typically include the declared dividend dollar amount that a company is obligated to pay. The dividend payment eliminates dividends payable and reduces cash.

- **Income Taxes Payable.** Income taxes payable are understood to mean taxes which are levied by state, federal, and local governments on the company's reported accounting profit. Income taxes payable are those which are due in the current accounting period.

- **Long Term Debt.** Long-term debt is defined to be due in a period exceeding one year or one operating cycle, whichever is longer. Long-term debt can have an extended repayment period such as a many-year mortgage on land and buildings, or debt that's intended to be permanent such as bonds issued to investors.

- **Long Term Debt Excluding Capitalized Leases.** Long term debt excluding capitalized leases is defined as debt which is typically due in a period exceeding one year or one operating cycle, whichever is longer, less capitalized leases (see Long Term Debt for exceptions). Capital leases are generally recorded as assets with liability at the current value of the lease payment.

- **Preferred Stock.** Preferred stock receives payment of dividends from the company's earnings before common stock. Preferred stock generally maintains priority in the case of the company's liquidation. Usually the dividends from preferred stock are priced at a specific rate which has been determined by the board of directors.

- **Shareholders Equity.** Shareholders equity is commonly defined to be the amount of total equity reserved for common and preferred shareholders.

- **Short Term Debt.** Short term debt is generally defined as debt payable within one year.

- **Total Liabilities.** Total liabilities are generally defined to include all the claims against a corporation. Liabilities include accounts and wages and salaries payable, dividends declared payable, accrued taxes payable, fixed or long-term liabilities such as mortgage bonds, debentures, and bank loans.

3.3.3 Liability Structure: Outlook

Using the methodology described in the introduction, the following table summarizes liability and equity structure benchmarks for firms involved in laboratory analytical instruments in India. To allow comparable benchmarking, a common index of Total Liabilities & Shareholders Equity = 100 is used. All figures are current-year projections for companies operating in India based on latest financial results available.

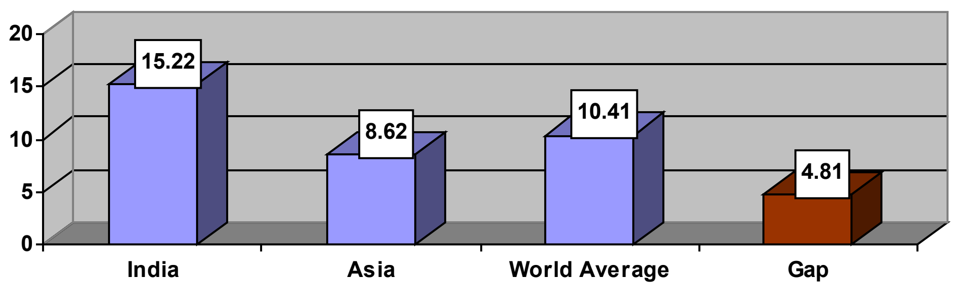
Liability Structure	India	Asia	World Avg.
Accounts Payable	15.22	8.62	10.41
Short Term Debt & Current Portion of Long Term Debt	16.96	10.20	12.11
Income Taxes Payable	0.01	0.55	0.46
Dividends Payable	1.05	1.63	0.98
Other Current Liabilities	2.36	3.67	4.15
Current Liabilities - Total	**35.60**	**24.05**	**28.07**
Long Term Debt	42.57	13.87	19.19
Long Term Debt Excluding Capitalized Leases	42.57	13.79	19.07
Provision For Risks and Charges	0.27	0.99	1.05
Deferred Taxes	5.91	0.15	0.09
Deferred Taxes - Credit	6.02	2.54	1.71
Deferred Taxes - Debit	0.11	1.94	1.62
Total Liabilities	**84.35**	**38.82**	**48.56**
Preferred Stock	5.28	0.97	1.31
Common Equity	10.37	32.09	26.23
Common Stock	5.58	11.26	10.65
Capital Surplus	8.15	9.25	7.78
Other Appropriated Reserves	-3.49	0.00	-0.30
Unappropriated Reserves	0.13	1.83	0.35
Total Liabilities & Shareholders Equity	**100.00**	**100.00**	**100.00**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

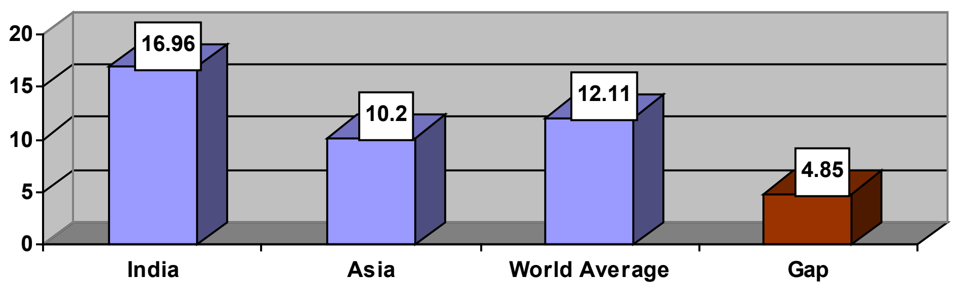
3.3.4 Large Variances: Liabilities

The following graphics summarize for laboratory analytical instruments the large liability structure gaps between firms operating in India and the world average. A gap cannot necessarily be interpreted as a positive or negative reflection on performance. Gaps may signal areas of specialization, market focus, or expertise. More contextual information is required to fully interpret these gaps. The gaps highlighted here are simply those that are large.

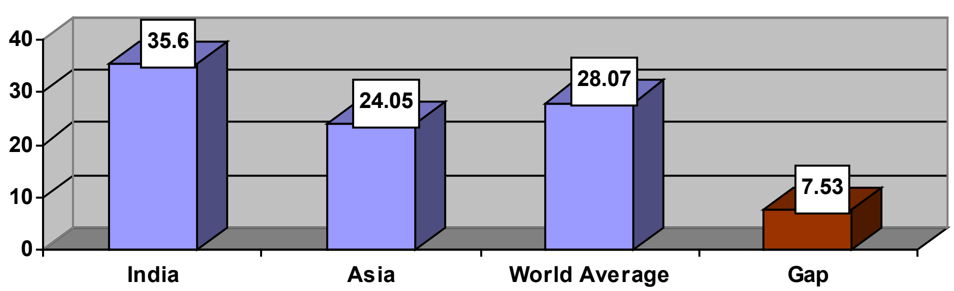
Gap: Accounts Payable



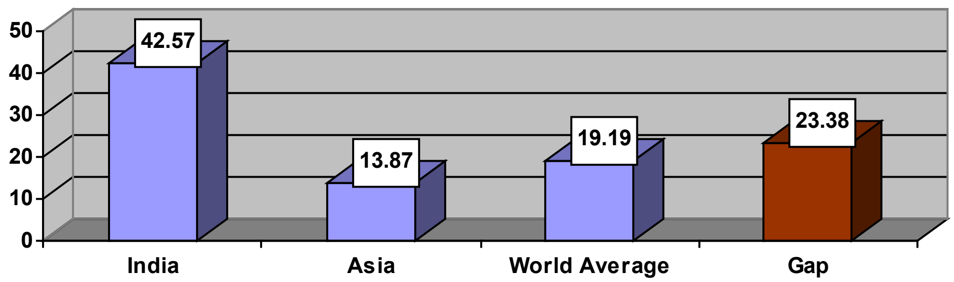
Gap: Short Term Debt & Current Portion of Long Term Debt



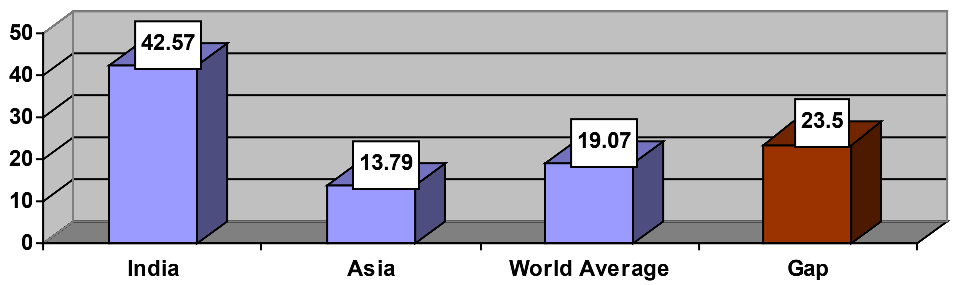
Gap: Current Liabilities - Total



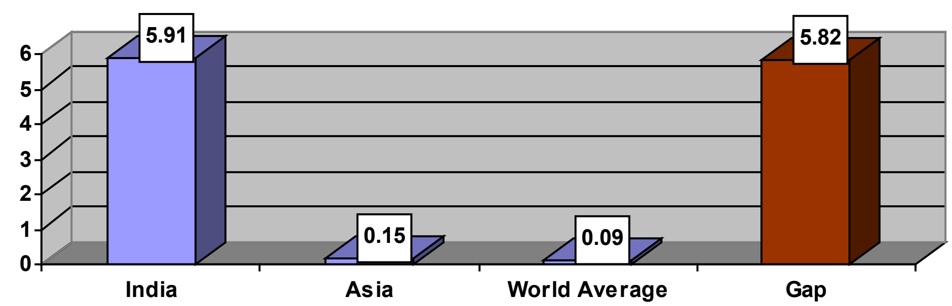
Gap: Long Term Debt



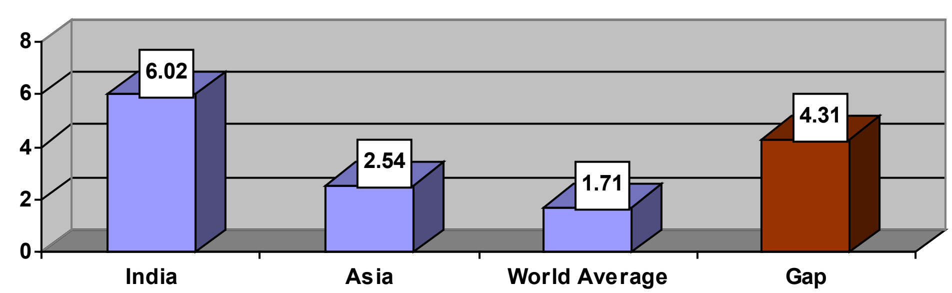
Gap: Long Term Debt Excluding Capitalized Leases



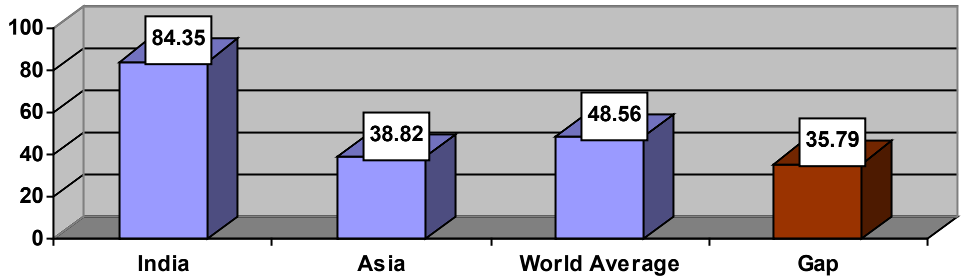
Gap: Deferred Taxes



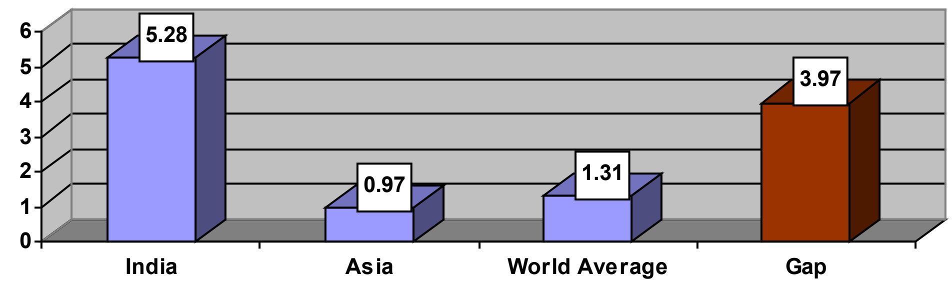
Gap: Deferred Taxes - Credit



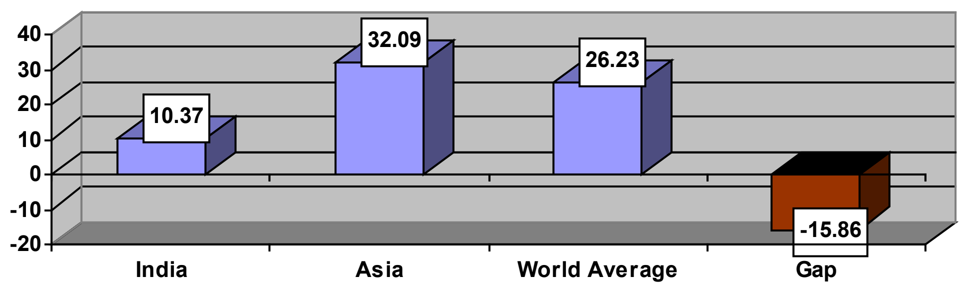
Gap: Total Liabilities



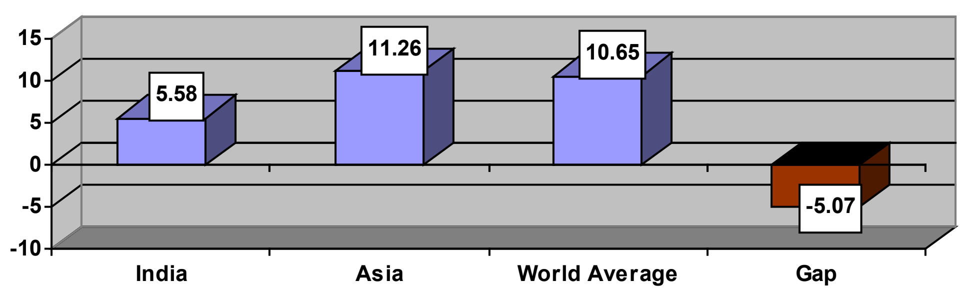
Gap: Preferred Stock



Gap: Common Equity



Gap: Common Stock



3.3.5 Key Percentiles and Rankings

We now consider the distribution of liability ratios for laboratory analytical instruments using ranks and percentiles. What percent of countries have a value lower or higher than India (what is the ratio's rank or percentile)? The table below answers this question with respect to the vertical analysis of liability structure. The ranks and percentiles indicate, from highest to lowest, where a value falls within the distribution of all countries considered in the global benchmark (the number of countries in the benchmark per line item may vary, as indicated in the Rank). Again, a high or low figure does not necessarily indicate good or bad performance. After the summary table below, a few key vertical liability ratios are highlighted in additional tables.

Liability Structure	**India**	**Rank of Total**	**Percentile**
Accounts Payable	15.22	5 of 53	90.57
Short Term Debt & Current Portion of Long Term Debt	16.96	10 of 42	76.19
Income Taxes Payable	0.01	43 of 43	0.00
Dividends Payable	1.05	16 of 25	36.00
Other Current Liabilities	2.36	45 of 53	15.09
Current Liabilities - Total	**35.60**	**13 of 53**	**75.47**
Long Term Debt	42.57	1 of 35	97.14
Long Term Debt Excluding Capitalized Leases	42.57	1 of 35	97.14
Provision For Risks and Charges	0.27	35 of 35	0.00
Deferred Taxes	5.91	1 of 40	97.50
Deferred Taxes - Credit	6.02	1 of 22	95.45
Deferred Taxes - Debit	0.11	29 of 29	0.00
Total Liabilities	**84.35**	**1 of 53**	**98.11**
Preferred Stock	5.28	1 of 6	83.33
Common Equity	10.37	53 of 53	0.00
Common Stock	5.58	40 of 52	23.08
Capital Surplus	8.15	28 of 49	42.86
Other Appropriated Reserves	-3.49	34 of 34	0.00
Unappropriated Reserves	0.13	18 of 22	18.18
Total Liabilities & Shareholders Equity	**100.00**		

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accounts Payable

Countries	Value (total liabilities & equity = 100)	Rank	Percentile	Region
Indonesia	22.68	1	98.11	Asia
Spain	19.20	3	94.34	Europe
India	**15.22**	**5**	**90.57**	**Asia**
France	15.02	6	88.68	Europe
Singapore	14.88	7	86.79	Asia
China	13.91	8	84.91	Asia
Pakistan	13.67	9	83.02	the Middle East
Canada	13.66	10	81.13	North America
Japan	13.30	11	79.25	Asia
Italy	12.93	12	77.36	Europe
Israel	12.88	13	75.47	the Middle East
Ireland	12.78	14	73.58	Europe
the United Kingdom	11.13	15	71.70	Europe
Taiwan	10.65	16	69.81	Asia
Belgium	10.52	17	67.92	Europe
Norway	10.29	18	66.04	Europe
Germany	9.63	19	64.15	Europe
Portugal	9.58	20	62.26	Europe
Australia	9.53	21	60.38	Oceana
Austria	8.77	22	58.49	Europe
Greece	8.73	23	56.60	Europe
Czech Republic	7.77	24	54.72	Europe
Netherlands	7.74	25	52.83	Europe
Argentina	7.24	26	50.94	Latin America
Sweden	7.08	27	49.06	Europe
Denmark	6.62	28	47.17	Europe
New Zealand	6.17	29	45.28	Oceana
USA	6.07	30	43.40	North America
Hong Kong	6.05	31	41.51	Asia
Switzerland	5.82	32	39.62	Europe
South Korea	5.51	33	37.74	Asia
Luxembourg	5.03	35	33.96	Europe
Finland	5.00	36	32.08	Europe
Russia	4.97	37	30.19	Europe
Hungary	4.46	38	28.30	Europe
Poland	3.65	39	26.42	Europe
Turkey	3.04	40	24.53	the Middle East
Mexico	3.04	41	22.64	Latin America
Malaysia	2.98	42	20.75	Asia
South Africa	2.97	43	18.87	Africa
Brazil	2.70	45	15.09	Latin America
Chile	2.56	46	13.21	Latin America
Thailand	1.95	47	11.32	Asia
Peru	1.44	50	5.66	Latin America
Philippines	0.86	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accounts Payable
(Laboratory Analytical Instruments)

Countries in Asia	Value (total liabilities & equity = 100)	Rank	Percentile
Indonesia	22.68	1	96.15
Maldives	20.68	2	92.31
Sri Lanka	16.31	3	88.46
India	**15.22**	**4**	**84.62**
Singapore	14.88	5	80.77
China	13.91	6	76.92
Japan	13.30	7	73.08
Cambodia	11.55	8	69.23
Laos	11.14	9	65.38
Taiwan	10.65	10	61.54
Vietnam	10.11	11	57.69
Bangladesh	8.66	12	53.85
Bhutan	8.25	13	50.00
Nepal	7.38	14	46.15
Macau	7.13	15	42.31
Hong Kong	6.05	16	38.46
South Korea	5.51	17	34.62
Brunei	5.26	18	30.77
Seychelles	4.64	19	26.92
Malaysia	2.98	20	23.08
Thailand	1.95	21	19.23
Mongolia	1.74	22	15.38
North Korea	1.40	23	11.54
Papua New Guinea	0.98	24	7.69
Burma	0.87	25	3.85
Philippines	0.86	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Liabilities - Total

Countries	Value (total liabilities & equity = 100)	Rank	Percentile	Region
Spain	54.41	1	98.11	Europe
Indonesia	49.35	2	96.23	Asia
Italy	47.78	3	94.34	Europe
South Korea	45.59	5	90.57	Asia
Australia	43.33	6	88.68	Oceana
Russia	41.08	8	84.91	Europe
Singapore	38.29	9	83.02	Asia
Norway	37.66	10	81.13	Europe
France	37.45	11	79.25	Europe
Hungary	36.91	12	77.36	Europe
India	**35.60**	**13**	**75.47**	**Asia**
Austria	35.19	15	71.70	Europe
the United Kingdom	34.87	16	69.81	Europe
Japan	34.11	17	67.92	Asia
Belgium	33.63	18	66.04	Europe
Finland	32.94	19	64.15	Europe
Denmark	32.00	20	62.26	Europe
Germany	31.11	21	60.38	Europe
China	30.26	22	58.49	Asia
Poland	30.18	23	56.60	Europe
Pakistan	29.76	24	54.72	the Middle East
Switzerland	27.65	25	52.83	Europe
Sweden	25.30	26	50.94	Europe
Turkey	25.18	27	49.06	the Middle East
Mexico	25.11	28	47.17	Latin America
Israel	24.88	29	45.28	the Middle East
Ireland	24.68	30	43.40	Europe
Luxembourg	23.91	31	41.51	Europe
Netherlands	23.47	32	39.62	Europe
New Zealand	22.88	34	35.85	Oceana
Hong Kong	22.42	35	33.96	Asia
USA	21.09	36	32.08	North America
Taiwan	20.56	37	30.19	Asia
Portugal	18.51	38	28.30	Europe
Canada	16.94	39	26.42	North America
Greece	16.86	40	24.53	Europe
Malaysia	16.07	41	22.64	Asia
South Africa	16.06	42	20.75	Africa
Czech Republic	15.01	43	18.87	Europe
Brazil	14.55	44	16.98	Latin America
Argentina	13.98	45	15.09	Latin America
Chile	13.84	46	13.21	Latin America
Thailand	10.52	47	11.32	Asia
Peru	7.77	50	5.66	Latin America
Philippines	4.67	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Liabilities - Total
(Laboratory Analytical Instruments)

Countries in Asia	Value (total liabilities & equity = 100)	Rank	Percentile
Indonesia	49.35	1	96.15
South Korea	45.59	2	92.31
Maldives	45.00	3	88.46
Seychelles	38.33	4	84.62
Singapore	38.29	5	80.77
India	**35.60**	**6**	**76.92**
Sri Lanka	35.49	7	73.08
Japan	34.11	8	69.23
China	30.26	9	65.38
Cambodia	27.01	10	61.54
Laos	26.05	11	57.69
Brunei	24.97	12	53.85
Vietnam	23.64	13	50.00
Hong Kong	22.42	14	46.15
Taiwan	20.56	15	42.31
Bangladesh	20.26	16	38.46
Bhutan	19.29	17	34.62
Nepal	17.27	18	30.77
Malaysia	16.07	19	26.92
Macau	13.78	20	23.08
Thailand	10.52	21	19.23
Mongolia	9.39	22	15.38
North Korea	7.55	23	11.54
Papua New Guinea	5.28	24	7.69
Burma	4.68	25	3.85
Philippines	4.67	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Long Term Debt

Countries	Value (total liabilities & equity = 100)	Rank	Percentile	Region
India	**42.57**	**1**	**97.14**	**Asia**
Indonesia	35.25	2	94.29	Asia
China	21.62	5	85.71	Asia
Pakistan	21.26	6	82.86	the Middle East
Sweden	14.72	7	80.00	Europe
Denmark	14.56	8	77.14	Europe
Netherlands	11.22	9	74.29	Europe
USA	11.08	10	71.43	North America
Switzerland	10.37	11	68.57	Europe
France	10.16	12	65.71	Europe
the United Kingdom	9.71	13	62.86	Europe
Canada	9.22	14	60.00	North America
Norway	9.00	15	57.14	Europe
Luxembourg	8.97	16	54.29	Europe
Italy	8.92	17	51.43	Europe
Japan	8.69	18	48.57	Asia
South Korea	8.64	19	45.71	Asia
Finland	8.37	20	42.86	Europe
Russia	7.78	22	37.14	Europe
New Zealand	7.28	23	34.29	Oceana
Belgium	7.27	24	31.43	Europe
Hong Kong	7.13	25	28.57	Asia
Spain	7.01	26	25.71	Europe
Hungary	6.99	27	22.86	Europe
Germany	5.99	28	20.00	Europe
Poland	5.72	29	17.14	Europe
Turkey	4.77	30	14.29	the Middle East
Mexico	4.76	31	11.43	Latin America
Australia	3.91	33	5.71	Oceana
Singapore	2.81	34	2.86	Asia
Austria	2.51	35	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Long Term Debt
(Laboratory Analytical Instruments)

Countries in Asia	Value (total liabilities & equity = 100)	Rank	Percentile
India	**42.57**	**1**	**94.12**
Indonesia	35.25	2	88.24
Cambodia	32.30	3	82.35
Maldives	32.14	4	76.47
Laos	31.15	5	70.59
Vietnam	28.27	6	64.71
Sri Lanka	25.35	7	58.82
Bangladesh	24.23	8	52.94
Bhutan	23.07	9	47.06
China	21.62	10	41.18
Nepal	20.65	11	35.29
Brunei	9.36	12	29.41
Japan	8.69	13	23.53
South Korea	8.64	14	17.65
Seychelles	7.26	15	11.76
Hong Kong	7.13	16	5.88
Singapore	2.81	17	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Liabilities

Countries	Value (total liabilities & equity = 100)	Rank	Percentile	Region
India	**84.35**	**1**	**98.11**	**Asia**
Indonesia	77.81	2	96.23	Asia
Italy	63.20	4	92.45	Europe
Spain	62.68	5	90.57	Europe
Germany	61.79	6	88.68	Europe
South Korea	58.43	7	86.79	Asia
Russia	52.65	10	81.13	Europe
Norway	52.48	11	79.25	Europe
France	50.91	12	77.36	Europe
Denmark	48.33	13	75.47	Europe
the United Kingdom	47.97	14	73.58	Europe
China	47.72	15	71.70	Asia
Hungary	47.30	16	69.81	Europe
Japan	46.96	17	67.92	Asia
Pakistan	46.92	18	66.04	the Middle East
Australia	46.43	19	64.15	Oceana
Sweden	44.40	20	62.26	Europe
Finland	43.67	21	60.38	Europe
Switzerland	42.01	22	58.49	Europe
Singapore	41.14	23	56.60	Asia
Austria	40.74	24	54.72	Europe
Belgium	40.10	25	52.83	Europe
Netherlands	40.07	26	50.94	Europe
Poland	38.69	27	49.06	Europe
Luxembourg	36.33	28	47.17	Europe
USA	35.21	29	45.28	North America
Turkey	32.27	30	43.40	the Middle East
Mexico	32.18	31	41.51	Latin America
New Zealand	30.29	32	39.62	Oceana
Hong Kong	29.68	34	35.85	Asia
Canada	29.34	35	33.96	North America
Israel	25.10	36	32.08	the Middle East
Ireland	24.90	37	30.19	Europe
Taiwan	20.75	38	28.30	Asia
Portugal	18.67	39	26.42	Europe
Greece	17.01	40	24.53	Europe
Malaysia	16.07	41	22.64	Asia
South Africa	16.06	42	20.75	Africa
Czech Republic	15.15	43	18.87	Europe
Brazil	14.55	44	16.98	Latin America
Argentina	14.11	45	15.09	Latin America
Chile	13.84	46	13.21	Latin America
Thailand	10.52	47	11.32	Asia
Peru	7.77	50	5.66	Latin America
Philippines	4.67	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Liabilities
(Laboratory Analytical Instruments)

Countries in Asia	Value (total liabilities & equity = 100)	Rank	Percentile
India	**84.35**	**1**	**96.15**
Indonesia	77.81	2	92.31
Maldives	70.95	3	88.46
Cambodia	64.00	4	84.62
Laos	61.72	5	80.77
South Korea	58.43	6	76.92
Vietnam	56.00	7	73.08
Sri Lanka	55.96	8	69.23
Seychelles	49.13	9	65.38
Bangladesh	48.00	10	61.54
China	47.72	11	57.69
Japan	46.96	12	53.85
Bhutan	45.72	13	50.00
Singapore	41.14	14	46.15
Nepal	40.92	15	42.31
Brunei	37.94	16	38.46
Hong Kong	29.68	17	34.62
Taiwan	20.75	18	30.77
Malaysia	16.07	19	26.92
Macau	13.90	20	23.08
Thailand	10.52	21	19.23
Mongolia	9.39	22	15.38
North Korea	7.55	23	11.54
Papua New Guinea	5.28	24	7.69
Burma	4.68	25	3.85
Philippines	4.67	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Common Equity

Countries	Value (total liabilities & equity = 100)	Rank	Percentile	Region
Malaysia	83.93	1	98.11	Asia
South Africa	83.88	2	96.23	Africa
Brazil	75.99	3	94.34	Latin America
Israel	74.90	4	92.45	the Middle East
Ireland	74.28	5	90.57	Europe
Chile	72.31	6	88.68	Latin America
Canada	70.18	7	86.79	North America
New Zealand	69.74	8	84.91	Oceana
Hong Kong	68.34	9	83.02	Asia
USA	64.18	10	81.13	North America
Taiwan	61.90	11	79.25	Asia
Belgium	59.56	12	77.36	Europe
Austria	59.26	13	75.47	Europe
Netherlands	58.81	14	73.58	Europe
Singapore	57.91	15	71.70	Asia
Switzerland	57.55	16	69.81	Europe
Finland	56.28	17	67.92	Europe
Portugal	55.71	18	66.04	Europe
Thailand	54.95	19	64.15	Asia
Sweden	53.94	20	62.26	Europe
Australia	53.57	21	60.38	Oceana
Japan	52.35	22	58.49	Asia
the United Kingdom	51.82	23	56.60	Europe
Denmark	51.59	24	54.72	Europe
Greece	50.76	25	52.83	Europe
Luxembourg	49.77	26	50.94	Europe
France	48.15	27	49.06	Europe
Norway	47.27	28	47.17	Europe
Czech Republic	45.18	30	43.40	Europe
Argentina	42.09	32	39.62	Latin America
South Korea	41.02	33	37.74	Asia
Peru	40.60	34	35.85	Latin America
Spain	37.16	36	32.08	Europe
Russia	36.96	37	30.19	Europe
Italy	35.83	38	28.30	Europe
Germany	35.63	39	26.42	Europe
Hungary	33.21	40	24.53	Europe
Poland	27.16	42	20.75	Europe
Philippines	24.39	43	18.87	Asia
Turkey	22.65	44	16.98	the Middle East
Mexico	22.59	45	15.09	Latin America
Indonesia	22.19	46	13.21	Asia
China	13.61	51	3.77	Asia
Pakistan	13.38	52	1.89	the Middle East
India	**10.37**	**53**	**0.00**	**Asia**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Common Equity
(Laboratory Analytical Instruments)

Countries in Asia	Value (total liabilities & equity = 100)	Rank	Percentile
Malaysia	83.93	1	96.15
Hong Kong	68.34	2	92.31
Taiwan	61.90	3	88.46
Singapore	57.91	4	84.62
Thailand	54.95	5	80.77
Japan	52.35	6	76.92
Brunei	51.97	7	73.08
Mongolia	49.03	8	69.23
Macau	41.47	9	65.38
South Korea	41.02	10	61.54
North Korea	39.41	11	57.69
Seychelles	34.49	12	53.85
Papua New Guinea	27.56	13	50.00
Burma	24.47	14	46.15
Philippines	24.39	15	42.31
Indonesia	22.19	16	38.46
Maldives	20.23	17	34.62
Sri Lanka	15.96	18	30.77
China	13.61	19	26.92
India	**10.37**	**20**	**23.08**
Cambodia	7.87	21	19.23
Laos	7.59	22	15.38
Vietnam	6.88	23	11.54
Bangladesh	5.90	24	7.69
Bhutan	5.62	25	3.85
Nepal	5.03	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

3.4 Financial Returns in India: Income Structure Ratios

3.4.1 Overview

In this chapter we consider the income structure of companies operating in India benchmarked against global averages. The chapter begins by defining relevant terms. A common-size statement, or vertical analysis of income is then presented for the proto-typical firm involved in laboratory analytical instruments operating in India and the average global benchmarks (total revenue = 100 percent). For ratios where there are large deviations between India and the benchmarks, graphics are provided. Then the distribution of ratios is presented in the form of ranks and percentiles. Certain key vertical analysis income ratios are highlighted across countries in the comparison group.

3.4.2 Income Statements – Definitions of Terms

The following definitions are provided for those less familiar with the income-side of financial statement analysis. As this chapter deals with the vertical analysis and global benchmarking of income, only definitions covering certain terms used in this chapter's tables and graphs are provided here . The glossary below reflects commonly accepted definitions across various countries and official sources.

- **Amortization.** Amortization generally refers to the depreciation, depletion, or charge-off to expense of intangible and tangible assets over a period of time. Amortization is commonly understood to be the taking as an expense (writing off) of the loss of value of an intangible asset such as a copyright, a patent, or a mailing list, in an accounting period.

- **Cost of Goods Sold (excluding depreciation).** For retail companies, cost of goods sold is generally defined as the equivalent of starting inventory plus purchases minus ending inventory. In manufacturing, cost of goods sold is defined to equal the starting inventory plus the cost of goods manufactured minus ending inventory. Most pure service firms do not generally have cost of goods sold.

- **Current Domestic Income Tax.** Current domestic income taxes are commonly defined as compulsory charges levied by the government where the company is located on current income.

- **Deferred Domestic Income Tax.** Deferred domestic income tax is defined as a compulsory charge from a previous accounting period which is yet unpaid to the government where the company is located on current income.

- **Depletion.** Depletion is commonly defined to be included as one of the elements of amortization, and is understood to be the portion of the carrying value (other than the portion associated with tangible assets) prorated in each accounting period for financial reporting purposes.

- **Depreciation.** Depreciation generally is defined as the expiration in the service life of fixed assets, other than depletable assets, attributable to wear and tear, deterioration, action of the physical elements, inadequacy and obsolescence. Depreciation is commonly defined as the portion of the cost of a fixed asset charged as an expense during a particular period. In accounting for depreciation, the cost of a fixed asset, less any salvage value, is prorated over the estimated service life of such an asset, and each period is charged with a portion of such cost. Through this process, the cost of the asset is ultimately charged off as an expense.

- **Earnings Before Interest and Taxes (EBIT).** EBIT is a financial measure defined as revenues less cost of goods sold and selling, general, and administrative expenses. In other words, operating and non-operating profit before the deduction of interest and income taxes.

- **Equity in Earnings.** Equity in earnings is defined as a company's proportional share (based on ownership) of the net earnings or losses of an unconsolidated company.

- **Gross Income.** Gross income is commonly defined as all the money, goods, and property received by the company that must be included as taxable income.

- **Income Taxes.** Income taxes are defined to include those taxes levied by state, federal, and local governments on the company's reported accounting profit. Income taxes generally include both deferred and paid taxes. They are generally determined after the interest expense has been deducted.

- **Interest Expense on Debt.** Interest expenses on debt are those which are spent on current debt and added to the net income so avoid underestimating interest coverage.

- **Net Income Available to Common.** Net income available to common is defined as the net income available to common stockholders.

- **Net Income Before Preferred Dividends.** Net income before preferred dividends is generally calculated as the difference between total revenues and total expense prior to the granting of preferred dividends.

- **Net Sales or Revenues.** Revenues or net sales are defined as payments made to and received by an entity. May take the form of taxes, user fees, fines, fees for service, and so on.

- **Non-Operating Interest Income.** Non-operating interest income is generally understood to be any interest received (e.g., royalty, production payment, net profits interest) that does not involve the operation of the company.

- **Operating Expenses.** Operating expenses are generally defined as those incurred in paying for the company's day-to-day activities.

- **Operating Income.** Operating income is generally defined to equal operating revenues less operating expenses. It typically excludes items of other revenue and expense such as equity in earnings of unconsolidated companies, dividends, interest income and expense, income taxes, extraordinary items, and cumulative effect of accounting changes.

- **Preferred Dividend Requirements.** Preferred dividend requirements are those dividend requirements set forth by the board to determine the amount of preferred dividends payable.

- **Pretax Income.** Pretax income is generally defined as income before tax deductions.

3.4.3 Income Structure: Outlook

Using the methodology described in the introduction, the following table summarizes income structure benchmarks for firms involved in laboratory analytical instruments in India. To allow comparable benchmarking, a common index of Net Sales or Revenues = 100 is used. All figures are current-year projections for companies operating in India based on latest financial results available.

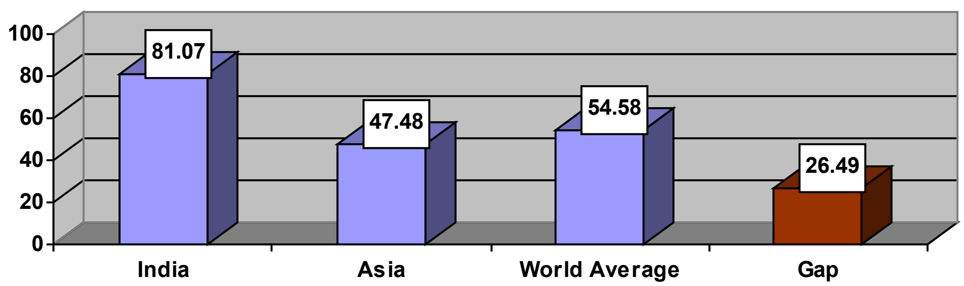
Income Structure	**India**	**Asia**	**World Avg.**
Net Sales or Revenues	100.00	100.00	100.00
Cost of Goods Sold (Excluding Depreciation)	81.07	47.48	54.58
Depreciation, Depletion & Amortization	4.62	2.69	2.91
Gross Income	**14.30**	**21.90**	**18.75**
Other Operating Expenses	90.28	61.24	66.71
Operating Expenses - Total	4.58	2.86	2.42
Operating Income	**9.72**	**11.03**	**9.05**
Non-Operating Interest Income	0.66	0.71	0.58
Other Income/Expense Net	0.18	0.14	-0.08
Earnings Before Interest and Taxes (EBIT)	**10.56**	**11.48**	**9.38**
Interest Expense on Debt	7.89	2.16	2.77
Pretax Income	**2.68**	**9.58**	**6.62**
Income Taxes	0.78	1.31	1.18
Current Domestic Income Tax	0.94	1.42	1.13
Deferred Domestic Income Tax	-0.16	-0.08	-0.05
Equity in Earnings	0.06	0.01	0.02
Net Income Before Extra Items/Prefer Dividends	1.95	8.25	5.45
Net Income Before Preferred Dividends	1.95	8.24	5.44
Preferred Dividend Requirements	0.56	0.10	0.14
Net Income Available to Common	**1.39**	**8.14**	**5.31**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

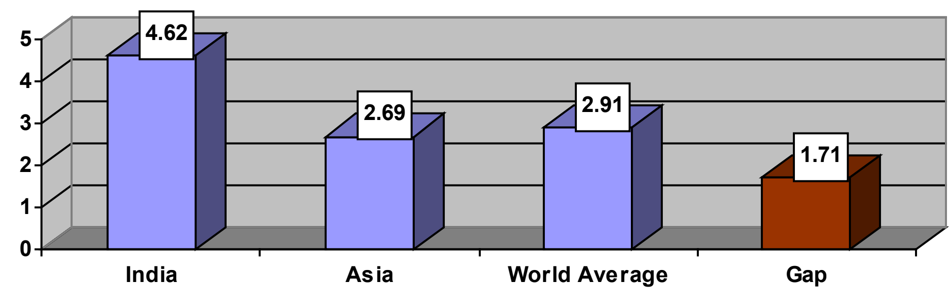
3.4.4 Large Variances: Income

The following graphics summarize for laboratory analytical instruments the large income structure gaps between firms operating in India and the world average. A gap cannot necessarily be interpreted as a positive or negative reflection on performance. Gaps may signal areas of specialization, market focus, or expertise. More contextual information is required to fully interpret these gaps. The gaps highlighted here are simply those that are large.

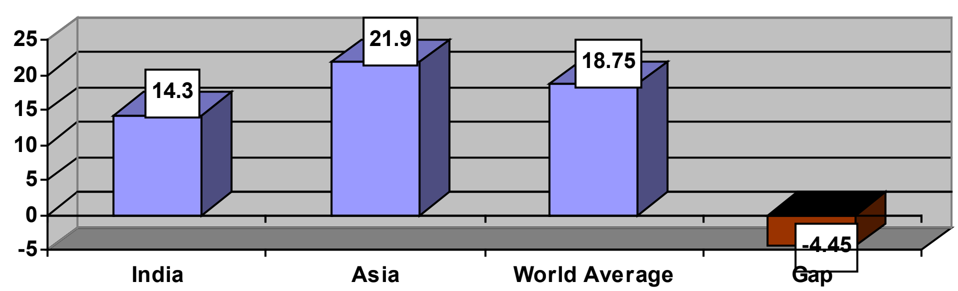
Gap: Cost of Goods Sold (Excluding Depreciation)



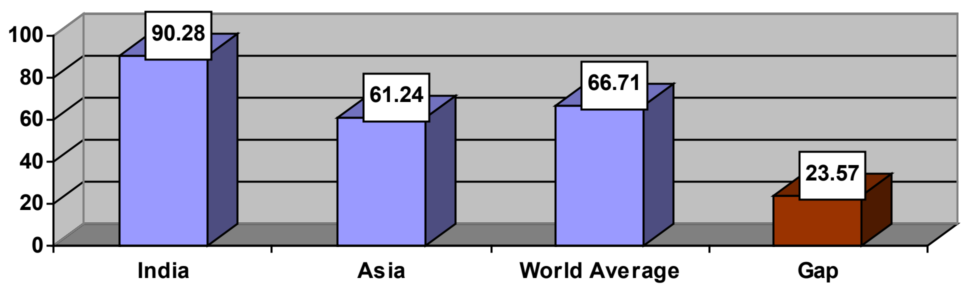
Gap: Depreciation, Depletion & Amortization



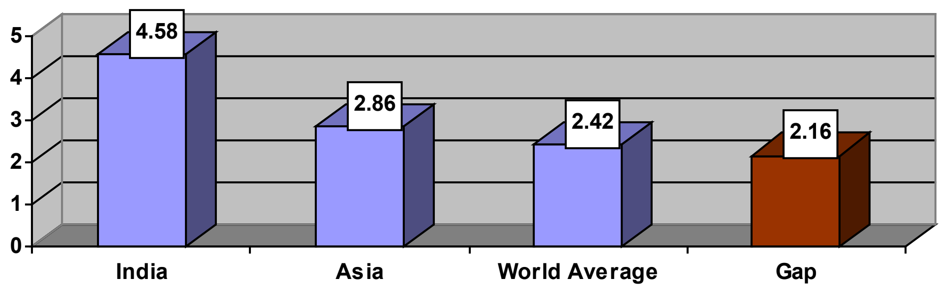
Gap: Gross Income



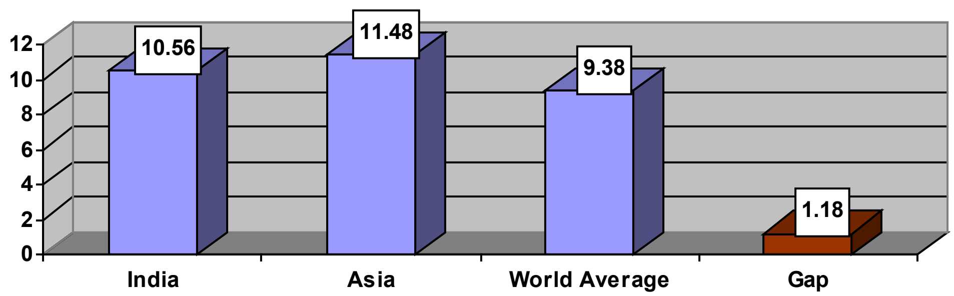
Gap: Other Operating Expenses



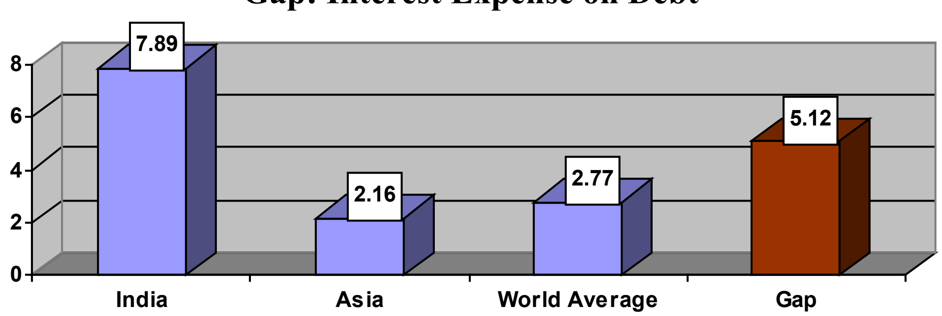
Gap: Operating Expenses - Total



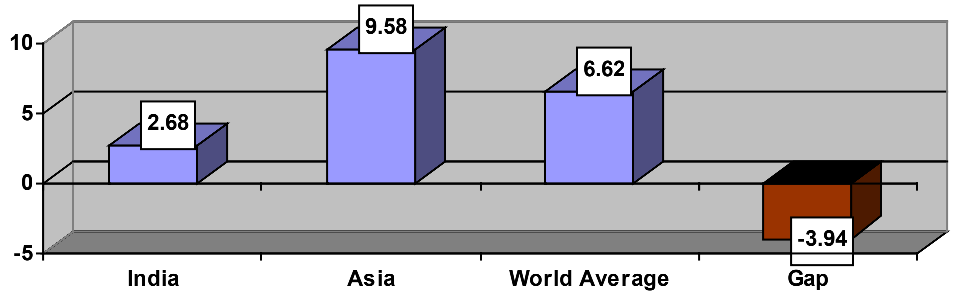
Gap: Earnings Before Interest and Taxes (EBIT)



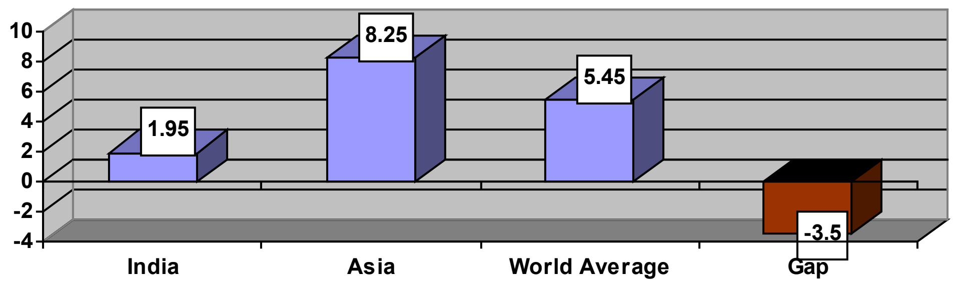
Gap: Interest Expense on Debt



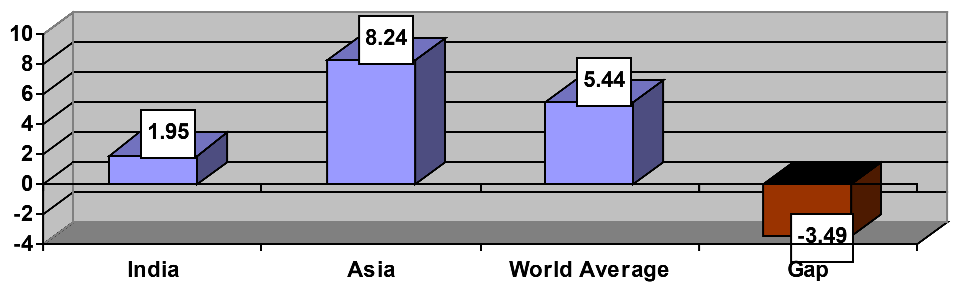
Gap: Pretax Income



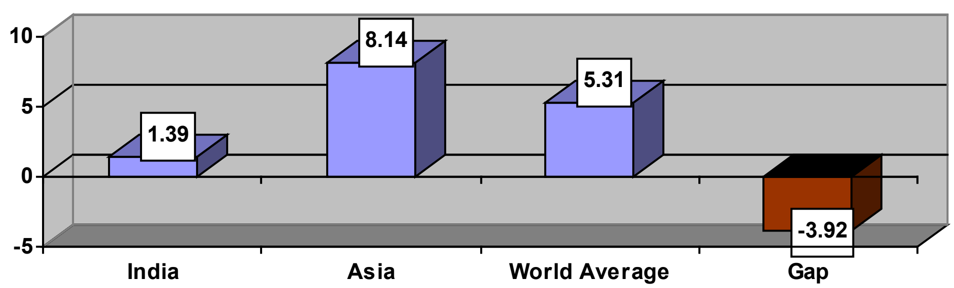
Gap: Net Income Before Extra Items/Prefer Dividends



Gap: Net Income Before Preferred Dividends



Gap: Net Income Available to Common



3.4.5 Key Percentiles and Rankings

We now consider the distribution of income ratios for laboratory analytical instruments using ranks and percentiles. What percent of countries have a value lower or higher than India (what is the ratio's rank or percentile)? The table below answers this question with respect to the vertical analysis of income structure. The ranks and percentiles indicate, from highest to lowest, where a value falls within the distribution of all countries considered in the global benchmark (the number of countries in the benchmark per line item may vary, as indicated in the Rank). Again, a high or low figure does not necessarily indicate good or bad performance. After the summary table below, a few key vertical income ratios are highlighted in additional tables.

Income Structure	**India**	**Rank of Total**	**Percentile**
Net Sales or Revenues	100.00		
Cost of Goods Sold (Excluding Depreciation)	81.07	2 of 53	96.23
Depreciation, Depletion & Amortization	4.62	13 of 53	75.47
Gross Income	**14.30**	**43 of 53**	**18.87**
Other Operating Expenses	90.28	14 of 52	73.08
Operating Expenses - Total	4.58	13 of 35	62.86
Operating Income	**9.72**	**20 of 53**	**62.26**
Non-Operating Interest Income	0.66	28 of 52	46.15
Other Income/Expense Net	**0.18**	**29 of 52**	**44.23**
Earnings Before Interest and Taxes (EBIT)	**10.56**	**25 of 53**	**52.83**
Interest Expense on Debt	7.89	1 of 53	98.11
Pretax Income	**2.68**	**43 of 53**	**18.87**
Income Taxes	0.78	38 of 53	28.30
Current Domestic Income Tax	0.94	32 of 43	25.58
Deferred Domestic Income Tax	-0.16	21 of 32	34.38
Equity in Earnings	0.06	5 of 11	54.55
Net Income Before Extra Items/Prefer Dividends	1.95	44 of 53	16.98
Net Income Before Preferred Dividends	1.95	44 of 53	16.98
Preferred Dividend Requirements	0.56	1 of 7	85.71
Net Income Available to Common	**1.39**	**46 of 53**	**13.21**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cost of Goods Sold (Excluding Depreciation)

Countries	Value (total revenue = 100)	Rank	Percentile	Region
Indonesia	82.41	1	98.11	Asia
India	**81.07**	**2**	**96.23**	**Asia**
Norway	79.42	3	94.34	Europe
Singapore	79.29	4	92.45	Asia
France	76.08	6	88.68	Europe
South Korea	75.42	7	86.79	Asia
Germany	73.56	8	84.91	Europe
Spain	69.82	9	83.02	Europe
Russia	67.96	11	79.25	Europe
Canada	64.62	12	77.36	North America
Japan	62.31	13	75.47	Asia
Belgium	61.34	14	73.58	Europe
Hungary	61.06	15	71.70	Europe
Italy	59.63	16	69.81	Europe
the United Kingdom	58.22	18	66.04	Europe
Austria	57.02	19	64.15	Europe
Denmark	56.97	20	62.26	Europe
New Zealand	54.70	21	60.38	Oceana
Sweden	53.99	22	58.49	Europe
Hong Kong	53.60	23	56.60	Asia
Australia	51.14	24	54.72	Oceana
China	50.54	25	52.83	Asia
Poland	49.94	26	50.94	Europe
Pakistan	49.69	27	49.06	the Middle East
USA	49.68	28	47.17	North America
Netherlands	45.29	29	45.28	Europe
Switzerland	43.76	30	43.40	Europe
Finland	43.49	31	41.51	Europe
Malaysia	43.38	32	39.62	Asia
South Africa	43.35	33	37.74	Africa
Turkey	41.65	34	35.85	the Middle East
Mexico	41.54	35	33.96	Latin America
Brazil	39.27	36	32.08	Latin America
Luxembourg	37.84	38	28.30	Europe
Chile	37.37	39	26.42	Latin America
Israel	37.32	40	24.53	the Middle East
Ireland	37.02	41	22.64	Europe
Taiwan	30.85	42	20.75	Asia
Thailand	28.40	43	18.87	Asia
Portugal	27.76	44	16.98	Europe
Greece	25.29	45	15.09	Europe
Czech Republic	22.52	47	11.32	Europe
Peru	20.99	49	7.55	Latin America
Argentina	20.98	50	5.66	Latin America
Philippines	12.60	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cost of Goods Sold (Excluding Depreciation)
(Laboratory Analytical Instruments)

Countries in Asia	Value (total revenue = 100)	Rank	Percentile
Indonesia	82.41	1	96.15
India	**81.07**	**2**	**92.31**
Singapore	79.29	3	88.46
South Korea	75.42	4	84.62
Maldives	75.14	5	80.77
Seychelles	63.42	6	76.92
Japan	62.31	7	73.08
Cambodia	61.52	8	69.23
Laos	59.32	9	65.38
Sri Lanka	59.26	10	61.54
Vietnam	53.83	11	57.69
Hong Kong	53.60	12	53.85
China	50.54	13	50.00
Bangladesh	46.14	14	46.15
Bhutan	43.94	15	42.31
Malaysia	43.38	16	38.46
Brunei	39.52	17	34.62
Nepal	39.33	18	30.77
Taiwan	30.85	19	26.92
Thailand	28.40	20	23.08
Mongolia	25.34	21	19.23
Macau	20.67	22	15.38
North Korea	20.37	23	11.54
Papua New Guinea	14.24	24	7.69
Burma	12.65	25	3.85
Philippines	12.60	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Expenses - Total

Countries	Value (total revenue = 100)	Rank	Percentile	Region
Malaysia	10.59	1	97.14	Asia
South Africa	10.58	2	94.29	Africa
Brazil	9.59	3	91.43	Latin America
Chile	9.12	4	88.57	Latin America
France	8.24	5	85.71	Europe
Switzerland	8.22	6	82.86	Europe
Germany	7.47	7	80.00	Europe
Luxembourg	7.11	8	77.14	Europe
Thailand	6.93	9	74.29	Asia
Peru	5.12	12	65.71	Latin America
India	**4.58**	**13**	**62.86**	**Asia**
Italy	3.73	15	57.14	Europe
Netherlands	3.42	16	54.29	Europe
Singapore	3.21	17	51.43	Asia
Philippines	3.08	18	48.57	Asia
Denmark	2.84	19	45.71	Europe
Belgium	2.61	21	40.00	Europe
New Zealand	2.50	22	37.14	Oceana
Hong Kong	2.45	23	34.29	Asia
the United Kingdom	2.11	24	31.43	Europe
Canada	1.51	25	28.57	North America
Finland	0.50	26	25.71	Europe
Indonesia	0.28	27	22.86	Asia
Sweden	0.28	28	20.00	Europe
USA	0.27	30	14.29	North America
Japan	0.25	31	11.43	Asia
Australia	0.20	33	5.71	Oceana
China	0.17	34	2.86	Asia
Pakistan	0.17	35	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Expenses - Total
(Laboratory Analytical Instruments)

Countries in Asia	Value (total revenue = 100)	Rank	Percentile
Malaysia	10.59	1	95.45
Brunei	7.42	2	90.91
Thailand	6.93	3	86.36
Mongolia	6.19	4	81.82
North Korea	4.97	5	77.27
India	**4.58**	**6**	**72.73**
Papua New Guinea	3.48	7	68.18
Cambodia	3.48	8	63.64
Laos	3.35	9	59.09
Singapore	3.21	10	54.55
Burma	3.09	11	50.00
Philippines	3.08	12	45.45
Vietnam	3.04	13	40.91
Bangladesh	2.61	14	36.36
Bhutan	2.48	15	31.82
Hong Kong	2.45	16	27.27
Nepal	2.22	17	22.73
Indonesia	0.28	18	18.18
Maldives	0.26	19	13.64
Japan	0.25	20	9.09
Sri Lanka	0.20	21	4.55
China	0.17	22	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Income

Countries	Value (total revenue = 100)	Rank	Percentile	Region
Malaysia	44.63	1	98.11	Asia
South Africa	44.60	2	96.23	Africa
Brazil	40.41	3	94.34	Latin America
Chile	38.45	4	92.45	Latin America
Thailand	29.22	5	90.57	Asia
Peru	21.59	8	84.91	Latin America
New Zealand	15.31	10	81.13	Oceana
Hong Kong	15.00	11	79.25	Asia
Australia	13.40	12	77.36	Oceana
Philippines	12.97	13	75.47	Asia
Switzerland	12.84	14	73.58	Europe
Canada	12.51	15	71.70	North America
USA	11.20	16	69.81	North America
Luxembourg	11.10	17	67.92	Europe
Netherlands	10.42	19	64.15	Europe
India	**9.72**	**20**	**62.26**	**Asia**
Denmark	9.39	21	60.38	Europe
Israel	9.21	22	58.49	the Middle East
Ireland	9.13	23	56.60	Europe
Sweden	9.12	24	54.72	Europe
South Korea	9.08	25	52.83	Asia
Russia	8.18	27	49.06	Europe
France	7.99	28	47.17	Europe
Finland	7.97	29	45.28	Europe
Taiwan	7.61	30	43.40	Asia
Hungary	7.35	31	41.51	Europe
Italy	6.85	32	39.62	Europe
Portugal	6.85	33	37.74	Europe
the United Kingdom	6.71	34	35.85	Europe
Japan	6.53	35	33.96	Asia
Greece	6.24	36	32.08	Europe
Poland	6.01	37	30.19	Europe
Czech Republic	5.55	38	28.30	Europe
Austria	5.20	39	26.42	Europe
Argentina	5.17	40	24.53	Latin America
Turkey	5.01	41	22.64	the Middle East
Mexico	5.00	42	20.75	Latin America
Singapore	4.71	43	18.87	Asia
Indonesia	3.65	45	15.09	Asia
Norway	3.13	47	11.32	Europe
China	2.24	49	7.55	Asia
Pakistan	2.20	50	5.66	the Middle East
Germany	1.04	51	3.77	Europe
Spain	-0.45	52	1.89	Europe
Belgium	-0.97	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Income
(Laboratory Analytical Instruments)

Countries in Asia	Value (total revenue = 100)	Rank	Percentile
Malaysia	44.63	1	96.15
Thailand	29.22	2	92.31
Mongolia	26.07	3	88.46
North Korea	20.96	4	84.62
Hong Kong	15.00	5	80.77
Papua New Guinea	14.65	6	76.92
Burma	13.01	7	73.08
Philippines	12.97	8	69.23
Brunei	11.59	9	65.38
India	**9.72**	**10**	**61.54**
South Korea	9.08	11	57.69
Seychelles	7.63	12	53.85
Taiwan	7.61	13	50.00
Cambodia	7.38	14	46.15
Laos	7.11	15	42.31
Japan	6.53	16	38.46
Vietnam	6.46	17	34.62
Bangladesh	5.53	18	30.77
Bhutan	5.27	19	26.92
Macau	5.10	20	23.08
Nepal	4.72	21	19.23
Singapore	4.71	22	15.38
Indonesia	3.65	23	11.54
Maldives	3.33	24	7.69
Sri Lanka	2.62	25	3.85
China	2.24	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Earnings Before Interest and Taxes (EBIT)

Countries	Value (total revenue = 100)	Rank	Percentile	Region
Malaysia	47.98	1	98.11	Asia
South Africa	47.95	2	96.23	Africa
Brazil	43.44	3	94.34	Latin America
Chile	41.33	4	92.45	Latin America
Thailand	31.41	5	90.57	Asia
Peru	23.21	8	84.91	Latin America
Italy	16.29	10	81.13	Europe
Australia	15.43	11	79.25	Oceana
Philippines	13.94	12	77.36	Asia
Switzerland	13.65	13	75.47	Europe
Canada	13.15	14	73.58	North America
New Zealand	12.80	15	71.70	Oceana
Hong Kong	12.55	16	69.81	Asia
France	12.11	17	67.92	Europe
Luxembourg	11.81	19	64.15	Europe
Denmark	11.81	20	62.26	Europe
Netherlands	11.59	21	60.38	Europe
Israel	11.16	22	58.49	the Middle East
Ireland	11.06	23	56.60	Europe
USA	11.05	24	54.72	North America
India	**10.56**	**25**	**52.83**	**Asia**
Sweden	10.41	26	50.94	Europe
Taiwan	9.22	27	49.06	Asia
Finland	8.90	28	47.17	Europe
Portugal	8.30	29	45.28	Europe
South Korea	7.94	30	43.40	Asia
Greece	7.56	31	41.51	Europe
Russia	7.15	33	37.74	Europe
Austria	7.07	34	35.85	Europe
the United Kingdom	6.99	35	33.96	Europe
Czech Republic	6.73	36	32.08	Europe
Norway	6.59	37	30.19	Europe
Hungary	6.43	38	28.30	Europe
Singapore	6.41	39	26.42	Asia
Argentina	6.27	40	24.53	Latin America
Japan	5.40	41	22.64	Asia
Poland	5.26	42	20.75	Europe
Turkey	4.38	43	18.87	the Middle East
Mexico	4.37	44	16.98	Latin America
Germany	4.00	46	13.21	Europe
Indonesia	2.42	47	11.32	Asia
China	1.48	50	5.66	Asia
Pakistan	1.46	51	3.77	the Middle East
Belgium	-2.63	52	1.89	Europe
Spain	-4.85	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Earnings Before Interest and Taxes (EBIT)
(Laboratory Analytical Instruments)

Countries in Asia	Value (total revenue = 100)	Rank	Percentile
Malaysia	47.98	1	96.15
Thailand	31.41	2	92.31
Mongolia	28.03	3	88.46
North Korea	22.53	4	84.62
Papua New Guinea	15.75	5	80.77
Burma	13.99	6	76.92
Philippines	13.94	7	73.08
Hong Kong	12.55	8	69.23
Brunei	12.33	9	65.38
India	**10.56**	**10**	**61.54**
Taiwan	9.22	11	57.69
Cambodia	8.01	12	53.85
South Korea	7.94	13	50.00
Laos	7.73	14	46.15
Vietnam	7.01	15	42.31
Seychelles	6.67	16	38.46
Singapore	6.41	17	34.62
Macau	6.18	18	30.77
Bangladesh	6.01	19	26.92
Bhutan	5.72	20	23.08
Japan	5.40	21	19.23
Nepal	5.12	22	15.38
Indonesia	2.42	23	11.54
Maldives	2.21	24	7.69
Sri Lanka	1.74	25	3.85
China	1.48	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Pretax Income

Countries	Value (total revenue = 100)	Rank	Percentile	Region
Malaysia	47.97	1	98.11	Asia
South Africa	47.94	2	96.23	Africa
Brazil	43.44	3	94.34	Latin America
Chile	41.33	4	92.45	Latin America
Thailand	31.41	5	90.57	Asia
Peru	23.21	8	84.91	Latin America
New Zealand	17.86	9	83.02	Oceana
Hong Kong	17.50	10	81.13	Asia
Australia	14.37	12	77.36	Oceana
Philippines	13.94	13	75.47	Asia
Italy	13.28	14	73.58	Europe
Switzerland	12.48	15	71.70	Europe
Canada	12.37	16	69.81	North America
Luxembourg	10.79	18	66.04	Europe
Netherlands	10.31	19	64.15	Europe
Denmark	10.19	20	62.26	Europe
France	10.00	21	60.38	Europe
Israel	9.95	22	58.49	the Middle East
Ireland	9.87	23	56.60	Europe
USA	9.76	24	54.72	North America
Sweden	8.70	25	52.83	Europe
Taiwan	8.22	26	50.94	Asia
Finland	7.80	27	49.06	Europe
Portugal	7.40	28	47.17	Europe
Greece	6.74	29	45.28	Europe
Czech Republic	6.00	30	43.40	Europe
the United Kingdom	5.81	31	41.51	Europe
Argentina	5.59	32	39.62	Latin America
Austria	5.18	33	37.74	Europe
Singapore	5.10	34	35.85	Asia
South Korea	4.80	35	33.96	Asia
Japan	4.79	36	32.08	Asia
Russia	4.32	38	28.30	Europe
Hungary	3.88	39	26.42	Europe
Norway	3.57	40	24.53	Europe
Poland	3.18	41	22.64	Europe
Germany	2.98	42	20.75	Europe
India	**2.68**	**43**	**18.87**	**Asia**
Turkey	2.65	44	16.98	the Middle East
Mexico	2.64	45	15.09	Latin America
Indonesia	0.44	47	11.32	Asia
China	0.27	50	5.66	Asia
Pakistan	0.26	51	3.77	the Middle East
Belgium	-4.41	52	1.89	Europe
Spain	-6.63	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Pretax Income
(Laboratory Analytical Instruments)

Countries in Asia	Value (total revenue = 100)	Rank	Percentile
Malaysia	47.97	1	96.15
Thailand	31.41	2	92.31
Mongolia	28.02	3	88.46
North Korea	22.53	4	84.62
Hong Kong	17.50	5	80.77
Papua New Guinea	15.75	6	76.92
Burma	13.99	7	73.08
Philippines	13.94	8	69.23
Brunei	11.27	9	65.38
Taiwan	8.22	10	61.54
Macau	5.51	11	57.69
Singapore	5.10	12	53.85
South Korea	4.80	13	50.00
Japan	4.79	14	46.15
Seychelles	4.03	15	42.31
India	**2.68**	**16**	**38.46**
Cambodia	2.03	17	34.62
Laos	1.96	18	30.77
Vietnam	1.78	19	26.92
Bangladesh	1.52	20	23.08
Bhutan	1.45	21	19.23
Nepal	1.30	22	15.38
Indonesia	0.44	23	11.54
Maldives	0.40	24	7.69
Sri Lanka	0.31	25	3.85
China	0.27	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Income Taxes

Countries	Value (total revenue = 100)	Rank	Percentile	Region
Malaysia	4.89	1	98.11	Asia
South Africa	4.89	2	96.23	Africa
Brazil	4.43	3	94.34	Latin America
Chile	4.21	4	92.45	Latin America
France	3.89	5	90.57	Europe
Italy	3.87	6	88.68	Europe
Canada	3.77	7	86.79	North America
Switzerland	3.62	8	84.91	Europe
Australia	3.44	9	83.02	Oceana
USA	3.30	10	81.13	North America
Netherlands	3.21	11	79.25	Europe
Thailand	3.20	12	77.36	Asia
Luxembourg	3.13	13	75.47	Europe
Finland	2.95	14	73.58	Europe
Sweden	2.86	15	71.70	Europe
Denmark	2.77	16	69.81	Europe
Japan	2.41	19	64.15	Asia
Peru	2.37	20	62.26	Latin America
the United Kingdom	2.08	21	60.38	Europe
Philippines	1.42	23	56.60	Asia
South Korea	1.22	24	54.72	Asia
Singapore	1.21	25	52.83	Asia
Germany	1.16	27	49.06	Europe
Russia	1.10	29	45.28	Europe
Belgium	1.03	30	43.40	Europe
Israel	1.02	31	41.51	the Middle East
Ireland	1.02	32	39.62	Europe
Hungary	0.99	33	37.74	Europe
New Zealand	0.98	34	35.85	Oceana
Hong Kong	0.96	35	33.96	Asia
Taiwan	0.85	36	32.08	Asia
Poland	0.81	37	30.19	Europe
India	**0.78**	**38**	**28.30**	**Asia**
Portugal	0.76	39	26.42	Europe
Greece	0.69	40	24.53	Europe
Turkey	0.68	41	22.64	the Middle East
Mexico	0.67	42	20.75	Latin America
Czech Republic	0.62	44	16.98	Europe
Argentina	0.58	45	15.09	Latin America
Indonesia	0.36	46	13.21	Asia
China	0.22	49	7.55	Asia
Pakistan	0.22	50	5.66	the Middle East
Spain	0.02	51	3.77	Europe
Austria	-0.67	52	1.89	Europe
Norway	-0.98	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Income Taxes
(Laboratory Analytical Instruments)

Countries in Asia	Value (total revenue = 100)	Rank	Percentile
Malaysia	4.89	1	96.15
Brunei	3.27	2	92.31
Thailand	3.20	3	88.46
Mongolia	2.86	4	84.62
Japan	2.41	5	80.77
North Korea	2.30	6	76.92
Papua New Guinea	1.61	7	73.08
Burma	1.43	8	69.23
Philippines	1.42	9	65.38
South Korea	1.22	10	61.54
Singapore	1.21	11	57.69
Seychelles	1.03	12	53.85
Hong Kong	0.96	13	50.00
Taiwan	0.85	14	46.15
India	**0.78**	**15**	**42.31**
Cambodia	0.59	16	38.46
Laos	0.57	17	34.62
Macau	0.57	18	30.77
Vietnam	0.52	19	26.92
Bangladesh	0.45	20	23.08
Bhutan	0.42	21	19.23
Nepal	0.38	22	15.38
Indonesia	0.36	23	11.54
Maldives	0.33	24	7.69
Sri Lanka	0.26	25	3.85
China	0.22	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

3.5 FINANCIAL RETURNS IN INDIA: PROFITABILITY RATIOS

3.5.1 Overview

In this chapter we consider additional financial ratios estimated for firms involved in laboratory analytical instruments operating in India benchmarked against global averages. The chapter begins by defining relevant terms. Estimates are then presented for the proto-typical firm operating in India compared to average global benchmarks. For ratios where there are large deviations between the average firm in India and the benchmarks, graphics are provided. Then the distribution of ratios is presented in the form of ranks and percentiles. Certain key ratios are highlighted across countries in the comparison group.

3.5.2 Ratios – Definitions of Terms

The following definitions are provided for those less familiar with financial ratio analysis. As this chapter deals with the global benchmarking of ratios, only definitions covering certain terms used in this chapter's tables and graphs are provided here . The glossary below reflects commonly accepted definitions across various countries and official sources.

- **Accounts Receivables Days.** The number of days' receivable sales generally correlates to the amount of the accounts receivables to the average daily sales on account. Accounts receivables days is often determined by dividing the gross receivables by (net sales/365).

- **Cash Earnings Return On Equity (%).** Cash earnings return on equity generally measures the return of revenues to the shareholders. This ratio is generally calculated by dividing (net income before nonrecurring items minus preferred dividends) by the average common equity.

- **Cash Flow.** Cash flow is generally defined as being equal to the company's net income plus the charge-off amounts for depreciation, depletion, amortization, extraordinary charges to reserves. These are bookkeeping deductions which are not paid out as cash.

- **Current Ratio.** The current ratio is generally defined as a ratio of liquidity measuring the ability of a business to pay its current obligations when due. The current ratio is generally calculated by dividing total current assets by total current liabilities. Managers and lenders often want the current ratio to be 2.00 or greater. This ratio is often seen as an indication of short-term debt-paying ability. The higher the ratio, the more liquid the company.

- **Fixed Charge Coverage Ratio.** The fixed charge coverage ratio is generally seen as an indication of the company's ability to cover its fixed charges. This ratio is typically determined by dividing recurring earnings excluding interest expense, tax expense, equity earnings, and minority earnings plus interest from rentals by interest expense including capitalized interest and interest from rentals.

- **Gross Profit Margin (%).** The gross profit margin is typically defined to equals the difference, in percent, between net sales revenue and the cost of goods sold.

- **Inventories (# of Days) Held.** Inventory days held is generally determined by dividing the ending inventory by (the cost of goods held/365). The number of days held results in the average daily cost of goods held.

- **Inventory Turnover (%).** Inventory turnover is used as a measure of the balance of inventory. It generally compares the amount of inventory with the total sales for the year. The ratio can reflect both on the quality of the inventory and the efficiency of management. Typically, the higher the turnover rate, the greater the likelihood that profits would be larger and less working capital bound up in inventory.

- **Net Margin (%).** The net margin is the ratio of net income dollars generated by each dollar of sales.

- **Operating Profit Margin (%).** Operating profit margin percent is the ratio of operating profit to net sales. Operating profit (loss) is income or loss before taxes calculated by the difference between total revenues and total expense disregarding the effects of any extraordinary transactions.

- **Quick Ratio.** The quick ratio, also commonly known as the "acid test ratio", is a refined current ratio and is often seen as a more conservative measure of liquidity. The quick ratio is generally determined by dividing cash and equivalents plus trade receivables by total current liabilities. The ratio shows the degree to which a company's current liabilities can be covered by the most liquid current assets. Financial management texts generally conclude that any value of less than 1 to 1 implies a reciprocal dependency on inventory or other current assets to liquidate short-term debt.

- **Return on Assets (%).** Return on assets is generally used to measure a company's ability to use assets to create profit.

- **Return on Equity - Total (%).** The return on total equity ratio is often seen to reflect the profitability of the company's operations after income taxes. Return on equity is often considered to be a good measure of the company's profitability. Tax laws and tax loss carryovers can affect the net income and therefore can also affect the return on equity.

- **Return on Invested Capital (%).** The ratio of return on invested capital is typically defined as an evaluation of earnings performance without regard to the method of financing. This ratio measures the earnings on investment and is an indication of how well the company utilizes its asset base. Return on investment is a type of return on capital, therefore this ratio can be an indication of the company's ability to reward investors who provide long-term funds and to attract future investors.

- **Tax Rate (%).** The tax rate is typically defined as the average rate of domestic tax owed to government by the company.

- **Working Capital.** Net working capital equals the difference between total current assets and total current liabilities. Working capital often reflects a company's ability to expand volume and meet obligations. Since growth is usually one goal, the amount of working capital on this year's balance sheet should be greater than that of the previous year's. This is an efficiency, or turnover, ratio which benchmarks the rate at which current assets less current liabilities are used by the company in making sales. A low ratio can indicate a less profitable use of working capital in making sales. On the other hand, a very high ratio can indicate the company is wasting current assets which could be more efficiently deployed in production and in increasing sales and profits; or that the company my be undercapitalized, and thus vulnerable to liquidity problems in a period of weak business conditions.

3.5.3 Ratio Structure: Outlook

Using the methodology described in the introduction, the following table summarizes ratio structure benchmarks for firms involved in laboratory analytical instruments in India. All figures are current-year projections for companies operating in India based on latest financial results available.

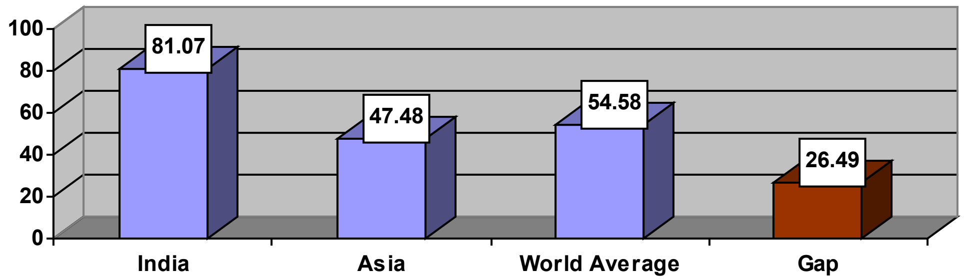
Ratios	India	Asia	World Avg.
Profitability			
Return on Equity - Total (%)	5.56	9.98	7.95
Return on Assets (%)	6.67	8.51	7.16
Return on Invested Capital (%)	7.63	10.12	8.36
Cash Earnings Return On Equity (%)	26.38	19.22	21.20
Cash Flow % Sales	6.57	10.47	8.10
Cost Goods Sold / Sales (%)	81.07	47.48	54.58
Gross Profit Margin (%)	14.30	21.90	18.75
Research & Development / Net Sales (%)	0.31	2.50	1.58
Operating Profit Margin (%)	9.72	11.03	9.05
Operating Inc / Total Capital (%)	15.78	16.85	17.39
Pretax Margin (%)	2.68	9.58	6.62
Tax Rate (%)	29.25	23.41	31.63
Net Margin (%)	1.95	8.24	5.44
Total Asset Turnover (X) th USD	0.89	0.75	0.90
Asset Utilization			
Inventory Turnover (%)	3.94	3.07	3.38
Net Sales % Working Capital	2.96	3.49	5.78
Accumulated Depreciation % Gross Fixed Assets	47.36	29.89	33.70
Leverage			
Total Debt % Total Capital	79.18	31.02	40.83
Long Term Debt % Total Capital	73.12	23.99	33.25
Equity % Total Capital	17.81	46.12	40.47
Preferred Stock % Total Capital	9.07	1.66	2.25
Total Debt % Total Assets	59.53	23.98	31.30
Common Equity % Total Assets	10.37	32.09	26.23
Total Capital % Assets	58.22	47.11	46.87
Fixed Charge Coverage Ratio	1.34	1292.15	833.01
Fixed Assets % Common Equity	256.95	81.59	104.75
Working Capital % Total Capital	51.43	31.63	29.75
Liquidity			
Quick Ratio	1.36	1.41	1.18
Current Ratio	1.84	1.83	1.67
Cash & Equivalents % Total Current Assets	3.75	21.68	15.77
Receivables % Total Current Assets	69.90	27.51	32.01
Inventories % Total Current Assets	26.29	21.43	26.23
Accounts Receivables Days	175.92	67.99	71.93
Inventories (# of Days) Held	91.48	69.04	71.97

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

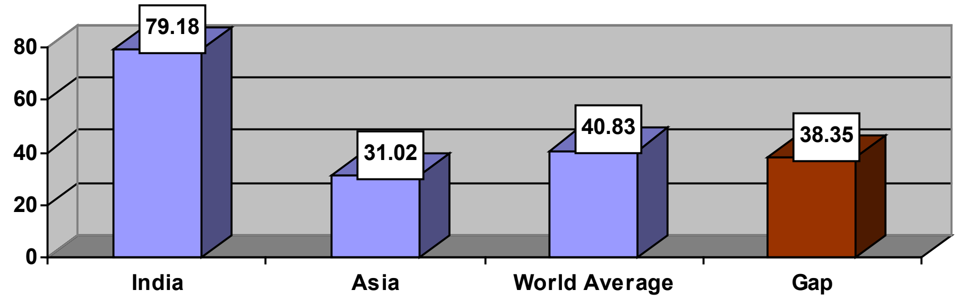
3.5.4 Large Variances: Ratios

The following graphics summarize for laboratory analytical instruments the large ratio structure gaps between firms operating in India and the world average. A gap cannot necessarily be interpreted as a positive or negative reflection on performance. Gaps may signal areas of specialization, market focus, or expertise. More contextual information is required to fully interpret these gaps. The gaps highlighted here are simply those that are large.

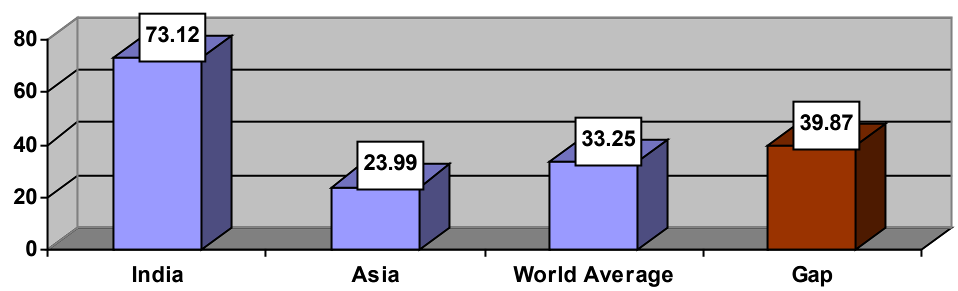
Gap: Cost Goods Sold / Sales (%)



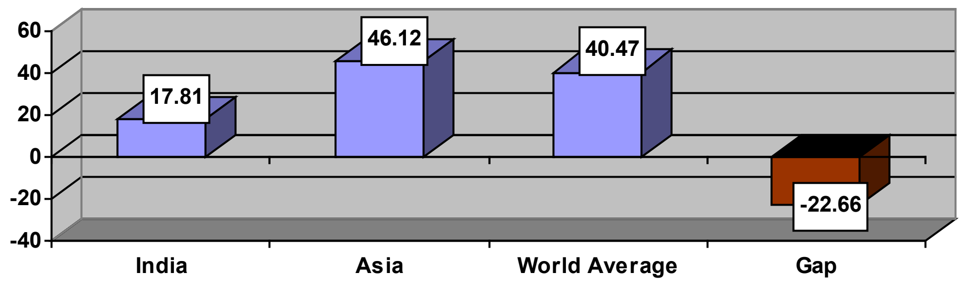
Gap: Total Debt % Total Capital



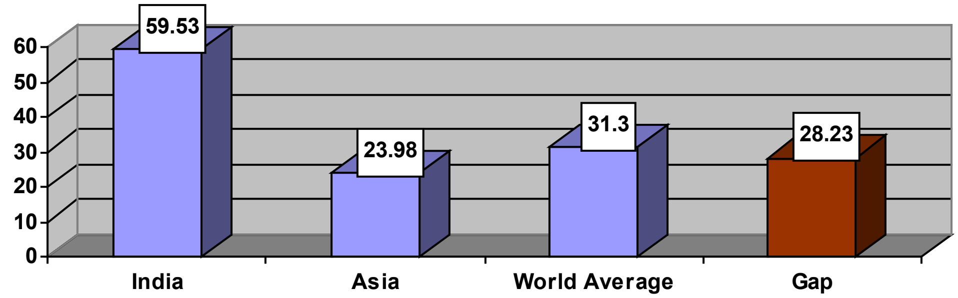
Gap: Long Term Debt % Total Capital



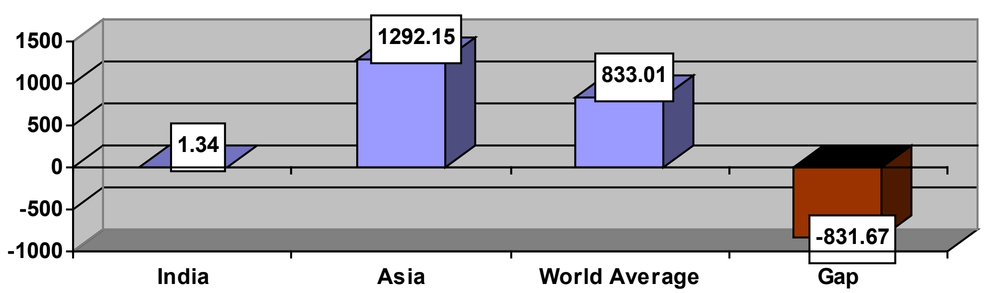
Gap: Equity % Total Capital



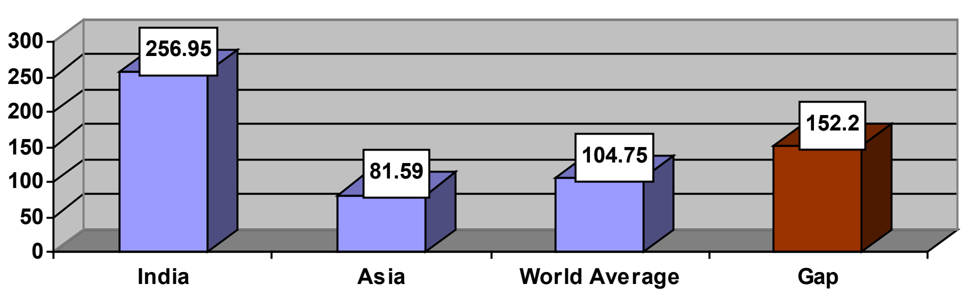
Gap: Total Debt % Total Assets



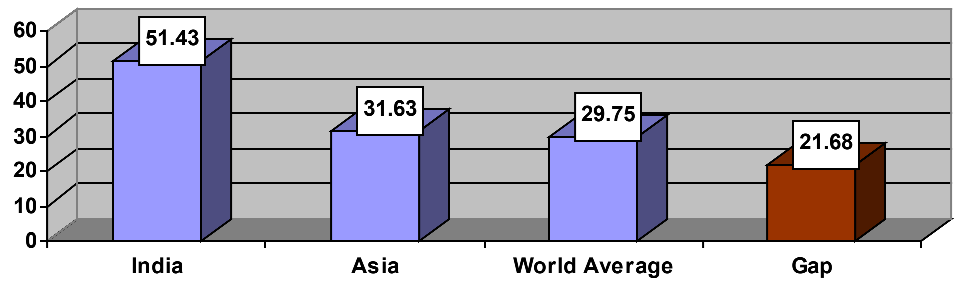
Gap: Fixed Charge Coverage Ratio



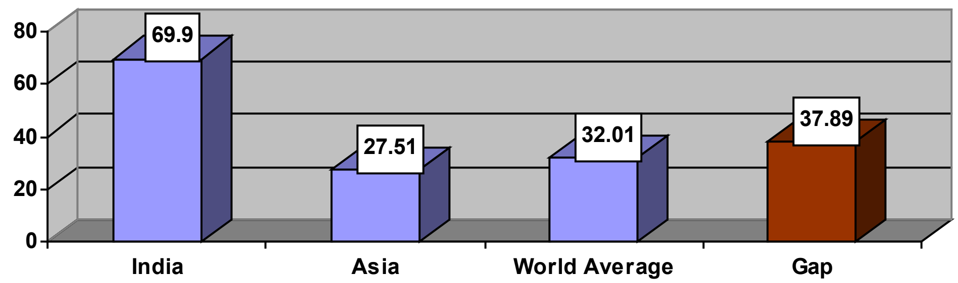
Gap: Fixed Assets % Common Equity



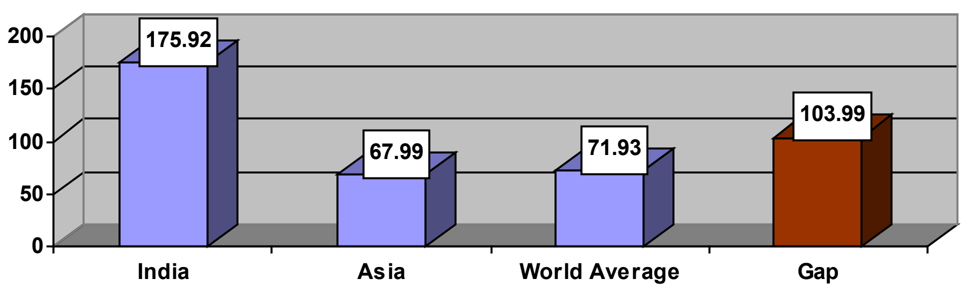
Gap: Working Capital % Total Capital



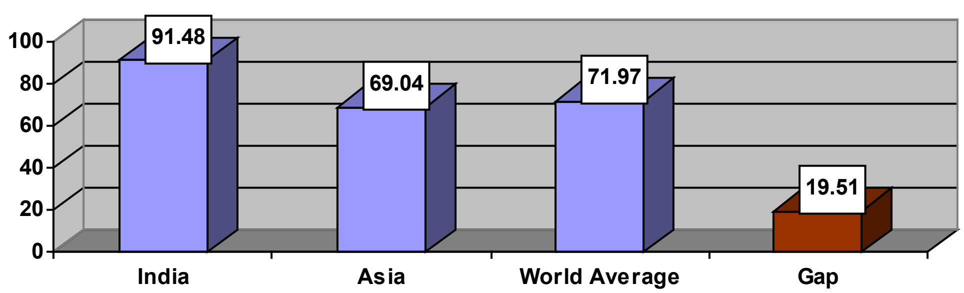
Gap: Receivables % Total Current Assets



Gap: Accounts Receivables Days



Gap: Inventories (# of Days) Held



3.5.5 Key Percentiles and Rankings

We now consider the distribution of financial ratios for laboratory analytical instruments using ranks and percentiles. What percent of countries have a value lower or higher than India (what is the ratio's rank or percentile)? The table below answers this question with respect to financial ratios. The ranks and percentiles indicate, from highest to lowest, where a value falls within the distribution of all countries considered in the global benchmark (the number of countries in the benchmark per line item may vary, as indicated in the Rank). Again, a high or low figure does not necessarily indicate good or bad performance. After the summary table below, a few key financial ratios are highlighted in additional tables.

Ratios	India	Rank of Total	Percentile
Profitability			
Return on Equity - Total (%)	5.56	40 of 53	24.53
Return on Assets (%)	6.67	29 of 53	45.28
Return on Invested Capital (%)	7.63	31 of 53	41.51
Cash Earnings Return On Equity (%)	26.38	15 of 53	71.70
Cash Flow % Sales	6.57	38 of 53	28.30
Cost Goods Sold / Sales (%)	81.07	2 of 53	96.23
Gross Profit Margin (%)	14.30	43 of 53	18.87
Research & Development / Net Sales (%)	0.31	39 of 46	15.22
Operating Profit Margin (%)	9.72	20 of 53	62.26
Operating Inc / Total Capital (%)	15.78	24 of 53	54.72
Pretax Margin (%)	2.68	43 of 53	18.87
Tax Rate (%)	29.25	15 of 50	70.00
Net Margin (%)	1.95	44 of 53	16.98
Total Asset Turnover (X) th USD	0.89	20 of 53	62.26
Asset Utilization			
Inventory Turnover (%)	3.94	19 of 53	64.15
Net Sales % Working Capital	2.96	23 of 53	56.60
Accumulated Depreciation % Gross Fixed Assets	47.36	20 of 53	62.26
Leverage			
Total Debt % Total Capital	79.18	1 of 42	97.62
Long Term Debt % Total Capital	73.12	1 of 35	97.14
Equity % Total Capital	17.81	53 of 53	0.00
Preferred Stock % Total Capital	9.07	1 of 6	83.33
Total Debt % Total Assets	59.53	1 of 42	97.62
Common Equity % Total Assets	10.37	53 of 53	0.00
Total Capital % Assets	58.22	24 of 53	54.72
Fixed Charge Coverage Ratio	1.34	46 of 53	13.21
Fixed Assets % Common Equity	256.95	1 of 53	98.11
Working Capital % Total Capital	51.43	20 of 53	62.26
Liquidity			
Quick Ratio	1.36	33 of 53	37.74
Current Ratio	1.84	36 of 53	32.08
Cash & Equivalents % Total Current Assets	3.75	53 of 53	0.00
Receivables % Total Current Assets	69.90	1 of 53	98.11
Inventories % Total Current Assets	26.29	28 of 53	47.17
Accounts Receivables Days	175.92	3 of 53	94.34
Inventories (# of Days) Held	91.48	24 of 53	54.72

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Gross Profit Margin (%)

Countries	Value	Rank	Percentile	Region
Israel	57.76	1	98.11	the Middle East
Ireland	57.29	2	96.23	Europe
Malaysia	55.22	3	94.34	Asia
South Africa	55.18	4	92.45	Africa
Finland	50.88	5	90.57	Europe
Brazil	50.00	6	88.68	Latin America
Switzerland	49.85	7	86.79	Europe
Netherlands	48.19	8	84.91	Europe
Taiwan	47.74	9	83.02	Asia
Chile	47.57	10	81.13	Latin America
Australia	46.72	11	79.25	Oceana
USA	46.13	12	77.36	North America
Luxembourg	43.11	13	75.47	Europe
Portugal	42.97	14	73.58	Europe
New Zealand	42.10	15	71.70	Oceana
Sweden	41.82	16	69.81	Europe
Hong Kong	41.25	17	67.92	Asia
Greece	39.15	18	66.04	Europe
Denmark	38.80	19	64.15	Europe
Austria	38.23	20	62.26	Europe
Thailand	36.16	21	60.38	Asia
the United Kingdom	36.14	22	58.49	Europe
Italy	35.05	23	56.60	Europe
Czech Republic	34.85	24	54.72	Europe
Belgium	34.36	25	52.83	Europe
Japan	33.73	26	50.94	Asia
Argentina	32.46	27	49.06	Latin America
Canada	31.79	28	47.17	North America
Peru	26.72	31	41.51	Latin America
Spain	25.61	32	39.62	Europe
Germany	22.47	33	37.74	Europe
South Korea	21.10	34	35.85	Asia
Russia	19.01	37	30.19	Europe
France	18.40	38	28.30	Europe
Singapore	17.36	39	26.42	Asia
Hungary	17.08	40	24.53	Europe
Norway	17.03	41	22.64	Europe
Philippines	16.04	42	20.75	Asia
India	**14.30**	**43**	**18.87**	**Asia**
Indonesia	14.05	44	16.98	Asia
Poland	13.97	45	15.09	Europe
Turkey	11.65	48	9.43	the Middle East
Mexico	11.62	49	7.55	Latin America
China	8.62	52	1.89	Asia
Pakistan	8.47	53	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Gross Profit Margin (%)
(Laboratory Analytical Instruments)

Countries in Asia	Value	Rank	Percentile
Malaysia	55.22	1	96.15
Taiwan	47.74	2	92.31
Brunei	45.02	3	88.46
Hong Kong	41.25	4	84.62
Thailand	36.16	5	80.77
Japan	33.73	6	76.92
Mongolia	32.26	7	73.08
Macau	31.99	8	69.23
North Korea	25.93	9	65.38
South Korea	21.10	10	61.54
Papua New Guinea	18.13	11	57.69
Seychelles	17.74	12	53.85
Singapore	17.36	13	50.00
Burma	16.10	14	46.15
Philippines	16.04	15	42.31
India	**14.30**	**16**	**38.46**
Indonesia	14.05	17	34.62
Maldives	12.81	18	30.77
Cambodia	10.85	19	26.92
Laos	10.47	20	23.08
Sri Lanka	10.10	21	19.23
Vietnam	9.50	22	15.38
China	8.62	23	11.54
Bangladesh	8.14	24	7.69
Bhutan	7.75	25	3.85
Nepal	6.94	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Pretax Margin (%)

Countries	Value	Rank	Percentile	Region
Malaysia	47.97	1	98.11	Asia
South Africa	47.94	2	96.23	Africa
Brazil	43.44	3	94.34	Latin America
Chile	41.33	4	92.45	Latin America
Thailand	31.41	5	90.57	Asia
Peru	23.21	8	84.91	Latin America
New Zealand	17.86	9	83.02	Oceana
Hong Kong	17.50	10	81.13	Asia
Australia	14.37	12	77.36	Oceana
Philippines	13.94	13	75.47	Asia
Italy	13.28	14	73.58	Europe
Switzerland	12.48	15	71.70	Europe
Canada	12.37	16	69.81	North America
Luxembourg	10.79	18	66.04	Europe
Netherlands	10.31	19	64.15	Europe
Denmark	10.19	20	62.26	Europe
France	10.00	21	60.38	Europe
Israel	9.95	22	58.49	the Middle East
Ireland	9.87	23	56.60	Europe
USA	9.76	24	54.72	North America
Sweden	8.70	25	52.83	Europe
Taiwan	8.22	26	50.94	Asia
Finland	7.80	27	49.06	Europe
Portugal	7.40	28	47.17	Europe
Greece	6.74	29	45.28	Europe
Czech Republic	6.00	30	43.40	Europe
the United Kingdom	5.81	31	41.51	Europe
Argentina	5.59	32	39.62	Latin America
Austria	5.18	33	37.74	Europe
Singapore	5.10	34	35.85	Asia
South Korea	4.80	35	33.96	Asia
Japan	4.79	36	32.08	Asia
Russia	4.32	38	28.30	Europe
Hungary	3.88	39	26.42	Europe
Norway	3.57	40	24.53	Europe
Poland	3.18	41	22.64	Europe
Germany	2.98	42	20.75	Europe
India	**2.68**	**43**	**18.87**	**Asia**
Turkey	2.65	44	16.98	the Middle East
Mexico	2.64	45	15.09	Latin America
Indonesia	0.44	47	11.32	Asia
China	0.27	50	5.66	Asia
Pakistan	0.26	51	3.77	the Middle East
Belgium	-4.41	52	1.89	Europe
Spain	-6.63	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Pretax Margin (%)
(Laboratory Analytical Instruments)

Countries in Asia	Value	Rank	Percentile
Malaysia	47.97	1	96.15
Thailand	31.41	2	92.31
Mongolia	28.02	3	88.46
North Korea	22.53	4	84.62
Hong Kong	17.50	5	80.77
Papua New Guinea	15.75	6	76.92
Burma	13.99	7	73.08
Philippines	13.94	8	69.23
Brunei	11.27	9	65.38
Taiwan	8.22	10	61.54
Macau	5.51	11	57.69
Singapore	5.10	12	53.85
South Korea	4.80	13	50.00
Japan	4.79	14	46.15
Seychelles	4.03	15	42.31
India	**2.68**	**16**	**38.46**
Cambodia	2.03	17	34.62
Laos	1.96	18	30.77
Vietnam	1.78	19	26.92
Bangladesh	1.52	20	23.08
Bhutan	1.45	21	19.23
Nepal	1.30	22	15.38
Indonesia	0.44	23	11.54
Maldives	0.40	24	7.69
Sri Lanka	0.31	25	3.85
China	0.27	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Quick Ratio

Countries	Value	Rank	Percentile	Region
Malaysia	4.68	1	98.11	Asia
South Africa	4.68	2	96.23	Africa
Denmark	4.25	3	94.34	Europe
Brazil	4.24	4	92.45	Latin America
Chile	4.03	5	90.57	Latin America
Belgium	3.19	6	88.68	Europe
Thailand	3.06	7	86.79	Asia
Israel	3.03	8	84.91	the Middle East
Canada	3.03	9	83.02	North America
Ireland	3.01	10	81.13	Europe
New Zealand	2.96	11	79.25	Oceana
Hong Kong	2.90	12	77.36	Asia
USA	2.61	13	75.47	North America
Taiwan	2.51	15	71.70	Asia
Sweden	2.39	16	69.81	Europe
Peru	2.26	18	66.04	Latin America
Portugal	2.26	19	64.15	Europe
Netherlands	2.12	20	62.26	Europe
Greece	2.06	21	60.38	Europe
Japan	1.99	22	58.49	Asia
Czech Republic	1.83	23	56.60	Europe
Argentina	1.71	24	54.72	Latin America
Austria	1.68	25	52.83	Europe
Germany	1.68	26	50.94	Europe
Switzerland	1.52	28	47.17	Europe
Finland	1.47	29	45.28	Europe
Norway	1.47	30	43.40	Europe
Italy	1.37	31	41.51	Europe
Philippines	1.36	32	39.62	Asia
India	**1.36**	**33**	**37.74**	**Asia**
France	1.35	34	35.85	Europe
Luxembourg	1.31	35	33.96	Europe
the United Kingdom	1.21	36	32.08	Europe
Australia	1.08	38	28.30	Oceana
Singapore	0.82	39	26.42	Asia
Spain	0.73	40	24.53	Europe
Indonesia	0.42	41	22.64	Asia
South Korea	0.37	43	18.87	Asia
Russia	0.33	45	15.09	Europe
Hungary	0.30	47	11.32	Europe
China	0.26	48	9.43	Asia
Pakistan	0.25	49	7.55	the Middle East
Poland	0.24	50	5.66	Europe
Turkey	0.20	51	3.77	the Middle East
Mexico	0.20	52	1.89	Latin America

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Quick Ratio
(Laboratory Analytical Instruments)

Countries in Asia	Value	Rank	Percentile
Malaysia	4.68	1	96.15
Thailand	3.06	2	92.31
Hong Kong	2.90	3	88.46
Mongolia	2.73	4	84.62
Taiwan	2.51	5	80.77
North Korea	2.20	6	76.92
Japan	1.99	7	73.08
Macau	1.68	8	69.23
Papua New Guinea	1.54	9	65.38
Brunei	1.37	10	61.54
Burma	1.36	11	57.69
Philippines	1.36	12	53.85
India	**1.36**	**13**	**50.00**
Cambodia	1.03	14	46.15
Laos	0.99	15	42.31
Vietnam	0.90	16	38.46
Singapore	0.82	17	34.62
Bangladesh	0.77	18	30.77
Bhutan	0.73	19	26.92
Nepal	0.66	20	23.08
Indonesia	0.42	21	19.23
Maldives	0.38	22	15.38
South Korea	0.37	23	11.54
Seychelles	0.31	24	7.69
Sri Lanka	0.30	25	3.85
China	0.26	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Ratio

Countries	Value	Rank	Percentile	Region
Malaysia	5.06	1	98.11	Asia
South Africa	5.06	2	96.23	Africa
Canada	4.94	3	94.34	North America
Denmark	4.84	4	92.45	Europe
Brazil	4.58	5	90.57	Latin America
Belgium	4.55	6	88.68	Europe
Chile	4.36	7	86.79	Latin America
USA	3.97	8	84.91	North America
New Zealand	3.72	9	83.02	Oceana
Hong Kong	3.64	10	81.13	Asia
Israel	3.37	11	79.25	the Middle East
Ireland	3.35	12	77.36	Europe
Thailand	3.31	13	75.47	Asia
Sweden	3.28	14	73.58	Europe
Netherlands	3.02	15	71.70	Europe
Germany	2.79	16	69.81	Europe
Taiwan	2.79	17	67.92	Asia
Japan	2.71	19	64.15	Asia
Austria	2.55	21	60.38	Europe
Portugal	2.51	22	58.49	Europe
Peru	2.45	23	56.60	Latin America
Switzerland	2.30	24	54.72	Europe
Greece	2.29	25	52.83	Europe
France	2.24	26	50.94	Europe
Finland	2.21	27	49.06	Europe
Italy	2.14	28	47.17	Europe
Norway	2.13	29	45.28	Europe
Czech Republic	2.03	30	43.40	Europe
Singapore	2.03	31	41.51	Asia
Luxembourg	1.99	32	39.62	Europe
Argentina	1.90	33	37.74	Latin America
the United Kingdom	1.88	34	35.85	Europe
Australia	1.87	35	33.96	Oceana
India	**1.84**	**36**	**32.08**	**Asia**
Philippines	1.47	38	28.30	Asia
Spain	1.29	39	26.42	Europe
Indonesia	1.17	41	22.64	Asia
South Korea	0.82	44	16.98	Asia
Russia	0.74	46	13.21	Europe
China	0.72	47	11.32	Asia
Pakistan	0.71	48	9.43	the Middle East
Hungary	0.67	49	7.55	Europe
Poland	0.54	50	5.66	Europe
Turkey	0.45	51	3.77	the Middle East
Mexico	0.45	52	1.89	Latin America

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Ratio
(Laboratory Analytical Instruments)

Countries in Asia	Value	Rank	Percentile
Malaysia	5.06	1	96.15
Hong Kong	3.64	2	92.31
Thailand	3.31	3	88.46
Mongolia	2.96	4	84.62
Taiwan	2.79	5	80.77
Japan	2.71	6	76.92
North Korea	2.38	7	73.08
Brunei	2.08	8	69.23
Singapore	2.03	9	65.38
Macau	1.87	10	61.54
India	**1.84**	**11**	**57.69**
Papua New Guinea	1.66	12	53.85
Burma	1.48	13	50.00
Philippines	1.47	14	46.15
Cambodia	1.40	15	42.31
Laos	1.35	16	38.46
Vietnam	1.22	17	34.62
Indonesia	1.17	18	30.77
Maldives	1.07	19	26.92
Bangladesh	1.05	20	23.08
Bhutan	1.00	21	19.23
Nepal	0.89	22	15.38
Sri Lanka	0.84	23	11.54
South Korea	0.82	24	7.69
China	0.72	25	3.85
Seychelles	0.69	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Inventories % Total Current Assets

Countries	Value	Rank	Percentile	Region
Indonesia	57.43	1	98.11	Asia
Singapore	52.32	3	94.34	Asia
Italy	42.44	4	92.45	Europe
South Korea	41.92	5	90.57	Asia
Australia	41.23	7	86.79	Oceana
Germany	39.29	8	84.91	Europe
Russia	37.78	10	81.13	Europe
Spain	36.00	11	79.25	Europe
China	35.22	12	77.36	Asia
Pakistan	34.63	13	75.47	the Middle East
Canada	34.07	14	73.58	North America
Hungary	33.94	15	71.70	Europe
Austria	32.59	16	69.81	Europe
France	32.37	17	67.92	Europe
Switzerland	32.02	18	66.04	Europe
USA	31.09	19	64.15	North America
Norway	30.60	20	62.26	Europe
the United Kingdom	29.83	21	60.38	Europe
Belgium	29.66	22	58.49	Europe
Denmark	29.51	23	56.60	Europe
Finland	28.80	24	54.72	Europe
Poland	27.76	25	52.83	Europe
Luxembourg	27.69	26	50.94	Europe
Netherlands	26.88	27	49.06	Europe
India	**26.29**	**28**	**47.17**	**Asia**
Japan	25.87	29	45.28	Asia
New Zealand	24.38	30	43.40	Oceana
Hong Kong	23.89	31	41.51	Asia
Turkey	23.15	32	39.62	the Middle East
Mexico	23.09	33	37.74	Latin America
Sweden	22.84	34	35.85	Europe
Israel	8.41	36	32.08	the Middle East
Ireland	8.34	37	30.19	Europe
Malaysia	7.21	38	28.30	Asia
South Africa	7.20	39	26.42	Africa
Taiwan	6.95	40	24.53	Asia
Brazil	6.53	41	22.64	Latin America
Portugal	6.26	42	20.75	Europe
Chile	6.21	43	18.87	Latin America
Greece	5.70	44	16.98	Europe
Czech Republic	5.08	45	15.09	Europe
Argentina	4.73	46	13.21	Latin America
Thailand	4.72	47	11.32	Asia
Peru	3.49	50	5.66	Latin America
Philippines	2.09	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Inventories % Total Current Assets (Laboratory Analytical Instruments)

Countries in Asia	Value	Rank	Percentile
Indonesia	57.43	1	96.15
Maldives	52.36	2	92.31
Singapore	52.32	3	88.46
South Korea	41.92	4	84.62
Sri Lanka	41.30	5	80.77
Seychelles	35.25	6	76.92
China	35.22	7	73.08
Brunei	28.91	8	69.23
India	**26.29**	**9**	**65.38**
Japan	25.87	10	61.54
Hong Kong	23.89	11	57.69
Cambodia	19.95	12	53.85
Laos	19.24	13	50.00
Vietnam	17.46	14	46.15
Bangladesh	14.96	15	42.31
Bhutan	14.25	16	38.46
Nepal	12.75	17	34.62
Malaysia	7.21	18	30.77
Taiwan	6.95	19	26.92
Thailand	4.72	20	23.08
Macau	4.66	21	19.23
Mongolia	4.21	22	15.38
North Korea	3.38	23	11.54
Papua New Guinea	2.37	24	7.69
Burma	2.10	25	3.85
Philippines	2.09	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accounts Receivables Days

Countries	Value	Rank	Percentile	Region
Italy	197.01	1	98.11	Europe
Austria	190.83	2	96.23	Europe
India	**175.92**	**3**	**94.34**	**Asia**
New Zealand	144.45	4	92.45	Oceana
Hong Kong	141.54	5	90.57	Asia
Israel	134.56	6	88.68	the Middle East
Ireland	133.45	7	86.79	Europe
Japan	120.51	8	84.91	Asia
France	113.98	9	83.02	Europe
Spain	113.49	10	81.13	Europe
Taiwan	111.20	11	79.25	Asia
Netherlands	104.41	12	77.36	Europe
Norway	100.09	13	75.47	Europe
Portugal	100.08	14	73.58	Europe
Belgium	96.76	15	71.70	Europe
Finland	93.55	16	69.81	Europe
Canada	91.24	17	67.92	North America
Greece	91.19	18	66.04	Europe
Germany	89.63	19	64.15	Europe
Sweden	87.55	20	62.26	Europe
Czech Republic	81.18	21	60.38	Europe
the United Kingdom	79.76	22	58.49	Europe
Singapore	78.07	23	56.60	Asia
Switzerland	77.39	24	54.72	Europe
Argentina	75.62	25	52.83	Latin America
USA	74.41	26	50.94	North America
Denmark	72.41	27	49.06	Europe
Australia	71.57	28	47.17	Oceana
Luxembourg	66.93	29	45.28	Europe
South Korea	49.69	30	43.40	Asia
Russia	44.78	32	39.62	Europe
Malaysia	43.86	33	37.74	Asia
South Africa	43.83	34	35.85	Africa
Hungary	40.23	35	33.96	Europe
Brazil	39.71	36	32.08	Latin America
Chile	37.78	37	30.19	Latin America
Poland	32.90	38	28.30	Europe
Thailand	28.72	39	26.42	Asia
Turkey	27.45	40	24.53	the Middle East
Mexico	27.37	41	22.64	Latin America
Indonesia	26.56	42	20.75	Asia
Peru	21.22	47	11.32	Latin America
China	16.29	49	7.55	Asia
Pakistan	16.01	50	5.66	the Middle East
Philippines	12.74	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accounts Receivables Days
(Laboratory Analytical Instruments)

Countries in Asia	Value	Rank	Percentile
India	**175.92**	**1**	**96.15**
Hong Kong	141.54	2	92.31
Cambodia	133.49	3	88.46
Laos	128.73	4	84.62
Japan	120.51	5	80.77
Vietnam	116.81	6	76.92
Taiwan	111.20	7	73.08
Bangladesh	100.12	8	69.23
Bhutan	95.35	9	65.38
Nepal	85.34	10	61.54
Singapore	78.07	11	57.69
Macau	74.51	12	53.85
Brunei	69.89	13	50.00
South Korea	49.69	14	46.15
Malaysia	43.86	15	42.31
Seychelles	41.79	16	38.46
Thailand	28.72	17	34.62
Indonesia	26.56	18	30.77
Mongolia	25.62	19	26.92
Maldives	24.21	20	23.08
North Korea	20.60	21	19.23
Sri Lanka	19.10	22	15.38
China	16.29	23	11.54
Papua New Guinea	14.40	24	7.69
Burma	12.79	25	3.85
Philippines	12.74	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Inventories (# of Days) Held

Countries	Value	Rank	Percentile	Region
Italy	478.52	1	98.11	Europe
Belgium	272.70	2	96.23	Europe
Austria	235.24	3	94.34	Europe
Switzerland	191.09	4	92.45	Europe
Luxembourg	165.26	5	90.57	Europe
Netherlands	144.50	6	88.68	Europe
Australia	141.84	7	86.79	Oceana
USA	139.92	8	84.91	North America
Canada	132.80	9	83.02	North America
Singapore	132.51	10	81.13	Asia
New Zealand	130.80	11	79.25	Oceana
Japan	129.23	12	77.36	Asia
Hong Kong	128.17	13	75.47	Asia
Spain	118.08	14	73.58	Europe
Sweden	113.30	15	71.70	Europe
Israel	103.73	16	69.81	the Middle East
the United Kingdom	103.27	17	67.92	Europe
Ireland	102.87	18	66.04	Europe
France	102.65	19	64.15	Europe
Denmark	101.81	20	62.26	Europe
Germany	98.22	21	60.38	Europe
Finland	96.70	22	58.49	Europe
Norway	94.22	23	56.60	Europe
India	**91.48**	**24**	**54.72**	**Asia**
Taiwan	85.73	25	52.83	Asia
South Korea	82.27	26	50.94	Asia
Malaysia	77.28	27	49.06	Asia
South Africa	77.23	28	47.17	Africa
Portugal	77.15	29	45.28	Europe
Russia	74.14	31	41.51	Europe
Greece	70.29	32	39.62	Europe
Brazil	69.97	33	37.74	Latin America
Indonesia	68.93	34	35.85	Asia
Hungary	66.61	35	33.96	Europe
Chile	66.57	36	32.08	Latin America
Czech Republic	62.58	38	28.30	Europe
Argentina	58.29	39	26.42	Latin America
Poland	54.48	40	24.53	Europe
Thailand	50.60	41	22.64	Asia
Turkey	45.44	43	18.87	the Middle East
Mexico	45.31	44	16.98	Latin America
China	42.27	46	13.21	Asia
Pakistan	41.56	48	9.43	the Middle East
Peru	37.39	50	5.66	Latin America
Philippines	22.45	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Inventories (# of Days) Held
(Laboratory Analytical Instruments)

Countries in Asia	Value	Rank	Percentile
Brunei	172.57	1	96.15
Singapore	132.51	2	92.31
Japan	129.23	3	88.46
Hong Kong	128.17	4	84.62
India	**91.48**	**5**	**80.77**
Taiwan	85.73	6	76.92
South Korea	82.27	7	73.08
Malaysia	77.28	8	69.23
Cambodia	69.42	9	65.38
Seychelles	69.18	10	61.54
Indonesia	68.93	11	57.69
Laos	66.94	12	53.85
Maldives	62.84	13	50.00
Vietnam	60.74	14	46.15
Macau	57.44	15	42.31
Bangladesh	52.06	16	38.46
Thailand	50.60	17	34.62
Bhutan	49.58	18	30.77
Sri Lanka	49.57	19	26.92
Mongolia	45.14	20	23.08
Nepal	44.38	21	19.23
China	42.27	22	15.38
North Korea	36.29	23	11.54
Papua New Guinea	25.37	24	7.69
Burma	22.53	25	3.85
Philippines	22.45	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

3.6 PRODUCTIVITY IN INDIA: ASSET-LABOR RATIOS

3.6.1 Overview

In this chapter, we consider numerous asset-labor ratios for laboratory analytical instruments in India benchmarked against global averages. Productivity and utilization ratios are presented for companies oprating in India and the average global benchmarks for laboratory analytical instruments. For ratios where there are large deviations between India and the benchmarks, graphics are provided (sometimes referred to as a “gap” analysis). Then the distribution of ratios is presented in the form of ranks and percentiles. Certain asset-labor ratios are highlighted across countries in the comparison group.

In the case of asset-labor ratios, this report maintains comparability over time and across countries by using a common currency (the US dollar) and relates each measure to a “per employee basis”. Ratios are projected using raw financial statistics and, as ratios, are therefore comparable. Given a country’s human resource ratios, the resulting figures are benchmarked across regional and global averages.

We then report the larger asset-labor ratio gaps for laboratory analytical instruments that India has vis-à-vis the worldwide average. Again, a gap need not be a bad sign. Rather, it is simply a substantial difference that might merit further attention or signal a firm’s relative incentive to invest locally. All figures are projections, so due caution is required.

3.6.2 Asset to Labor: Outlook

The following tables and graphs are prepared using the methodology described at the beginning of this section. All units are in thousands of US dollars per employee. All figures are current-year projections for laboratory analytical instruments in India based on latest financial results available.

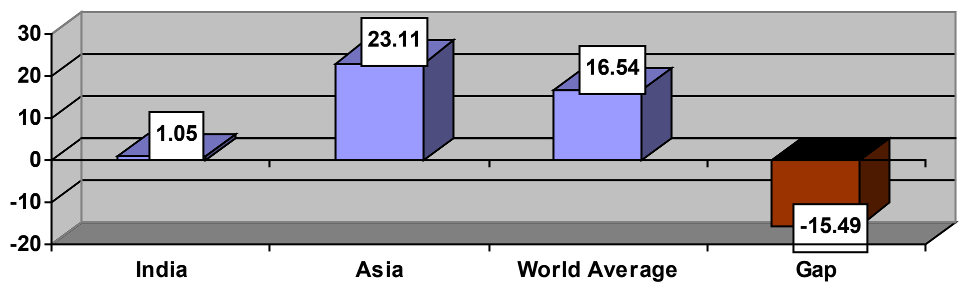
Labor-asset Ratios ($k/employee)	India	Asia	World Avg.
Cash & Short Term Investments	1.05	23.11	16.54
Cash	0.90	11.49	6.48
Short Term Investments	0.15	9.17	7.61
Receivables (Net)	19.60	18.33	16.52
Total Inventories	7.37	14.02	12.85
Raw Materials	2.05	4.18	3.99
Work in Process	2.05	3.42	4.70
Finished Goods	2.99	13.98	3.82
Progress Payments & Other	0.28	0.38	0.42
Other Current Assets	0.02	4.59	5.64
Current Assets - Total	**28.04**	**58.45**	**49.53**
Investments in Unconsolidated Subsidiaries	0.02	0.37	0.31
Other Investments	0.08	6.88	7.22
Property Plant and Equipment - Net	11.40	24.24	24.24
Property Plant and Equipment - Gross	21.65	36.80	37.10
Land	0.04	5.81	3.49
Buildings	2.62	8.94	8.15
Machinery & Equipment	17.31	20.02	22.11
Transportation Equipment	0.15	1.77	0.98
Other Property Plant & Equipment	1.51	4.22	3.78
Property Plant & Equipment Under Capitalized Leases	0.03	1.40	0.64
Accumulated Depreciation - Total	10.25	12.68	12.88
Accumulated Depreciation - Buildings	0.52	2.54	1.84
Accumulated Depreciation -Machinery & Equipment	9.06	13.01	13.90
Accumulated Depreciation - Transportation Equipment	0.05	1.01	0.51
Accumulated Depreciation - Other Prop & Equip	0.62	2.38	1.40
Accumulated Depreciation - PP&E Under Capitalized Leases	0.00	0.20	0.13
Other Assets	3.24	10.74	12.18
Deferred Charges	1.33	0.55	0.96
Intangible Other Assets	1.91	5.27	6.58
Total Assets	**42.78**	**97.32**	**89.77**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

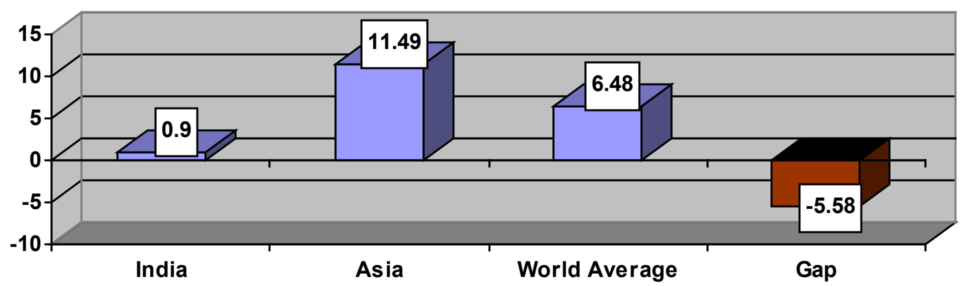
3.6.3 Asset to Labor: International Gaps

The following graphics summarize for laboratory analytical instruments the large labor-asset gaps between firms operating in India and the world average. A gap cannot necessarily be interpreted as a positive or negative reflection on performance. Gaps may signal areas of specialization, market focus, or expertise. More contextual information is required to fully interpret these gaps. The gaps highlighted here are simply those that are large.

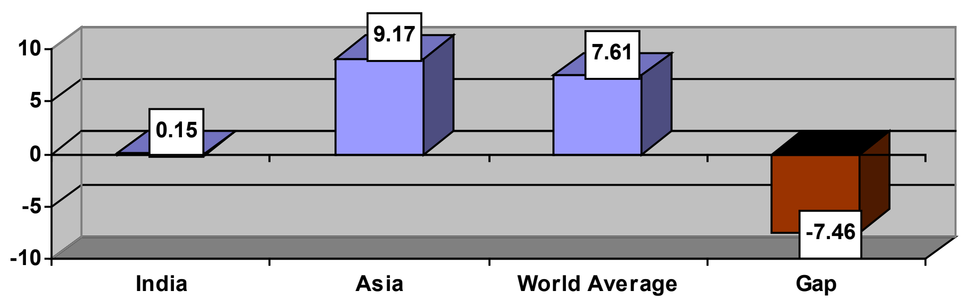
Gap: Cash & Short Term Investments ($k/employee)



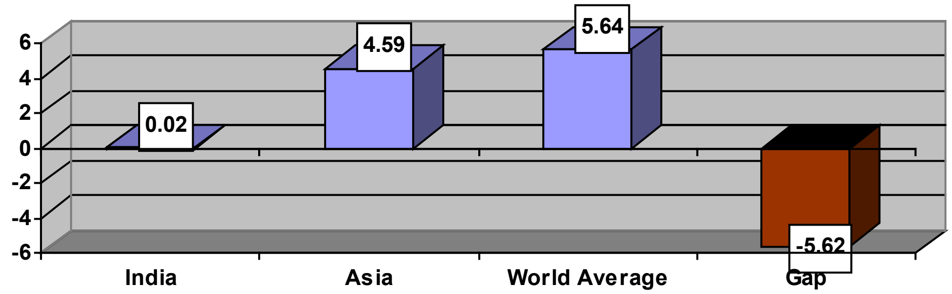
Gap: Cash ($k/employee)



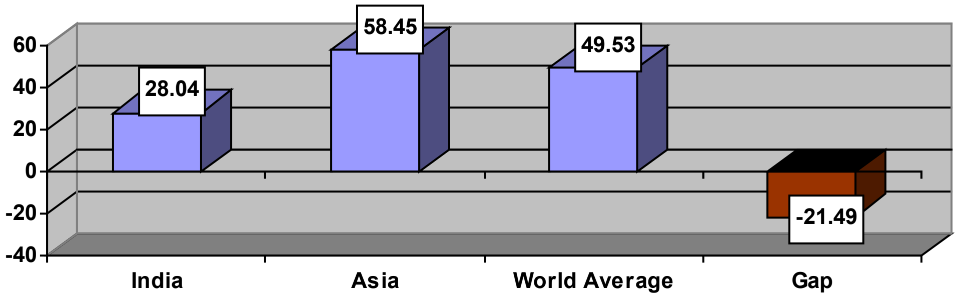
Gap: Short Term Investments ($k/employee)



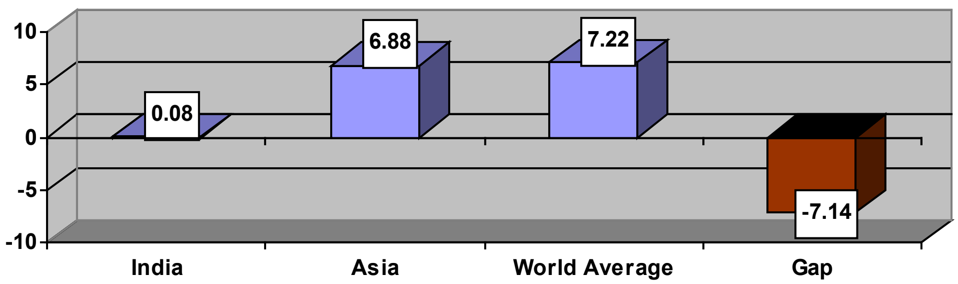
Gap: Other Current Assets ($k/employee)



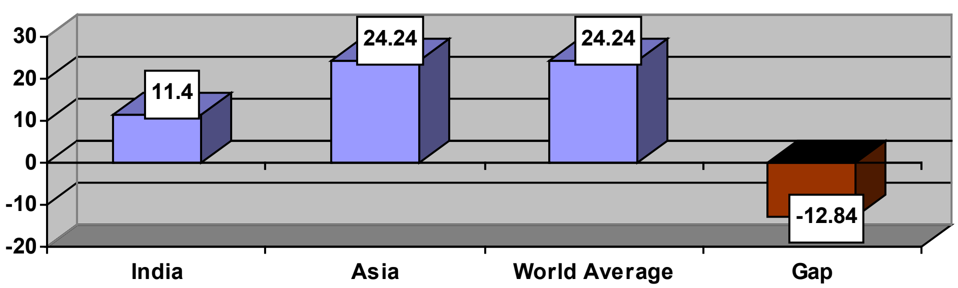
Gap: Current Assets - Total ($k/employee)



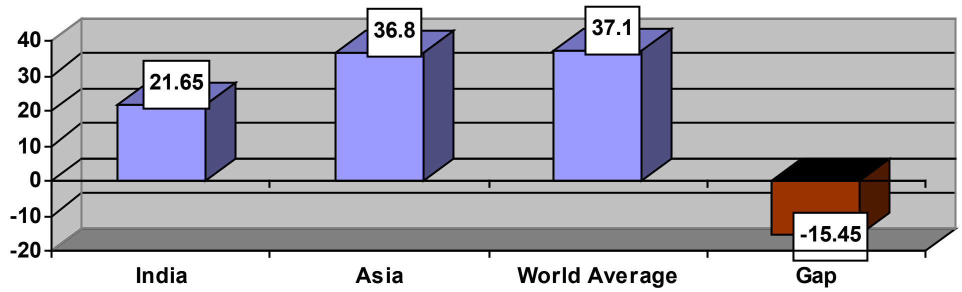
Gap: Other Investments ($k/employee)



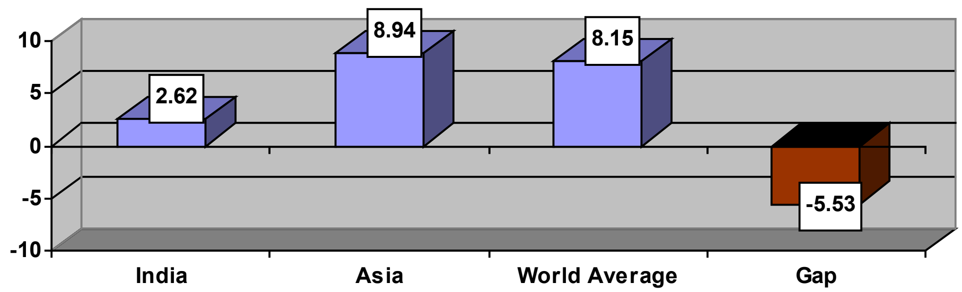
Gap: Property Plant and Equipment - Net ($k/employee)



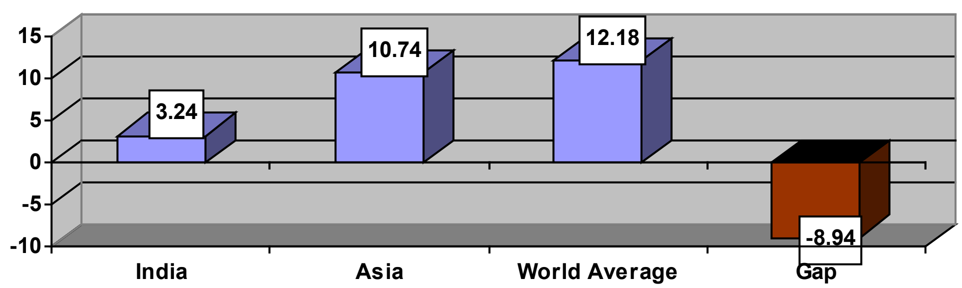
Gap: Property Plant and Equipment - Gross ($k/employee)



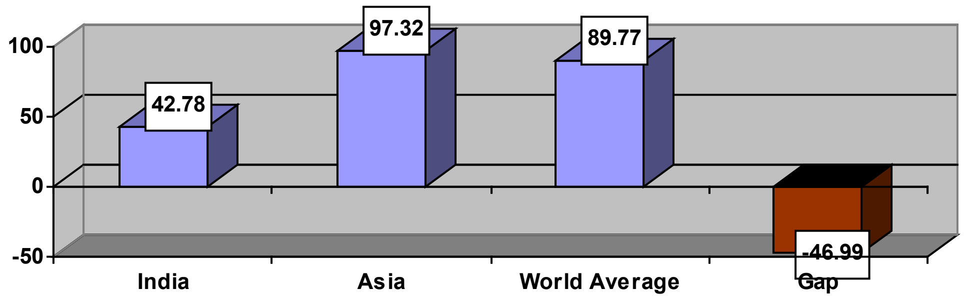
Gap: Buildings ($k/employee)



Gap: Other Assets ($k/employee)



Gap: Total Assets ($k/employee)



3.6.4 Key Percentiles and Rankings

We now consider the distribution of asset-labor ratios using ranks and percentiles across . What percent of countries have a productivity indicator lower or higher than India (what is the indicator's rank or percentile)? The table below answers this question with respect to asset-labor structure. The ranks and percentiles indicate, from highest to lowest, where a value falls within the distribution of all countries considered in the global benchmark (the number of countries in the benchmark per line item may vary, as indicated in the Rank). Again, a high or low figure does not necessarily indicate good or bad performance or productivity. After the summary table below, a few key asset-labor ratios are highlighted in additional tables.

Asset Structure ($k/employee)	**India**	**Rank of Total**	**Percentile**
Cash & Short Term Investments	1.05	48 of 53	9.43
Cash	0.90	40 of 52	23.08
Short Term Investments	0.15	38 of 43	11.63
Receivables (Net)	19.60	34 of 53	35.85
Total Inventories	7.37	37 of 53	30.19
Raw Materials	2.05	39 of 46	15.22
Work in Process	2.05	25 of 46	45.65
Finished Goods	2.99	36 of 47	23.40
Progress Payments & Other	0.28	11 of 24	54.17
Other Current Assets	0.02	34 of 34	0.00
Current Assets - Total	**28.04**	**45 of 53**	**15.09**
Investments in Unconsolidated Subsidiaries	0.02	21 of 24	12.50
Other Investments	0.08	42 of 42	0.00
Property Plant and Equipment - Net	11.40	29 of 53	45.28
Property Plant and Equipment - Gross	21.65	32 of 53	39.62
Land	0.04	26 of 26	0.00
Buildings	2.62	32 of 45	28.89
Machinery & Equipment	17.31	26 of 51	49.02
Transportation Equipment	0.15	35 of 42	16.67
Other Property Plant & Equipment	1.51	31 of 45	31.11
Property Plant & Equipment Under Capitalized Leases	0.03	36 of 36	0.00
Accumulated Depreciation - Total	10.25	31 of 53	41.51
Accumulated Depreciation - Buildings	0.52	29 of 45	35.56
Accumulated Depreciation -Machinery & Equipment	9.06	29 of 51	43.14
Accumulated Depreciation - Transportation Equipment	0.05	41 of 41	0.00
Accumulated Depreciation - Other Prop & Equip	0.62	34 of 44	22.73
Accumulated Depreciation - P P & E Under Capitalized Leases	0.00	34 of 34	0.00
Other Assets	3.24	37 of 42	11.90
Deferred Charges	1.33	11 of 29	62.07
Intangible Other Assets	1.91	36 of 42	14.29
Total Assets	**42.78**	**44 of 53**	**16.98**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cash & Short Term Investments

Countries	Value ($K/employee)	Rank	Percentile	Region
Israel	112.21	1	98.11	the Middle East
Ireland	111.28	2	96.23	Europe
Taiwan	92.73	3	94.34	Asia
Belgium	90.94	4	92.45	Europe
Portugal	83.46	5	90.57	Europe
Greece	76.04	6	88.68	Europe
Czech Republic	67.70	7	86.79	Europe
Argentina	63.06	8	84.91	Latin America
Malaysia	58.39	9	83.02	Asia
South Africa	58.35	10	81.13	Africa
South Korea	55.27	11	79.25	Asia
Japan	54.45	12	77.36	Asia
Brazil	52.86	13	75.47	Latin America
Chile	50.30	15	71.70	Latin America
Russia	49.81	16	69.81	Europe
Sweden	49.21	17	67.92	Europe
USA	46.50	18	66.04	North America
Hungary	44.75	19	64.15	Europe
Thailand	38.23	20	62.26	Asia
Poland	36.60	21	60.38	Europe
Italy	35.90	22	58.49	Europe
Switzerland	33.63	23	56.60	Europe
Turkey	30.53	25	52.83	the Middle East
Mexico	30.44	26	50.94	Latin America
Luxembourg	29.08	28	47.17	Europe
Peru	28.25	30	43.40	Latin America
France	27.69	31	41.51	Europe
New Zealand	27.25	32	39.62	Oceana
Hong Kong	26.70	33	37.74	Asia
Netherlands	25.19	34	35.85	Europe
Norway	23.91	35	33.96	Europe
Austria	22.47	36	32.08	Europe
Philippines	16.96	38	28.30	Asia
Finland	15.06	39	26.42	Europe
Canada	14.94	40	24.53	North America
Singapore	14.01	42	20.75	Asia
the United Kingdom	13.91	43	18.87	Europe
Denmark	11.88	44	16.98	Europe
Germany	6.80	45	15.09	Europe
Australia	4.75	46	13.21	Oceana
Spain	1.89	47	11.32	Europe
India	**1.05**	**48**	**9.43**	**Asia**
Indonesia	0.71	49	7.55	Asia
China	0.44	52	1.89	Asia
Pakistan	0.43	53	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cash & Short Term Investments
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Taiwan	92.73	1	96.15
Macau	62.13	2	92.31
Malaysia	58.39	3	88.46
South Korea	55.27	4	84.62
Japan	54.45	5	80.77
Seychelles	46.48	6	76.92
Thailand	38.23	7	73.08
Mongolia	34.10	8	69.23
Brunei	30.37	9	65.38
North Korea	27.42	10	61.54
Hong Kong	26.70	11	57.69
Papua New Guinea	19.17	12	53.85
Burma	17.02	13	50.00
Philippines	16.96	14	46.15
Singapore	14.01	15	42.31
India	**1.05**	**16**	**38.46**
Cambodia	0.80	17	34.62
Laos	0.77	18	30.77
Indonesia	0.71	19	26.92
Vietnam	0.70	20	23.08
Maldives	0.65	21	19.23
Bangladesh	0.60	22	15.38
Bhutan	0.57	23	11.54
Sri Lanka	0.51	24	7.69
Nepal	0.51	25	3.85
China	0.44	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Receivables (Net)

Countries	Value ($K/employee)	Rank	Percentile	Region
Austria	151.13	1	98.11	Europe
Italy	91.45	2	96.23	Europe
Israel	78.55	3	94.34	the Middle East
Ireland	77.90	4	92.45	Europe
Japan	77.41	5	90.57	Asia
Taiwan	64.92	6	88.68	Asia
France	60.30	7	86.79	Europe
Portugal	58.43	8	84.91	Europe
Greece	53.23	9	83.02	Europe
Finland	52.04	10	81.13	Europe
Netherlands	49.32	11	79.25	Europe
Norway	48.53	12	77.36	Europe
Czech Republic	47.39	13	75.47	Europe
Singapore	45.24	14	73.58	Asia
Belgium	44.23	15	71.70	Europe
Argentina	44.14	16	69.81	Latin America
Sweden	42.73	17	67.92	Europe
Switzerland	42.19	18	66.04	Europe
Australia	40.39	19	64.15	Oceana
USA	39.57	20	62.26	North America
Germany	36.86	21	60.38	Europe
Luxembourg	36.49	22	58.49	Europe
South Korea	32.34	23	56.60	Asia
Canada	31.10	24	54.72	North America
the United Kingdom	30.24	25	52.83	Europe
Russia	29.14	27	49.06	Europe
Denmark	28.85	28	47.17	Europe
Hungary	26.18	29	45.28	Europe
Spain	24.71	30	43.40	Europe
New Zealand	23.57	31	41.51	Oceana
Hong Kong	23.10	32	39.62	Asia
Poland	21.41	33	37.74	Europe
India	**19.60**	**34**	**35.85**	**Asia**
Turkey	17.86	35	33.96	the Middle East
Mexico	17.81	36	32.08	Latin America
Malaysia	6.89	38	28.30	Asia
South Africa	6.88	39	26.42	Africa
Brazil	6.23	40	24.53	Latin America
Chile	5.93	41	22.64	Latin America
Thailand	4.51	42	20.75	Asia
Peru	3.33	45	15.09	Latin America
Indonesia	2.09	47	11.32	Asia
Philippines	2.00	48	9.43	Asia
China	1.28	52	1.89	Asia
Pakistan	1.26	53	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Receivables (Net)
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Japan	77.41	1	96.15
Taiwan	64.92	2	92.31
Singapore	45.24	3	88.46
Macau	43.49	4	84.62
Brunei	38.10	5	80.77
South Korea	32.34	6	76.92
Seychelles	27.20	7	73.08
Hong Kong	23.10	8	69.23
India	**19.60**	**9**	**65.38**
Cambodia	14.87	10	61.54
Laos	14.34	11	57.69
Vietnam	13.01	12	53.85
Bangladesh	11.15	13	50.00
Bhutan	10.62	14	46.15
Nepal	9.51	15	42.31
Malaysia	6.89	16	38.46
Thailand	4.51	17	34.62
Mongolia	4.02	18	30.77
North Korea	3.23	19	26.92
Papua New Guinea	2.26	20	23.08
Indonesia	2.09	21	19.23
Burma	2.01	22	15.38
Philippines	2.00	23	11.54
Maldives	1.90	24	7.69
Sri Lanka	1.50	25	3.85
China	1.28	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Inventories

Countries	Value ($K/employee)	Rank	Percentile	Region
Italy	149.95	1	98.11	Europe
Singapore	106.74	2	96.23	Asia
Austria	85.80	3	94.34	Europe
Belgium	50.60	4	92.45	Europe
South Korea	44.50	5	90.57	Asia
Japan	43.17	6	88.68	Asia
Russia	40.10	8	84.91	Europe
France	36.68	9	83.02	Europe
Hungary	36.03	10	81.13	Europe
Switzerland	35.10	11	79.25	Europe
USA	33.83	12	77.36	North America
Germany	32.17	13	75.47	Europe
Norway	31.65	14	73.58	Europe
Australia	30.92	15	71.70	Oceana
Luxembourg	30.35	16	69.81	Europe
Finland	30.35	17	67.92	Europe
Poland	29.47	18	66.04	Europe
Netherlands	28.28	19	64.15	Europe
Canada	25.90	20	62.26	North America
Turkey	24.58	21	60.38	the Middle East
Mexico	24.51	22	58.49	Latin America
Sweden	23.21	23	56.60	Europe
the United Kingdom	21.04	25	52.83	Europe
Denmark	18.35	26	50.94	Europe
Israel	17.84	27	49.06	the Middle East
Ireland	17.70	28	47.17	Europe
Spain	16.91	29	45.28	Europe
Taiwan	14.75	30	43.40	Asia
Portugal	13.27	31	41.51	Europe
Greece	12.09	32	39.62	Europe
Czech Republic	10.76	33	37.74	Europe
Argentina	10.03	34	35.85	Latin America
New Zealand	8.55	35	33.96	Oceana
Hong Kong	8.38	36	32.08	Asia
India	**7.37**	**37**	**30.19**	**Asia**
Malaysia	5.09	38	28.30	Asia
South Africa	5.09	39	26.42	Africa
Brazil	4.61	40	24.53	Latin America
Indonesia	4.47	41	22.64	Asia
Chile	4.39	42	20.75	Latin America
Thailand	3.33	44	16.98	Asia
China	2.74	47	11.32	Asia
Pakistan	2.70	48	9.43	the Middle East
Peru	2.46	50	5.66	Latin America
Philippines	1.48	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Inventories
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Singapore	106.74	1	96.15
South Korea	44.50	2	92.31
Japan	43.17	3	88.46
Seychelles	37.42	4	84.62
Brunei	31.69	5	80.77
Taiwan	14.75	6	76.92
Macau	9.88	7	73.08
Hong Kong	8.38	8	69.23
India	**7.37**	**9**	**65.38**
Cambodia	5.59	10	61.54
Laos	5.39	11	57.69
Malaysia	5.09	12	53.85
Vietnam	4.89	13	50.00
Indonesia	4.47	14	46.15
Bangladesh	4.19	15	42.31
Maldives	4.08	16	38.46
Bhutan	4.00	17	34.62
Nepal	3.58	18	30.77
Thailand	3.33	19	26.92
Sri Lanka	3.22	20	23.08
Mongolia	2.97	21	19.23
China	2.74	22	15.38
North Korea	2.39	23	11.54
Papua New Guinea	1.67	24	7.69
Burma	1.48	25	3.85
Philippines	1.48	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Assets - Total

Countries	Value ($K/employee)	Rank	Percentile	Region
Italy	280.36	1	98.11	Europe
Austria	263.31	2	96.23	Europe
Israel	212.07	3	94.34	the Middle East
Ireland	210.32	4	92.45	Europe
Belgium	192.71	5	90.57	Europe
Japan	182.65	6	88.68	Asia
Taiwan	175.27	7	86.79	Asia
Singapore	167.79	8	84.91	Asia
South Korea	163.44	9	83.02	Asia
Portugal	157.74	10	81.13	Europe
Russia	147.28	12	77.36	Europe
Greece	143.72	13	75.47	Europe
Hungary	132.33	14	73.58	Europe
USA	129.62	15	71.70	North America
Czech Republic	127.95	16	69.81	Europe
France	125.44	17	67.92	Europe
Sweden	124.04	18	66.04	Europe
Argentina	119.18	19	64.15	Latin America
Switzerland	114.58	20	62.26	Europe
Poland	108.22	21	60.38	Europe
Netherlands	107.67	22	58.49	Europe
Finland	106.60	23	56.60	Europe
Norway	104.09	24	54.72	Europe
Luxembourg	99.09	25	52.83	Europe
Turkey	90.27	26	50.94	the Middle East
Mexico	90.02	27	49.06	Latin America
Germany	79.42	29	45.28	Europe
Australia	76.49	30	43.40	Oceana
Canada	73.50	31	41.51	North America
Malaysia	70.62	32	39.62	Asia
South Africa	70.57	33	37.74	Africa
the United Kingdom	69.25	34	35.85	Europe
Brazil	63.94	35	33.96	Latin America
Chile	60.84	36	32.08	Latin America
Denmark	60.34	37	30.19	Europe
New Zealand	59.43	38	28.30	Oceana
Hong Kong	58.23	39	26.42	Asia
Spain	46.98	40	24.53	Europe
Thailand	46.24	41	22.64	Asia
Peru	34.16	44	16.98	Latin America
India	**28.04**	**45**	**15.09**	**Asia**
Philippines	20.52	47	11.32	Asia
Indonesia	7.79	49	7.55	Asia
China	4.77	52	1.89	Asia
Pakistan	4.69	53	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Assets - Total
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Japan	182.65	1	96.15
Taiwan	175.27	2	92.31
Singapore	167.79	3	88.46
South Korea	163.44	4	84.62
Seychelles	137.44	5	80.77
Macau	117.43	6	76.92
Brunei	103.47	7	73.08
Malaysia	70.62	8	69.23
Hong Kong	58.23	9	65.38
Thailand	46.24	10	61.54
Mongolia	41.25	11	57.69
North Korea	33.16	12	53.85
India	**28.04**	**13**	**50.00**
Papua New Guinea	23.19	14	46.15
Cambodia	21.27	15	42.31
Burma	20.59	16	38.46
Philippines	20.52	17	34.62
Laos	20.51	18	30.77
Vietnam	18.61	19	26.92
Bangladesh	15.96	20	23.08
Bhutan	15.20	21	19.23
Nepal	13.60	22	15.38
Indonesia	7.79	23	11.54
Maldives	7.10	24	7.69
Sri Lanka	5.60	25	3.85
China	4.77	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Property Plant and Equipment - Net

Countries	Value ($K/employee)	Rank	Percentile	Region
South Korea	177.04	1	98.11	Asia
Russia	159.53	3	94.34	Europe
Hungary	143.34	4	92.45	Europe
Poland	117.23	5	90.57	Europe
Turkey	97.78	6	88.68	the Middle East
Mexico	97.51	7	86.79	Latin America
Japan	72.57	9	83.02	Asia
Switzerland	58.62	10	81.13	Europe
Luxembourg	50.70	11	79.25	Europe
Belgium	38.87	12	77.36	Europe
Canada	38.83	13	75.47	North America
Singapore	38.76	14	73.58	Asia
Netherlands	34.96	15	71.70	Europe
USA	33.60	16	69.81	North America
the United Kingdom	31.98	17	67.92	Europe
Finland	30.39	18	66.04	Europe
Italy	29.59	19	64.15	Europe
New Zealand	26.57	20	62.26	Oceana
Hong Kong	26.04	21	60.38	Asia
Denmark	24.57	22	58.49	Europe
Sweden	24.14	23	56.60	Europe
Norway	24.13	24	54.72	Europe
Germany	22.79	25	52.83	Europe
France	18.43	26	50.94	Europe
Australia	15.86	27	49.06	Oceana
Austria	14.94	28	47.17	Europe
India	**11.40**	**29**	**45.28**	**Asia**
Malaysia	9.67	30	43.40	Asia
South Africa	9.66	31	41.51	Africa
Israel	8.97	32	39.62	the Middle East
Ireland	8.90	33	37.74	Europe
Brazil	8.75	34	35.85	Latin America
Spain	8.47	35	33.96	Europe
Chile	8.33	36	32.08	Latin America
Taiwan	7.42	37	30.19	Asia
Portugal	6.67	38	28.30	Europe
Thailand	6.33	39	26.42	Asia
Greece	6.08	40	24.53	Europe
Czech Republic	5.41	41	22.64	Europe
Argentina	5.04	43	18.87	Latin America
Peru	4.68	45	15.09	Latin America
Indonesia	3.87	46	13.21	Asia
Philippines	2.81	49	7.55	Asia
China	2.37	52	1.89	Asia
Pakistan	2.33	53	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Property Plant and Equipment - Net
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
South Korea	177.04	1	96.15
Seychelles	148.88	2	92.31
Japan	72.57	3	88.46
Brunei	52.94	4	84.62
Singapore	38.76	5	80.77
Hong Kong	26.04	6	76.92
India	**11.40**	**7**	**73.08**
Malaysia	9.67	8	69.23
Cambodia	8.65	9	65.38
Laos	8.34	10	61.54
Vietnam	7.57	11	57.69
Taiwan	7.42	12	53.85
Bangladesh	6.49	13	50.00
Thailand	6.33	14	46.15
Bhutan	6.18	15	42.31
Mongolia	5.65	16	38.46
Nepal	5.53	17	34.62
Macau	4.97	18	30.77
North Korea	4.54	19	26.92
Indonesia	3.87	20	23.08
Maldives	3.53	21	19.23
Papua New Guinea	3.17	22	15.38
Burma	2.82	23	11.54
Philippines	2.81	24	7.69
Sri Lanka	2.78	25	3.85
China	2.37	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accumulated Depreciation - Total

Countries	Value ($K/employee)	Rank	Percentile	Region
Japan	80.78	1	98.11	Asia
Switzerland	51.15	2	96.23	Europe
South Korea	45.60	3	94.34	Asia
Luxembourg	44.24	4	92.45	Europe
Russia	41.09	6	88.68	Europe
Germany	38.16	7	86.79	Europe
Hungary	36.92	8	84.91	Europe
Netherlands	35.28	9	83.02	Europe
the United Kingdom	34.27	10	81.13	Europe
Italy	34.10	11	79.25	Europe
USA	34.03	12	77.36	North America
Norway	33.44	13	75.47	Europe
Finland	31.30	14	73.58	Europe
Belgium	31.13	15	71.70	Europe
Poland	30.20	16	69.81	Europe
Turkey	25.19	17	67.92	the Middle East
Mexico	25.12	18	66.04	Latin America
Denmark	24.07	19	64.15	Europe
Spain	23.38	20	62.26	Europe
France	23.37	21	60.38	Europe
Sweden	20.72	23	56.60	Europe
Singapore	19.82	24	54.72	Asia
Austria	19.06	25	52.83	Europe
Canada	18.71	26	50.94	North America
Israel	13.00	27	49.06	the Middle East
Ireland	12.89	28	47.17	Europe
Australia	11.90	29	45.28	Oceana
Taiwan	10.74	30	43.40	Asia
India	**10.25**	**31**	**41.51**	**Asia**
Portugal	9.67	32	39.62	Europe
Greece	8.81	33	37.74	Europe
Czech Republic	7.84	34	35.85	Europe
Argentina	7.30	35	33.96	Latin America
New Zealand	7.05	36	32.08	Oceana
Hong Kong	6.91	37	30.19	Asia
Indonesia	4.04	38	28.30	Asia
Malaysia	3.41	40	24.53	Asia
South Africa	3.41	41	22.64	Africa
Brazil	3.09	42	20.75	Latin America
Chile	2.94	43	18.87	Latin America
China	2.48	45	15.09	Asia
Pakistan	2.43	46	13.21	the Middle East
Thailand	2.24	47	11.32	Asia
Peru	1.65	50	5.66	Latin America
Philippines	0.99	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accumulated Depreciation - Total (Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Japan	80.78	1	96.15
Brunei	46.19	2	92.31
South Korea	45.60	3	88.46
Seychelles	38.35	4	84.62
Singapore	19.82	5	80.77
Taiwan	10.74	6	76.92
India	**10.25**	**7**	**73.08**
Cambodia	7.78	8	69.23
Laos	7.50	9	65.38
Macau	7.20	10	61.54
Hong Kong	6.91	11	57.69
Vietnam	6.81	12	53.85
Bangladesh	5.84	13	50.00
Bhutan	5.56	14	46.15
Nepal	4.97	15	42.31
Indonesia	4.04	16	38.46
Maldives	3.68	17	34.62
Malaysia	3.41	18	30.77
Sri Lanka	2.90	19	26.92
China	2.48	20	23.08
Thailand	2.24	21	19.23
Mongolia	1.99	22	15.38
North Korea	1.60	23	11.54
Papua New Guinea	1.12	24	7.69
Burma	1.00	25	3.85
Philippines	0.99	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Intangible Other Assets

Countries	Value ($K/employee)	Rank	Percentile	Region
Netherlands	49.74	1	97.62	Europe
USA	46.68	2	95.24	North America
France	39.69	3	92.86	Europe
Switzerland	37.10	4	90.48	Europe
Luxembourg	32.09	5	88.10	Europe
Israel	29.59	6	85.71	the Middle East
Ireland	29.34	7	83.33	Europe
Finland	26.96	8	80.95	Europe
Sweden	25.45	9	78.57	Europe
the United Kingdom	24.91	10	76.19	Europe
Taiwan	24.45	11	73.81	Asia
South Korea	24.01	12	71.43	Asia
Canada	22.71	13	69.05	North America
Portugal	22.01	15	64.29	Europe
Russia	21.63	16	61.90	Europe
Greece	20.05	17	59.52	Europe
Hungary	19.44	18	57.14	Europe
Italy	19.22	19	54.76	Europe
Czech Republic	17.85	20	52.38	Europe
Argentina	16.63	21	50.00	Latin America
Poland	15.90	22	47.62	Europe
Turkey	13.26	23	45.24	the Middle East
Mexico	13.22	24	42.86	Latin America
Belgium	10.76	26	38.10	Europe
Denmark	10.22	27	35.71	Europe
Australia	10.16	28	33.33	Oceana
Germany	9.71	29	30.95	Europe
Austria	8.31	30	28.57	Europe
Spain	5.34	31	26.19	Europe
Norway	4.64	32	23.81	Europe
New Zealand	3.54	33	21.43	Oceana
Hong Kong	3.47	34	19.05	Asia
Japan	2.79	35	16.67	Asia
India	**1.91**	**36**	**14.29**	**Asia**
Singapore	1.82	37	11.90	Asia
Indonesia	0.43	38	9.52	Asia
China	0.26	41	2.38	Asia
Pakistan	0.26	42	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Intangible Other Assets
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Brunei	33.51	1	94.74
Taiwan	24.45	2	89.47
South Korea	24.01	3	84.21
Seychelles	20.19	4	78.95
Macau	16.38	5	73.68
Hong Kong	3.47	6	68.42
Japan	2.79	7	63.16
India	**1.91**	**8**	**57.89**
Singapore	1.82	9	52.63
Cambodia	1.45	10	47.37
Laos	1.40	11	42.11
Vietnam	1.27	12	36.84
Bangladesh	1.09	13	31.58
Bhutan	1.04	14	26.32
Nepal	0.93	15	21.05
Indonesia	0.43	16	15.79
Maldives	0.39	17	10.53
Sri Lanka	0.31	18	5.26
China	0.26	19	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

3.7 PRODUCTIVITY IN INDIA: LIABILITY-LABOR RATIOS

3.7.1 Overview

In this chapter we consider the liability-labor ratios of companies operating in India benchmarked against global averages for laboratory analytical instruments. For ratios where there are large deviations between India and the benchmarks, graphics are provided (sometimes referred to as a "gap" analysis). Then the distribution of productivity ratios is presented in the form of ranks and percentiles. Certain key liability-labor ratios are highlighted for laboratory analytical instruments across countries in the comparison group. Definitions of liability statement terms are given in Chapter 3.

In the case of liability-labor ratios, this report maintains comparability over time and across countries by using a common currency (the US dollar) and relates each measure to a "per employee basis". Ratios are projected using raw financial statistics and, as ratios, are therefore comparable. Given a country's human resource ratios, the resulting figures are benchmarked across regional and global averages.

I then report the larger liability-labor ratio gaps for laboratory analytical instruments that India has vis-à-vis the worldwide average. Again, a gap need not be a bad sign. Rather, it is simply a substantial difference that might merit further attention or signal a firm's relative incentive to invest locally. All figures are projections, so due caution is required.

3.7.2 Liability to Labor: Outlook

The following tables and graphs are prepared using the methodology described at the beginning of this section. All units are in thousands of US dollars per employee. All figures are current-year projections for laboratory analytical instruments in India based on latest financial results available.

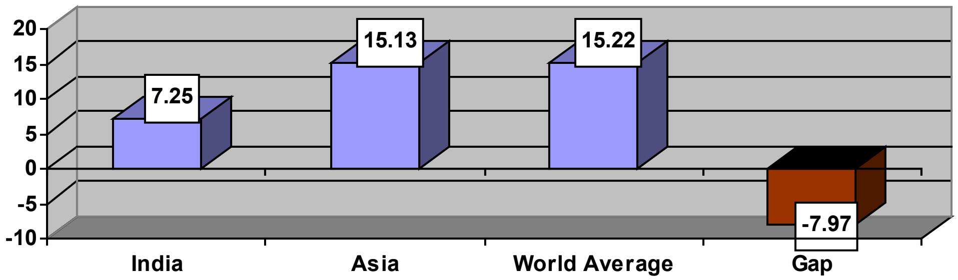
Labor-liability Ratios ($k/employee)	India	Asia	World Avg.
Accounts Payable	6.51	8.89	7.59
Short Term Debt & Current Portion of Long Term Debt	7.25	15.13	15.22
Income Taxes Payable	0.01	1.06	0.62
Dividends Payable	0.45	1.30	0.75
Other Current Liabilities	1.01	7.68	8.88
Current Liabilities - Total	**15.23**	**33.29**	**33.02**
Long Term Debt	18.21	8.76	11.08
Long Term Debt Excluding Capitalized Leases	18.21	8.50	10.74
Provision For Risks and Charges	0.12	2.70	2.22
Deferred Taxes	2.53	0.10	0.25
Deferred Taxes - Credit	2.57	1.61	1.10
Deferred Taxes - Debit	0.05	1.02	0.67
Total Liabilities	**36.08**	**44.14**	**46.94**
Preferred Stock	2.26	0.41	0.58
Common Equity	4.44	52.43	41.97
Common Stock	2.39	15.92	14.40
Capital Surplus	3.49	19.85	15.14
Other Appropriated Reserves	-1.49	0.89	0.72
Unappropriated Reserves	0.05	6.82	0.99
Total Liabilities & Shareholders Equity	**42.78**	**97.32**	**89.77**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

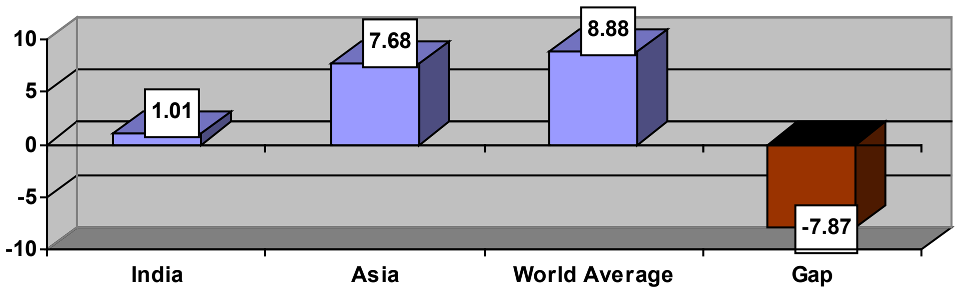
3.7.3 Liability and Equity to Labor: International Gaps

The following graphics summarize for laboratory analytical instruments the large labor-liability gaps between firms operating in India and the world average. A gap cannot necessarily be interpreted as a positive or negative reflection on performance. Gaps may signal areas of specialization, market focus, or expertise. More contextual information is required to fully interpret these gaps. The gaps highlighted here are simply those that are large.

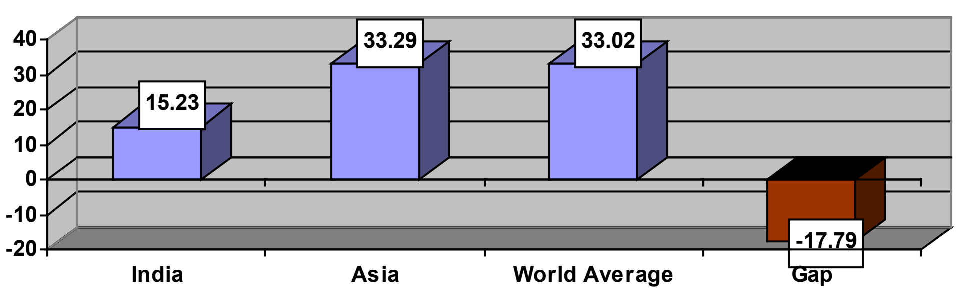
Gap: Short Term Debt & Current Portion of Long Term Debt ($k/employee)



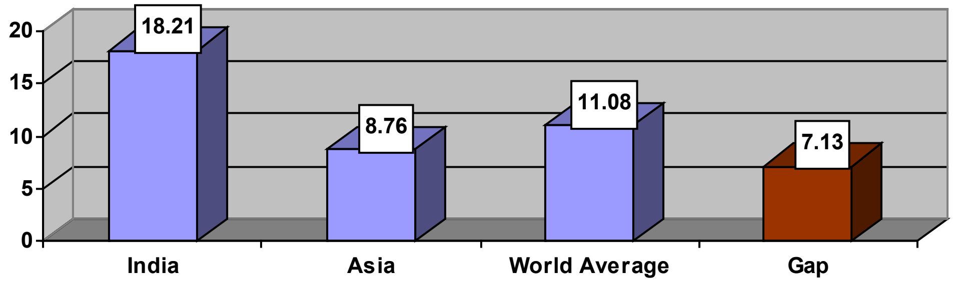
Gap: Other Current Liabilities ($k/employee)



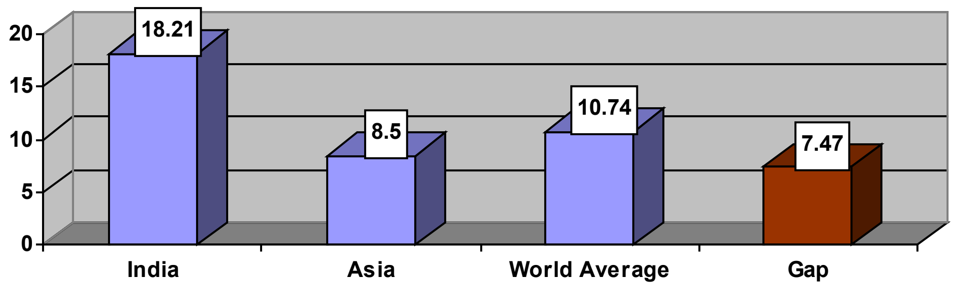
Gap: Current Liabilities - Total ($k/employee)



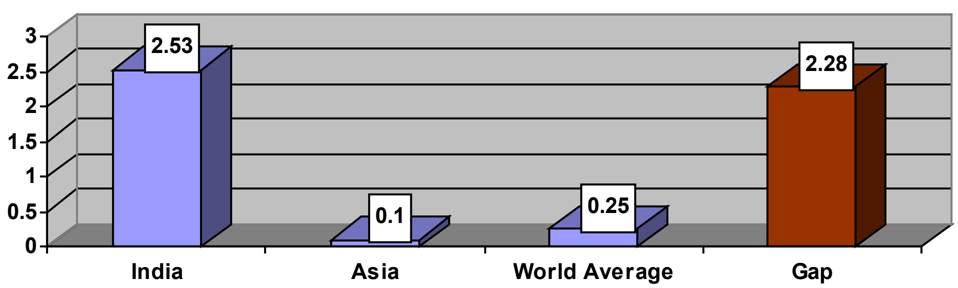
Gap: Long Term Debt ($k/employee)



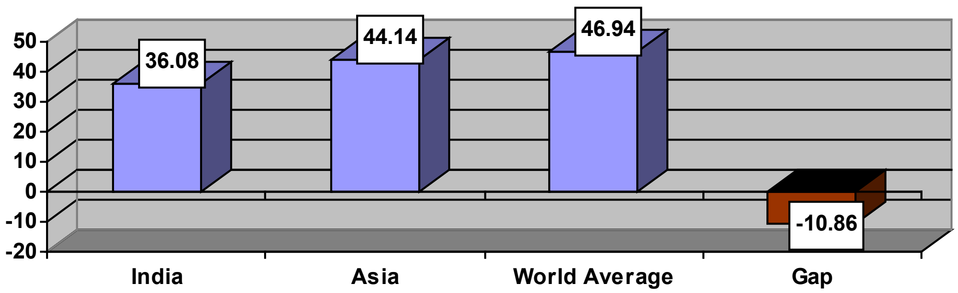
Gap: Long Term Debt Excluding Capitalized Leases ($k/employee)



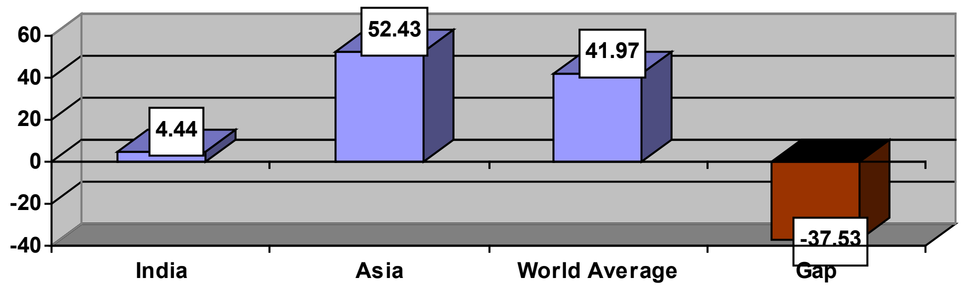
Gap: Deferred Taxes ($k/employee)



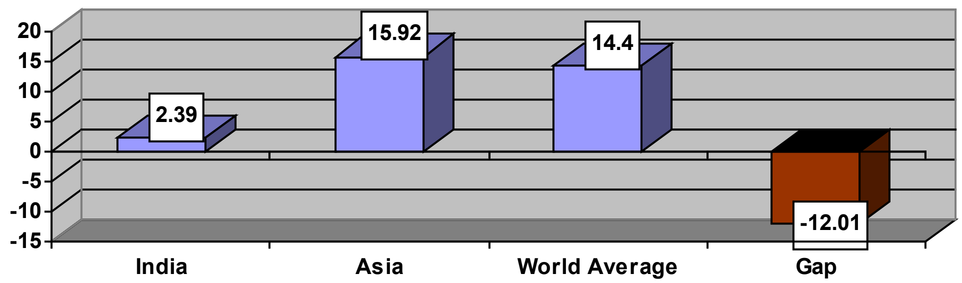
Gap: Total Liabilities ($k/employee)



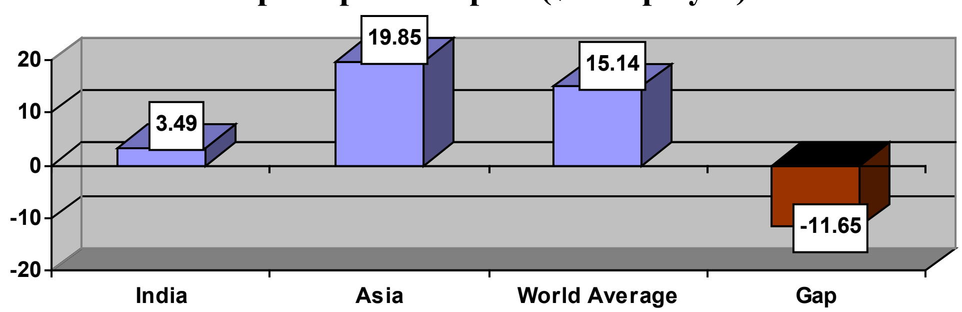
Gap: Common Equity ($k/employee)



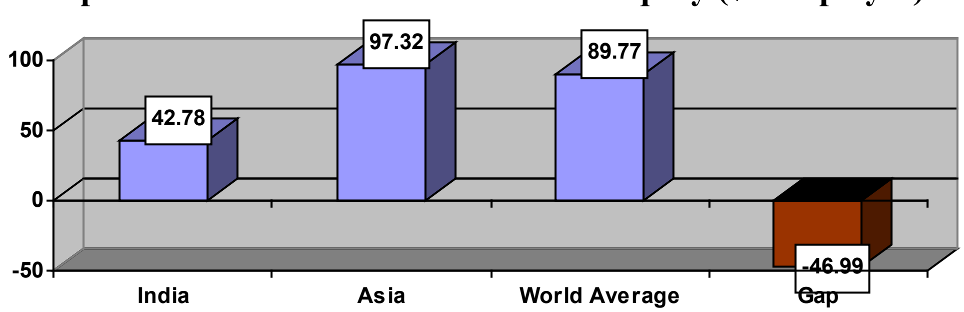
Gap: Common Stock ($k/employee)



Gap: Capital Surplus ($k/employee)



Gap: Total Liabilities & Shareholders Equity ($k/employee)



3.7.4 Key Percentiles and Rankings

We now consider the distribution of liability-labor ratios using ranks and percentiles across . What percent of countries have a value lower or higher than India (what is the indicator's rank or percentile)? The table below answers this question with respect to liability-labor ratios. The ranks and percentiles indicate, from highest to lowest, where a value falls within the distribution of all countries considered in the global benchmark (the number of countries in the benchmark per line item may vary, as indicated in the Rank). Again, a high or low figure does not necessarily indicate good or bad performance or productivity. After the summary table below, a few key liability-labor ratios are highlighted in additional tables.

Liability Structure ($k/employee)	India	Rank of Total	Percentile
Accounts Payable	6.51	34 of 53	35.85
Short Term Debt & Current Portion of Long Term Debt	7.25	32 of 42	23.81
Income Taxes Payable	0.01	43 of 43	0.00
Dividends Payable	0.45	19 of 25	24.00
Other Current Liabilities	1.01	48 of 53	9.43
Current Liabilities - Total	**15.23**	**37 of 53**	**30.19**
Long Term Debt	18.21	19 of 35	45.71
Long Term Debt Excluding Capitalized Leases	18.21	17 of 35	51.43
Provision For Risks and Charges	0.12	35 of 35	0.00
Deferred Taxes	2.53	3 of 40	92.50
Deferred Taxes - Credit	2.57	11 of 22	50.00
Deferred Taxes - Debit	0.05	29 of 29	0.00
Total Liabilities	**36.08**	**34 of 53**	**35.85**
Preferred Stock	2.26	1 of 6	83.33
Common Equity	4.44	48 of 53	9.43
Common Stock	2.39	38 of 52	26.92
Capital Surplus	3.49	38 of 49	22.45
Other Appropriated Reserves	-1.49	33 of 34	2.94
Unappropriated Reserves	0.05	21 of 22	4.55
Total Liabilities & Shareholders Equity	**42.78**	**44 of 53**	**16.98**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accounts Payable

Countries	Value ($K/employee)	Rank	Percentile	Region
Italy	41.37	1	98.11	Europe
Singapore	37.97	2	96.23	Asia
Japan	34.38	3	94.34	Asia
Israel	32.56	4	92.45	the Middle East
Ireland	32.29	5	90.57	Europe
Taiwan	26.91	6	88.68	Asia
France	26.54	7	86.79	Europe
Austria	25.74	8	84.91	Europe
South Korea	25.68	9	83.02	Asia
Portugal	24.22	10	81.13	Europe
Russia	23.14	12	77.36	Europe
Greece	22.06	13	75.47	Europe
Canada	21.69	14	73.58	North America
Hungary	20.79	15	71.70	Europe
Czech Republic	19.64	16	69.81	Europe
Argentina	18.30	17	67.92	Latin America
Poland	17.00	18	66.04	Europe
Turkey	14.18	19	64.15	the Middle East
Mexico	14.14	20	62.26	Latin America
Norway	13.45	21	60.38	Europe
Netherlands	13.17	22	58.49	Europe
Spain	12.81	24	54.72	Europe
the United Kingdom	12.17	25	52.83	Europe
Belgium	12.01	26	50.94	Europe
USA	11.27	27	49.06	North America
Sweden	11.27	28	47.17	Europe
Switzerland	11.19	29	45.28	Europe
Australia	10.51	30	43.40	Oceana
Germany	10.23	31	41.51	Europe
Luxembourg	9.68	32	39.62	Europe
Finland	9.27	33	37.74	Europe
India	**6.51**	**34**	**35.85**	**Asia**
New Zealand	6.48	35	33.96	Oceana
Denmark	6.44	36	32.08	Europe
Hong Kong	6.35	37	30.19	Asia
Indonesia	3.05	38	28.30	Asia
Malaysia	2.58	40	24.53	Asia
South Africa	2.58	41	22.64	Africa
Brazil	2.34	42	20.75	Latin America
Chile	2.23	43	18.87	Latin America
China	1.87	45	15.09	Asia
Pakistan	1.84	46	13.21	the Middle East
Thailand	1.69	47	11.32	Asia
Peru	1.25	50	5.66	Latin America
Philippines	0.75	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Accounts Payable
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Singapore	37.97	1	96.15
Japan	34.38	2	92.31
Taiwan	26.91	3	88.46
South Korea	25.68	4	84.62
Seychelles	21.59	5	80.77
Macau	18.03	6	76.92
Brunei	10.11	7	73.08
India	**6.51**	**8**	**69.23**
Hong Kong	6.35	9	65.38
Cambodia	4.94	10	61.54
Laos	4.76	11	57.69
Vietnam	4.32	12	53.85
Bangladesh	3.71	13	50.00
Bhutan	3.53	14	46.15
Nepal	3.16	15	42.31
Indonesia	3.05	16	38.46
Maldives	2.78	17	34.62
Malaysia	2.58	18	30.77
Sri Lanka	2.19	19	26.92
China	1.87	20	23.08
Thailand	1.69	21	19.23
Mongolia	1.51	22	15.38
North Korea	1.21	23	11.54
Papua New Guinea	0.85	24	7.69
Burma	0.75	25	3.85
Philippines	0.75	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Liabilities - Total

Countries	Value ($K/employee)	Rank	Percentile	Region
South Korea	207.53	1	98.11	Asia
Italy	193.27	2	96.23	Europe
Russia	187.01	4	92.45	Europe
Hungary	168.03	5	90.57	Europe
Poland	137.42	6	88.68	Europe
Turkey	114.62	7	86.79	the Middle East
Mexico	114.31	8	84.91	Latin America
Austria	103.28	10	81.13	Europe
Japan	94.42	11	79.25	Asia
Singapore	83.40	12	77.36	Asia
France	69.44	13	75.47	Europe
Israel	62.87	14	73.58	the Middle East
Ireland	62.35	15	71.70	Europe
Switzerland	59.81	16	69.81	Europe
Finland	56.43	17	67.92	Europe
Taiwan	51.96	18	66.04	Asia
Luxembourg	51.72	19	64.15	Europe
Norway	48.95	20	62.26	Europe
Portugal	46.77	21	60.38	Europe
Australia	44.70	22	58.49	Oceana
Belgium	44.61	23	56.60	Europe
Greece	42.61	24	54.72	Europe
Netherlands	42.17	25	52.83	Europe
the United Kingdom	42.00	26	50.94	Europe
Sweden	41.62	27	49.06	Europe
USA	40.98	28	47.17	North America
Czech Republic	37.93	29	45.28	Europe
Spain	36.29	30	43.40	Europe
Denmark	35.46	31	41.51	Europe
Argentina	35.33	32	39.62	Latin America
Germany	34.83	33	37.74	Europe
Canada	27.92	34	35.85	North America
New Zealand	21.00	35	33.96	Oceana
Hong Kong	20.57	36	32.08	Asia
India	**15.23**	**37**	**30.19**	**Asia**
Malaysia	13.95	38	28.30	Asia
South Africa	13.94	39	26.42	Africa
Brazil	12.63	40	24.53	Latin America
Chile	12.02	41	22.64	Latin America
Thailand	9.13	42	20.75	Asia
Peru	6.75	45	15.09	Latin America
Indonesia	6.63	46	13.21	Asia
China	4.06	50	5.66	Asia
Philippines	4.05	51	3.77	Asia
Pakistan	4.00	52	1.89	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Current Liabilities - Total
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
South Korea	207.53	1	96.15
Seychelles	174.52	2	92.31
Japan	94.42	3	88.46
Singapore	83.40	4	84.62
Brunei	54.01	5	80.77
Taiwan	51.96	6	76.92
Macau	34.81	7	73.08
Hong Kong	20.57	8	69.23
India	**15.23**	**9**	**65.38**
Malaysia	13.95	10	61.54
Cambodia	11.56	11	57.69
Laos	11.14	12	53.85
Vietnam	10.11	13	50.00
Thailand	9.13	14	46.15
Bangladesh	8.67	15	42.31
Bhutan	8.25	16	38.46
Mongolia	8.15	17	34.62
Nepal	7.39	18	30.77
Indonesia	6.63	19	26.92
North Korea	6.55	20	23.08
Maldives	6.04	21	19.23
Sri Lanka	4.77	22	15.38
Papua New Guinea	4.58	23	11.54
Burma	4.07	24	7.69
China	4.06	25	3.85
Philippines	4.05	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Long Term Debt

Countries	Value ($K/employee)	Rank	Percentile	Region
South Korea	38.54	1	97.14	Asia
Russia	34.73	3	91.43	Europe
Hungary	31.21	4	88.57	Europe
Poland	25.52	5	85.71	Europe
Italy	25.10	6	82.86	Europe
Switzerland	23.39	7	80.00	Europe
Canada	22.90	8	77.14	North America
Japan	22.88	9	74.29	Asia
Belgium	22.08	10	71.43	Europe
USA	21.52	11	68.57	North America
Turkey	21.29	12	65.71	the Middle East
Mexico	21.23	13	62.86	Latin America
Sweden	21.22	14	60.00	Europe
Luxembourg	20.23	15	57.14	Europe
Netherlands	20.04	16	54.29	Europe
France	19.22	18	48.57	Europe
India	**18.21**	**19**	**45.71**	**Asia**
the United Kingdom	14.44	20	42.86	Europe
Norway	13.04	21	40.00	Europe
Denmark	12.90	22	37.14	Europe
Finland	12.83	23	34.29	Europe
Germany	7.86	24	31.43	Europe
Austria	7.36	25	28.57	Europe
New Zealand	5.93	26	25.71	Oceana
Hong Kong	5.81	27	22.86	Asia
Singapore	5.00	28	20.00	Asia
Indonesia	4.74	29	17.14	Asia
Spain	4.68	30	14.29	Europe
Australia	3.84	32	8.57	Oceana
China	2.90	34	2.86	Asia
Pakistan	2.85	35	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Long Term Debt
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
South Korea	38.54	1	94.12
Seychelles	32.41	2	88.24
Japan	22.88	3	82.35
Brunei	21.12	4	76.47
India	**18.21**	**5**	**70.59**
Cambodia	13.82	6	64.71
Laos	13.32	7	58.82
Vietnam	12.09	8	52.94
Bangladesh	10.36	9	47.06
Bhutan	9.87	10	41.18
Nepal	8.83	11	35.29
Hong Kong	5.81	12	29.41
Singapore	5.00	13	23.53
Indonesia	4.74	14	17.65
Maldives	4.32	15	11.76
Sri Lanka	3.41	16	5.88
China	2.90	17	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Liabilities

Countries	Value ($K/employee)	Rank	Percentile	Region
South Korea	258.87	1	98.11	Asia
Italy	241.13	2	96.23	Europe
Russia	233.28	4	92.45	Europe
Hungary	209.59	5	90.57	Europe
Poland	171.41	6	88.68	Europe
Turkey	142.97	7	86.79	the Middle East
Mexico	142.58	8	84.91	Latin America
Japan	128.74	10	81.13	Asia
Austria	119.58	11	79.25	Europe
France	94.09	12	77.36	Europe
Switzerland	93.11	13	75.47	Europe
Singapore	88.52	14	73.58	Asia
Luxembourg	80.52	15	71.70	Europe
Finland	73.42	16	69.81	Europe
Norway	72.66	17	67.92	Europe
Sweden	70.49	18	66.04	Europe
Germany	69.04	19	64.15	Europe
Netherlands	68.87	20	62.26	Europe
USA	68.84	21	60.38	North America
Israel	63.43	22	58.49	the Middle East
Ireland	62.91	23	56.60	Europe
the United Kingdom	61.81	24	54.72	Europe
Belgium	58.03	25	52.83	Europe
Canada	56.79	26	50.94	North America
Taiwan	52.42	27	49.06	Asia
Denmark	50.11	28	47.17	Europe
Australia	47.35	29	45.28	Oceana
Portugal	47.18	30	43.40	Europe
Greece	42.99	31	41.51	Europe
Spain	41.80	32	39.62	Europe
Czech Republic	38.27	33	37.74	Europe
India	**36.08**	**34**	**35.85**	**Asia**
Argentina	35.65	35	33.96	Latin America
New Zealand	26.86	36	32.08	Oceana
Hong Kong	26.32	37	30.19	Asia
Malaysia	13.95	38	28.30	Asia
South Africa	13.94	39	26.42	Africa
Brazil	12.63	40	24.53	Latin America
Chile	12.02	41	22.64	Latin America
Indonesia	10.45	42	20.75	Asia
Thailand	9.13	44	16.98	Asia
Peru	6.75	48	9.43	Latin America
China	6.41	49	7.55	Asia
Pakistan	6.30	50	5.66	the Middle East
Philippines	4.05	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Total Liabilities
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
South Korea	258.87	1	96.15
Seychelles	217.70	2	92.31
Japan	128.74	3	88.46
Singapore	88.52	4	84.62
Brunei	84.08	5	80.77
Taiwan	52.42	6	76.92
India	**36.08**	**7**	**73.08**
Macau	35.12	8	69.23
Cambodia	27.38	9	65.38
Laos	26.40	10	61.54
Hong Kong	26.32	11	57.69
Vietnam	23.96	12	53.85
Bangladesh	20.53	13	50.00
Bhutan	19.56	14	46.15
Nepal	17.50	15	42.31
Malaysia	13.95	16	38.46
Indonesia	10.45	17	34.62
Maldives	9.53	18	30.77
Thailand	9.13	19	26.92
Mongolia	8.15	20	23.08
Sri Lanka	7.52	21	19.23
North Korea	6.55	22	15.38
China	6.41	23	11.54
Papua New Guinea	4.58	24	7.69
Burma	4.07	25	3.85
Philippines	4.05	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Common Equity

Countries	Value ($K/employee)	Rank	Percentile	Region
Israel	189.25	1	98.11	the Middle East
Ireland	187.68	2	96.23	Europe
Belgium	187.10	3	94.34	Europe
South Korea	184.93	4	92.45	Asia
Austria	173.91	5	90.57	Europe
Russia	166.65	7	86.79	Europe
Japan	159.07	8	84.91	Asia
Taiwan	156.40	9	83.02	Asia
Hungary	149.73	10	81.13	Europe
USA	143.62	11	79.25	North America
Portugal	140.76	12	77.36	Europe
Greece	128.25	13	75.47	Europe
Netherlands	127.97	14	73.58	Europe
Switzerland	126.06	15	71.70	Europe
Singapore	125.98	16	69.81	Asia
Poland	122.45	17	67.92	Europe
Czech Republic	114.17	18	66.04	Europe
Sweden	109.10	19	64.15	Europe
Luxembourg	109.02	20	62.26	Europe
Argentina	106.35	21	60.38	Latin America
Italy	104.53	22	58.49	Europe
Turkey	102.14	23	56.60	the Middle East
Mexico	101.86	24	54.72	Latin America
Finland	96.70	25	52.83	Europe
France	93.85	27	49.06	Europe
Canada	88.57	28	47.17	North America
the United Kingdom	73.67	29	45.28	Europe
Malaysia	72.87	30	43.40	Asia
South Africa	72.82	31	41.51	Africa
New Zealand	69.65	32	39.62	Oceana
Hong Kong	68.25	33	37.74	Asia
Brazil	65.97	34	35.85	Latin America
Norway	64.40	35	33.96	Europe
Chile	62.77	36	32.08	Latin America
Australia	54.61	37	30.19	Oceana
Thailand	47.71	38	28.30	Asia
Denmark	46.37	39	26.42	Europe
Germany	45.73	40	24.53	Europe
Peru	35.25	43	18.87	Latin America
Spain	24.78	45	15.09	Europe
Philippines	21.17	46	13.21	Asia
India	**4.44**	**48**	**9.43**	**Asia**
Indonesia	2.98	49	7.55	Asia
China	1.83	52	1.89	Asia
Pakistan	1.80	53	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Common Equity
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
South Korea	184.93	1	96.15
Japan	159.07	2	92.31
Taiwan	156.40	3	88.46
Seychelles	155.52	4	84.62
Singapore	125.98	5	80.77
Brunei	113.84	6	76.92
Macau	104.79	7	73.08
Malaysia	72.87	8	69.23
Hong Kong	68.25	9	65.38
Thailand	47.71	10	61.54
Mongolia	42.56	11	57.69
North Korea	34.22	12	53.85
Papua New Guinea	23.93	13	50.00
Burma	21.24	14	46.15
Philippines	21.17	15	42.31
India	**4.44**	**16**	**38.46**
Cambodia	3.37	17	34.62
Laos	3.25	18	30.77
Indonesia	2.98	19	26.92
Vietnam	2.94	20	23.08
Maldives	2.72	21	19.23
Bangladesh	2.52	22	15.38
Bhutan	2.40	23	11.54
Nepal	2.15	24	7.69
Sri Lanka	2.14	25	3.85
China	1.83	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

3.8 PRODUCTIVITY IN INDIA: INCOME-LABOR RATIOS

3.8.1 Overview

In this chapter we consider the income-labor ratios for laboratory analytical instruments in India benchmarked against global averages. For ratios where there are large deviations between the average firm operating in India and the benchmarks, graphics are provided (sometimes referred to as a "gap" analysis). Then the distribution of ratios is presented in the form of ranks and percentiles. Certain key income-labor ratios are highlighted across countries in the comparison group.

In the case of income-labor ratios, this report maintains comparability over time and across countries by using a common currency (the US dollar) and relates each measure to a "per employee basis". Ratios are projected using raw financial statistics and, as ratios, are therefore comparable. Given a country's human resource ratios, the resulting figures are benchmarked across regional and global averages.

We then report the larger income-labor ratio gaps for laboratory analytical instruments that India has vis-à-vis the worldwide average. Again, a gap need not be a bad sign. Rather, it is simply a substantial difference that might merit further attention or signal a firm's relative incentive to invest locally. All figures are projections, so due caution is required.

3.8.2 Income to Labor: Outlook

The following tables and graphs are prepared using the methodology described at the beginning of this section. All units are in thousands of US dollars per employee. All figures are current-year projections for laboratory analytical instruments in India based on latest financial results available.

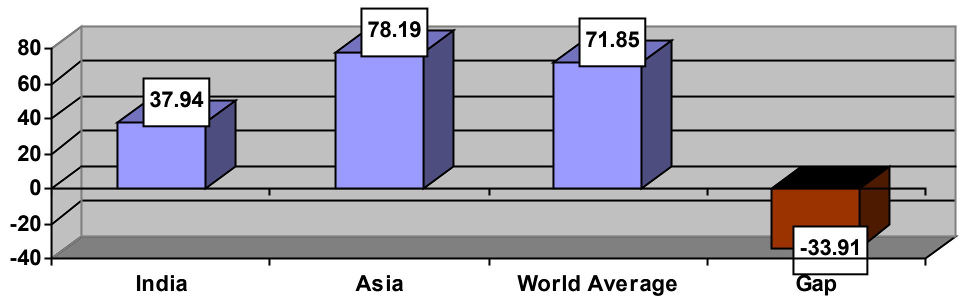
Labor-income Ratios ($k/employee)	**India**	**Asia**	**World Avg.**
Net Sales or Revenues	37.94	78.19	71.85
Cost of Goods Sold (Excluding Depreciation)	30.76	50.78	48.69
Depreciation, Depletion & Amortization	1.75	2.77	2.72
Gross Income	**5.43**	**24.68**	**20.41**
Other Operating Expenses	34.25	77.67	65.04
Operating Expenses - Total	1.74	2.41	1.43
Operating Income	**3.69**	**9.61**	**7.77**
Non-Operating Interest Income	0.25	0.60	0.53
Other Income/Expense Net	0.07	-0.06	-0.15
Earnings Before Interest and Taxes (EBIT)	**4.01**	**9.67**	**7.92**
Interest Expense on Debt	2.99	1.70	2.05
Pretax Income	**1.02**	**8.29**	**5.87**
Income Taxes	0.30	1.48	1.30
Current Domestic Income Tax	0.36	1.65	1.05
Deferred Domestic Income Tax	-0.06	-0.07	-0.01
Equity in Earnings	0.02	0.02	0.02
Net Income Before Extra Items/Prefer Dividends	0.74	6.79	4.57
Net Income Before Preferred Dividends	0.74	6.78	4.56
Preferred Dividend Requirements	0.21	0.04	0.06
Net Income Available to Common	**0.53**	**6.75**	**4.52**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

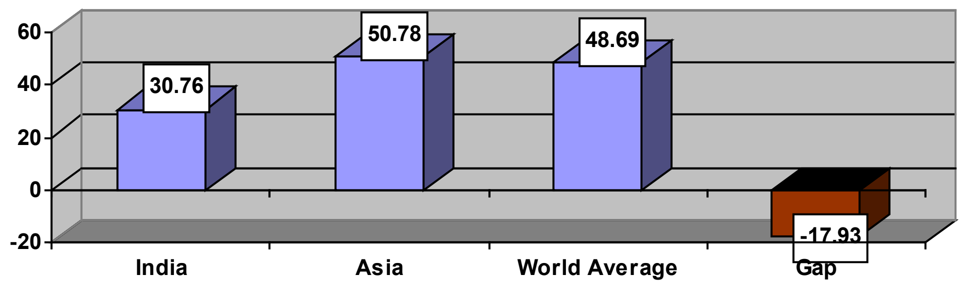
3.8.3 Income to Labor: Gaps

The following graphics summarize for laboratory analytical instruments the large labor-income gaps between firms operating in India and the world average. A gap cannot necessarily be interpreted as a positive or negative reflection on performance. Gaps may signal areas of specialization, market focus, or expertise. More contextual information is required to fully interpret these gaps. The gaps highlighted here are simply those that are large.

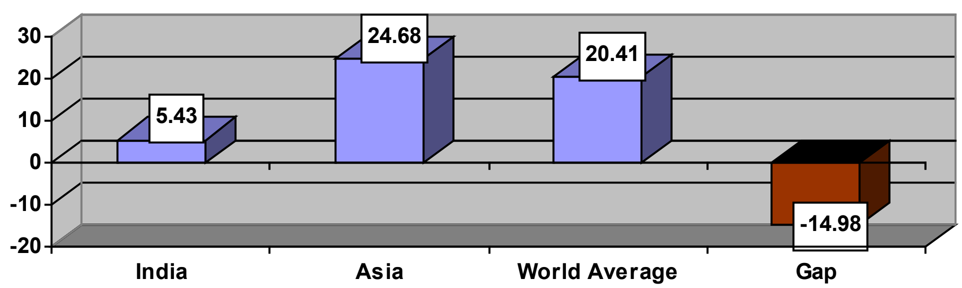
Gap: Net Sales or Revenues ($k/employee)



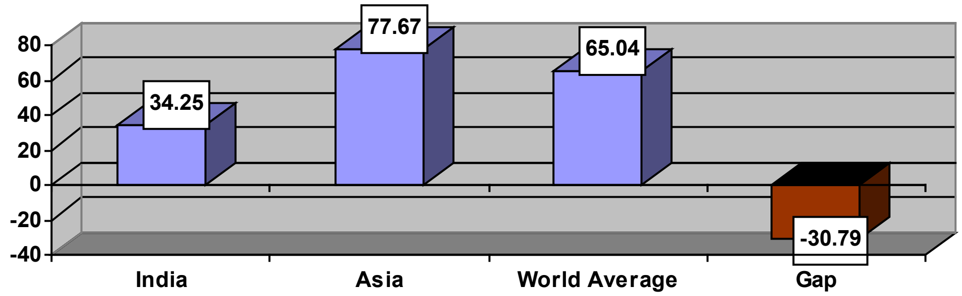
Gap: Cost of Goods Sold (Excluding Depreciation) ($k/employee)



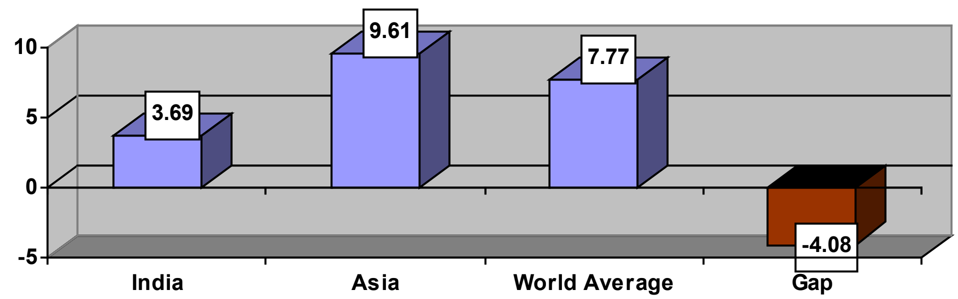
Gap: Gross Income ($k/employee)



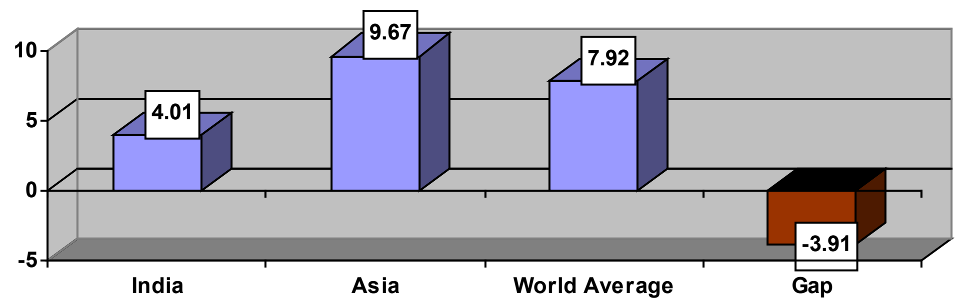
Gap: Other Operating Expenses ($k/employee)



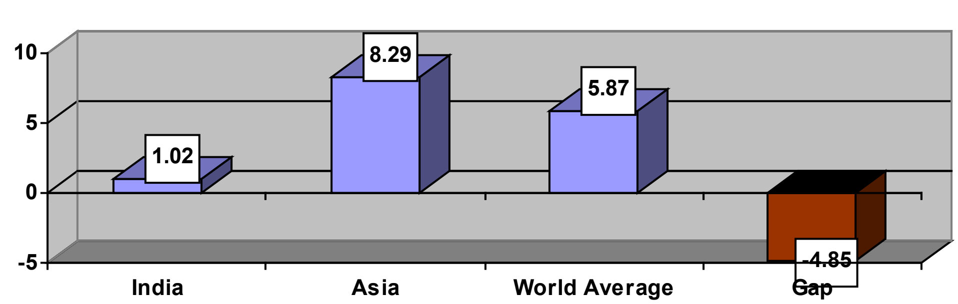
Gap: Operating Income ($k/employee)



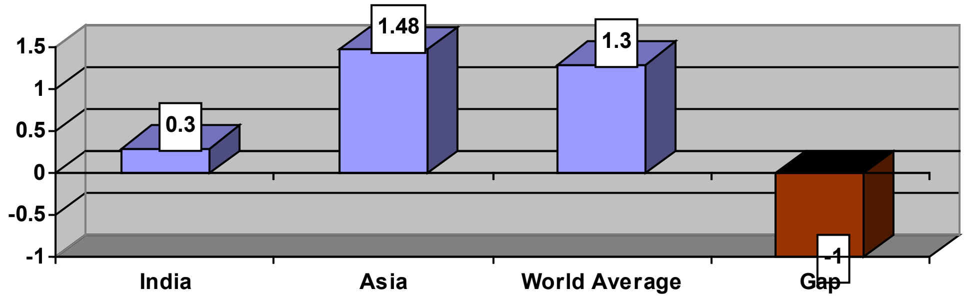
Gap: Earnings Before Interest and Taxes (EBIT) ($k/employee)



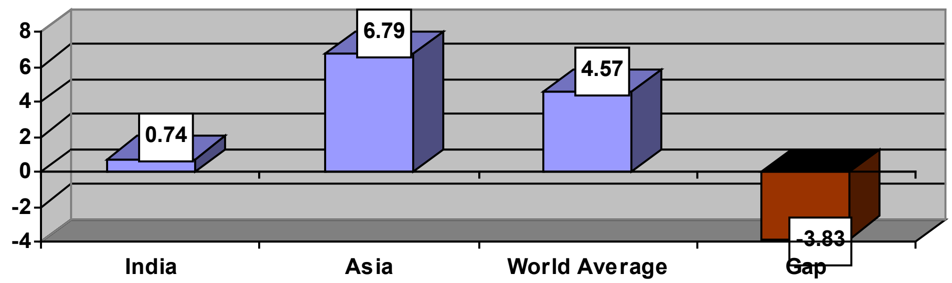
Gap: Pretax Income ($k/employee)



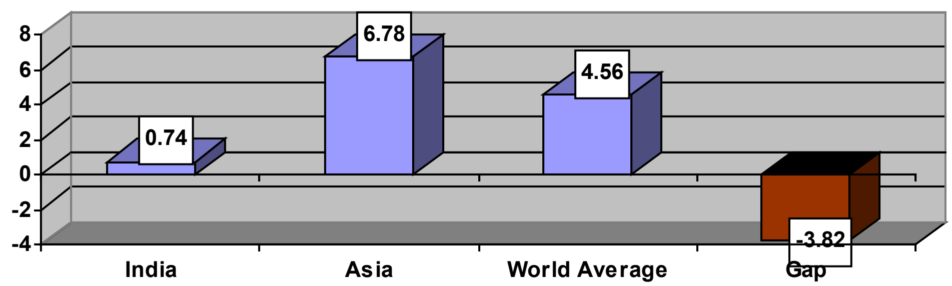
Gap: Income Taxes ($k/employee)



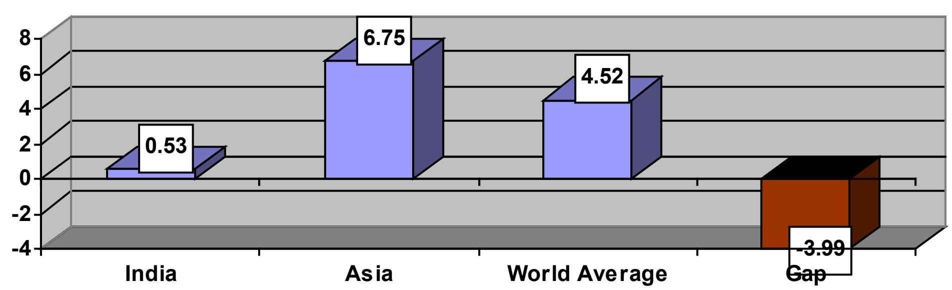
Gap: Net Income Before Extra Items/Prefer Dividends ($k/employee)



Gap: Net Income Before Preferred Dividends ($k/employee)



Gap: Net Income Available to Common ($k/employee)



3.8.4 Key Percentiles and Rankings

We now consider the distribution of income-labor ratios using ranks and percentiles across . What percent of countries have a value lower or higher than India (what is the ratio's rank or percentile)? The table below answers this question with respect to income-labor ratios. The ranks and percentiles indicate, from highest to lowest, where a value falls within the distribution of all countries considered in the global benchmark (the number of countries in the benchmark per line item may vary, as indicated in the Rank). Again, a high or low figure does not necessarily indicate good or bad performance or productivity. After the summary table below, a few key income-labor ratios are highlighted in additional tables.

Income Structure ($k/employee)	**India**	**Rank of Total**	**Percentile**
Net Sales or Revenues	37.94	41 of 53	22.64
Cost of Goods Sold (Excluding Depreciation)	30.76	35 of 53	33.96
Depreciation, Depletion & Amortization	1.75	37 of 53	30.19
Gross Income	**5.43**	**48 of 53**	**9.43**
Other Operating Expenses	34.25	34 of 52	34.62
Operating Expenses - Total	1.74	21 of 35	40.00
Operating Income	**3.69**	**45 of 53**	**15.09**
Non-Operating Interest Income	0.25	46 of 52	11.54
Other Income/Expense Net	**0.07**	**29 of 52**	**44.23**
Earnings Before Interest and Taxes (EBIT)	**4.01**	**44 of 53**	**16.98**
Interest Expense on Debt	2.99	13 of 53	75.47
Pretax Income	**1.02**	**46 of 53**	**13.21**
Income Taxes	0.30	43 of 53	18.87
Current Domestic Income Tax	0.36	35 of 43	18.60
Deferred Domestic Income Tax	-0.06	20 of 32	37.50
Equity in Earnings	0.02	6 of 11	45.45
Net Income Before Extra Items/Prefer Dividends	0.74	46 of 53	13.21
Net Income Before Preferred Dividends	0.74	46 of 53	13.21
Preferred Dividend Requirements	0.21	1 of 7	85.71
Net Income Available to Common	**0.53**	**46 of 53**	**13.21**

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cost of Goods Sold (Excluding Depreciation)

Countries	Value ($K/employee)	Rank	Percentile	Region
Singapore	240.76	1	98.11	Asia
South Korea	232.10	2	96.23	Asia
Russia	209.15	4	92.45	Europe
Hungary	187.91	5	90.57	Europe
Japan	154.54	6	88.68	Asia
Poland	153.68	7	86.79	Europe
Norway	133.93	8	84.91	Europe
France	130.52	9	83.02	Europe
Turkey	128.19	10	81.13	the Middle East
Mexico	127.84	11	79.25	Latin America
Austria	117.03	13	75.47	Europe
Australia	111.71	14	73.58	Oceana
Italy	105.46	15	71.70	Europe
Germany	104.13	16	69.81	Europe
Sweden	88.92	17	67.92	Europe
USA	88.27	18	66.04	North America
Finland	85.32	19	64.15	Europe
Switzerland	84.86	20	62.26	Europe
Netherlands	80.80	21	60.38	Europe
the United Kingdom	79.75	22	58.49	Europe
Belgium	79.35	23	56.60	Europe
Canada	78.80	24	54.72	North America
Denmark	74.84	25	52.83	Europe
Luxembourg	73.38	26	50.94	Europe
Israel	62.22	27	49.06	the Middle East
Ireland	61.70	28	47.17	Europe
Spain	53.74	29	45.28	Europe
Taiwan	51.42	30	43.40	Asia
Portugal	46.28	31	41.51	Europe
Greece	42.16	32	39.62	Europe
Czech Republic	37.54	33	37.74	Europe
Argentina	34.97	34	35.85	Latin America
India	**30.76**	**35**	**33.96**	**Asia**
New Zealand	24.56	36	32.08	Oceana
Malaysia	24.44	37	30.19	Asia
South Africa	24.43	38	28.30	Africa
Hong Kong	24.06	39	26.42	Asia
Indonesia	23.63	40	24.53	Asia
Brazil	22.13	42	20.75	Latin America
Chile	21.06	43	18.87	Latin America
Thailand	16.00	45	15.09	Asia
China	14.49	46	13.21	Asia
Pakistan	14.25	47	11.32	the Middle East
Peru	11.83	50	5.66	Latin America
Philippines	7.10	52	1.89	Asia

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Cost of Goods Sold (Excluding Depreciation)
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Singapore	240.76	1	96.15
South Korea	232.10	2	92.31
Seychelles	195.18	3	88.46
Japan	154.54	4	84.62
Brunei	76.63	5	80.77
Taiwan	51.42	6	76.92
Macau	34.45	7	73.08
India	**30.76**	**8**	**69.23**
Malaysia	24.44	9	65.38
Hong Kong	24.06	10	61.54
Indonesia	23.63	11	57.69
Cambodia	23.34	12	53.85
Laos	22.50	13	50.00
Maldives	21.54	14	46.15
Vietnam	20.42	15	42.31
Bangladesh	17.50	16	38.46
Sri Lanka	16.99	17	34.62
Bhutan	16.67	18	30.77
Thailand	16.00	19	26.92
Nepal	14.92	20	23.08
China	14.49	21	19.23
Mongolia	14.28	22	15.38
North Korea	11.48	23	11.54
Papua New Guinea	8.03	24	7.69
Burma	7.13	25	3.85
Philippines	7.10	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Expenses - Total

Countries	Value ($K/employee)	Rank	Percentile	Region
Singapore	17.63	1	97.14	Asia
Switzerland	14.91	2	94.29	Europe
France	13.55	3	91.43	Europe
Luxembourg	12.90	4	88.57	Europe
Germany	9.40	5	85.71	Europe
Netherlands	6.99	6	82.86	Europe
Malaysia	5.97	7	80.00	Asia
South Africa	5.96	8	77.14	Africa
Italy	5.70	9	74.29	Europe
Brazil	5.40	10	71.43	Latin America
Chile	5.14	11	68.57	Latin America
Denmark	3.99	12	65.71	Europe
Thailand	3.91	13	62.86	Asia
Peru	2.89	16	54.29	Latin America
the United Kingdom	2.55	17	51.43	Europe
Belgium	2.44	18	48.57	Europe
Canada	1.90	20	42.86	North America
India	**1.74**	**21**	**40.00**	**Asia**
Philippines	1.73	22	37.14	Asia
Finland	0.85	24	31.43	Europe
USA	0.78	25	28.57	North America
Japan	0.70	26	25.71	Asia
New Zealand	0.69	27	22.86	Oceana
Hong Kong	0.68	28	20.00	Asia
Sweden	0.43	29	17.14	Europe
Australia	0.25	30	14.29	Oceana
Indonesia	0.08	31	11.43	Asia
China	0.05	34	2.86	Asia
Pakistan	0.05	35	0.00	the Middle East

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Expenses - Total
(Laboratory Analytical Instruments)

Countries in Asia	**Value ($K/employee)**	**Rank**	**Percentile**
Singapore	17.63	1	95.45
Brunei	13.47	2	90.91
Malaysia	5.97	3	86.36
Thailand	3.91	4	81.82
Mongolia	3.49	5	77.27
North Korea	2.80	6	72.73
Papua New Guinea	1.96	7	68.18
Burma	1.74	8	63.64
India	**1.74**	**9**	**59.09**
Philippines	1.73	10	54.55
Cambodia	1.32	11	50.00
Laos	1.27	12	45.45
Vietnam	1.15	13	40.91
Bangladesh	0.99	14	36.36
Bhutan	0.94	15	31.82
Nepal	0.84	16	27.27
Japan	0.70	17	22.73
Hong Kong	0.68	18	18.18
Indonesia	0.08	19	13.64
Maldives	0.07	20	9.09
Sri Lanka	0.06	21	4.55
China	0.05	22	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Income

Countries	Value ($K/employee)	Rank	Percentile	Region
Switzerland	30.68	1	98.11	Europe
Luxembourg	26.53	2	96.23	Europe
South Korea	25.21	3	94.34	Asia
Malaysia	25.15	4	92.45	Asia
South Africa	25.13	5	90.57	Africa
Australia	24.16	6	88.68	Oceana
Brazil	22.77	8	84.91	Latin America
Russia	22.72	9	83.02	Europe
USA	21.96	10	81.13	North America
Chile	21.67	11	79.25	Latin America
Hungary	20.41	12	77.36	Europe
Netherlands	20.25	13	75.47	Europe
Sweden	18.13	14	73.58	Europe
Singapore	17.25	15	71.70	Asia
Canada	17.07	16	69.81	North America
Poland	16.69	17	67.92	Europe
Thailand	16.47	18	66.04	Asia
Japan	16.30	19	64.15	Asia
Finland	15.47	20	62.26	Europe
Israel	15.35	21	60.38	the Middle East
Ireland	15.22	22	58.49	Europe
France	14.43	23	56.60	Europe
Turkey	13.92	24	54.72	the Middle East
Mexico	13.88	25	52.83	Latin America
Denmark	12.88	28	47.17	Europe
Taiwan	12.68	30	43.40	Asia
Italy	12.66	31	41.51	Europe
Peru	12.17	32	39.62	Latin America
Portugal	11.41	33	37.74	Europe
Austria	10.68	34	35.85	Europe
Greece	10.40	35	33.96	Europe
the United Kingdom	9.76	36	32.08	Europe
Czech Republic	9.26	37	30.19	Europe
New Zealand	9.19	38	28.30	Oceana
Hong Kong	9.01	39	26.42	Asia
Argentina	8.62	41	22.64	Latin America
Philippines	7.31	42	20.75	Asia
Norway	5.68	44	16.98	Europe
India	**3.69**	**45**	**15.09**	**Asia**
Germany	2.14	46	13.21	Europe
Indonesia	1.05	47	11.32	Asia
China	0.64	50	5.66	Asia
Pakistan	0.63	51	3.77	the Middle East
Spain	-0.35	52	1.89	Europe
Belgium	-1.53	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Operating Income
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Brunei	27.71	1	96.15
South Korea	25.21	2	92.31
Malaysia	25.15	3	88.46
Seychelles	21.20	4	84.62
Singapore	17.25	5	80.77
Thailand	16.47	6	76.92
Japan	16.30	7	73.08
Mongolia	14.69	8	69.23
Taiwan	12.68	9	65.38
North Korea	11.81	10	61.54
Hong Kong	9.01	11	57.69
Macau	8.50	12	53.85
Papua New Guinea	8.26	13	50.00
Burma	7.33	14	46.15
Philippines	7.31	15	42.31
India	**3.69**	**16**	**38.46**
Cambodia	2.80	17	34.62
Laos	2.70	18	30.77
Vietnam	2.45	19	26.92
Bangladesh	2.10	20	23.08
Bhutan	2.00	21	19.23
Nepal	1.79	22	15.38
Indonesia	1.05	23	11.54
Maldives	0.95	24	7.69
Sri Lanka	0.75	25	3.85
China	0.64	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Earnings Before Interest and Taxes (EBIT)

Countries	Value ($K/employee)	Rank	Percentile	Region
Switzerland	32.27	1	98.11	Europe
Luxembourg	27.91	2	96.23	Europe
Australia	27.74	3	94.34	Oceana
Malaysia	27.04	4	92.45	Asia
South Africa	27.02	5	90.57	Africa
Italy	25.87	6	88.68	Europe
Brazil	24.48	7	86.79	Latin America
France	23.41	8	84.91	Europe
Chile	23.29	9	83.02	Latin America
Netherlands	22.33	10	81.13	Europe
South Korea	21.77	11	79.25	Asia
USA	21.70	12	77.36	North America
Sweden	20.41	13	75.47	Europe
Russia	19.62	15	71.70	Europe
Singapore	19.35	16	69.81	Asia
Israel	18.60	17	67.92	the Middle East
Ireland	18.44	18	66.04	Europe
Thailand	17.70	19	64.15	Asia
Canada	17.67	20	62.26	North America
Hungary	17.62	21	60.38	Europe
Finland	17.36	22	58.49	Europe
Denmark	16.13	23	56.60	Europe
Taiwan	15.37	24	54.72	Asia
Austria	14.52	26	50.94	Europe
Japan	14.42	27	49.06	Asia
Poland	14.41	28	47.17	Europe
Portugal	13.83	29	45.28	Europe
Peru	13.08	31	41.51	Latin America
Greece	12.60	32	39.62	Europe
Norway	12.24	33	37.74	Europe
Turkey	12.02	34	35.85	the Middle East
Mexico	11.99	35	33.96	Latin America
Czech Republic	11.22	36	32.08	Europe
Argentina	10.45	38	28.30	Latin America
the United Kingdom	10.10	39	26.42	Europe
Philippines	7.86	41	22.64	Asia
Germany	5.83	43	18.87	Europe
India	**4.01**	**44**	**16.98**	**Asia**
New Zealand	3.66	45	15.09	Oceana
Hong Kong	3.59	46	13.21	Asia
Indonesia	0.69	47	11.32	Asia
China	0.43	50	5.66	Asia
Pakistan	0.42	51	3.77	the Middle East
Spain	-3.73	52	1.89	Europe
Belgium	-5.25	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Earnings Before Interest and Taxes (EBIT)
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Brunei	29.15	1	96.15
Malaysia	27.04	2	92.31
South Korea	21.77	3	88.46
Singapore	19.35	4	84.62
Seychelles	18.31	5	80.77
Thailand	17.70	6	76.92
Mongolia	15.79	7	73.08
Taiwan	15.37	8	69.23
Japan	14.42	9	65.38
North Korea	12.70	10	61.54
Macau	10.30	11	57.69
Papua New Guinea	8.88	12	53.85
Burma	7.88	13	50.00
Philippines	7.86	14	46.15
India	**4.01**	**15**	**42.31**
Hong Kong	3.59	16	38.46
Cambodia	3.04	17	34.62
Laos	2.93	18	30.77
Vietnam	2.66	19	26.92
Bangladesh	2.28	20	23.08
Bhutan	2.17	21	19.23
Nepal	1.94	22	15.38
Indonesia	0.69	23	11.54
Maldives	0.63	24	7.69
Sri Lanka	0.50	25	3.85
China	0.43	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Pretax Income

Countries	Value ($K/employee)	Rank	Percentile	Region
Switzerland	30.03	1	98.11	Europe
Malaysia	27.03	2	96.23	Asia
South Africa	27.02	3	94.34	Africa
Luxembourg	25.97	4	92.45	Europe
Australia	25.45	5	90.57	Oceana
Brazil	24.48	6	88.68	Latin America
Chile	23.29	7	86.79	Latin America
Italy	20.42	8	84.91	Europe
Netherlands	20.04	9	83.02	Europe
USA	19.42	10	81.13	North America
France	19.01	11	79.25	Europe
Sweden	17.77	12	77.36	Europe
Thailand	17.70	13	75.47	Asia
Singapore	17.43	14	73.58	Asia
Canada	16.69	15	71.70	North America
Israel	16.59	16	69.81	the Middle East
Ireland	16.45	17	67.92	Europe
Finland	15.17	18	66.04	Europe
Denmark	13.90	20	62.26	Europe
Taiwan	13.71	21	60.38	Asia
Japan	13.11	23	56.60	Asia
Peru	13.08	24	54.72	Latin America
Portugal	12.34	25	52.83	Europe
South Korea	11.31	26	50.94	Asia
Greece	11.24	27	49.06	Europe
New Zealand	11.21	28	47.17	Oceana
Hong Kong	10.99	29	45.28	Asia
Austria	10.63	30	43.40	Europe
Russia	10.20	32	39.62	Europe
Czech Republic	10.01	33	37.74	Europe
Argentina	9.32	35	33.96	Latin America
Hungary	9.16	36	32.08	Europe
the United Kingdom	8.50	37	30.19	Europe
Philippines	7.85	38	28.30	Asia
Poland	7.49	39	26.42	Europe
Norway	6.92	40	24.53	Europe
Turkey	6.25	42	20.75	the Middle East
Mexico	6.23	43	18.87	Latin America
Germany	4.43	45	15.09	Europe
India	**1.02**	**46**	**13.21**	**Asia**
Indonesia	0.13	47	11.32	Asia
China	0.08	50	5.66	Asia
Pakistan	0.08	51	3.77	the Middle East
Spain	-5.10	52	1.89	Europe
Belgium	-7.65	53	0.00	Europe

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Pretax Income
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Brunei	27.12	1	96.15
Malaysia	27.03	2	92.31
Thailand	17.70	3	88.46
Singapore	17.43	4	84.62
Mongolia	15.79	5	80.77
Taiwan	13.71	6	76.92
Japan	13.11	7	73.08
North Korea	12.70	8	69.23
South Korea	11.31	9	65.38
Hong Kong	10.99	10	61.54
Seychelles	9.51	11	57.69
Macau	9.19	12	53.85
Papua New Guinea	8.88	13	50.00
Burma	7.88	14	46.15
Philippines	7.85	15	42.31
India	**1.02**	**16**	**38.46**
Cambodia	0.77	17	34.62
Laos	0.74	18	30.77
Vietnam	0.67	19	26.92
Bangladesh	0.58	20	23.08
Bhutan	0.55	21	19.23
Nepal	0.49	22	15.38
Indonesia	0.13	23	11.54
Maldives	0.11	24	7.69
Sri Lanka	0.09	25	3.85
China	0.08	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

Income Taxes

Countries	Value ($K/employee)	Rank	Percentile	Region
Switzerland	8.85	1	98.11	Europe
Luxembourg	7.65	2	96.23	Europe
France	7.45	3	94.34	Europe
USA	6.55	4	92.45	North America
Netherlands	6.30	5	90.57	Europe
Japan	6.12	6	88.68	Asia
Italy	5.99	7	86.79	Europe
Australia	5.81	8	84.91	Oceana
Finland	5.68	9	83.02	Europe
Sweden	5.34	10	81.13	Europe
Canada	5.19	11	79.25	North America
Singapore	4.89	12	77.36	Asia
Denmark	3.54	13	75.47	Europe
the United Kingdom	2.98	14	73.58	Europe
South Korea	2.80	15	71.70	Asia
Malaysia	2.76	16	69.81	Asia
South Africa	2.75	17	67.92	Africa
Russia	2.52	19	64.15	Europe
Brazil	2.50	20	62.26	Latin America
Chile	2.37	21	60.38	Latin America
Hungary	2.27	22	58.49	Europe
Belgium	2.16	23	56.60	Europe
Poland	1.85	24	54.72	Europe
Thailand	1.80	25	52.83	Asia
Israel	1.71	26	50.94	the Middle East
Ireland	1.69	27	49.06	Europe
Germany	1.67	28	47.17	Europe
Turkey	1.55	29	45.28	the Middle East
Mexico	1.54	30	43.40	Latin America
Taiwan	1.41	33	37.74	Asia
Peru	1.33	35	33.96	Latin America
Portugal	1.27	36	32.08	Europe
Greece	1.16	37	30.19	Europe
Czech Republic	1.03	38	28.30	Europe
Argentina	0.96	40	24.53	Latin America
Philippines	0.80	41	22.64	Asia
India	**0.30**	**43**	**18.87**	**Asia**
New Zealand	0.27	44	16.98	Oceana
Hong Kong	0.26	45	15.09	Asia
Indonesia	0.10	46	13.21	Asia
China	0.06	49	7.55	Asia
Pakistan	0.06	50	5.66	the Middle East
Spain	0.01	51	3.77	Europe
Austria	-1.38	52	1.89	Europe
Norway	-1.44	53	0.00	Europe

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Income Taxes
(Laboratory Analytical Instruments)

Countries in Asia	Value ($K/employee)	Rank	Percentile
Brunei	7.99	1	96.15
Japan	6.12	2	92.31
Singapore	4.89	3	88.46
South Korea	2.80	4	84.62
Malaysia	2.76	5	80.77
Seychelles	2.36	6	76.92
Thailand	1.80	7	73.08
Mongolia	1.61	8	69.23
Taiwan	1.41	9	65.38
North Korea	1.29	10	61.54
Macau	0.95	11	57.69
Papua New Guinea	0.91	12	53.85
Burma	0.80	13	50.00
Philippines	0.80	14	46.15
India	**0.30**	**15**	**42.31**
Hong Kong	0.26	16	38.46
Cambodia	0.23	17	34.62
Laos	0.22	18	30.77
Vietnam	0.20	19	26.92
Bangladesh	0.17	20	23.08
Bhutan	0.16	21	19.23
Nepal	0.14	22	15.38
Indonesia	0.10	23	11.54
Maldives	0.09	24	7.69
Sri Lanka	0.07	25	3.85
China	0.06	26	0.00

Source: Philip M. Parker, Professor, INSEAD, copyright 2007

4 MACRO-ACCESSIBILITY IN INDIA

4.1 EXECUTIVE SUMMARY

Relations between the United States and India are now broader and stronger than during any previous period in their 54-year history. Trade, investment and commercial ties have spurred cooperation in difficult bilateral and global issues, including nuclear nonproliferation, climate change, counter-terrorism, and peacekeeping.

Gaining access to India's markets requires careful analysis of consumer preferences, existing sales channels, and changes in distribution and marketing practices that are continually evolving. With the gradual opening up of the market in line with India's WTO commitments, U.S. exporters will find strong interest from potential representatives and distributors for a broad range of products.

Of India's total population of 1.1 billion, approximately 2 percent have a per capita income in excess of USD 13,000; 80 million have a per capita income of over USD 3,500; and more than 100 million have a per capita income in excess of USD 2,800. These represent substantial market segments.

India controls foreign investment with equity limits and government approvals for many types of investments. "Automatic" foreign direct investment is approved in many sectors, which means that foreign investors must notify the Reserve Bank of India (RBI) of their investments, but need not obtain government licenses or approvals. Other sectors require approval by either the Foreign Investment Promotion Board (FIPB) or the Cabinet Committee on Foreign Investment. The rules vary from industry to industry and are frequently changed, but usually the changes have been in the direction of further de-regulation. The process is not always transparent.

There are no restrictions on remittances for debt service or payments for imported inputs. Dividend remittances are permitted without RBI approval. The RBI's approval is required to remit funds from asset liquidation. Foreign partners may sell their shares to resident Indian investors. There have been few instances of direct expropriation since the 1970's. Foreign investors frequently complain about the purported lack of "sanctity of contracts". Although Indian courts are independent, they are backlogged with unsettled dispute cases.

U.S. exporters can avail of loan guarantees, insurance and project financing from the Export-Import Bank of the U.S., Overseas Private Investment Corporation, and international financial institutions. The U.S. Trade & Development Agency also has programs that provide funding to assist U.S. exports.

A passport and visa are required for entry into India for tourism or business. All visitors, including those on official U.S. Government business, must obtain visas at an Indian Embassy or Consulate abroad prior to entering the country. There are no provisions for visas upon arrival. U.S. citizens are urged to register and obtain updated security information at the Embassy or the nearest Consulate.

Among other export assistance products, The Commercial Service offers industry sector analyses and market insight reports covering the Indian economy. It also offers market research tailored to specific export and investment needs, as well as business matchmaking services.

4.2 DYNAMIC MARKETS

4.2.1 Agriculture

Agriculture is about 25 percent of GDP and employs 62 percent of the work force. India has one of the largest agricultural sectors among the more important emerging markets. By mid-2002, northern India was experiencing a very weak and uneven monsoon, portending lower agricultural output in the months ahead. In July, the Farm Ministry said that India faces the most widespread drought in 15 years. The central Government maintains a costly price support system for wheat and rice, and also subsidizes fertilizer. State governments provide farmers with free or subsidized electricity and irrigation water. Laws are still on the books inhibiting inter-state commerce in key commodities and hampering agricultural exports. The cumulative effect of these interventions has been to distort prices, planting patterns, and marketing. For example, because of price supports the Government's strategic stocks of wheat and rice were 62 million tons in July 2002. Critics say much of those stores are wasted by spoilage. The Government is trying to remedy this situation by boosting the target for rice and wheat exports in 2002-03 to 15 million tons, up from 7.6 million tons in the previous year. Nonetheless, observers point to the economic benefit of higher rural incomes and increased demand when there are good harvests. Farm output grew by 7.2 percent in 2001-02, helping to buoy an otherwise lackluster economic performance.

4.2.2 Industry

The industrial sector, about 25 percent of GDP, is dominated by large, inefficient public-sector companies. Even in the private sector, manufacturing tends to be dominated by family conglomerates, where management can be lethargic. The sector needs further restructuring. The public and private sectors are evenly weighted, each accounting for about 45 percent of gross industrial sales, with the remaining 10 percent going to foreign-owned operations. Studies indicate that Indian industry's competitiveness continues to deteriorate, with lackluster measures on such variables as manufactured exports per capita and manufacturing value-added per capita. Some 550 products are set aside for small-scale industries exclusively, a restriction that hampers industrial efficiency. Business confidence showed a modest improvement in mid-2002 compared to a year earlier. Output in mid-2002 was rising at about 3.5 percent on a yearly basis, up from the 2.7 percent annual growth in 2001-02, the worst performance for industry since 1991. By contrast, industrial output grew 5 percent in 2000. Despite the apparent rebound, new net investment in manufacturing is sluggish. The production of capital goods actually fell by a negative 4 percent in 2001-02, compared to 1.7 percent positive growth in 2000-01. Industrialists point to weak global demand as the source of the slowdown.

Oil

Oil is a key part of the industrial sector. India has recoverable crude reserves of 645 million tons, which have declined since 1991 when they peaked at 806 million tons. Crude oil production was about 32 million tons in early 2002, a 1.2 percent decline from the year earlier. At current production, known reserves are expected to last for the next 21 years. Consumption of petroleum products has risen 5-6 percent yearly for the last two and a half decades. With domestic production meeting only 37 percent of demand, India imports 85-90 million tons of crude oil a year. About 61 percent of India's total oil needs come from the Middle East. Refining capacity is 110 million tons of crude a year, but more capacity is coming on line. Refinery output is expected to reach 135 million tons in three years. State-owned oil companies contribute almost 25 percent of the total government revenue. The Oil and Natural Gas Corporation is the biggest producer, but private sector/joint ventures have recently entered the scene. They now account for about 12.5 percent of total production

4.2.3 Services

Services (trade, tourism, banking, transport and communications) comprise slightly more than 50 percent of GDP and have greatly benefited from the decade-old process of economic liberalization. Although growth in services continues to sustain overall GDP growth, the quality is subject to question because of the large government services component. Services grew 6.5 percent in 2001-02, a decline from 7 percent growth in the previous year. Telecommunications and software services are two of the fastest growing segments of the economy. The following are summaries of other key service industries.

Banking

State-owned banks control 80 percent of the banking system's total assets. In general, their profits are weak. Foreign and private domestic banks are relatively smaller players. The system is characterized by a high level of bad debts; political interference in the form of "directed lending;" over-regulation; poor services and management; weak profits and undercapitalization; opaque or non-existent credit-rating policies; competition from post-office savings schemes; and barriers to entry to foreign investors. Public-sector banks are reducing their payrolls through voluntary retirement schemes. FDI is slowly being liberalized: the foreign investment equity ceiling has been raised to 49 percent from 20 percent. Foreign banks may set up subsidiaries as an alternate to branches of the parent company.

4.2.4 Insurance

Pointing to India's population of one billion people and low insurance penetration rate, market players are optimistic about future prospects. Life or health insurance covers less than two percent of the population. Indians save about 25 percent of their incomes, but less than five percent of savings is put into insurance. Nonetheless, the market has begun to move, with several private players forming joint ventures with foreign insurance companies. FDI in the insurance industry is capped at 26 percent of equity. Increasing that cap would help deepen India's capital markets.

4.2.5 Healthcare

India’s healthcare industry, about 4 percent of GDP, is a $15 billion business. Its strengths include low costs and a large rained labor pool of healthcare professionals. Although health insurance coverage is low, per capita spending on healthcare has been rising. This increased demand has created a national shortage of hospital beds. A WHO report states that India needs to add 80,000 hospital beds each year to meet the demand of its population The Government permits 100 percent FDI in hospitals and other healthcare activities.

4.2.6 Pharmaceuticals

India has 20,000 drug manufacturers, accounting for nearly 3 percent of GDP. The industry is dominated by the private sector (only five state-owned companies manufacture drugs). Industry output meets about 95 percent of domestic demand. Over 60 percent of India’s bulk drug production is exported. Imports are generally limited to a small number of life-saving and newer drugs. A sectoral weakness is the lack of effective legal protection for product patents. The unauthorized local production of patented products is widespread. Several multinational drug companies operate import bulk drugs from the parent company and formulate them for the local market. India is self-sufficient in terms of formulation technology, including those for sulpha drugs, vitamins, hormones and a number of new synthetic drugs.

4.2.7 Broadcasting

The rapid growth in recent years of India's cable TV industry illustrates the power of a liberalized regulatory regime. India has some 79 million television sets, of which 38 million are connected to cable TV (about 209 million viewers). There are over 30,000 cable operators with about 1,000 subscribers each. The industry's revenue is estimated at 57 billion rupees ($1.17 billion) and is growing 10-12 percent annually in terms of declared revenue. Non-cable TVs receive programming the three state-owned Doordarsahn channels, compared to the 90 channels available by cable nationwide. (The operators are required to carry the Doordarshan channels in their packages.) Cable TV represents a large potential for broadband Internet connections to the home. Several cable operators have already begun to offer such service. Under parliamentary pressure in mid-2002, the Government withdrew the Cable Television Networks (Regulation) Bill, which would offer pay-per-view service, thus breaking the cable operators' programming monopoly. Direct-to-home digital satellite radio broadcasting was launched in February 2002, with direct foreign investment capped at 49 percent. Radio reaches 98 percent of the population. The dominate broadcaster is the state-owned All India Radio. The sector is opening up to the private sector and several privately owned FM radio operations are now in business. The FM radio industry has advertising revenues of about 1.6 billion rupees ($33 million).

4.2.8 Software Services

The software industry is one of the fastest growing sectors of the economy. For the year ending March 31, 2002, the industry grossed $10.1 billion in revenue, compared to $8.4 billion in 2000-01. Gross revenue is projected to increase 22 percent to $12.3 billion in 2002-03. In 2001, the software industry was about 1.4 percent of GDP, but the industry's trade association expects that relative weight to increase to about 8 percent of the economy by 2008, representing a $87 billion industry with $50 billion in exports. Some 700 software companies export their services. Exports are currently growing faster than the industry as a whole (they were $6.2 billion in 2001-02), and have helped give India its first current account surplus in decades. Domestic e-commerce is small but expected to be a $5.4 billion industry in 2005 from $0.1 billion in 2001. E-commerce solutions are becoming an important part of India's software export mix, and are projected to be $2 billion in 2002. Duties on imported IT and telecom equipment is 15 percent, but the Government has signaled its intention to eliminate the tariff in two years.

4.3 ECONOMIC FUNDAMENTALS AND DYNAMICS

4.3.1 Government Intervention Risks

Despite a decade of economic reform, the Government still has a heavy hand in many key aspects of the economy, as illustrated by the following:

- The public sector. At least 250 companies are owned by the central government and hundreds others by state governments. They dominate many industries, especially banking and infrastructure, receive preferential policy treatment, and hamper private investment. The Government's privatization program has made some progress, but much more needs to be done.
- Regulation. Despite liberalization, many industries are still heavily regulated, which skews incentives and promotes inefficiencies. Business start-up procedures are cumbersome, for both domestic and foreign investors alike.
- India's 28 states may tax goods "imported" from other states. In principle, the power to tax inter-state commerce fragments key sectors of the economy, especially trade in agricultural goods

- Free electricity and irrigation water for farmers distorts true agricultural costs and has led to the uneconomic cultivation of rice and wheat.
- Some 550 goods are "reserved" by law for "small-scale industry." This has hampered local firms, such as in textiles and toy making, from developing economies of scale, marketing techniques, and even foreign markets.
- Directed lending. The central government requires all banks to make 40 percent of their loans to identified groups, such as farmers and small businesses. In principle, this means the nation's stock of investment capital is not efficiently employed.
- Even though the power-generation business is open to private companies, individual state electricity boards are the sole legal buyers of electricity. Many of them are insolvent. Large industrial companies have increasingly opted out of the national grid in favor of their own captive power-generation units. Government reform efforts are now centered on power transmission and distribution.
- Railroad freight tariffs have long been used to subsidize passenger rail traffic. These higher rates have re-directed freight onto the nation's inadequate road system

4.3.2 Infrastructure Development

Outlook

Problems with the country's roads, railroads, ports, airports, power grid, and telecommunications hamper economic growth. Nonetheless, a slow process of liberalization in these areas has been underway, including a more liberal environment for telecom and information technology, and greater roles for the private sector in ports and roads. The power sector remains the most problem-plagued.

Power

The power sector is largely under the control of the state governments, which offer free or low cost power to the agricultural industry. Demand for power is growing at three percent a year. Because of governmental intrusion, the industry is inefficient and unprofitable. Although private companies may own and operate power generation plants, state electricity boards are still the only legal purchasers of electrical power. However, many of them are financially weak and are in arrears on payments to the power producers. This in turn has caused a slowdown in new investment in the sector by private companies. Foreign investors appear to be leaving the sector. The unauthorized off-take of power equal is as high as 50 percent in some places. Power shortages are common in many parts of the country. The lack of independent state regulators is another factor hampering new investment. At the national level, a new Electricity Bill is under review in Parliament. It envisions dismantling the "single buyer" system, allowing generators to sell to the market. The central Government is encouraging reform at the state level, offering state government financial incentives in exchange for power-sector reforms, such as universal metering of users.

Roads

With three million kilometers of roads, India has the world's third largest road network. Half of the roads are not surfaced. Only 58,000 kms of highway are suitable for high-speed traffic. National highways are 1.4 percent of total road length, but carry nearly 40 percent of the country's road traffic. Road traffic is increasing 8-10 percent a year. Although 92 percent of the villages with populations over 1,500 are serviced by roads, only 37 percent of villages with less than 1,000 inhabitants are connected.

Railways

Indian Railways (founded 1851) is one of the World's largest. The country has seven railway zones, operating a network of 63,028 kilometers, 24 percent of which is electrified. Seventy-five percent of the network is only single track. Narrow-gauge lines are being converted to broad gauge (about 70 percent of the system). The central government is trying to control the loss-making subsidy system in which high freight rates (about 67 percent of revenue) subsidizes passenger traffic. High tariffs for freight has caused the diversion of cargo onto the nation's inadequate road system.

Ports

Indian ports are struggling with inadequate storage space and out-dated handling equipment. The country has 12 major ports, under the control of the central Government, handling 90 percent of foreign trade. One of them, Ennore Port Ltd., is under private management. The central Government has opened up the following port activities to the private sector: leasing out existing assets, port construction, dredging, captive power plants, captive facilities for port-based industries, and supply and maintenance. State governments are following suite with some 160 minor ports. Ship idle times continue to be longer than the accepted norms. A National Tribunal in the Ministry of Labor adjudicates port labor issues.

Airports

India has 12 international airports (under central Government control) and 83 domestic airports (under state government control). All but 10 of them are reportedly unprofitable, including the country's sole privately operated airport in Cochin. The domestic airline market is growing faster than international traffic. The four largest international airports are located in New Delhi, Calcutta, Chennai and Mumbai. The GOI is exploring options for turning their management over to the private sector. Unlike most international airports, which make 60 percent of their revenue from non-flight business, Indian airports remain heavily dependent on flight-related activities for earning revenue. This is due in part because many international flights depart India at night or in early morning darkness, thus leaving relatively few passengers in the airport halls during the day. In south India, new greenfield airports are on the drawing boards for Bangalore and Hyderabad. The Government is finalizing the financial terms with the foreign companies that won the construction contracts.

Telecommunications

Unlike some other infrastructure sectors, India's mobile phone industry has been built up entirely by the private sector, which has sunk some $6 billion in capital equipment into the market in recent years. As a result, India today has a world-class cell phone system, although other aspects of the telecom infrastructure (fixed-line, e.g.) are still sub-standard. The industry is regulated by the Telecommunications Regulatory Authority of India (TRAI). Although the regulatory environment has improved, private telecom firms have raised concerns about TRAI's weak enforcement powers and about the apparent conflicts of interest arising out of the Government's ownership interest in some telecom companies. A telecommunications Convergence Bill is pending in Parliament, which aims to bring telecommunications, information technology and broadcasting under the purview of one regulatory body. Tariff rates and prices for handsets continue to fall.

Mumbai is the largest market with over 17 percent of all subscribers. India has only 30 million fixed-line telephone connections, a very low rate of telephone penetration, amounting to less than four percent of the population. More than 970 million Indians do not have access to a telephone. Still the number of metered calls showed rapid growth in the 1990's, up 64 percent a year, compared to the 18 percent growth rates in the 1980's.

Information Technology

Although India has become a major player in international software outsourcing and services, Internet and PC ownership penetration rates are very low. India has about 3.5-4 million PCs, less than one-half a percent of population. The GOI estimates there are 3.3 million Internet subscribers in India, but users are about three times that figure. Internet cafes provide accessibility to millions of citizens who cannot afford the cost of a PC or the monthly Internet billing charge. Despite these bottlenecks, India has abundant skilled manpower for virtually all types of IT-enabled services and a progressive info tech regulatory environment. Its time-zone location is also an advantage to North American companies seeking outsourcing services. Many Indian state governments offer special incentives to private companies to set up IT enabled services. Privately owned ISPs may set up Internet gateways by both satellite and submarine optical fiber cable. The Information Technology Act of 2000, provides the legal framework to facilitate e-commerce, and also stipulates penalties for cyber crime.

4.3.3 Regional Economic Integration

Regional trade and economic integration do not have a significant effect on India's trade patterns. India's largest single-country trading partner is the United States, with two-way trade at about $12 billion, or 13 percent of India's total trade. Two-way trade with the EU is about $21 billion, by far eclipsing trade with any combination of South Asian countries. India is a member of several regional groupings, the most important of which is the South Asian Association for Regional Cooperation (SAARC), but the potential for greater regional cooperation has not yet been realized.

4.4 POLITICAL RISKS

4.4.1 Economic Relationship with the United States

The United States and India share common interests that extend beyond trade and commerce. Relations between the two countries are now broader and stronger than during any previous period in their 54-year history. Increased trade, investment and commercial ties between the world's two largest democracies have spurred the two governments to cooperate on difficult bilateral and global issues, such as nuclear nonproliferation, climate change, counter-terrorism, and peacekeeping.

A New Start to U.S.-India Relations

Following India’s nuclear tests in May 1998, sanctions had seriously complicated trade flows, development aid, and the implementation of our common agenda. Loans by international financial institutions for projects not related to basic human needs were curtailed. India’s credit rating dropped and borrowing costs for businesses increased. On the other hand, the BJP government approved a number of pending large-scale projects, including several proposals from the United States, in record time, presumably to signal that business would proceed as usual. While the USG lifted many of the sanctions after 9/11, a number remain in place and important political constituencies in the U.S. continue to watch non-proliferation issues very closely.

4.4.2 Political Risks

Opposition by a variety of leftist and other parties to reducing subsidies, further privatization and labor law reforms remain important inhibitions to modernizing the Indian economy. Other factors that mitigate usually generally "business-friendly" national policy include: India's stultifying and largely unreformed bureaucracy, as well as social tensions (some manifested violently) in a huge and extremely diverse population, much of which suffers from extreme poverty and the burdens of underdevelopment.

In India, enormous social diversity and democracy give rise to many voices of dissent. Many major decisions generate vigorous debate along caste, ethnic/linguistic, religious, regional, urban/rural, socio-economic, and ideological lines. Disagreements and hard bargaining between the federal and state governments are common, and changes in government often lead to changes in rules. The slow pace of economic reform is in part a result of the need to mediate among competing interests both within the party and among coalition partners. U.S. firms are advised to be patient and take a long-term view in the Indian market.

India's dynamic, growing and influential private sector will not give up the gains in liberalization it has achieved. Some BJP leaders espouse policies of economic nationalism, have attempted to return to the "swadeshi" (nationalist) agenda of previous decades, and have called for "India to be built by Indians." These politicians, however, generally do not wish to antagonize foreign investors and traders, but rather seek policies that are fair and consistent, and that address India's economic needs. On balance, India's business environment is improving and most industrialized nations are expanding their commercial presence in the country.

4.4.3 The Political System

India is a multi-ethnic, multi-religious, federal republic of 28 states and 7 union territories. The country has a bicameral parliament, including the indirectly-elected Upper House, the Rajya Sabha (government assembly), and the directly-elected Lower House, the Lok Sabha (people's assembly). The judiciary is independent and the legal system is based on English common law.

National and state legislatures are elected for five-year terms, although terms may be extended in an emergency and elections held early if a government is unable to maintain the confidence of Parliament.

4.5 MARKETING STRATEGIES

4.5.1 Distribution Channel Options

Following the 1991 economic reforms, India's international trade environment has been liberalized. Gaining access to India's markets requires careful analysis of consumer preferences, existing sales channels, and changes in distribution and marketing practices that are continually evolving.

India is a subcontinent, nearly 2,000 miles from north to south and 1,800 miles from east to west. Its coastline is 3,800 miles long and its area is 1.3 million square miles. Vast distances separate the most populous cities. The urban population centers are widely dispersed and nationwide distribution is imperative for many classes of consumer products. For instance, a leading manufacturer of cosmetics and personal care products sells to 250 million Indians through a network of 100,000 retail outlets across the country.

Rural India constitutes approximately 70 percent of the country's population. Although in terms of buying power urban India would rate higher, the rural market has been showing rapid growth in recent years. The main reason for such growth, apart from awareness created by various media, has been the increased availability of products in rural areas. The adaptation of distribution channels to the needs of the rural market has been the major factor contributing to the growth of the rural market. A good example of innovative distribution has been the availability of products in the traditional weekly market, which often caters to multiple villages.

Most Indian manufacturers use a three-tier selling and distribution structure that has evolved over the years: distributor, wholesaler and retailer. As general examples, a company operating on an all-India basis could have between 400-2,300 distributors. The retailers served directly by a company's distributors may similarly be between

250,000-750,000. Depending on how a company chooses to manage and supervise these relationships, its sales staff could vary between 75 to 500 in number. Wholesaling is profitable by maintaining low costs and high turnover. Many wholesalers operate out of wholesale markets. India has approximately 12 million retailers, mostly family-owned or family-run businesses. In urban areas, the more enterprising retailers provide credit and home-delivery.

In recent years, there has been an increased interest by companies to improve their distribution logistics in their effort to address a fiercely competitive market. This in turn has led to the emergence of independent distribution and logistics agencies to handle this important function. Marketers are increasingly out-sourcing some of the key functions in the distribution and logistics areas to courier and logistics companies and searching for more efficient ways to reach the consumer. The courier network in India now spreads to Class IV towns (towns with populations less than 50,000).

Most fast moving consumer goods (FMCG) and pharmaceutical companies use Clearing and Forwarding (C&F) agents for their distribution and each C&F agent services stockists in an area, typically a state. It is also important to note that duty structures vary among states for the same product, thus creating disparate pricing. With the cost of establishing warehouses becoming extremely high, C&F agents are fast becoming the norm. Innovative trends have also been seen in recent years where companies utilize distribution channels for products with complementary characteristics.

While there are no major national store chains, departmental stores, branded stores, specialty stores, malls and supermarkets are mushrooming in many large and medium-sized cities in India. Most cities have well-known market districts. Retail sales outlets are almost always locally owned. The current trend for shopping centers in major Indian cities is integration of shopping with entertainment and leisure activities. Buying and selling is often a process of bargaining and negotiation. Outside the major metropolitan areas, India is an intricate network of rural villages. Poor roads make many rural districts inaccessible. Although villages may have satellite TV, moving goods to rural markets can present real challenges.

The current volume of organized retailing is very small. Large industry groups in India are now pursuing organized retailing as a business opportunity. Dairy Farm of Hong Kong along with RPG Enterprises of India are joint promoters of the MusicWorld and Foodworld chain of stores in India. Foodworld has 45 stores in 5 cities across South India. Many leading retail chains from Europe (Carrefour, and Casino of France, and Ahold of Netherlands) are planning to enter the Indian retail market. In spite of the size and scope, retailing as an industry is not yet developed in India. India as yet does not allow 100 percent foreign direct investment in retailing.

India has both organized and unorganized (or traditional) channels for selling goods. Smuggled goods such as food items, computer parts, cellular telephones, gold and a vast range of imported consumer goods are routinely sold through the thriving "unorganized" sector or black market. By avoiding taxes and customs duties and using cash transactions, unorganized merchants offer better prices than those offered by the organized sector. However, with liberalization and more and more foreign companies coming to India, the volume of business in smuggled goods has fallen significantly. Most products being sold through the smuggled channel previously are now sold in India through direct channels.

India, in recent times, has also seen the emergence of mature channels of distribution and support for products such as computer hardware, software, and peripherals, ranging from commodity products to high-end IT equipment. The typical distribution structure has been two-tiered with a distributor (for the entire country) servicing dealers and retailers.

Improvements in packaging technology has also had a significant influence on the models of distribution adopted by companies in India for marketing perishable and processed food items.

There has been a significant expansion in distribution channels in India during the past few years. The total number of retail distribution outlets in the country is now estimated at more than 12 million. A firm can take its products to the user through a variety of channels. It can use different types of marketing intermediaries; it can structure its channel into a single tier or a three-tier outfit. After deciding on the broad design of the distribution channel and the number of tiers in the channel, the number of members required in each tier and their locations are decided, suitable dealers need to be selected and appointed.

4.5.2 Agents and Distributors

When a company wants to sell its products or services in India, before establishing a branch office or a subsidiary, it can enter the market by appointing a representative or a distributor. If the product has a wide market appeal, it would be appropriate to appoint representatives/distributors by region.

With the gradual opening up of the market in line with India's WTO commitments, U.S. exporters will find strong interests from potential representatives and distributors for a broad range of products.

In selecting a distributor, the following considerations are important: business reputation and business standing; business capacity and marketing strength; expertise and previous experience in the line; financial capacity and willingness to invest in the line; and creditworthiness. In addition, an ideal distributor should have the capacity to offer customers the required assortment of products and services and a willingness to extend credit. The distributor should be able to provide storage facilities, showrooms, shops, service workshops, sales staff and service commensurate with the expected volume of business.

At first glance, many representatives appear to have excellent industry and customer contacts. Typically they will have developed and nurtured these contacts over time, and their primary interest in a distributorship will be to sell to these established contacts. These representatives may have little motivation to develop new markets or new customers. It is important to gauge your prospective representatives aggressiveness in developing new networks and contacts.

Some potential representatives will provide long lists of foreign principals, covering dozens of products. Although such lists may seem impressive at first sight, some of them may be outdated, and some of the relationships may no longer exist. Further, representatives with many principals and product obligations could find it difficult to devote sufficient management and resources to support additional relationships. Companies should do their homework to ensure that their product will be strongly represented among the representative's product mix.

Many representatives will also highlight their widespread distribution network and countrywide presence. They will project a professional image, backed by well-qualified staff. Very often such representatives will leave the distribution of a new product or service to this network, without making any extra effort, because this approach has worked in the past. Companies should make sure their prospective distributor is committed to actively promoting your product. U.S. firms should avoid the temptation to establish a relationship with a representative or distributor merely because this individual appears to be the most persistent or the most enthusiastic out of several candidates.

Additional factors need to be considered before making a final choice of representatives or distributors. First, determine who the customers are and where in India these customers will make their buying decisions. A potential distributor who handles products similar or related to those of an U.S. firm need not necessarily be the best choice. Selected Indian firms have very effective distribution channels, and can offer the U.S. principal more by way of marketing savvy than mere product knowledge. Representatives with fewer principals and smaller operations can prove to be more adaptable and committed than agents with a large infrastructure and a large reputation. A small distributor could be ideal where a flexible strategy is called for. Also, avoid conflicts of interest where the potential representatives handle similar product lines, and many representatives do. U.S. firms should decide up-front whether or not this will be acceptable in order to avoid complications later on in the process. By the same token, U.S. companies should decide if they will need more than one representative. It is not uncommon in India to appoint multiple representatives for different products, locations or distinct markets. The U.S. firms should set up proper feedback systems so that the level of dedication in the venture remains stable.

The U.S. firms should examine all distributor prospects and thoroughly research the more promising ones. Credit and reputation checks is easier, with a number of private organizations now providing these services in India. Even established, reputable distributors may tend to exaggerate their capabilities.

One way of identifying suitable representatives is to look for distributors of complementary products. U.S. firms can screen unsolicited applications, seek any additional details needed, and see who responds best to your request for more specific information.

To gauge a representative's abilities, U.S. firms should evaluate the prospect in the Indian context. For example, rather than focusing on the decor of the office, consider address, as well as references from lawyers, accountants, and above all, existing clients. For technical products, a visit to the prospect's place of business is critical to ensure technical expertise. The representative's general facilities, staff and experience should be carefully assessed. It is vitally important for U.S. firms to check the potential representative's reputation. This can be checked with local industry sources, industry associations, existing clients, bankers, other foreign companies and the prospect's competitors. These steps will ensure that selection of a representatives or distributor is not left to chance. After performing a credit check of the proposed partner, contract details can be negotiated and a memorandum of understanding or representative agreement can be finalized.

4.5.3 Franchising Activities

While a sizeable proportion of the Indian population still lives in the villages and has limited purchasing power, India also has a large and growing middle class and a much smaller wealthy segment of consumers. The Indian market has a segment of approximately 150-200 million people with growing purchasing power, who seek products and services for a better lifestyle. Approximately 2 percent of Indians have a per capita income in excess of USD 13,000, which translates into a segment of 20 million well-off consumers. This is small in comparison to India's total population, but still comprises a substantial market segment. Approximately 8 percent of Indians have a per capita income of more than $3,500, or about 80 million people; more than 100 million Indians have a per capita income in excess of $2,800.

Franchising in some form has been operating in India for several decades. One well-known example of this is the Bata shoe chain, started in the 1960's. However, franchising in its modern concept has become popular in India only in recent years. The industry is still very much in an evolutionary stage. New franchise business concepts now span across diverse sectors as education, specialized food services, healthcare, garments and apparel, entertainment, fitness and personal grooming clinics, stationery and gift shops, and courier services to name a few.

As the service economy grows in India, opportunities for franchising will increase. According to experts, the Indian franchise economy currently accounts for 5 percent of the country's GDP. According to a study conducted by FICCI, there are approximately 600 active franchisers and more than 40,000 franchisees in India currently across various sectors. The same study estimates that total annual sales turnover achieved by franchised businesses in India is in the range of $1.6 billion – 2.08 billion. Franchising is poised to spur economic growth because it encourages private enterprise with no danger of flight of capital, and because it offers the potential to establish products and services that meet global standards.

Unlike in the U.S. and many other countries in the west, India does not have any specific law on franchising. Franchising is covered within the broad definition of transfer of technology contained in domestic legislation. A legal framework for new franchisers interested in setting up master franchises in India however exists, in terms of brand protection and rules regarding payment of franchise fees. However, there is also a growing need to improve this regulatory framework.

Following the economic liberalization of 1991, several foreign companies with strong brand names established a presence in India through franchising. In the hospitality and service industries, this has been the preferred method for starting operations in India. International companies that operate through franchises include Hertz, Avis and Budget for car rental; Radisson, Best Western and Quality Inns for hotels; Kentucky Fried Chicken, Domino's Pizza, Thank God it's Friday (TGIF), Ruby's Tuesday, Subway, and Baskin Robbins for food. Pizza Hut and Domino's Pizza have opened many outlets and McDonald's has been open for business since 1996. Similarly, Indian companies with strong brand recognition are also using the franchising route to expand business volumes. Archie's for giftware, MRF for automotive tires, NIIT for computer training schools and Apollo Hospitals for healthcare are examples.

Several foreign management training institutes are adopting the franchise route to expand their operations in India. CMC is a government-owned enterprise that has 120 computer education institutes in India. It requires potential franchisees to provide a minimum space of 1,200 square feet and invest $32,000-34,000.

While franchising is growing in India, the concept has initially functional mainly on an agent basis. Franchising in India is often perceived as a strategy to cover the high cost of real estate that a company that is interested in retailing would have to bear. As a result, if business projections are not met, franchisees can and sometimes do shift to other franchise concepts.

With minor variations, in a typical franchise operation, a company approaches an owner of prime commercial space to provide the real estate, to invest in interiors and inventories to run a franchise business, and to hire staff for the operation. Franchisees prefer to recruit staff directly, but most franchisers insist on training the staff themselves, particularly in educational and computer training academies.

U.S. firms need to use several criteria to evaluate prospective franchisees. The key one is that prospective franchisees must be financially sound. Other considerations include space location and availability, a willingness to work through initial teething problems together, high ethical standards, and similarity of goals and values.

Financial arrangements can vary. Some companies offer franchisees a percentage of commission on sales, while others provide a fixed percentage of the retail price of the product as a profit. The costs of promotions and advertising are usually shared between franchiser and franchisee, with some companies assisting franchisees in specific promotional activities to help increase product sales. Most franchisers provide their franchisees with initial training in the business and some franchisers also help with site selection.

Franchise fee payments in hard currency are allowed. A potential franchisee must submit a proposal for a franchise operation to the government ministry that regulates the particular industry sector. Among other details, the proposal must contain the amount of franchise fee that will be paid to the franchiser. The proposal moves from the relevant ministry to the Ministry of Industry and the Foreign Investment Promotion Board. Reserve Bank of India approval of the franchise fee is automatic when the Ministry of Industry clears the proposal. There are value or percentage limits on approvals of franchise fees, with franchises involving advanced or high-technology receiving the highest limits. Royalty payments ranging from 3 to 8 percent are allowed in hard currency, in addition to the franchise fee, although the norm is closer to 5 percent. The royalty is calculated on total turnover for the year for the franchise operation.

Franchising Association of India (FAI)

The Franchising Association of India (FAI), established through the efforts of the Indo American Chamber of Commerce in 1999, is the first organization of its kind in India. It represents the interests of franchisers, franchisees, vendors, consultants and other interested individuals and bodies. The FAI's objectives include improving the business environment for franchising; acting as a resource center for current and prospective franchisers and franchisees, media and the government; promoting the concept of franchising and its use as a healthy business practice; establishing a discussion forum for franchising matters; and promoting the interests of members by organizing seminars, conferences and meetings. The FAI is in the process of establishing appropriate international linkages, and was admitted as a member of the World Franchising Council in early 2000. The FAI will make representations to the government with regard to legislative and other measures affecting franchising.

The FAI can publicize updated information on American franchisers that are interested in expanding their business in India. It can advise potential franchisers about the current legislative framework, and lobby with the government for changes. It can also help to identify high-quality potential Indian franchisees.

4.5.4 Direct Marketing Options

In India, direct selling has traditionally meant contracting of outside agencies by manufacturers to move surplus or promotional products or small manufacturers resorting to door-to-door selling because of their inability to compete in the retail market. It has also meant deploying direct sales employees to demonstrate products with the objective of making a spot sale. The traditional view of direct selling is changing. One of the first Indian companies to practice direct selling in India was Eureka Forbes, which sells a range of household appliances through direct selling. Though some form of direct selling had been in practice in India, a new wave of interest to sell in the Indian market through the modern concept of direct selling has begun only recently.

According to the Indian Direct Selling Association (IDSA), which was established in 1996, the direct selling industry in India accounts for sales worth approximately USD 400 million and is estimated to be growing at 36 percent a year. Today, the direct selling industry employs more than 700,000 sales persons as compared to approximately 125,000 in 1997.

Many Indian and multinational companies like Aero Pharma, Amway, Avon, Herbalife, Sunrider, Tupperware, D K Family Learning, L B Publishers, Lotus Learning, Oriflame, and Time Life have started operations in India through joint ventures or through wholly-owned subsidiaries. Established retail companies in India have also started direct selling operations, the most prominent being Hindustan Lever Limited of the Unilever group.

Promising sub-sectors in the direct selling market include consulting services in real estate, sales and marketing of education programs and services for healthcare. A market exists for direct selling of health and nutrition products, beauty and skin care products, costume jewelry, cookware, and consumer durables.

Direct selling companies are busy reworking their strategies with emphasis on the three critical Ps of marketing - product, pricing, and packaging. Once considered as the medium for sales of premium products, direct selling in India today is moving towards lower priced products to meet the demands of the price sensitive Indian consumer. Package sizes are being reduced to bring down the psychological price barrier and make the products sold through the direct selling channel appear more economical.

To safeguard consumer interest, the Indian government plans to introduce a legislation to regulate the $416 million direct selling business in India. The proposed legislation will regulate activities of direct selling companies and their sales force, protect consumers interest, solicitation and recruitment of direct sellers and unlawful operation and promotion of pyramid schemes. The draft legislation makes it mandatory for a direct selling company to be incorporated in India and have contractual agreements with each of its members to sell its products.

Direct selling companies follow different plans of compensation for their sales force. Some follow the single level plan under which sales people earn commission on sales made by them alone, and do not earn anything on sales made by people they have introduced in the business. They may earn a one-time reward for people they help recruit. There are still some others who also compensate a sales person for the sales made by persons recruited by the first sales person, and from the sales of the group or network recruited by the first sales person's personal recruits.

The recommended retail margins on products range from 20 to 30 percent. The manufacturer provides initial training on product knowledge and use. This kind of distribution channel does not mean less expense, either on the products or on the channel. It is labor-intensive and the products retailed are not low cost/low value. Rather, they are high involvement/high value products. There is no system of credit. For all goods purchased, the distributor has to make a complete payment.

In recent years, thousands of Indian women and, increasingly, men are taking to direct selling in India to supplement salaried incomes. Rather than sales people they call themselves consultants, book advisors, dealers and beauty advisors. Other than a minimum age requirement by law, no qualifications are needed. Most companies do offer some cursory training, ranging from two hours to one week. The dropout rate in this method of selling is high.

India has strong potential for direct selling because unemployment and underemployment is perennial. Multinational direct sellers have been quick to sense an opportunity in India's post-liberalization economy. Due to the industry's high growth potential, the direct selling industry association is already gearing up to appoint an ombudsman to protect consumer interest and respond to inquiries. It has released a code of ethics that member-companies have to adhere to.

In the absence of advertising in the direct selling industry, to increase penetration and facilitate direct access to their products, direct selling companies have established lifestyle centers and kiosks at major retail stores. A lifestyle store is basically like a large store that carries the entire product range of the marketer but is not meant for retailing. Instead, it is a place for consumers to come and experience the brands and for distributors to conduct their business and impart training. To increase brand awareness, temporary kiosks set up at leading retail stores display and sell their products. These strategies enhance recruitment, create brand awareness and reach out to consumers who may not be aware how and where to buy the products from.

4.5.5 Joint Ventures and Licensing Options

A joint venture company is generally formed under the Indian Companies Act, and is jointly owned by an Indian company and a foreign company. This type of arrangement is quite common because India encourages foreign collaborations to facilitate capital investments, import of capital goods and transfer of technology.

India is a market that requires a careful approach because mistakes can be quite costly and local entrepreneurs yield to no one in terms of business acumen. Once a decision to go with a joint venture is made, the following practical tips will be of use to U.S. firms: define each partner's roles and expectations because equality and trust will help keep partners together; experience is a key ingredient; there is no substitute for thorough research; and look at the long term.

A foreign company invests in India either through automatic approval by the Reserve Bank of India (RBI) or through the Foreign Investment Promotion Board (FIPB). Automatic approval by the RBI is available if the foreign direct investment in the equity of the joint venture company does not exceed 51 percent in Annexure III and IIIB industries; 50 percent in Annexure IIIA industries; and 74 percent in Annexure IIIC industries. FIPB approval is required for all investment proposals that are not eligible for automatic approval. The rules regarding equity limits are being constantly liberalized and revised.

High-Priority (Annexure III) Industries

India has identified 35 industries (called Annexure III industries) where investment is sought on a priority basis. These 35 industries as defined by the Government in Annexure III to its statement on Industrial Policy of July 24, 1991, include:

- Metallurgical industries
- Boilers and steam generating plants
- Prime movers (other than electrical generators)
- Electrical equipment
- Transportation equipment

- Industrial machinery and equipment
- Agricultural machinery
- Earth-moving machinery
- Industrial instruments
- Scientific instruments
- Fertilizers
- Chemicals
- Drugs and pharmaceuticals
- Paper, pulp and paper products
- Heavy-duty rubberized and plastic products
- Plate glass
- Ceramics for industrial use
- Cement
- High-technology reproduction equipment
- Carbon and carbon products
- Pre-tensioned high pressure RCC pipes
- Rubber machinery
- Printing machinery
- Welding electrodes
- Industrial synthetic diamonds
- Equipment for biotechnology applications
- Extraction and upgrading of minor oils
- Prefabricated building materials
- Soya products
- High-yield seeds and live plants
- Food processing
- Food packaging
- Hotels and tourism
- Software development

Annexure III Part A Industries

The following is a list of industries and items where approval for foreign equity up to 50 percent is automatic:

- Mining of iron ore
- Mining of metal ores other than iron ore and uranium ores

- Mining of non-metallic minerals not elsewhere classified

Annexure III Part B Industries

The following is a list of additional industries and items where approval for foreign equity up to 51 percent is automatic:

- Manufacture of food products
- Cotton textiles
- Wool, silk & man-made fibers
- Water-proof textile fabrics
- Basic chemicals & chemical products except products of petroleum & coal
- Rubber, plastic, petroleum & coal products
- Metal products & parts except machinery and equipment
- Non-metallic mineral products
- Machinery and equipment other than transport equipment
- Land and water transport support services and services incidental to transport not elsewhere classified
- Renting & leasing
- Business services not elsewhere classified
- Health and medical services
- Tourism-related industry

Annexure Part C Industries

The following is a list of additional industries and items where approval for foreign equity up to 74 percent is automatic:

- Mining services
- Basic metals & alloy industries
- Manufacture of medical, surgical, scientific and measuring appliances and equipment
- Industrial process control equipment
- Meters for electricity, water and gas
- Laboratory and scientific equipment
- Photographic, cinematographic and optical goods
- Construction of electricity generation, transmission and distribution projects
- Construction of hydroelectric power and industrial plants
- Non-conventional energy generation & distribution
- Construction and maintenance of ocean and inland and water transport
- Refrigerated cold-storage and warehousing of agricultural products

Industries Reserved for the Small Scale Sector

About 850 items are reserved for manufacture by the small-scale sector. A small-scale unit is defined by an investment limit of USD 215,000 (Rs 10 million) in plant and machinery. These industries and investment requirements may be revised from time-to-time. Ice cream, biscuits, farm tools, automobile component and corrugated paper and board have recently been de-reserved and opened up for manufacture by non-small scale units.

Foreign equity in a small-scale undertaking is permissible up to 24 per cent. However there is no bar on a higher foreign equity holding if the unit is willing to give up its small-scale status. Non-small scale units can also manufacture items reserved for the small-scale sector. In case of non small-scale units and foreign investment beyond 24 per cent in a small-scale unit which manufactures small scale reserved item(s), an industrial license carrying a mandatory export obligation of 50 per cent of their production within a specified time frame is required.

Industries Subject to Compulsory Licensing

All industrial undertakings are exempt from obtaining an industrial license to manufacture, except for:

- Industries reserved for the Public Sector
- Industries retained under compulsory licensing
- Items of manufacture reserved for the small scale sector
- If the proposal attracts location restriction

Industrial units exempt from obtaining an industrial license are required to file an Industrial Entrepreneur Memoranda (IEM) with the Secretariat of Industrial Assistance(SIA) in the Ministry of Commerce and Industries.

Only six industries are subject to compulsory licensing in India. The need for licensing is attributed to safety, environmental and defense related considerations. The licensing authority in this case is the Ministry of Industrial Development and the industries are: distillation and brewing of alcoholic drinks; cigars and cigarettes of tobacco and manufactured tobacco substitutes; electronic aerospace and defense equipment of all types; industrial explosives including detonating and safety fuses, gun powder, nitrocellulose and matches, hazardous chemicals; drugs and pharmaceuticals; (according to the modified Drug Policy issued in September 1994).

Industries Reserved for the Public Sector

Some industries are reserved exclusively for the public sector. The following industries are not available for private investment unless a specific approval is obtained: arms and ammunition and allied items of defense equipment, defense aircraft and warships, atomic energy, and railway transport.

Foreign Investment Promotion Board

The Foreign Investment Promotion Board (FIPB) is a high-level central agency that deals and clears proposals for investment into India. It is chaired by the Industry Secretary, Department of Industrial Policy & Promotion. Other Board members consist of the Secretaries in the Ministries of Finance and Commerce, and the Economic Relations Secretary in the Ministry of External Affairs. Other members can be co-opted from senior government officials, and professional experts from industry, commerce and banks, as and when required.

Applications are received by the FIPB through the Secretaries for Industrial Assistance (SIA). The SIA was established by the Government of India in the Department of Industrial Policy & Promotion in the Ministry of Industry to provide a single window for entrepreneurial assistance, investor facilitation, processing all applications which require Government approval, assisting entrepreneurs and investors in setting up projects (including liaison with other organizations and state governments) and in monitoring the implementation of projects. Applications can also be made with India mission abroad. Applications received by SIA are placed before the FIPB within 15 days of receipt. The Board has the flexibility to negotiate with investors. The FIPB's decisions are communicated by SIA, normally within 6 weeks of receipt of the application.

Investment in the following areas is expected to be accorded priority in considering investment applications:

- Items listed in the automatic approval list, where conditions for automatic approval are not met
- Infrastructure
- Items with export potential
- Projects with large employment potential, particularly in rural areas
- Items which have a direct or backward linkage with the agricultural sector
- Socially relevant projects such as hospitals and life saving drugs
- Projects which induct new technology or infuse capital

If the U.S. investor has written a comprehensive proposal, provided details, and the FIPB is fully satisfied that the investment meets India's industrial development goals, approval can be granted in as little as three weeks. Proposals that are badly formulated, do not meet FIPB goals, and invite objections on political, environmental or public health or welfare grounds are likely to be denied.

4.5.6 Technology Transfers

In addition to direct foreign investment, foreign investors may enter into technology-transfer and technical collaborations. Technology transfer agreements involve one-time payment in exchange of know-how, drawings, design and other specifications. Technical collaborations are long term agreements bound by a periodic royalty payment. Automatic approval from the RBI is permitted for technical collaborations as follows:

- Lump sum payments not exceeding US $ 2 Million
- Royalty payable being limited to 5 per cent for domestic sales and 8 per cent for exports, subject to a total payment of 8 per cent on sales over a 10 year period
- Period for payment of royalty not exceeding 7 years from the date of commencement of commercial production, or 10 years from the date of agreement, whichever is earlier

The aforesaid royalty limits are net of taxes.

4.5.7 Creating a Sales Office

Overseas companies are required to obtain general or special permission of the Reserve Bank of India for carrying out any activity relating to agriculture or plantation.

A foreign company or individual planning to set up business operations in India but choosing not to establish a subsidiary or to form a joint venture with an Indian partner, can do so by establishing Liaison, Project and Branch offices in India. Approval from the Reserve Bank of India (RBI) is required for opening such offices. Such companies also have to register themselves with the Registrar of Companies (ROC) within 30 days of setting up a place of business in India.

Liaison or Representative Office

Many foreign companies initially establish a presence in India by establishing a liaison or representative office which is not directly engaged in commercial transactions in India. Foreign companies usually open representative/liaison offices to oversee their existing business interests, to promote awareness of their products and to explore further opportunities for business and investment. A Liaison office is not allowed to undertake any commercial activity and cannot therefore earn any revenue in India. As no revenue is generated, there are no tax implications on the office in India. Such offices are not allowed to charge any commission or receive other income from Indian customers for providing liaison services. All expenses are to be borne by remittances from the head office abroad. A foreign company establishing a liaison office cannot repatriate money out of India.

India's Foreign Exchange Management Act (FEMA) regulates the establishment and operation of a liaison office. RBI permission to establish liaison offices is initially granted for a period of 3 years and this may be extended. While registering with the ROC, along with the application form, the foreign company is required to submit copies of its memorandum and articles of association, its balance sheet and copies of any contracts that it has entered into in India. Under now-eased accounting requirements of the Department of Company Affairs, foreign companies with liaison offices in India will not be required to file a full balance sheet and a profit and loss account with the ROC, under section 594 of the Companies Act, 1956.

Branch Office

A branch office, like a liaison office, is not an incorporated company but an extension of the foreign company in India. A branch of a foreign company is limited to the following activities by the RBI: representing the parent company, as buying/selling agent; conducting research for the parent company, provided that research results are made available to Indian companies; carrying out import and export trading activities; promoting technical and financial collaborations between Indian and foreign companies, rendering professional or consulting services, rendering services in Information Technology and development of software in India, and rendering technical support to the products supplied by the parent/group companies. A branch office actually does business in India and is subject to tax in India. However, a branch office is not allowed to carry out manufacturing and processing activities either directly or indirectly. Under the Banking Regulation Act, 1949, opening of branches in India by foreign banks requires RBI permission. Remittances of net profits/surplus by Indian branches of such banks to their head offices abroad however, require prior approval of the Exchange Control Department of the Reserve Bank.

Also under the Indian Companies Act, prescribed documents need to be filed with the ROC in the state where the branch is situated, and also with the main office in New Delhi. After initial registration, every year the accounts of the branch need to be submitted to the registrar of companies. The branch office is allowed to repatriate the profits generated from the Indian operations to the parent company after payment of taxes.

Project Office

Foreign companies sometimes set up a temporary project office to undertake projects in India awarded to the parent company. It is essentially a branch office set up for the limited purpose of executing a specific project. Approval for project offices is generally accorded for executing government-supported construction projects or where the projects are financed by Indian and international financial institutions and multilateral organizations. In exceptional cases, approval is also given for private projects.

None of these entities are permitted to acquire immovable property without prior RBI approval. However, they are allowed to lease property in India for a maximum period of 5 years.

There are some practical guidelines that new companies establishing offices in India should consider - identify the right decision-makers; keep these decision-makers and other key players briefed about your project; avoid getting into the land acquisition process from private sources; handle local labor issues carefully, because Indian laws essentially prohibit firing workers; and take the opposition seriously, whether it is local politicians or residents.

According to a detailed survey sponsored by "Business Today" and undertaken by Gallup-MBA (India), the most important parameters in choosing a location in India are:

- Physical infrastructure
- State government support and flexibility
- Cost and availability of power
- Law and order situation

Other factors to take into account include:

- Labor availability and cost
- Labor relations and work culture
- Proximity to resources and/or markets

In the area of labor law, an employer with more than 10 workers cannot fire them without permission from a government labor commissioner -- something usually impossible to obtain.

Given the shortage of good commercial office space at reasonable prices in major Indian cities, business centers are a viable option for new companies wanting to establish a physical presence. Business centers facilities that are ready to move in, wired for communications, and air-conditioned. Billing is normally done on a monthly basis; and for long-term use, discounts are available. For selected industry sectors like Software, biotechnology, auto, the state governments are creating special Technology Parks.

State governments eager to attract investments to such locations often provide special support and incentives. While some foreign companies have ventured into smaller cities, the numbers are increasing slowly.

Given their large size in terms of population and middle/high income households, many foreign companies have traditionally focused on Mumbai and Delhi. During the past decade or so, foreign companies have discovered other places to set up base, such as Bangalore, Chennai and Hyderabad. Pune is also catching up fast, especially for software companies.

In western India, besides Mumbai there are many other cities which have good and acceptable infrastructure facilities. These cities include:

- Ahmedabad, Surat, Vadodara in Gujarat
- Pune, Nashik, Ahmednagar, Nagpur, Aurangabad and Kolhapur in Maharashtra
- Bhopal, Indore, Gwalior and Ujjain in Madhya Pradesh
- Panaji in Goa

Some of the major U.S. companies which are slowly spreading to these small cities include:

- GE Medical Systems
- Johnson Controls
- John Deere
- Whirlpool
- Parametric Technology Solutions
- Lucent Technologies

- Cirrus Logic
- Amphenol Amphetronix
- AT&T
- BPL US WEST
- Babcox & Wilcox
- Pizza Hut
- Domino’s Pizza
- McDonald's
- Kimberley-Clark
- SC Johnson
- Schentedy Chemicals
- Colgate Palmolive
- General Motors
- Proctor & Gamble

4.5.8 Selling Strategies

A well-respected Indian economist researched Indian market demographics and concluded that consumption, not income, differentiates Indian consumer segments. According to his research a one million strong wealthy class has emerged at the top. The middle class actually comprises 3 different segments. Consumer durables are purchased by up to 28 million households, while non-durables are bought by up to 90 million households. Also, comfort and personal transport are the two most important priorities. Additionally, he found the following conditions in the case of rural India: the number of households exiting the low income groups is rising; rural and urban shares of many consumables purchased are equal; urbanization is creating rural demand for urban products; and lack of credit facilities and electrification are choking demand.

At first sight the bulk of the purchasing power in India would appear to be concentrated in its urban markets. However, a huge majority of the Indian population lives in the rural areas distributed over some 627,000 villages. The balance lives in 3,700 towns of which approximately 300 have a population of more than 100,000 inhabitants. It is said that the real India lives in the villages. All marketers, Indian as well as MNC's, who have paid due attention to the market potential of rural India, have benefited.

Analysis of consumer purchase data over the last several years by various research agencies has shown that rural markets in India are growing as disposable income and literacy level increase, and as television access stimulates demand. Due to the influence of the media, consumption patterns in rural household have also changed significantly in recent years. Indians in rural areas are far more aware of brands, and the increasing brand awareness is generating demand for some products that were previously not familiar to the rural people. For the country’s mega-marketers, rural reach is on the rise. Poor infrastructure, however, is a major problem which makes distribution difficult and reduces demand for some products. Significantly, most purchases are made from the household’s own income. Rent/hire purchase schemes and loans account for only 10 percent of rural buying.

As mentioned earlier, there are few malls in major cities and towns in India. There is a teeming marketing layer of major and minor retailers. In addition, companies typically offer promotional schemes and discounts during numerous Indian festivals to boost sales. Recently, road shows have been used effectively to sell products. For consumer durable products, which are relatively expensive, financing and buybacks are used as incentives to promote sales.

In order for the sales techniques to be successful, distribution coverage is of prime importance. Indian consumers are serviced by an efficient, but highly fragmented, trade system consisting of over 12 million retail and wholesale outlets, spread over many urban and rural population centers. India has the largest retail outlet density in the world, but the majority of these stores are very small in size and unorganized. Thus, access to a broad, well-managed efficient distribution network is a source of significant competitive advantage.

In addition to the traditional selling techniques, the Internet is also now gaining importance as a selling method.

Although India’s rapidly growing population appears to present limitless opportunities, many Indian and foreign companies have discovered that for many product categories, only a fraction of India’s population can be regarded as potential customers. Many companies have been disappointed with the response to products that they have launched in India over the past few years. Initially, these companies grossly over-estimated the depth and size of the Indian market for their products. Projections for the growing Indian middle-class ranged from 150-200 million and these figures subsequently proved to be way off the mark for products marketed to the typical Western middle class consumers. Another mistake was to offer global brands at global prices, without any customization. Merely transposing brands and products from other markets did not work. Suitability and adaptation to Indian preferences and conditions are perceived as significant benefits by Indian consumers and hence is an important factor to be taken into account while designing a sales strategy for this country. A final mistake was to enter India without an efficient distribution network, forgetting that India is a market with poor infrastructure and logistics.

A successful sales strategy will recognize and deal with the existence of strong local competition - this exists in many products and service categories and should not be under-estimated. U.S. firms must also carefully compare customer needs and the quality of latent demand with the level of service that they want to offer in India. Even among the affluent middle class, much of their money is spent on need-based consumption rather than on luxury goods.

While selling in the Indian market can be a complicated and difficult experience for new entrants, this can be avoided if, at the outset, the market opportunity is assessed accurately and the capabilities of local competition are not underestimated. Only in unusual circumstances should new foreign entrants create a new and independent sales infrastructure, because it is very expensive in the short run, and requires sustained investment to build over the long run, even if the product is successful.

4.5.9 Advertising and Trade Promotion

Over the years, the Indian economy has moved from being a controlled, sellers’ market to a buyers’ market. In the former, whatever was produced was sold easily, and advertising was hardly necessary. The government began dismantling production controls in the mid-1980's and opened up the economy in 1991. With these developments came increased competition, and increased advertising. According to the Advertising and Marketing (A&M) magazine, a leading trade journal, advertising is a USD 3 billion industry in India today. Media availability has increased exponentially, competition is unlimited, budgets are large and expectations of advertising are high. Practically every aspect of media is available for advertising, from print to outdoor advertising to satellite channels to movie theaters.

Print

India has a diverse and growing number of daily newspapers. According to the National Readership Survey (NRS) 2000, the print media reaches 62 percent of urban adults. The NRS is a biannual survey of media habits amongst Indians.

U.S. companies have a choice of many advertising and trade promotion channels in India. The print media, nearly all controlled by the private sector, is well developed and advertising and promotional opportunities are available in a large number of daily newspapers including business dailies; and a wide selection of weekly and monthly business magazines, news magazines and industry-specific magazines.

The Times of India and the Hindustan Times are the largest selling English-language newspapers, with a readership base across India. Other leading business newspapers include:

- Business Standard
- Economic Times

Leading magazines include:

- India Today
- Business India
- Business Today
- Business World and Outlook

Satellite and Cable Television

Advertising opportunities are also available on satellite and cable television channels. Doordarshan, the government-owned television network, has the potential reach of almost 90 percent of the population. In addition, over two dozen satellite and cable television channels, including many U.S. and international channels such as STAR TV, CNN, NBC, Discovery, National Geographic and BBC, are available for advertising. According to the National Readership Survey 2000, television reaches 75 percent of all homes in India. Satellite and cable television penetration is approximately 60 percent of all urban homes.

Radio

Another advertising media is radio, by which the government-owned All India Radio (AIR) reaches over 90 percent of the population. Private radio channels are restricted to the FM music channels that are currently available only in a few cities. The latest medium to become available is the Worldwide Web.

All the above media are available in English, the national language Hindi, and a variety of regional languages.

U.S. companies interested in advertising in any of the above media can work through the many advertising agencies in India. Many large and reputable U.S. and other international advertising agencies are present in India in collaboration with local advertising agencies. The advertising sector in India is technologically advanced.

Indian Agency	International Partner
Chaitra	Leo Burnett
R K Swamy	BBDO (Batton, Barton, Durstine & Osborn)
Rediffusion	Dentsu-Young & Rubicam
Mudra	DDB Needham
Triton	BDDP (Boulet, Dru, Dupuy, Petit)
Trikaya	Grey Advertising
Siesta's	Saatch & Saatchi
Ulka	FCB (Foote Cone & Belding)
Madison	DMB&B (Darcy Macius Benton & Bowles)
Everest	Dentsu
Nexus-Enterprise	Lowe Group
Speer	O&M Worldwide
MAA COMM	Bozell

In addition to advertising, established public relations firms are also available to U.S. companies that require such services. In public relations too, a few U.S. and other international companies are present in collaboration with local partners.

In India, advertising is no different from other businesses - local advertising companies that need to have access to the best global technologies and practices in their industry have global collaborations. Most major U.S. advertising firms have chosen local Indian partners for their work in this market. Mumbai remains the center of the advertising industry in India.

The key to gaining rural market share is increased brand awareness, complemented by a wide distribution network. Rural markets are best covered by mass media - India's vast geographical expanse and poor infrastructure pose problems for other media to be really effective.

U.S. companies can select from a number of quality international trade fairs, both industry-specific and horizontal, to display and promote their products and services. The U.S. Department of Commerce (USDOC) certifies a number of Indian trade shows as good venues for U.S. companies; and the U.S. Commercial Service (USCS) offices in India directly organize U.S. participation in a number of selected trade shows every year.

Trade development offices of USDOC, U.S. industry associations, and individual U.S. states organize trade delegations and missions to visit India to explore prospects for doing business with local firms in the private and public sectors. Participation in such trade missions, whose programs in India are managed by the USDOC's U.S. Commercial Service, will be useful for American companies interested in doing business in India.

The USCS in India organize catalog exhibitions. These are low-cost promotional vehicles, particularly for small and medium new-to-market U.S. companies. Another low-cost promotional option available, particularly to new-to-market companies, is advertising in Commercial News USA (CNUSA). Although this monthly catalog magazine is circulated world-wide through U.S. Commercial Service offices and is not country-specific, over 3,000 copies are circulated to selected buyers, agents/distributors, chambers of commerce and trade associations in India.

4.5.10 Major Indian Business Associations and Organizations

India's private businesses are organized into three leading business organizations:

Associated Chambers of Commerce (Assocham)

Assocham is the oldest national organization of the Chambers of Commerce in India. It is non-political, and seeks a close working relationship with the Government and representative business and commercial organizations.

Confederation of Indian Industry (CII)

Founded more than 100 years ago, CII is a non-government, industry-led and managed organization. It has a direct membership of 3,900 companies from the public and private sectors, and indirect membership of 40,000 companies of over 100 sectoral associations. CII represents over 80 percent of India's organized industry. It has 30 offices in India and 10 offices overseas. CII serves as a reference point for Indian industry and the international business community. CII organizes trade fairs, conferences, and meetings. It has a Memorandum of Understanding with the U.S. National Association of Manufacturers.

Federation of Indian Chambers of Commerce and Industry (FICCI)

FICCI was established in 1927 as a central organization of industry, trade and commerce in India. The Government has invited FICCI to join over 100 advisory bodies for policy review and recommendation. FICCI organizes trade fairs, conferences, and workshops to serve its members. FICCI has a longstanding relationship with the U.S. India Business Council (USIBC) and, through them, with the U.S. Chamber of Commerce in Washington, D.C. FICCI, with a membership of over 500 chambers of commerce, trade associations and industry bodies, represents directly and indirectly more than 250,000 small, medium, and large business units.

4.5.11 Pricing Issues

When formulating key strategies and making decisions about product pricing for the Indian market, it is important to remember that simple conversion of U.S. dollar prices to Indian Rupees will not work in most cases. Also, the assumption that a latent niche market for premium products exists has often resulted in low sales volumes and negligible returns for foreign companies. For example, when a U.S. company priced its products in India Rupees equivalent to U.S. dollar prices, it failed to attract the mass consumer; today it serves a smaller, focused niche. Refrigerators offered by a U.S. manufacturer did not sell well because they were priced 40 percent above Indian brands.

Another key consideration in pricing is Indian import tariffs. These are high for most products, especially consumer products. There are pockets of affluent Indians who can afford to buy a variety of luxury branded goods. However, in general, consumer consumption patterns are very different from those in many other countries. While in the U.S., for instance, the consumption pattern is 25 percent for need-based items and 75 percent for other goods or luxury items; in India, even among the affluent, this proportion could be reversed.

Per-capita consumption of most manufactured items in India is relatively low, somewhere between 5-25 percent of the level in developed economies. Price is a very significant factor in a purchasing decision for the majority of potential customers. Indians tend to be particularly price conscious due to generally low per capita incomes, a frugal mind-set, a high propensity to save and buying primarily for need-based consumption.

If the product can be imitated easily in terms of quality and service, international pricing will not work in India as local entrepreneurs will quickly adopt the same business opportunity. To reduce product import duties or other local costs and ensure a stable market share, several U.S. and other foreign companies have set up product assembly shops in India.

Pricing decisions have some bearing on product packaging. Many consumer product suppliers have found it helpful to package smaller portions at reduced prices rather than "economy" sizes. While the Indian consumer will pay a little extra to ensure that he gets quality and value for money, he may not be able to afford the higher prices of attractive packaging which many multinational companies have developed.

Although some Indian consumers are aware of quality differences and insist on world class products, many customers can sacrifice quality concerns for price reductions. In East Asia, Europe, and North America, for example, laser printers and ink jet printers have almost eliminated the dot matrix printer from homes and offices. In India, dot matrix printers are still used in business correspondence by some industrial groups. The price advantage of this older technology has extended its lifetime in this market.

Bargaining for the best price is a routine process of the buyer and seller in India. For consumer goods, especially for durables, the sellers often give discounts on the listed prices, especially during festive seasons, to attract more customers. Trade-ins of old products for new items are also increasingly popular among the customers. A pricing strategy must consider all these factors, too.

Since January, 2001, under Indian law, it is mandatory for all pre-packaged goods intended for direct retail sale imported into India to bear the following labeling declarations:

- Name and address of the importer
- Generic or common name of the commodity packed
- Net quantity in terms of standard unit of weights and measures
- Month and year of packing in which the commodity is manufactured or packed or imported
- Maximum retail sales price (MRP) at which the commodity in packaged form may be sold to the end consumer

The MRP includes all taxes, freight transport charges, commission payable to dealers, and all charges towards advertising, delivery, packing, forwarding and the like.

Compliance with these requirements is necessary before the import consignments are cleared by Customs in India. Import of pre-packaged commodities such as raw materials, components, bulk import etc., that need to undergo further processing before they are sold to end consumers are not included under this labeling requirement.

Supplying

An important consideration during a purchase decision is the quality of after-sales service by the seller. To retain customer loyalty, local and multinational companies are increasingly focusing on after-sales service and customer support as a means of offering their consumers more value.

India has a diversified industrial base, therefore the Indian consumers are familiar with a variety of locally available products and services. Domestic manufacturers have the added advantage of knowing their territories well. This makes it important for U.S. companies in this market to highlight their superior quality, innovative product features and after-sales service in any selling efforts.

Engineering support for manufacturing technologies, medical equipment, state-of-the-art products and processes are required for successful sales to private firms, or to the Government of India, or one of its public enterprises. There is no dearth of technically qualified manpower in India at reasonable rates to undertake customer support services, but these technicians must be properly trained. Most foreign companies doing business in India either have their own maintenance service centers or appoint well-trained service agents in the major Indian cities.

Call centers are burgeoning with overseas and Indian firms setting up centers for both domestic and international clients. In the face of intensifying competition, call centers are becoming an effective way to improve customer service.

Indian consumers are now getting increasingly aware of their rights and are demanding more from manufacturers. Several Web sites on consumer rights have been launched to create such awareness. Two of these are **www.planetcustomer.com** and **www.customerpowernyou.com**.

Several Indian consumer awareness magazines exist to inform Indian consumers of their rights, and provide a comprehensive source of independent, objective information on products and services.

4.5.12 Government Procurement

Indian government procurement practices and procedures are often not transparent or standardized, and discriminate against foreign suppliers, but they are improving under the influence of fiscal stringency. Specific price and quality preferences for local suppliers were largely abolished in 1992. Recipients of preferential treatment are now supposedly limited to the small-scale industrial and handicrafts sectors, which represent a very small share of total government procurement. There are occasional reports of government-owned companies calling in the performance bonds of foreign companies, even when there was no dispute over performance.

It is not unusual for negotiations to drag on for years and be held up at more than one of the sundry levels within the Indian bureaucracy for long periods with no discernible movement or reason given for lack of progress. With this in mind some firms seek out local representatives who are familiar with the culture and customs of India, and are familiar with ways to expedite their product or service through the maze of bureaucracy in Government ministries.

When foreign financing is involved, principal government procurement agencies tend to follow multilateral development bank requirements for international tenders. However, in other purchases, current procurement practices usually result in discrimination against foreign suppliers when goods or services of comparable quality and price are available locally.

The Government of India regularly advertises its requirements for the purchase of supplies and new equipment. These foreign government tenders are reported by the U.S. Department of Commerce, which then publishes them in its Economic Bulletin Board and in the National Trade Data Bank. For more information about these information services, including subscription prices, please call the U.S. Department of Commerce Trade Information Center at USA-TRADE, or 1-800-872-8723.

Defense Sales

In recent months, India has expressed increased interest in U.S. weapons systems. U.S. businesses desiring to make defense related sales to India should be aware that the process can be daunting. U.S. defense suppliers should assess the merits of having some representation in India to assist in market assessments, logistical support, and after-sales contact. This representation can either be through the supplier's own office presence in India, or through an authorized representative. Caution must be exercised when seeking local expertise because unless strict guidelines are followed, Indian law may be broken.

In November 2001, the Government of India lifted the ban on agents in defense purchases and issued regulatory provisions for Indian authorized representatives and agents, where permissible, in defense purchases. Details of these provisions are posted on the Web site of the Ministry of Defense: **http://mod.nic.in/newadditions/repagent.htm**.

The regulations require both the principal as well as the potential local representative to meet the provisions stipulated – it is the foreign supplier that has to make an application to the Ministry to register the relationship reached with the agent. The regulations also call for complete disclosure of the principal-agent relationship in all its aspects. These requirements have discouraged many established local representatives in the defense business to register as agents for new defense deals.

The Office of Defense Cooperation (ODC) within the U.S. Embassy in New Delhi is a good point of contact for U.S. defense firms. The Defense Cooperation Attaché will assist by providing contact details of offices that are the main purchasers of foreign defense goods for India and offer advice on the most effective, successful strategies for defense related sales. The offices of the U.S. Commercial Service in New Delhi and Chennai are also good points of contact for U.S. defense firms initialing sales efforts in India.

4.5.13 Hiring Local Counsel

Since the Indian government controls inbound investments, it is useful to have a local attorney who can advise on investment options, structuring of the Indian operations and how best to establish a business presence in India, whether by way of subsidiaries, joint ventures, branch offices or liaison offices. In most cases, the investor, in order to do business in India, will have to deal with a number of government departments and officials and to comply with many rules, regulations and procedures that invariably lead to delays.

Doing business in India is difficult because the Indian market is a complex one, with some laws dating back to the 1900's, and some enacted or amended as a result of the economic liberalization process that began in 1991. Like the U.S., India has adapted a legacy of British common law.

Court delays are common and often lengthy. Firms undertaking complex projects must consider this in developing project timelines and factor in the costs legal expenses and project delays.

Following economic liberalization, there has been an increased inflow of investment in power, telecommunications, banking, institutional investments, oil and gas, construction and capital markets. Due to the substantial nature of many of these projects, standard agreements have given way to legally sophisticated and specialized agreements.

Several local law firms are well equipped to serve multinational and foreign companies. They offer the entire range of legal and tax services and have the expertise to interact or network with international law firms, whenever required.

Billing for legal services has become extremely flexible in India. Attorneys are proposing a combination of discounted fees, blended hourly rates, partly deferred fees, overall caps and/or lump sum fees.

For large-scale projects, U.S. developers will encounter public interest litigation and media reaction, among the most challenging variables. They must finesse to assure success on both these fronts; must be prepared to furnish substantial information; and patiently refute misleading allegations. It is imperative to have a capable local attorney to help manage these situations, and an effective public relations effort to maintain an objective, positive projection.

In India, there are an increasing number of agreements that provide for arbitration, in the event of disputes between the parties, as litigation in the country is a time consuming, cumbersome and expensive process. Local attorneys can assist in litigation but also have developed the expertise to handle international arbitration.

The more progressive local attorneys are developing further expertise in specific areas by hiring industry professionals and professionals from other law and accounting firms. Many spend considerable non-billable time in research, to increase their knowledge and information base and to shorten their response time.

Most major U.S. international law firms have existing correspondent or informal relationships with leading solicitors and advocates in India. Several U.S. law firms have offices in India. Indian bar associations regard the entry of foreign law firms as a competitive threat to their existing business. Local law firms advocate that the Government of India should restrict entry only to firms from nations that grant reciprocal treatment to Indian law firms. The U.S. Embassy may not recommend any specific individual or firm to supply legal services to U.S. companies. However, the U.S. Commercial Service does maintain a list of such firms who are used by the local offices of U.S. corporations. This list is available on request.

4.5.14 Performing Due Diligence and Checking Bona Fides

It is prudent to exercise normal business caution when dealing with Indian entities. The Embassy recommends due diligence checks on Indian parties and these should be carried out thoroughly and promptly. The Commercial Service can assist this due diligence through its International Company Profile (ICP) service.

The International Company Profile (ICP) service helps U.S. companies evaluate potential business partners by providing a detailed report on overseas companies. A standard ICP report includes information on the local firm's size and revenue, organization, background, imports, financial information and key customers. It also provides advice on the reliability and relative strength of the company in the Indian market. The ICP service keeps the name of the U.S. client confidential. The report is prepared on the basis of a personal visit to the local firm's office facility. The credibility of the local firm is checked through client, bank, and trade association affiliations. The ICP report is available in 7 Indian cities where the Commercial Service maintains offices:

- New Delhi
- Mumbai
- Chennai
- Calcutta
- Bangalore
- Hyderabad
- Ahmedabad

An ICP report can be requested from a U.S. Export Assistance Center in the U.S. The nearest Center can be located from the Web site **http://www.usatrade.gov/**. An ICP can also be requested from:

Ms. Renie Subin
Country-Wide ICP Coordinator for India
Tel: 91-11-331 684
Fax: 91-11-331 5172
E-mail: renie.subin@mail.doc.gov

Prior to confirming an ICP request, the U.S. client needs to provide complete contact information for the local firm to facilitate clear identification and contact. The ICP report will be delivered within ten working days from the date of acceptance.

For local firms located in Indian cities where The U.S. Commercial Service does not have a presence, U.S. clients can conduct due diligence through the following private firms:

Mr. Arun Thukral
Dun & Bradstreet India Private Limited
S-7, Panchsheel Park, 1st Floor
New Delhi 110 017

Tel: 91-11-601 3880/601 3881
Fax: 91-11-601 3879
E-mail: dbisdel@del2.vsnl.net.in or dbdelhi@mail.dnbco.in

Mr. Deepak Bhawnani, Country Manager
Kroll Associates (Asia) Ltd.
1202 Ashoka Estate
24 Barakhamba Road
New Delhi 110 001
Phone: 91-11-373 6355/373 6357
Fax: 91-11-373 6356
E-mail: krollindia@krollworldwide.com or krollin@kroll-ogara.com

Kroll Associates conducts pre-transaction research and assesses critical information on potential joint venture partners.

E-Commerce-Related Web Sites

www.buyusa.com
Export assistance Web site for U.S. companies to locate overseas buyers and international business partners

www.agriwatch.com
Agribusiness trade within, to and from India

www.apnatransport.com
Road transport industry

www.bijleeindia.com
Electrical engineering portal serving power producers, utilities and equipment manufacturers, consultants, and project managers.

www.chemicalhouse.com
Chemicals

www.commodityindia.com
Commodity intelligence

www.clickforsteel.com
Steel trading

www.e-chem.com
Chemical exchange in association with Indian Chemical Manufacturers Association

www.e-indiabiz.com
In strategic partnership with U.S. India Business Council. Offers auctions.

www.electricmela.com
Electrical industry

www.efoodcommerce.com
Food

www.eplasticsindia.com

Plastics industry

www.eyefabrics.com
Textiles industry

www.indiaconstruction.com
Marketplace for construction material & equipment

www.indiaengineering.com
A market space for manufacturers and engineers

www.indiahomeseek.com
Indian real estate portal.

www.indiamarkets.com
Marketplace for multiple industry sectors.

www.indiatransporters.com
Transportation

www.industrialproductsfind.com
Industrial products

www.itconnexion.com
Information Technology marketplace

www.infodriveindia.com
India's export import trade

www.indiaengineering.com
Engineering and manufacturing

www.inpaperexchange.com
Paper and pulp industry with listing of Indian manufacturers and traders

www.industryspider.com
Industrial guide, Web sites, industrial directory, and industrial classification

www.knowproblems.com
Project consultants

www.kagaz.com
Paper and pulp industry

www.onhospitals.com
Medical industry

www.oilmandi.com
Oil industry

www.pharmabiz.com
Pharmaceutical industry

www.packagingindia.com
Indian packaging industry. Offers auction facility.

www.rupeesaver.com
Computers, telephony products, electronics

www.sugartrade.com
Indian sugar industry

4.6 IMPORT AND EXPORT REGULATION RISKS

4.6.1 Tariff and Non-Tariff Barriers

From 1947 to 1991, India's import and export policies were such that a vast majority of goods could be imported only under license from the Central government's Controller of Imports & Exports (CCI&E). In 1991, India initiated economic reforms to tide over the budget deficit, balance of payments problems and structural imbalances in several industry sectors of the economy. In successive years, India has made the trade regime increasingly more transparent. However, India's tariffs are still high by international standards, and many quantitative restrictions on imports still exist. These high tariffs and import restrictions have constrained U.S. firms from selling in this market and U.S. investors from importing competitive inputs in several industries.

While India has removed some tariff barriers, it has introduced other curbs such as adjustment of tariffs and anti dumping duties. Approximately 300 items comprise a 'sensitive' list of imports that the Government monitors. A 'war room' group has been created to closely monitor the import trends for these items.

India has appealed to the Appellate Body of the World Trade Organization against the recommendations of a WTO panel report on its quantitative restrictions on import of agricultural, textile, and industrial products. India has challenged the panel’s authority to determine whether the balance of payments can be used to justify imposition of import restrictions and the overall compatibility of regional trade agreements with WTO norms..

4.6.2 Tariff Schedule

Classification

The Indian classification on tariff items follows the Harmonized Commodity Description and Coding System (Harmonized System or HS). India has fully adopted HS through the Customs Tariff Amendment Act, 1985. There has been some modification of HS as appropriate to the Indian environment concerning excise taxes.

Customs Duties

The Customs Act governs the levying of tariffs on imports and exports and frames the rules for customs valuation. The Customs Tariff Act specifies the tariffs rates and provides for the imposition of anti-dumping and countervailing duties. With some exceptions, most tariffs are ad valorem. Tariff rates, excise duties, regulatory duties, and countervailing duties are revised in each annual budget. The April 1993 trade policy merged the auxiliary duty with the present duty. The peak tariff rate was reduced to a ceiling (with a few exceptions) of 35 percent in the last fiscal budget. The budget announcement committed to a phased reduction in duty rates in accordance with WTO guidelines. It eliminated the surcharge of 10 percent on basic custom duty in order to bring the peak rate duty structure down to 20 percent over the next three years. A special additional duty will continue to be charged at 4 percent on all products, except on duty free imports. As import duties are quite product specific and may be altered in mid-year, U.S. companies are advised to verify the relevant rates for their products. Rates are published by the Central Board of Customs and Excise within the Indian Ministry of Finance's Department of Revenue. They may be obtained from the Public Relations Officer, Customs House, Indraprastha Estate, New Delhi, 110 002 (Tel: 9133-331 9451).

Duty Exemption Scheme

Indian import policy includes a duty exemption scheme for registered exporters so that they may import the inputs required for export production at international prices and free from duty in order to make their exports more competitive. Imported items, which are exempt from customs duty, are raw materials, components and consumables. The customs schedule makes multiple provisions for tariff concessions and exemptions. The government has wide discretionary power to declare full or partial duty exemptions "in the public interest" and to specify conditions such as end-use provisions. Almost half of India's total inputs enter under concessional tariffs, though the use of exemptions is falling in tandem with the tariff-reduction program.

Canalized Imports

Imports of products such as wheat, rice, maize, petrol, diesel, aviation turbine fuel (ATF) and urea are permitted only through designated State Trading Enterprises. Import of all food products, meat and poultry products, tea waste and textile material will be subject to domestic regulations and compliance. The budget introduced a 3 percent customs duty on airplanes, simulators of airplanes, helicopters, and gliders.

The budget also reduced basic duty rates on selected information technology, telecommunications, textile machinery and cinematography equipment; gold; and on infrastructure-related items such as cement and clinker. A steep (effectively 180 percent) import duty on second hand motor vehicles and two wheelers, tea coffee, crude and refined edible oil was introduced to restrict imports and protect domestic industry.

While reduced tariffs have assisted several U.S. export industries, further reductions in basic tariff rates would benefit a wide range of U.S. exports. Industries that might benefit from reduced tariff rates and removal of QR's include consumer products, processed food, footwear, toys and telecommunications products. Fertilizers, mining equipment, wood products, jewelry, camera components, paper and paperboard, ferrous waste and scrap, computers, office machines and spares, textile machinery and spare parts, hand tools, soft drinks, cling peaches, vegetable juice and canned soup would also benefit.

Prohibited Imports

The Export Import Policy does not include a separate ‘prohibited imports’ listing. The ‘prohibited import’ status of any item is noted alongside the item listing in the Indian Trade Classification (Harmonized System Book), notified by the Directorate General of Foreign Trade. The information is published, among others, by the Directorate General of Commercial Intelligence & Statistics, Calcutta.

Items completely banned from import into India include items that damage the environment or wildlife, and certain defense items. There are also prohibitions in place for items related to maintaining internal security, public order and various standards of decency and morality.

The prohibitions were also introduced to prevent shortages of goods in the domestic market and conserve foreign exchange to safeguard India's balance of payments; and to control trade in gold and silver.

India's trade policy specifies a restricted list of imports. These goods, cited as restricted under the ITC (HS) can be exported or imported under license.

The import of primary products of plant and animal origin is restricted to 'Bio Security & Sanitary and Phyto-Sanitary Permit' to be issued by the Department of Agriculture and Cooperation. This permit will be based on Import Risk Analysis of the product to be conducted on scientific principles, in accordance with the WTO agreement on Application of Sanitary and Phyto-Sanitary Measures.

The policy also states that in conformity with the 'National Treatment Principle' of GATT, imports have also been made subject to the following domestic regulations:

- Import of all food products will be subject to compliance of all the provisions of Food Adulteration Act and Rules thereunder
- Import of meat and poultry products will be subject to compliance of all the provisions of Meat Food Product Order
- Import Tea Waste will be subject to compliance of Tea Waste (Control Order)
- No import of textile material using the prohibited dyes like azo dye shall be allowed. For this purpose, a pre-shipment inspection certificate has been made mandatory

In view of road safety and environmental considerations, imports of second hand automobiles have been allowed subject to the following conditions:

- Import of automobiles older than three years is not allowed
- Imported vehicles need to conform to Central Motor Vehicle Rules
- Import of left hand drive vehicles not allowed
- For ensuring the requirements, pre-shipment as well as post shipment certification is mandatory.
- Imported automobiles must have a minimum residual life of five years. The importer is to ensure supply of spares and service during this period.
- Such imports are allowed only through customs port at Mumbai

The import of new automobiles is allowed subject to following conditions:

- Import allowed only from the country of manufacture
- Import of left hand drive vehicles not allowed
- Imported vehicles to conform to the provisions of Motor Vehicles Act, 1988
- Prototype of vehicle to be approved by notified agencies in India

4.6.3 U.S.-Imposed Export Controls

The Bureau of Industry & Security (BIS) (formerly the Bureau of Export Administration, BXA) is the U.S. Department of Commerce agency charged with administering and enforcing the Export Administration Act and Regulations (EAA/EAR). The EAA and EAR control the export and re-export of U.S.-origin goods and technical data for reasons of national security; non-proliferation of chemical/biological weapons, nuclear weapon and ballistic missile technology; antiterrorism; other foreign policy concerns and short supply.

For further inquiries regarding the list of items requiring U.S. export clearance, please contact:

Joan M. Roberts

Director, Foreign Policy Controls Division
Office of Strategic Threat and Foreign Policy Controls
Bureau of Industry & Security
U.S. Department of Commerce
Tel: 202-482-0171 or
Tel: 202-482-3772 (India point of contact)

4.6.4 Licenses Required for Imports

In the last decade, India has steadily replaced licensing and discretionary controls over imports with deregulation and simpler import procedures. The Ex-Im Policy and the Handbook of Procedures has been posted on the Internet. All public notices issued by the Directorate General of Foreign Trade (DGFT) are available on the Web site: **http://www.nic.in/eximpol** or **http://dgft.delhi.nic.in/**.

The majority of import items fall within the scope of India's Ex-Im Policy regulation of the Open General License (OGL). This means that they are deemed to be freely importable without restrictions and without a license, except to the extent that they are regulated by the provisions of the Policy or any other law for the time being in force.

Imports of items not covered by OGL are regulated, and fall into three categories: banned or prohibited items; restricted items, requiring an import license; "canalized" items importable only by government trading monopolies and subject to Cabinet approval regarding timing and quantity.

The Policy guidelines include the following:

Actual User Condition

Capital goods, raw materials, intermediates, components, consumables, spares, parts, accessories, instruments and other goods, which are importable without any restriction, may be imported by any person. However, if such imports require a license, the actual user alone may import such goods unless the Actual User Condition is specifically dispensed with by the licensing authority.

Second-Hand Goods

All second-hand goods are restricted for imports and may be imported only in accordance with the provisions of the Policy. ITC (HS), Handbook (Vol.1), Public Notice or a license issued in this behalf applies.

Import of Gifts

Imports of gifts are permitted where such goods are otherwise freely importable under the Policy. In other cases, a Customs Clearance Permit (CCP) is required.

Passenger Baggage

Household goods and personal effects can be imported as part of passenger baggage. Samples of such items that are otherwise freely importable under the Policy may also be imported as part of passenger baggage without a license. Exporters coming from abroad are also allowed to import drawings, patterns, labels, price tags, buttons, belts, trimming and embellishments required for export, as part of their passenger baggage, without a license.

Import on Export Basis

New or second hand jigs, fixtures, dies (including contour roller dies), moulds (including molds for die-casting), patterns, press tools and lasts, construction machinery, containers/ packages meant for packing of goods for export and other equipment, can be imported for export without a license by furnishing a Legal Undertaking/Bank Guarantee with the Customs Authorities.

Re-Import of Goods Repaired Abroad

Capital goods, aircraft including their components spare parts and accessories, whether imported or indigenous, can be sent abroad for repairs, testing, quality improvement or upgrading of technology and re-imported without a license.

Import of Machinery and Equipment Used in Projects Abroad

After completion of the projects abroad, project contractors may import, without a license, used construction equipment, machinery, related spares up to 20% of the CIF value of such machinery, tools and accessories. Used office equipment and vehicles may also be imported after completion of the projects abroad without a license provided they have been used for at least one year.

Sale on High Seas

Sale of goods on high seas for import into India may be made subject to the Ex-Im Policy or any other law for the time being in force.

Import under Lease Financing

Permission from the licensing authority is not required for import of new capital goods under lease financing.

Import/Export Documentation

Importers are required to furnish an import declaration in the prescribed bill of entry format, disclosing full details of the value of imported goods. This must be accompanied by any import licenses, along with documentation such as sales invoice, freight and insurance certificates. Not all consignments are inspected prior to clearance, and inspection may be dispensed with for reputable importers. In the current customs set-up, an appointment with the clearing agents for clearance purposes will avoid delays.

In general, documentation requirements, including ex-factory bills of sale, are extensive and delays are frequent. These cost investors time and money, including additional detention and demurrage charges, making it more expensive to operate and invest in India. For delayed clearances, importers seek release of shipments against a performance bond; furnishing a bank guarantee for this purpose is a more expensive proposition. Customs have recently extended operations to 24 hours a day to ensure timely clearance of export cargo.

The import of specified capital goods, raw materials, components etc from the U.S. is subject to U.S. Export Control Regulations. U.S. suppliers of such items are required to obtain an export license based on the import certificate furnished by the Indian importer to the U.S. supplier. The following are designated Import Certificate issuing Authorities:

- The Department of Electronics for import of computer and computer related systems
- The Department of Industrial Policy and Promotion for organized sector firms except for import of computers and computer based systems
- The Ministry of Defense for defense related items

- The Director General of Foreign Trade for small-scale industries not covered in the foregoing

Until March 2001, Special Import Licenses (SIL's) were granted to companies with Export Trading House status based on a percentage of their FOB export values. These could be traded on the open market and were fully transferable. SIL's were discontinued on March 31, 2001. All items that were imported under SIL's are now be importable on surrender of SIL's equivalent to 5 times the CIF value of the imported goods.

Capital goods can be imported with a license under the Export Promotion Capital Goods scheme (EPCG) at reduced rates of duty, subject to the fulfillment of a time-bound export obligation. The EPGC scheme now applies to all industry sectors. It is also applicable to all capital goods without any threshold limits, on payment of 5 percent custom duty.

A duty exemption scheme is also offered under which imports of raw materials, intermediates, components, consumables, parts, accessories and packing materials required for direct use in products to be exported may be permitted free of duty under various categories of licenses. The actual user, non-transferable advance license is one such license. For those who do not wish to go through the advance-licensing route, post-export duty-free replenishment certificate is available.

4.6.5 Customs Regulations and Contact Information

The Customs Act was formulated in 1962 to control imports and prevent illegal imports and exports of goods. Besides, all imports were subjected to an import duty aiming to protect the indigenous industries as well as to minimize the imports to secure stable exchange rate for Indian currency. Customs of duties are levied on goods imported or exported from India at the rate specified under the customs Tariff Act, 1975, as amended from time to time or any other law for the time being in force.

For the purpose of exercising proper surveillance over imports and exports, the federal government has the power to monitor the exports and imports. It can notify ports and airports for the unloading of the imported goods and loading of the exported goods. It can also check the places for clearance of goods imported or to be exported, the routes by which above goods may pass by land or inland water into or out of Indian and the ports which alone shall be coastal ports. There are several acts that control the functioning of the Indian customs. These include:

- Customs Act, 1962
- Customs Tariff Act, 1975
- Provision Collection of Taxes Act, 1931
- Foreign Trade (Development & Regulation) Act, 1992
- Foreign Trade (Regulation) Rules, 1993
- Foreign Trade (Exemption from Application of Rules in certain cases) Order, 1993
- Central Excise Act, 1944
- Central Excise Tariff Act, 1985

Contact information for Indian Customs:

Office of the Finance Minister
North Block, New Delhi
Tel: 91-11-301-2810/301-5510
Fax: 91-11-373-9367
E-mail: finmin@excise.gov.in

Office of the Finance Secretary
North Block New Delhi
Tel: 91-11-301-2611
Fax: 91-11-301-0555
E-mail: fsecy@excise.gov.in

Chairman & Special Secretary
Central Board of Excise & Customs
North Block, New Delhi –110001
Tel: 91-11-301-2849
Fax: 91-11-301-6215
E-mail: chcbec@excise.gov.in

Director General of Vigilance
Customs and Central Excise Department
2nd Floor, C.R. Building, New Delhi - 110 002
Tel: 91-11-334-4760/332-4906
Fax: 91-11-332-6982
E-mail: drivdel@excise.gov.in

Chief Commissioner of Customs (Gujarat)
Custom House, Near All India Radio
Navrangpura, Ahmedabad - 380009.
Tel: 91-79-7545730, 7542678
Fax: 91-79-7543762

Chief Commissioner of Customs (Kolkata)
Custom House, Calcutta -700 001
Tel: 91-33-220-6579/243-5655 (D)
Fax: 91-33-220-2723

Chief Commissioner of Customs (Chennai)
Commissioner of Customs (Sea Port) Custom House
Chennai - 400 001
Tel: 91-44-5268925
Fax: 91-44-5220093

Commissioner of Customs (Cochin)
Custom House, Cochin – 682009
Tel: 91-484-668068
Fax: 91-484-668468

Commissioner of Customs (Gen.)
Office of Commissioner of Customs (GEN.)
New Customs House, Near I.G.I. Airport,

New Delhi - 110 037
Tel: 91-11-5652970

Chief Commissioner of Customs (Mumbai)
Office of Commissioner of Customs
New Custom House, Ballard Estate, Mumbai – 400038
Tel: 91-22-262-0091
Fax: 91-22-261-4957

Commissioner of Customs (Kandla)
Office of the Commissioner of Customs,
Custom House, Kandla – 370210
Tel: 91-2836-70634/70244
Fax: 91-2836-80843/70627

4.6.6 Entering Temporary Imports

India's drive to attract U.S. investment is hampered by a difficulty faced by potential investors in determining if there is, in fact, a market in India for their products. Allowing temporary imports for test marketing at substantially lower tariff rates will allow these companies to analyze the market and then make informed investment decisions. U.S. companies understand and accept the need for such test marketing to be allowed on a restricted, time-bound basis.

At present, imports for demonstration and test marketing are allowed only for Indian Trade Promotion Organization-approved trade events, and then against a required bank guarantee. However, successful demonstration of a product to a customer often requires placement in his premises or elsewhere other than a trade event. There are no differential tariffs for test marketing. Approvals for imports for test marketing should be part of the company's investment application to the Foreign Investment Promotion Board (FIPB), a federal government agency, which makes the decision.

4.6.7 Special Import/Export Requirements and Certifications

Currently, all new and unused Capital Goods (CGs) are freely allowed, and no items are restricted. The importer needs an EXIM code number, and has to pay applicable customs duties. The importers also needs to provide surety and repayment liability. Although the items of import are not strictly licensable, because the exporter seeks concessions or exemption of duty, an elaborate, cumbersome export order-wise licensing procedure is prescribed. Similarly, almost all raw materials, components, parts, accessories, consumables, packing materials are freely allowed. Certain goods, though free from licensing, face certain non-tariff requirements or conditions.

An exporter can locate in a specified tax free zone, and be free to import all requirements free of tax and licensing under a one-time approval, undertaking surety procedure. In such a case, the revenue authorities strictly monitor operations.

4.6.8 Labeling Issues

Under existing law, foreign merchandise bearing any name, trademark or description must be marked with the country of origin, either on the goods, or on the containers. The bill of lading, commercial invoice and packing list required by Indian customs must show country of origin, description, quantity and value of goods. The labeling of imported goods must comply with the requirements to Rule 33 of The Standards of Weights and Measures (Packaged Commodities) Rules, 1977, appended to The Standards of Weights and Measurements Act, 1976.

The Directorate General of Foreign Trade (DGFT) in the Ministry of Commerce and Industries have mandated for all pre-packaged goods (intended for direct retail sale) imported into India to bear the following labeling declarations:

- Name and address of the importer
- Generic or common name of the commodity packed
- Net quantity in terms of standard unit of weights and measures
- Month and year of packing in which the commodity is manufactured or packed or imported
- Maximum retail sales price (mrp) at which the commodity in packaged form may be sold to the ultimate consumer

The MRP includes all taxes local or otherwise, freight transport charges, commission payable to dealers, and all charges towards advertising, delivery, packing, forwarding and the like, as the case may be. Compliance of the above-stated requirements has to be ensured before the import consignments are cleared by Customs for consumption in India.

Import of pre-packaged commodities such as raw materials, components, bulk import etc., that need to undergo further processing before they are sold to end consumers are not included under this labeling requirement.

4.6.9 Warranty and Non-Warranty Repairs

The Ex-Im Policy allows re-export of equipment for repairs and reconditioning and re-import within a specified time period. However, current procedures delay the shipment and return of parts or equipment that must be shipped abroad for repair or replacement. Shipping parts for repair requires clearance from the Reserve Bank of India (RBI), and then, Customs verification, that these parts were indeed originally imported. Since the parts are usually imported as part of a larger piece of equipment, and are not listed on the original bill, documentation and discussion can take considerable time.

Similarly, when parts are returned after repair, it is necessary to prove once again that these were the same parts that were shipped for repair, including verifying the parts' price. In many cases, it is not economical or even possible to repair the parts; consequently, replacement parts are required. But even if these items are identical models, circuit boards or parts, duty must be paid all over again on the replacements at a specified rate.

4.6.10 Free Trade Zone

Foreign investment up to 100 percent is permitted in units set up in Export Processing Zones (EPZ's), Software Technology Parks (STP's), Electronic Hardware Technology Parks (EHTP's), and to 100 percent Export Oriented Units (EOU's). New industrial undertakings set up in Free Trade Zones (FTZ's) are entitled, subject to various conditions, exemption from income tax on business income.

Approval for investment in EPZ's and FTZ's can be obtained from The Ministry of Industry and the Development Commissioners of Export Processing Zones and Free Trade Zones. EPZ's are currently set up in seven designated areas in India:

- Kandla FTZ

- Santa Cruz Electronics EPZ
- NOIDA EPZ
- Cochin EPZ
- Falta EPZ
- Vishakapatnam EPZ
- Chennai EPZ

The rationale for the FTZ scheme envisages no interference by customs authorities in order to get the best from exporters when left without any bureaucratic interference.

Contact List of Export Processing Zones

The Development Commissioner
Santa Cruz Electronics Export Processing Zone
Ministry of Commerce, Government of India
Andheri(East), Mumbai - 400 096, India
Phone: 91-22-829 0143 / 829 1754
Fax: 91-22-832 1169

Development Commissioner
Noida Export Processing Zone
Noida Dadri Road Noida-201 305
Phone: 91-118-562315(Noida)
Phone: 91-11-6855061(Delhi)
Fax: 91-118-562314

Development Commissioner
Cochin Special Economic Zone (CSEZ)
Administrative Building Kakkanad, KOCHI - 682 030
Phone: 91- 484 - 422571 / 422551 / 422545
Fax: 91- 484 - 422530

Development Commissioner
Falta Export Processing Zone,
(Govt. of India, Deptt. of Commerce)
2nd, MSO Building (4 th Floor),
Nizam Palace, Calcutta - 700 020
Phone: 91-33-247-2263, 240 4092
Fax: 91-33-247-7923

Development Commissioner,
Visakhapatnam Export Processing Zone
Duvvada, Visakhapatnam - 530046,
Andhra Pradesh,
Phone: 91-891-587555
Fax: 91-891-587352

Development Commissioner
Madras Export Processing Zone,

Chennai - 600 045. India.
Phone: 91-44-2628220, 2628230
Fax: 91-44-2628218

Development Commissioner
Kandla Free Trade Zone
Ghandhidham, Kutch 370 230, India
Tel: 91-2836-521 94
Fax: 91-2836-522 50

Of the seven EPZ's in India, the one at Santacruz is meant exclusively for the exports of electronics and gem and jewelry items. All the other zones are multi-product zones. There are currently 553 units in operation in the seven EPZ's. These broadly fall under the product groups of electronics, engineering items, chemicals and allied products, gem and jewelry, textiles, garments, plastics and rubber products.

Private customs bonded warehouses may be set up in domestic tariff areas by following the procedure laid out in chapter IX of the Customs Act 1962. Such warehouses are permitted to import items consistent with paragraph 4.15 of the Ex-Im policy, notifying the validity of import licenses and custom clearance permits. On receipt of goods, such warehouses shall keep the goods for a period of one year without payment of applicable customs duties. Goods can be cleared against a bill of entry for home consumption on payment of applicable custom duty and submission of license, wherever required, provided an order for clearance of such goods for home consumption has been made by the competent Customs authorities. The goods can also be re-exported without payment of custom duty provided:

- A shipping bill or a bill of export is presented in respect of such goods
- An order for export of such goods has been made by competent Custom authorities

4.6.11 Adherence to Free Trade Agreements

India is a participant in the Global System of Trade Preferences (GSTP), the Bangkok Agreement (BA), the South Asian Agreement for Regional Cooperation (SAARC), and the South Asian Preferential Trading Arrangement (SAPTA) under which it grants and receives tariff concessions on imports and exports. The rule of origin requirement is mandatory to avail tariff preferences. India is a signatory to the Tokyo Round Agreements on Technical Barriers to Trade, Customs Valuation, Anti-Dumping Subsidies and Countervailing Duties. According to experts, India and the USA should carefully explore possibilities for a free trade arrangement. The long-term-focused deliberations on free trade will bolster free enterprise and greater partnerships between India and the United States.

4.7 INVESTMENT CLIMATE

4.7.1 Openness to Foreign Investment

Since 1991, India has made significant progress on economic reforms. Nonetheless, foreign investment is still relatively controlled, with equity limits and government approvals required for many types of investments.

A key reform allows “automatic" FDI approval in many sectors, which means that foreign investors must notify the Reserve Bank of India (RBI) of their investments, but need not obtain government licenses or approvals. Other sectors require approval by either the Foreign Investment Promotion Board (FIPB) or the Cabinet Committee on

Foreign Investment. The rules vary from industry to industry and are frequently changed, but usually the changes have been in the direction of further de-regulation. The process is not always transparent.

The equity caps for foreign portfolio investment are equal to the FDI caps. There are no set rules specifying combination of FDI and foreign portfolio investment; in some cases foreign portfolio investment is additive to the FDI limit, while in other cases they are cumulative.

4.7.2 Sector-Specific Guidelines for Foreign Direct Investment (FDI)

Advertising and Films

100 percent FDI with automatic approval is allowed, but certain conditions apply.

Agriculture

No FDI is permitted in farming or seed business, nor may foreigners, NRI's, or OCB's own farmland. FDI up to 100 percent is permitted in tea plantations, but proposals require prior government approval. There is compulsory divestment of 26 percent equity of the company in favor of an Indian partner or the Indian public within five years.

Airport Infrastructure

FDI is allowed up to 100 percent. Approvals for up to 74 percent are automatic.

Atomic Energy

FDI is limited to 74 percent for mining and mineral separation, integration, and value addition in mining and mineral separation. FDI beyond 74 percent is approved on case-to-case basis. There are no automatic approvals.

Automobiles

In 2002 the government abolished FDI caps for the industry (100 percent FDI allowed with automatic approval), as well as local content requirements and export obligations.

Banking

FDI is limited to 49 percent for private banks, and 20 percent for state-owned banks. In each case, the foreign portfolio investment caps are equal to the FDI caps and additive to them. A regulatory rule change in 2002 gives foreign banks in India the option to operate as branches of their parent banks or as subsidiaries.

Broadcasting

FDI is limited to 20 percent, but the foreign stake may be as high as 49 percent for non-Resident Indians and Overseas Corporate Bodies.

Civil Aviation (Domestic Airlines)

FDI is limited to 40 percent for foreign non-aviation companies. No foreign airline company may make either a direct or indirect investment in an Indian domestic airline. NRIs and Overseas Corporate Bodies (OCBs) may own 100 percent of a domestic airline.

Coal/Lignite

FDI is allowed up to 100 percent in coal processing plant/power projects but limited to 74 percent for exploration and mining for captive consumption. Proposals up to 50 percent FDI are approved automatically.

Construction

Construction and maintenance of roads, highways, vehicular bridges, tunnels, ports and harbors is allowed 100 percent FDI with automatic approval, up to a ceiling of Rs.15 billion ($345 million). FDI is limited to 74 percent with automatic approval for construction and maintenance of waterways, rail beds, hydroelectric projects, power plants and industrial plants. FDI is not allowed in housing/office construction.

Defense and Strategic Industries

FDI is limited to 26 percent subject to a license from the Defense Ministry. There are no automatic approvals.

Drugs/Pharmaceuticals

FDI is allowed up to 100 percent for bulk drugs. Automatic approval is granted irrespective of the FDI limit, provided the activity does not attract compulsory licensing or use recombinant DNA technology; otherwise, an approval from the FIPB is required.

E-Commerce

FDI up to 100 percent is allowed in business-to-business e-commerce with the condition that foreign investors divest at least 26 percent to the Indian public within 5 years. FDI is limited to 49 percent under the automatic approval route. No FDI is allowed in retail e-commerce.

Food Processing

FDI is limited to 51 percent with automatic approval. Higher foreign equity must be approved by the FIPB. FDI up to 74 percent is allowed with automatic approval for cold storage facilities.

Health and Education Services

FDI is limited to 51 percent with automatic approval. Higher equity proposals need FIPB approval.

Hotels, Tourism, and Restaurants

100 percent FDI is allowed with automatic approval.

Housing/Real Estate

No FDI is permitted in retail business. NRI's and Overseas Corporate Bodies (OCBs) may invest up to 100 percent. FDI up to 100 percent is permitted for projects in development of integrated townships, including housing, commercial premises, resorts, hotels, etc.

Insurance

FDI is limited to 26 percent. Approval is automatic.

Manufacturing

100 percent FDI is allowed in manufacturing with automatic approval in textiles, paper, basic chemicals, rubber, plastic, non-metallic mineral products, metal products, ship/boat building, machinery and equipment. FDI is limited to 24 percent in a protected category reserved for "small scale industries". The manufacture or production of about 550 goods or services is restricted by law to small-scale enterprises having a capital investment of less than $206,000. Higher foreign equity may be approved if the company exports 75 percent of production.

Mining

FDI is limited to 74 percent with automatic approval for diamond and precious stone mining; 100 percent FDI is allowed with automatic approval for exploration and mining of gold/silver and other minerals, metallurgy and processing.

Non-Banking Financial Companies (Merchant banking, underwriting, portfolio management, financial consulting, stock-brokerage, asset management, venture capital, credit rating, housing finance, leasing & finance, credit card business, foreign exchange brokerage, factoring and custodial services, investment advisory services): FDI is allowed up to 100 percent with automatic approval. Capital norms are as follows: if FDI is less than 51 percent, $0.5 million needs to be brought in up front; if FDI is between 51 percent and 75 percent, $5.0 million to be brought in up front; and if FDI exceeds 75 percent, $50 million is needed, out of which $7.5 million to be brought in up front and the balance in two years. Approvals may not be used to undertake holding company operations pertaining to downstream investments.

Petroleum

Approval must be obtained from the FIPB:

Small fields	**100 percent**
Unincorporated joint venture	60 percent
Incorporated joint venture	51 percent
Refining with domestic private	49 percent
Refining with public company	26 percent
Petroleum product/pipeline	51 percent
Marketing	74 percent
LNG pipeline	100 percent
Exploration	100 percent

Pollution Control

FDI up to 100 percent is allowed with automatic approval for equipment manufacture and for consulting/management services.

Ports and Harbors

FDI is limited to 74 percent with automatic approval. 100 percent FDI is allowed for build-own-transfer projects.

Postal/Courier Services

FDI up to 100 percent is permitted in courier services. FDI in letter delivery is not allowed.

Power
FDI up to 100 percent is permitted.

Print Media
In 2002 the Government opened up the sector to foreign investment, with a 26 percent equity cap for news publications and a 74 percent cap for non-news publications.

Professional Services
FDI is limited to 51 percent in most consulting and professional services with automatic approval. Legal services are not open to foreign investment.

Railways
FDI is not allowed in rail services.

Roads & Highways and Mass Rapid Transport Systems
FDI up to 100 percent is allowed with automatic approval.

Shipping
FDI is limited to 74 percent with automatic approval for water transport services.

Telecommunications

Basic and cellular services, including national and international	49 percent
Long Distance	51 percent
Equipment manufacturing	100 percent
Global Mobile Personal Communication	49 percent
Radio paging, Internet service providers but GOI approval required for FDI above 49 pct	74 percent
ISP without international gateways	100 percent

Trading
FDI is not allowed in retail business. FDI is limited to 51 percent under the automatic route primarily for export activities. 100 percent FDI may be approved through the FIPB for some activities like bulk imports with export warehouse sales, and cash and carry wholesale trading.

Venture Capital: FDI is allowed up to 100 percent in venture capital funds (VCF) and venture capital companies (VCC) subject to Securities and Exchange Board of India (SEBI) regulations and sector specific FDI limits. VCF' and VCC' may own up to 40 percent of unlisted Indian companies. Investment in a single company by a VCF/VCC may not exceed five percent of the paid up corpus of a domestic VCF/VCC. The automatic route is not available.

4.7.3 Conversion and Transfer Policies

There are no restrictions on remittances for debt service or payments for imported inputs. Dividend remittances are permitted without RBI approval. The RBI's approval is required to remit funds from asset liquidation. Foreign partners may sell their shares to resident Indian investors.

The Indian rupee is fully convertible on the current account and the capital account for foreign investors. Non-resident Indians (NRI's) would be allowed to repatriate abroad any dividends, rents, and interests earned in India. Indian companies are allowed to make investments in joint ventures abroad up to 50 percent of their net worth without any government approval. Indian companies may make offshore investments up to $50 million annually. Indian mutual funds are permitted to invest in rated securities in other countries.

FII's may transfer funds from rupee to foreign currency accounts and vice versa at the market exchange rate. They may also repatriate capital, capital gains, dividends, interest income, and any compensation from the sale of rights offerings, net of all taxes without approval.

Indian companies having technology transfer agreements with foreign companies may remit royalties; but recurring royalty payments, such as patent licensing payments, are normally limited to eight percent of the selling price. Royalties and lump sum payments are taxed at 20 to 30 percent. Payment of royalty up to two percent on exports and one percent on domestic sales is allowed under the automatic route on the use of trademarks and brand names of the foreign collaborator without technology transfer.

Foreign banks may remit profits and surpluses to their headquarters, subject to the banks' compliance with the Banking Regulation Act, 1949. Banks may also issue credit cards without RBI approval.

4.7.4 Expropriation and Compensation

There have been few instances of direct expropriation since the 1970's. The current trend favors government disinvestment of existing publicly owned enterprises.

Five US pharmaceutical companies in business in India since the 1980's have a pending dispute regarding a GOI price control order on certain pharmaceutical products. At least three U.S. companies with investments in India's power sector are involved in compensation disputes against various Indian state governments or local electricity boards.

4.7.5 Dispute Settlement

Foreign investors frequently complain about the purported lack of "sanctity of contracts". Although Indian courts are independent, they are backlogged with unsettled dispute cases. Critics say that liquidating a bankrupt company may take as long as 20 years. India has enacted the Arbitration and Conciliation Act of 1996, based on the UNCITRAL (United Nations Commission on International Trade Law) Model Law. The Act attempts to unify the adjudication process on commercial contracts in India with the rest of the world.

India is not a member of the International Center for the Settlement of Investment Disputes, but is a member of the New York Convention of 1958.

4.7.6 Performance Requirements and Incentives

Local sourcing is generally not required. In some consumer goods industries the GOI requires the foreign party to ensure that the inflow of foreign exchange and foreign equity covers the foreign exchange requirement for imported goods.

Automobiles

In 2002 the GOI announced a new auto policy allowing automatic approval for FDI up to 100 percent without any minimum capitalization, local content norms, and export obligations. The new policy removed measures previously requiring local content and foreign exchange balancing.

Plant Location

Industrial undertakings are free to select the location of a project; in case of cities with population of more than a million, the proposed location should be at least 25 kilometers away from the Standard Urban Area limits of that city. Electronics/computer and printing or other non-polluting industries are exempt from such location restrictions. Environmental regulations and local government zoning policies can delay projects.

Employment

There is no requirement to employ Indian nationals. Restrictions on employing foreign technicians and managers have been eliminated, though companies complain that hiring and compensating expatriates is time-consuming and expensive. The RBI has raised the remittable per-diem rate from $500 to $1000, with an annual ceiling of $200,000 for services provided by foreign workers payable to a foreign firm. Employment of foreigners in excess of 12 months requires approval from the Ministry of Home Affairs.

Taxes

The government gives a 10-year tax holiday for knowledge-based industries. Most state governments also offer fiscal concessions. The export-import policy allows exporting firms duty-free import of all goods, including capital goods, a ten-year corporate income tax holiday, exemption of excise tax on capital goods, components and raw materials, and exemption of sales tax at the federal and state level.

4.7.7 Right to Private Ownership and Establishment

Depending on sectoral restrictions, foreign and domestic private entities may establish and own businesses in trading companies, subsidiaries, joint ventures, branch offices, project offices and liaison offices.

Various approvals and clearances are required. These include:

- Incorporation of the company
- Registration and allotment of land
- Permission for land use in case of industry located outside an industrial area
- Environmental site approval
- Sanction of power and finance
- Approval for construction activity and building plan

- Registration under State Sales Tax Act and Central and State Excise Acts
- Consent under the Water and Air Pollution Control Acts

Inadequate bankruptcy laws and the requirement to obtain government permission to shut down some businesses make it difficult to dispose of company assets. The Government's policy does not permit investment in real estate by foreign investors, except for company property used to do business. NRI's and OCB's are permitted 100 percent equity investment in real estate.

4.7.8 Intellectual Property Risks

The legal system puts a number of restrictions on the transfer of land, making titles sometime unclear, and often making it difficult to buy and sell land. There is no reliable system for recording secured interest in property, making it difficult to use immovable property as collateral or to foreclose against such property.

India has effective copyright laws, but enforcement is weak and piracy of copyrighted materials is widespread. India is a party to the Geneva Convention for the Protection of Rights of Producers of Phonograms and the Universal Copyright Convention, and a member of the World Intellectual Property Organization and UNESCO.

Trademark protection is good and was raised to international standards with the passage in 1999 of a new Trademark Bill that codified the use and protection of foreign trademarks and service marks. As with copyright laws, enforcement is weak.

The patent law long provided protection for patented processes but not products. However, in May 2002 the GOI amended the law to provide for product patent protection. The change does not apply to drugs, pharmaceutical, and agro-chemicals, and the new provisions on compulsory licensing and exclusive marketing rights are unclear. The amended law gives the Government the power to acquire the patentees' exclusive marketing rights on grounds of national emergency. Many U.S.-patented drugs are produced in India under unauthorized circumstances.

4.7.9 Transparency of the Regulatory System

Even though India has made much progress on economic reform since 1991, the economy is still hobbled by excessive rules and a powerful bureaucracy with broad discretionary powers. Moreover, India has a federal system of government in which the state governments possess broad regulatory powers. Regulatory decisions governing important issues such as zoning, land-use and environment can vary from one state to another. Opposition from labor unions and political parties has slowed reform in such areas as exit policy, bankruptcy, and labor law reform.

4.7.10 Capital Market Risks

Foreign Institutional Investors (FII's) may invest in all securities traded on India's primary and secondary markets, in unlisted domestic debt securities, and in commercial paper issued by Indian companies. The ceiling of an investment by FIIs is equal to the sector-specific FDI limits. Indian mutual funds may invest in rated securities in other countries. Disinvestment and repatriation of dividends are permitted after payment of capital gains taxes.

The list of eligible FII's has been expanded to include endowment funds, university funds, foundations and charitable trusts. The Securities and Exchange Board of India (SEBI) allows foreign brokers to work on behalf of registered FII's. These brokers can open foreign currency or rupee accounts to credit inward remittances, commissions and brokerage fees. The FII's can bypass brokers and deal directly with companies in open offers. Portfolio investments by non-resident Indians and Indian companies abroad, known as overseas corporate bodies, in the Indian stock markets are limited to five percent individually. Non Resident Indians may open non-resident rupee bank accounts in India. Distributed and undistributed incomes of Venture Capital Funds are tax exempted.

The National Stock Exchange in Mumbai uses a screen-based trading system. Computers and reliable telecommunications links permit automated buy/sell transactions. Other regional exchanges and the National Over-the-Counter Exchange in Delhi also have computer-trading systems. The efficiency of the capital market has improved because of the compulsory depository system for most of the stocks, abolition of the traditional speculative "badla" system of carry forward trades and introduction of derivatives trading by way of stock options and index trading. SEBI regulates all market intermediaries. Securities can be transferred through electronic book entry. The National Securities Depository Limited commenced operation in 1996 as part of the National Stock Exchange. The Bombay Stock Exchange, a regional exchange, has set up a depository system.

NRI's are allowed to repatriate dividends, rents and interest earned in India. Their bank deposits are fully convertible. FII's bank deposits are also fully convertible and they may repatriate capital, capital gains, dividends, interest income, and any compensation from the sale of rights offerings, net of all taxes without approval. A special government bond issue, the Foreign Currency Convertible Bonds Scheme, is available to NRIs only. Purchases may be up to $50 million without prior approval. Indian mutual funds are allowed to invest abroad up to $100 million per year without prior approval.

The RBI's credit policy requires a 5 percent cash reserve ratio. Cooperative banks that come under states' jurisdiction have been allowed to do away with minimum lending rate. Banks may tap domestic capital markets through a variety of instruments, such as Euro-issues, Global Depository Receipts (GDRs) and convertible bonds. The FII's are allowed 100 percent forward cover on investments made after March 31, 1999.

India's banking sector is split into three categories -- public sector banks (80 percent of the total assets in the banking system), regional private banks (6 percent) and foreign banks (about 8 percent). According to official figures, the ratio of non-performing assets to total loan assets for the 27 public sector banks was 12 percent in 2001 compared to 14.3 percent in the previous year. A Board for Financial Supervision ensures compliance with guidelines on loan management, capital adequacy, and asset classification. While domestic banks are mandated to extend 40 percent of their loans to "priority" borrowers (agriculturists, exporters, and small businesses), foreign banks are required to grant 32 percent of their loans to exporters and small businesses.

External borrowing above $50 million for Indian companies requires RBI approval. The upper limits for such debt is $200 million for 8 years and $400 million for 16 years. Companies may pre-pay up to 10 percent of outstanding debt to buy back debt at a discount.

The takeover regulations require disclosure on acquisition of shares exceeding five percent of the capital of a company. In case of acquisition of over 10 percent, the buyer must make a public offer for a minimum of 20 percent from the remaining shareholders at a fixed price. Companies may buy back their shares in the market to make inter-corporate investments. RBI and FIPB clearances are required to acquire a controlling stake in Indian companies.

4.7.11 Corruption

Corruption is a major concern. The government procurement system, especially for telecommunications, power, and defense, has been particularly subjected to allegations of corruption. Several government employees and public figures have been indicted or convicted under anti-corruption laws.

The main laws are the Prevention of Corruption Act, 1988; The Code of Criminal Procedures, 1973; The Companies Act, 1956; and The Indian Contract Act, 1872. The GOI is introducing legislative changes to its anti-corruption laws that would give additional powers to vigilance departments in government bodies and to make the Central Vigilance Commission (CVC) a statutory body.

4.7.12 Bilateral Investment Agreements

The GOI has signed bilateral investment treaties with many countries, including the United Kingdom, France, Germany and Malaysia. Negotiations on investment protection agreements are underway with other countries. The United States does not have a bilateral investment treaty with India, but the two countries do have a double taxation avoidance treaty. Several tax disputes are pending.

4.7.13 OPIC and Other Investment Insurance

The U.S. and India signed an Investment Incentive Agreement in 1997, which covers Overseas Private Investment Corporation (OPIC) programs. India is a member of the World Bank's Multilateral Investment Guarantee Agency (MIGA).

4.7.14 Labor

India has a very large pool of scientific and technical personnel. Most managers and technicians, and many skilled workers, speak English. Most multinationals recruit managerial and engineering staff locally for their Indian operations. Nonetheless, illiteracy acts as a brake on labor productivity in the workforce as a whole.

India is a member of the International Labor Organization (ILO) and adheres to 37 ILO conventions that protect workers' rights. Industrial relations are governed by the Industrial Disputes Act of 1947. Workers may form or join unions of their choice. The Factories Act regulates working conditions. Other laws regulate employment of women and children and prohibit bonded labor.

Although there are more than 7 million unionized workers, unions represent less than one-fourth of the workers in the organized sector (primarily in state-owned concerns), and less than two percent of the total work force. Most unions are linked to political parties. Worker-days lost to strikes and lockouts have declined yearly since 1991.

Payment of wages is governed by the Payment of Wages Act, 1936 and the Minimum Wages Act, 1948. Industrial wages range from about $3 per day for unskilled workers, to over $150 per month for skilled production workers. Retrenchment, closure and layoffs are governed by the Industrial Disputes Act, which requires prior government permission to layoff workers or close a businesses employing 100 or more workers. Permission is not easily obtained. Private firms have successfully downsized using voluntary retirement schemes.

The Industrial Disputes Act stipulates that employers with more than 100 employees must obtain government approval before laying-off workers. An amendment to the Act, which would increase the threshold to 1,000 workers, is pending in Parliament.

4.7.15 Free Trade Zone Options

Export Processing Zones (EPZ's)

Export Processing Zones (EPZ's) are industrial parks with incentives for foreign investors in export-oriented business. Software Technology Parks (STP's) are special zones with similar incentives for software exports. Seven EPZ's are located in Mumbai, Caclutta, Kochin, NOIDA near Delhi, Kutch, Chennai, and Vishakhapatnam. EPZ/STP units may import intermediate goods duty-free. The minimum net foreign exchange earning as a percentage of exports by EPZ/STP units is required to be at least 3 percent. EPZ/STP units may sell up to 50 percent of their level of exports on the domestic market after payment of taxes, with the exception of motor cars, alcoholic liquors, tea, books, and refrigeration units.

Export Oriented Undertakings (EOU's)

Export Oriented Undertakings (EOU's) are industrial companies established anywhere in India that export their entire production. They are allowed to import intermediate goods duty-free; have a ten-year corporate income tax holiday; are exempt from excise tax on capital goods, components and raw materials; and are exempt from sales taxes. EOU's may sell up to five percent of "seconds" on the domestic market after paying appropriate taxes.

Special Economic Zones (SEZ's)

Special Economic Zones (SEZ's) are designated duty-free enclaves with developed industrial infrastructure. These zones are regarded as foreign territory for the purpose of duties and taxes, and are excluded from the domain of the custom authorities to enjoy full freedom for the in and outflow of goods. Four SEZs have started operations since 2001 (Kandla, Mumbai, Cochin, and Surat). SEZ businesses are expected to be a positive foreign exchange earner within five years from the commencement of production. None of the FDI equity caps are applicable to units in SEZ's. There is no limit on foreign investment by SEZ units for items reserved for small-scale production, and they are exempted from the requirement of industrial licensing for these items. Indian banks may set up overseas banking units in the SEZs, but foreign banks may not do so. Although the SEZs are supposed to be self-governing with regard to many tax and regulatory laws, they are still governed by India's restrictive labor law, which some observers say is a disincentive to foreign investors.

4.8 TRADE AND PROJECT FINANCING

4.8.1 The Banking System

India has an extensive banking network, in both urban and rural areas. The banking system has three tiers. These are the scheduled commercial banks; the regional rural banks which operate in rural areas not covered by the scheduled banks; and the cooperative and special purpose rural banks. There are approximately 80 scheduled commercial banks, Indian and foreign; almost 200 regional rural banks; more than 350 central cooperative banks, 20 land development banks; and a number of primary agricultural credit societies. All large Indian banks are nationalized, and all Indian financial institutions are in the public sector. Though the banking industry is currently dominated by public sector banks, numerous private and foreign banks exist. Several public sector banks are being restructured, and in some cases the government either has already reduced, or is in the process of reducing its ownership. In terms of business, the state-owned banks account for more than 70 percent of deposits and loans. Private banks handle 17 percent of the market, and foreign banks located in metropolitan area account for approximately 13 percent of the market.

The Reserve Bank of India (RBI) is the central banking institution. It is the sole authority for issuing bank notes and the supervisory body for banking operations in India. It supervises and administers exchange control and banking regulations, and administers the government's monetary policy. It is also responsible for granting licenses for new bank branches. The Deposit Insurance and Credit Guarantee Corporation, an organization promoted and fully funded by the RBI, offers deposit insurance facilities. The RBI directs banks to meet Bureau of Indian Standards guidelines. Indian banks must also adhere to the prudential norms laid down by the Basle Group for income recognition, capital adequacy and accounting practices.

There are over 50 foreign banks operating in India with more than 200 branches, most of which are located in metropolitan centers. The entry of foreign banks is based on reciprocity, economic and political bilateral relations. Foreign banks in India are subject to the same regulations as scheduled banks. These banks finance trade and lend to large business groups. They have also diversified into merchant and retail banking, deposit mobilization from non-resident Indians, security operations, and consulting services. They account for approximately 13 percent of total deposits, and have a small exposure in the RBI’s priority lending sectors. Most Indian banks are well behind foreign banks in the areas of customer funds transfer and clearing systems. They are hugely over-staffed and are unlikely to be able to compete with the new private banks that are now entering the market. While these new banks and foreign banks still face restrictions in their activities, they are well capitalized, use modern equipment and attract high-caliber employees.

The entry of new private sector banks has led to greater competition in the market, with these banks gaining significant market shares. The private banks are highly automated and offer quality client service. Branches of the private banks are well connected and offer ATM's and other delivery interfaces. They interface with corporate customers through branches, mobile relationship managers, electronic banking and telephone banking, and also ATM's and Web banking for retail customers. Competition from private sector banks has stimulated nationalized banks to become more customer-oriented.

Indian banking financial statements conform to internationally recognized standards, but, in some cases, are modified to suit Indian conditions. The RBI issues circulars to all banks in this regard and advises banks to follow these guidelines. Banks are free to choose their auditors. Most foreign banks and the more progressive private Indian banks work with international auditing firms. Many private and GOI banks continue to work with local auditing firms whose audit reports do not conform to international standards.

Most public sector banks meet the RBI’s guideline of 9 percent capital to risk assets ratio (CAR). Branches of foreign banks must also meet the above requirements on the basis of locally held capital as well as achieve the specified levels of capital to risk assets ratio. A separate Board at the RBI, with the RBI Governor as its Chairman, performs the supervisory function in this regard. Following are the average CAR across different segments of banks.

The diminishing CAR of foreign banks indicates that their assets have grown faster than their liabilities. Also the New Private sector banks have kept their CAR well above the statutory limit to protect themselves against future tighter prudential norms relating to capital adequacy. Other banks have their CAR marginally above the others indicating low growth or higher capital requirement in the coming years.

All commercial banks face stiff restrictions on the use of both their assets and liabilities. The RBI requires that domestic Indian banks make 40 percent of their loans at concessional rates to priority sectors' selected by the government. These sectors consist largely of agriculture, exporters, and small businesses. Since July 1993, foreign banks have been required to make 32 percent of their loans to these priority sector. Within the target of 32 percent, two sub-targets for loans to the small-scale sector (minimum of 10 percent) and exports (minimum of 12 percent) have been fixed. Foreign banks, however, are neither required to open branches in rural areas nor to extend loans to the agricultural sector. The rate of non-performing loans in priority sector lending is about 30 percent higher than in non-priority lending. Over 10 percent of non-priority loans are non-performing. Further, most Indian banks lend approximately 30-40 percent of their funds to the GOI. A high demand from the GOI for credit, and the Indian banking sector’s relative lack of experience in market-based lending, continues to support lending for the Government.

The high level of bad debts and non-performing assets (NPA), particularly in public sector banks, continues to cause concern for the GOI and the banking system. The GOI has established Debt Recovery Tribunals (DRT's) to speedily settle long-pending cases related to debt recovery. The GOI has plans to strengthen the DRT's and selectively encourage banks with high NPA's to establish asset reconstruction companies to facilitate debt recovery.

The blurring in the distinction between Development Financial Institutions (DFIs) and Banks is yet another issue that requires serious attention in the Indian banking system. Given that Bank loans still account for over 75% of capital expansion of industrial India, speaks of the importance of term loans. The market needs to be structured to take care of longer-term loans, if they become the purview of banks' loans. Further, the entry of new private insurance companies would bring in changes in lending practices requiring a harmonious synthesis between DFIs, banks and insurance companies to cater to the need of industry, agriculture services and priority sectors.

4.8.2 Foreign Exchange Control Risks

The RBI sets India's exchange-control policy and administers foreign exchange regulations in consultation with the GOI. The basis of this policy was laid down in 1973 with the Foreign Exchange Regulation Act (FERA), which was completely replaced by the Foreign Exchange Management Act (FEMA) in December 1999. FEMA will focus on the management of foreign exchange and not control it. The Act seeks to promote orderly development and maintenance of the foreign exchange market in India, particularly on current account. FEMA extends to the whole of India. It applies to all branches, offices and agencies outside India owned or controlled by a person resident in India and also to any contravention thereunder committed outside India by any person to whom this Act applies.

The Act also re-defines the term 'resident Indian'. Under the new definition, any person who has lived in the country for more than 182 days during the previous financial year is considered to be a resident, but persons who have traveled to and from India for the purpose of vacation, business or employment are excluded from this definition.

Foreign companies operating in India fall under the purview of FEMA. Since 1992, all foreign companies have been on par with Indian companies and foreign-equity firms in terms of the activities they can conduct in India.

Firms may make advance payments without prior RBI approval for importing certain products such as machinery and capital goods when foreign manufacturers require down payments. Where the amount of advance remittance exceeds USD 15,000, such payments are permitted only if the importer obtains a bank guarantee from an international bank covering the advance remittance amount. The physical import of goods should normally be completed within three months of advance payment to the foreign exporter.

The RBI permits short-term credits up to 180 days only. Longer periods are allowed for deferred-payment credits, especially for capital goods, but permission must be obtained and a deferred import license is required from the Director General of Foreign Trade.

Since April 1997, companies can use forward cover from authorized dealers in foreign exchange for periods exceeding six months. Documentation requirements of banks for arranging such cover have also been drastically reduced and replaced with business projections and past performance criteria to gauge the level of exposure that is prudent. As a result of these measures, the RBI has enabled banks to arrange swaps between two borrowers without obtaining prior RBI approval.

In March 1993, India abolished its two-tiered exchange rate regime, moving to a single, market-determined exchange rate for trade transactions and inward remittances. The Rupee is convertible on current account transactions, with limits remaining on foreign exchange for travel and tourism. Capital account transactions for foreign investors, both portfolio and direct, are fully convertible. However, Indian firms and individuals remain subject to capital account restrictions.

Measures initiated by the Reserve Bank to integrate the Indian foreign exchange market with the global financial system include: permitting banks to fix their own position limit and aggregate gap limits; to borrow from and invest abroad up to 15 percent of tier I capital; and to arrange hedge risks for corporate clients through derivative instruments.

Indian companies are allowed to employ foreign nationals and make payments in foreign currency. Indian companies are also allowed to bid in foreign currencies for major projects such as oil exploration contracts and multilateral funded projects.

4.8.3 Financing Export Strategies

Sources of finance are available in general to all companies equally, whether they are Indian owned or 100 percent subsidiaries of foreign companies. The most important source for finance for the corporate sector continues to be the capital markets. However, the Indian capital markets, particularly the primary market, continue to be depressed with small investors generally shying away. Companies are not required to obtain prior permission from the GOI to access capital markets, but it is compulsory for companies to obtain RBI permission before issuing any shares to a non-resident investor. Indian companies can also issue American Depository Receipts and Global Depository Receipts without any value limits. Several steps have been taken to improve liquidity in the ADR / GDR market abroad. Two-way fundability in ADR/GDR issues has been introduced, subject to sectoral caps, wherever applicable. Indian companies are increasingly accessing overseas markets to raise finances through these instruments.

Commercial banks continue to be the main source of short-term finance and working capital requirements. Companies also raise funds by issuing commercial paper and debentures, from inter-corporate borrowings, and by accepting public deposits. Several term-lending public financial institutions provide local and foreign exchange loans for new capital investment projects. They also provide deferred payment loans, long-term working capital finance, export credit and stock underwriting services. Lending banks secure their loans with company assets, corporate guarantees from a parent company, and, in some cases, by personal guarantees from company directors.

Venture capital financing has been very active in select sectors and this is having a substantial impact on mobilization of finances for nascent, high growth sectors such as information technology and biotechnology.

Local and resident foreign companies are permitted to raise medium-to-long-term loans in foreign currency for projects requiring capital equipment, technology imports, or the purchase of aircraft or ships. The Indian government permits borrowing through suppliers' credits, buyers' credits, syndicated loans, floating-rate notes, revolving underwriting facilities and bonds. The RBI permits loans, which mature within one year to be repaid from net foreign exchange earnings without prior government approval.

Loans in foreign currencies can be obtained through foreign commercial banks, overseas financial institutions (e.g., the International Finance Corporation and the Asian Development Bank), and foreign export-credit agencies, in addition to Indian development and commercial banks. Indian companies can also raise foreign currency loans in accordance with the guidelines for External Commercial Borrowings (ECB's), issued by the Ministry of Finance. There are no restrictions on the use of such loans, except that they cannot be used for real estate or for stock market speculation. Once the RBI and Ministry of Finance have approved a loan and its terms, no limitations are placed on interest and principal payments. A firm, however, must report to the RBI through its designated banker every time an interest payment is effected.

The RBI encourages and permits, on a specific approval basis, Indian companies to receive interest-free loans from their parent companies. In addition, permission is given to receive advance share subscriptions from foreign collaborators, to be adjusted against the company's share capital for meeting pre-operative expenses in India.

Import financing procedures adhere to western business practices. The safest method of receiving payments for a U.S export is through an irrevocable letter of credit (L/C). The L/C should be payable in favor of the supplier against presentation of shipping documents through the importer's bank. Importers open L/C's valid for three to six months depending upon the terms of the agreement. The GOI does not allow advance payment for goods to be imported. Banks in India require the importer to deposit funds prior to issuance of a L/C. Typically L/C's are opened for a period of time to cover production and shipping, and they are normally paid within seven working days of the receipt of goods. There are several lines of credit available to U.S companies.

4.8.4 Availability of GSM Credit Guarantees

The U.S. Department of Agriculture administers export credit guarantee programs for commercial financing of U.S. agricultural exports. These USDA Commodity Credit Corporation (CCC) programs encourage exports to buyers in countries where credit is necessary to maintain or increase U.S. sales, but where financing may not be available without such credit guarantees.

Two programs underwrite credit extended by the private banking sector in the United States (or, less commonly, by the U.S. exporter) to approved foreign banks using dollar-denominated, irrevocable letters of credit to pay for food and agricultural products sold to foreign buyers. The Export Credit Guarantee Program (GSM-102) covers credit terms up to three years. The Intermediate Export Credit Guarantee Program (GSM-103) covers longer credit terms up to 10 years.

Under these programs, which are administered by the Foreign Agricultural Service (FAS), the CCC does not provide financing, but guarantees payments due from foreign banks. Typically, 98 percent of principal and a portion of interest at an adjustable rate is covered. Because payment is guaranteed, financial institutions in the United States can offer competitive credit terms to the foreign banks, usually with interest rates based on the London Inter-Bank Offered Rate (LIBOR). Any follow-on credit arrangements between the foreign bank and the importer are negotiated separately and are not covered by the CCC guarantee. Program announcements provide information on specific country and commodity allocations, length of credit period, and other program information and requirements.

The CCC selects agricultural commodities and products according to market potential. The CCC must qualify exporters for participation before accepting guarantee applications. An exporter must have a business office in the United States and must not be debarred or suspended from participating in any U.S. government program. Financial institutions must also meet established criteria and be approved by the CCC. The CCC sets limits and advises each approved foreign bank on the maximum outstanding amount the CCC can guarantee for that bank.

The exporter negotiates the terms of the export credit sale with the importer. If the exporter anticipates being paid at the time of shipment, the exporter and importer must work closely during negotiations with the eligible U.S. financial institution and the eligible foreign bank. This will help ensure that arrangements are firmly in place for the U.S. financial institution to pay the exporter and to extend credit to the foreign bank. Once a firm sale exists, the qualified U.S. exporter must apply for a payment guarantee before the date of export. The exporter pays a fee calculated on the dollar amount guaranteed, based on a schedule of rates applicable to different credit periods.

The CCC-approved foreign bank issues a dollar-denominated, irrevocable letter of credit in favor of the U.S. exporter, ordinarily advised or confirmed by the financial institution in the United States agreeing to extend credit to the foreign bank. The U.S. exporter may negotiate an arrangement to be paid as exports occur by assigning to the U.S. financial institution the right to proceeds that may become payable under the guarantee, and later presenting required documents to that financial institution. Such documents normally include a copy of the export report, which also must be submitted to the CCC.

If the foreign bank fails to make any payment as agreed, the exporter or assignee must submit a notice of default to the CCC. A claim for loss also may be filed, and the CCC will promptly pay claims found to be in good order. For

CCC audit purposes, the U.S. exporter must obtain documentation to show that the commodity arrived in the eligible country, and must maintain all transaction documents for five years from the date of completion of all payments.

The Supplier Credit Guarantee Program (SCGP) provides a guarantee, in the event of importers' default, on a portion of a US exporter's open account receivable. U.S. Exporters can purchase coverage for agricultural commodities or product sales where short-term credit has been extended directly to the importer. The payment obligation of the importer must be evidenced by a signed promissory note as prescribed by CCC. While the SCGP emphasizes high-value or value-added agricultural commodities, any agricultural product may be considered.

The Facility Guarantee Program (FGP) provides credit guarantees for the sale of manufactured goods and services and establishes agribusiness-related facilities overseas that primarily handle, store, distribute, or process U.S. agricultural products and commodities. The FGP assists importers in acquiring needed manufactured goods and services while protecting exporters from most of the risk of nonpayment by the foreign bank.

Market Access Program (MAP) uses funds from CCC to help U.S. producers, exporters, private companies, and other trade organizations finance both brand and generic promotional activities for U.S. agricultural, fish and forestry products. The MAP encourages the development, maintenance, and expansion of commercial export markets for these products. Activities financed include consumer promotions, market research, technical assistance, and trade servicing. Agricultural trade organizations, cooperatives, state departments of agriculture, and small businesses may submit applications for participation.

For further information, U.S. companies may contact:

Program Planning, Development, and Evaluation Division
Export Credits
FAS-USDA
Stop 1034
1400 Independence Ave. SW
Washington, DC 20250-1034
Tel: (202) 720-4221
Fax: (202) 690-0251

Also, general information about FAS programs, resources, and services is available on the Internet at the FAS home page: **http://www.fas.usda.gov**.

Availability of loan guarantees, insurance and project financing from U.S. Ex-Im Bank, OPIC and the international financial institutions (IFI's).

4.8.5 The Export-Import Bank of the United States (Ex-Im Bank)

The Export-Import Bank of the United States (Ex-Im Bank) is an independent U.S. Government agency that helps finance the overseas sales of U.S. goods and services. In 65 years, Ex-Im Bank has supported more than $300 billion in U.S. exports. Ex-Im Bank's mission is to create jobs through exports. It provides guarantees of working capital loans for U.S. exporters, guarantees the repayment of loans or makes loans to foreign purchasers of U.S. goods and services. Ex-Im Bank also provides credit insurance that protects U.S. exporters against the risks of non-payment by foreign buyers for political or commercial reasons. Ex-Im Bank does not compete with commercial lenders, but assumes the risks they cannot accept. It must always conclude that there is reasonable assurance of repayment on every transaction financed.

Ex-Im Bank provides a level playing field for U.S. exporters by countering the export credit subsidies of other governments. It also provides financing to creditworthy private and sovereign foreign buyers when private financing is unavailable. To qualify for Ex-Im Bank support, the product or service must have at least 50 percent U.S. content and must not affect the U.S. economy adversely. Ex-Im Bank supports the sales of U.S. exports worldwide. In recent years, its focus has shifted to the developing nations whose economies are growing at twice the rate of the industrial nations. Ex-Im Bank will finance the export of all types of goods or services, including commodities, as long as they are not military-related (certain exceptions exist). Two of its major goals are to increase the export of environmental goods and services, which are in strong demand among the developing nations, and to expand the number of U.S. small businesses using Ex-Im Bank programs.

Ex-Im's outstanding loans in India are much lower than other developing countries like China and Indonesia. To better serve the Indian market, EXIM has announced up to USD 1 billion of support for rupee loans aimed at small and medium-sized Indian companies. Ex-Im has signed a memorandum of understanding with India's Power Finance Corporation for up to USD 500 million in Ex-Im support for transactions involving U.S. exports of energy-related technologies. U.S. exporters can obtain an Ex-Im Bank Letter of Interest (LI) to assist in negotiations with a potential foreign buyer. The LI indicates Ex-Im’s willingness to consider a financing offer if a sale is completed. A LI can be issued within seven days of a request for financing and remains in effect for six months. The following are descriptions of the main Ex-Im Bank programs:

Working Capital Guarantee Program

Ex-Im Bank's Working Capital Guarantee Program encourages commercial lenders to make loans to U.S. businesses for various export-related activities. The program facilitates the expansion of U.S. exports. It helps small and medium-sized businesses that have exporting potential but need funds to buy or produce goods, and/or to provide services, for export. It may be used to cover working capital loans to a U.S. business if the lender shows that the loan would not have been made without Ex-Im Bank's guarantee, and Ex-Im Bank determines that the exporter is creditworthy. Ex-Im Bank's working capital guarantee covers 90 percent of the loan's principal and accrued interest. Guaranteed loans must be fully collateralized. Exporters must demonstrate a successful track record of past performance including at least one full year of operations and a positive net worth. Financial statements must show sufficient strength to accommodate the requested debt. Exporters may apply directly to Ex-Im Bank for a preliminary commitment for a guarantee. If approved, the exporter may then approach various lenders to secure the most attractive loan package. A preliminary commitment is valid for six months. The lender must apply for the final commitment. Ex-Im Bank imposes no interest rate ceilings or maximum fee limitations; however, lenders should take into account that 90 percent of the risk is covered by an agency of the U.S. Government and price their loans accordingly.

The Export Credit Insurance Program

The Export Credit Insurance program helps U.S. exporters develop and expand their overseas sales by protecting them against loss should a foreign buyer or other foreign debtor default for political or commercial reasons. To encourage the export of U.S. goods and services, Ex-Im Bank has tailored its policies to meet the insurance needs of exporters and financial institutions. For example, insurance policies may apply to shipments to one buyer or to many buyers, insure comprehensive (commercial and political) credit risks or only specific political risks, or cover short-term as well as medium-term sales. Three policies, the Small Business Policy, the Small Business Environmental Policy and the Umbrella Policy, are geared specifically to small businesses just beginning their export sales program. Eligibility criteria differ for each type of policy.

Medium- and Long-Term Loans and Guarantees

Under the Medium-Term Guarantee Program, the lender's loan to the foreign buyer is guaranteed by Ex-Im Bank. Because Ex-Im Bank approves the documentation before the guarantee is effective, the lender is assured that a claim will be paid if presented within the time allowed. The interest rate charged is negotiated between the lender and the buyer. Ex-Im Bank's guarantee includes accrued interest. Usually the approach to Ex-Im Bank is made by the lender or the foreign buyer. In very rare situations, usually at the insistence of the foreign buyer, Ex-Im Bank will use its Direct Loan Program to make a loan from its own resources to the foreign buyer. All such loans have a fixed interest rate which is based on U. S. Treasury securities and is the lowest allowed under international agreement. Under Ex-Im Bank's standard repayment terms, exporters of capital goods can obtain 2-year repayment terms for their buyers with a U.S. contract value up to $80,000. Once the level reaches $350,000, 5-year repayment terms can be offered. For exporters that are facing competition from other exporters backed by foreign-aid type financing from their governments, Ex-Im Bank may match their financing. Exporters of environmental goods and services are eligible for additional benefits in the financing to the foreign buyer.

Credit Guarantee Facility (CGF) Program

In order to facilitate the sale of U.S. capital goods and related services, Ex-Im Bank has established the Credit Guarantee Facility (CGF) Program. Credit guarantee facilities are lines of credit between a bank in the U.S. and a foreign bank (or occasionally a large foreign buyer). Ex-Im Bank guarantees the repayment of the foreign bank's obligations. The foreign bank then makes credit available to the end user of the U.S. exports and takes the repayment risk of that local company. Financing is restricted to repayment terms of two to five years. Exports typically sold on shorter terms are not covered under such facilities. U.S. exporters do not need to go through the Ex-Im Bank application process. They should direct their buyers to an on-lending bank in their country to obtain the credit. The U.S.-based bank will disburse to the U.S. exporter. Since the lines are pre-approved and individual transactions do not require Ex-Im Bank's review, the process can move very quickly.

Project Finance Program

Ex-Im Bank offers limited recourse project finance support to assist U.S. exporters competing in international growth industries. The Limited Recourse Finance Program provides financing for projects that are dependent on the cash flows of the project for repayment rather than on the credit strength of a purchaser. Combinations of either direct loans or guarantees for commercial bank loans with political risk only or comprehensive coverage are available for a given project. During the construction period, Ex-Im will provide guarantees to cover only political risk and will finance up to 85 percent of the export value. Ex-Im offerings also include: the financing of interest accrued during construction; the financing of host country local costs of up to 15 percent of the U.S. contract value; and the provision of maximum repayment terms under OECD guidelines.

Aircraft Finance Program

Ex-Im Bank offers financial support for the export of new and used U.S. manufactured commercial and general aviation aircraft, including helicopters, under its direct loan, guarantee, and insurance programs. The terms and conditions of Ex-Im Bank`s aircraft programs are governed by the OECD Sector Understanding on Export Credits for Civil Aircraft. Ex-Im Bank typically provides guaranteed loans that have been extended by a financial institution to either the borrower directly or to facilitate a finance lease. In India, this program assumes an added significance since aircraft finance accounts for bulk of the Ex-Im Bank's exposure in India.

4.8.6 The Overseas Private Investment Corporation (OPIC)

OPIC's mission is "to mobilize and facilitate the participation of United States private capital and skills in the economic and social development of less developed countries and areas, and countries in transition from non-market to market economies, thereby complementing the development assistance objectives of the United States…" OPIC accomplishes this mission by assisting U.S. investors through four principal activities designed to promote overseas investment and reduce the associated risks:

- Insuring investments overseas against a broad range of political risks;
- Financing of businesses overseas through loans and loan guaranties;
- Financing private investment funds that provide equity to businesses overseas; and

- Advocating the interests of the American business community overseas.

As part of its overall mission, OPIC advocates on behalf of U.S. business clients that have made long-term investments in emerging markets and developing nations. OPIC also works with host country governments to help create economic climates that attract U.S. investment, facilitating the entry of hundreds of U.S. businesses into new markets abroad. The Overseas Private Investment Corporation's political risk insurance and loans help U.S. businesses of all sizes invest and compete in more than 140 developing nations and emerging markets and worldwide. OPIC is a self-sustaining agency. By charging user-fees, OPIC operates at no net cost to U.S. taxpayers. Over the agency's 29-year history, OPIC has supported $138 billion worth of investments that will generate $63.6 billion in U.S. exports and create nearly 250,000 American jobs. All of OPIC's guaranty and insurance obligations are backed by the full faith and credit of the United States of America.

OPIC offers several programs to insure U.S. investments in emerging markets and developing countries against the following risks:

- Currency inconvertibility - the inability to convert profits, debt service, and other investment remittances from local currency into U.S. dollars
- Expropriation--the loss of an investment due to expropriation, nationalization, or confiscation by a foreign government
- Political violence--the loss of assets or income due to war, revolution, insurrection, or civil strife

Coverage is available for new investments and for investments to expand or modernize existing operations. Equity, debt, loan guarantees, leases and most other forms of long-term investment can be insured. Special programs are also available for contractors, exporters, and oil and gas projects.

Medium-to-long-term financing for sound overseas investment projects is available through loan guarantees and direct loans. Direct loans generally range from USD 2 million to USD 30 million and are reserved exclusively for projects significantly involving U.S. small businesses and cooperatives. Loan guarantees generally range from USD 10 million to USD 200 million. OPIC's financing commitment may range from 50 percent of total project costs for new ventures up to 75 percent for the expansion of existing successful operations, with final maturities of five to 12 years or more. OPIC also supports a family of privately managed direct-investment funds in various regions and business sectors.

OPIC has a current profile of $917.5 million in India, which is helping to leverage an additional $7.3 billion in investment. OPIC has not made any recent investments in India and is primarily working to protect its exposure in the Enron-promoted Dabhol power project.

4.8.7 Trade and Development Agency

Since the U.S. Trade and Development Agency's inception in 1981, it has been associated with approximately $16.8 billion in exports -- or nearly $40 in exports for every dollar invested in TDA activities. TDA is a small, independent federal agency. TDA, through the Trade Promotion Coordinating Committee (TPCC), works closely with the Department of Commerce, The Export-Import Bank, the Overseas Private Investment Corporation, and other export promotion agencies to advance American business interests abroad.

TDA assists in the creation of jobs for Americans by helping U.S. companies pursue overseas business opportunities. Through the funding of feasibility studies, orientation visits specialized training grants, business workshops, and various forms of technical assistance, TDA enables American businesses to compete for infrastructure and industrial projects in middle-income and developing countries. As a core priority, TDA promotes U.S. partnerships in high priority overseas projects. TDA is increasing its international representation by opening offices in Thailand and

South Africa. These strategically located satellites join existing TDA presence in Croatia and Turkey. The office in Thailand will also serve India.

The primary activity of TDA is grant funding of feasibility studies, consulting studies, and other project planning services for major projects in developing countries. The studies are conducted by U.S. private sector firms and represent a wide range of host government high-priority sectors including agribusiness, educational technology, electronics, energy, mineral development, telecommunications, transportation, and waste management. Feasibility studies assess the economic, financial and technical viability of a potential project. The host country must hire U.S. firms to undertake detailed studies of the technical and economic feasibility of the proposed projects. TDA maintains trust funds at six multilateral development banks (MDB's): the World Bank, the International Finance Corporation, the European Bank for Reconstruction and Development, the Inter-American Bank, and its private sector arm, the Inter-American Investment Corporation, and the African Development Bank. These funds can be used for technical assistance and for feasibility studies. Most of these are known as “Evergreen Funds”. TDA maintains a minimum balance that is readily available to fund project opportunities for firms or to help U.S. businesses take advantage of time-sensitive projects.

TDA provided more than $ 3 million in funding projects in India during FY01. TDA signed six feasibility study grants during the period amounting to nearly $ 2.5 million. In addition, TDA sponsored two conferences and two orientation visits for India. Over the years, the most active sectors for TDA have been refining, mining and minerals, power, chemicals / petrochemicals, environment, and telecommunications.

4.8.8 Asian Development Bank

Asia's premier non-profit financial institution, the Asian Development Bank (ADB), is headquartered in Manila, Philippines. ADB was founded in 1966 and is owned by 60 member countries, including India, third largest shareholder among the bank's regional members, and fourth largest overall. The United States and Japan are the largest shareholders, currently with 13% voting power each. The Bank's regional membership extends from South Asia to the Far East, through the Pacific Islands up to Central Asia. Portugal joined in 2001.

The ADB’s major objective is the promotion of the social and economic well being of its developing member countries in Asia and the Pacific. This is achieved by lending funds to projects involving agriculture, energy, industry, transportation, and communication, as well as for social infrastructure projects such as water supply, sewage, and sanitation, education, health and urban development. The ADB also invests in, and lends to, the private sector for Build-Own-Operate (BOO) and Build-Operate-Transfer (BOT) infrastructure, industrial and capital market development projects and mobilizes additional resources through co-financing arrangements, including the bank’s credit enhancement instruments such as guarantees and complementary financing schemes.

ADB's lending portfolio generates commercial opportunities in borrowing countries for consultants, equipment suppliers, contractors, banks and project sponsors from the bank's member countries. For many American companies, ADB projects represent an attractive opportunity for business in Asia. ADB projects are especially appealing because they are fully financed and bid according to international competitive guidelines. In addition, participation in an ADB-funded project often leads to other related work in that country.

Aside from its public sector operations, ADB also lends directly to the private sector where its participation serves to mobilize further investments for projects that have a high developmental impact. In India, ADB's private sector lending has reached well over $200 million, mostly for financial institutions, as well as for a power company.

ADB maintains a resident office in New Delhi as well as a field office in Gujarat. ADB maintains other resident and field offices in Bangladesh, Cambodia, China, Indonesia, Laos, Kyrgyz Republic, Nepal, Pakistan, Sri Lanka, Vietnam, Vanuatu, Uzbekistan, Kazakhstan and Mongolia. The bank also maintains representative offices in Tokyo, Washington D.C., and Frankfurt.

The U.S. Department of Commerce maintains a Congressionally mandated Commercial Liaison Office for the ADB (CS ADB). The Office's mission is to help American firms access, enter and expand in Asian markets that benefit from ADB assistance. The office provides counseling, advocacy, project information, and conducts outreach programs in the region as well as in the U.S. to help U.S. firms take advantage of commercial opportunities in countries borrowing from the ADB.

To perform its mandate, the office cooperates with the U.S. Director's Office at ADB and works closely with Commercial Service posts in the region. An American Senior Commercial Officer heads the office, assisted by two Commercial Specialists. One, a Commercial Environmental Specialist, is funded by the US-Asia Environmental Partnership (US-AEP) and focuses exclusively on environment projects in South and Southeast Asia, including Hong Kong and Taipei. CS/ADB invites American firms to work with it in pursuing ADB commercial and infrastructure project development opportunities.

4.8.9 The World Bank

The World Bank Group is one of the world's largest sources of development assistance. It works in more than 100 developing economies with the primary focus of helping the poorest people and the poorest countries.

The establishment of a World Bank Resident Mission in New Delhi in 1957 was a sign of the importance that the Bank attached to its relations with India. The New Delhi Office is today the oldest, continuously functioning local office. The Delhi-based India country director is responsible for the Bank's strategy in India and manages the annual budget for the country program. About one-third of the Bank's operations in India are now task-led by Delhi-based staff, of which more than half are managed by national staff. The World Bank's New Delhi office has an active public information center with a large collection of World Bank and other publications on India and international development, and documents on projects financed by the Bank.

India is one of the single largest borrowers of World Bank and IDA funds. In recent years, the World Bank’s IBRD has been giving support for India’s economic policy reforms and expanded social and environmental programs. Future World Bank projects in India under consideration are designed to promote sustainable economic growth in the areas of power, highways, environment management, urban development, social infrastructure, health and financial services. The top 10 Indian states in order of IBRD/IDA commitment to India are:

- Maharashtra
- Tamil Nadu
- Orissa
- Uttar Pradesh
- Karnataka
- Andhra Pradesh
- Haryana
- Madhya Pradesh
- Punjab
- West Bengal

4.8.10 International Finance Corporation (IFC)

IFC, a part of the World Bank Group, promotes private sector investment, both foreign and domestic, in developing member countries. Its investment and advisory activities are designed to reduce poverty and improve people's lives in an environmentally and socially responsible manner. Its work includes activities in some of the riskiest sectors and countries. IFC serves as an investor and an honest broker to balance each party's interest in a transaction, reassuring foreign investors, local partners, other creditors, and government authorities. IFC advises businesses entering new markets and governments trying to provide a more hospitable business environment, to create effective and stable financial markets, or to privatize inefficient state enterprises.

IFC resumed new business in India in 1999, after a lull in project approvals stemming from the international economic sanctions imposed after nuclear testing in May 1998. Among those receiving IFC support were India's first private coal mine, a joint venture in the tractor industry and a compact disc recordables firm. Priorities remain to exploit synergies between private infrastructure development and financial markets.

4.8.11 The Multilateral Investment Guarantee Agency (MIGA)

MIGA, a member of the World Bank group, supplements the activities of the IBRD; IFC and other international development finance institutions. It complements the activities of national and regional development insurance through coinsurance and reinsurance agreements with these institutions, bilateral exchanges of information, and its membership in the Berne Union. MIGA issues guarantees against noncommercial risks for investments in its developing member countries. MIGA guarantees cover the following risks: currency transfer, expropriation, war and civil disturbance and breach of contract by a host government.

4.8.12 U.S. Banks

American Express Bank Ltd.
Mr. W. Roderick Richards
Chief Executive Officer
Maker Chamber IV, 7th Floor
Nariman Point
Mumbai 400 021, India
Telephone: 91-22-287 2686
Fax: 91-22-287-2968

Bank of America
Mr. Vishwavir Ahuja
Chief Executive Officer
Express Towers
16th Floor, Nariman Point
Mumbai 400 021.
Telephone: 91-22-2323001
Fax:91-22-2870981

Chase Manhattan Bank
Mr. Dominic Price
Chief Executive Officer
Mafatlal Centre, 9th Floor
Nariman Point, Mumbai 400 021, India

Telephone: 91-22-286-3100; 281-6110 (D)
Fax: 91-22-202-7772; 286-3198 (D)

Citibank N.A.
Mr. Nanoo Pamnani
Chief Executive Officer
Citicorp Centre, 5th Floor, Plot C-61
Bandra Kurla Complex
G Block, Bandra (East)
Mumbai 400 051
Telephone: 91-22-653-5757; 653-5888(D)
Fax: 91-22-653-5859

Mr. F. Carl Reinhardt
Regional Business Development Manager
Overseas Private Investment Corporation
1100 New York Avenue, N.W.
Washington, D.C. 20527
Tel: 202-336-8799
Fax: 202-336-8700
Web site: **www.opic.gov**

Mr. David Chavern
Vice President
Export-Import Bank of the United States
811 Vermont Avenue, N.W., Office 911
Washington, D.C. 20571
Tel: 202-565-3579
Fax: 202-565-3932
Web site: **www.exim.gov**

Mr. Geoff Jackson
Regional Director
U.S. Trade and Development Agency
1611 North Kent Street, Suite 200
Arlington, VA 22209 - 2131
Tel: 703-875-4357
Fax: 703-875-4009
Web site: **www.tda.gov**

4.8.13 Regional MBD/IFI Offices

Mr. Louis DeJonghe
Resident Representative
Asian Development Bank
4, San Martin Marg
Chanakyapuri
New Delhi 110 021, India
Tel: 91-11-4107200
Fax: 91-11-6870955
E-mail: adbinrm@adb.org

Web Site: **http://www.adbindia.org**

Stewart Ballard
Senior Commercial Officer
U.S. Commercial Liaison Office for ADB (CS/ADB)
American Business Center
25th Floor, Ayala Life-FGU Building
6811 Ayala Avenue,
Makati City, Philippines 1226
Tel: (632) 887-1345
Fax: (632) 887-1164

ADB North American Representative Office
730 Pennsylvania Avenue
Suite 975, Washington, D.C. 2006
Tel: 202-626-0050
Fax: 202-626-0055
E-mail: adbnaro@mail.adb.org

Mr. Dimitris Tsitsiragos
Director South Asia
International Finance Corporation
1 Panchsheel Marg
Chanakyapuri
New Delhi 110 001, India
Tel: 91-11-611-1306/611-1563
Fax: 91-11-611-2278/611-1281

Mr. Michael F. Carter
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The World Bank
70 Lodi Estate
New Delhi 110 003 India
Tel: 91-11-461-7241/461 9491Ext. 271
Fax: 91-11-461-9393/462 8074

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1818 H Street, N.W.
Washington, D.C. 20433
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4.9 TRAVEL ISSUES

4.9.1 Local Business Practices

India is five and one-half hours ahead of Greenwich Mean Time (GMT). It has not adopted summer time (daylight saving time) and uses standard time countrywide throughout the year.

Time Difference between India and the United States

Eastern Standard	Eastern Daylight	India
8:00 a.m.	7:00 a.m.	4:30 p.m.
12:00 noon	11:00 a.m.	8:30 p.m.
10:30 p.m.	9:30 p.m.	7:00 a.m.

New Delhi is nine hours thirty minutes ahead of Washington, D.C., during daylight savings time and 10 hours 30 minutes ahead of Washington, D.C., during standard time. Due to the uncomfortable time difference, many business executives find communication via e-mail, automatic fax machines or the Internet a practical and convenient alternative to real time voice communications.

Work Week

The standard six-day working week is Monday through Friday, 9:30 a.m. to 5:30 p.m., with a half-day on Saturday. However, the trend in the corporate sector is to work a five-day week. Central Government offices are closed on Saturdays. Banking hours are between 10:00 a.m. and 2:00 p.m. on weekdays and 10:00 a.m. to 12:00 noon on Saturdays. In Mumbai, however, banks are open weekdays from 11:00 a.m. to 3:00 p.m. and on Saturdays from 11:00 a.m. to 1:00 p.m. In major metropolitan cities, several foreign and Indian-owned banks are beginning to provide 24-hour banking services. Stock exchange trading hours in Mumbai is 10:00 a.m. to 3:30 p.m., Monday to Friday.

Social Practices

India is a secular, democratic nation without a state religion. The Indian Constitution protects the freedom of religion, although some 80 percent of the population consider themselves living in accordance with Hindu beliefs. It is considered polite in India to inquire about dietary preferences, since Hindus abstain from beef, Muslims abstain from pork, and Indians of many religions practice vegetarianism. U.S. visitors can learn more about social attitudes and dietary preferences by watching Indian movies and reading guide books and novels. English-language guidebooks include:

- South Asia. Lonely Planet Guides, 1993 (and later editions)
- Fodor's India. Fodor, 1994 (and later)
- The South Asia Handbook, 1997.

Indian authors writing in English provide U.S. reader's insights into life and society in India. Some recent novels and travel narratives include:

- Naipaul, V.S., A Million Mutinies Now, 1990.
- Seth, Vikram, A Suitable Boy, 1993.
- Mehta, Geeta, Karma Cola, 1995.
- Mistry, Rohinton, A Fine Balance, 1996.
- Mehta, Geeta, Snakes and Ladders, 1997.

4.9.2 Travel Advisories

Country Description

India is an economically developing democratic republic. Tourist facilities varying in degree of comfort and amenities are widely available in the major population centers and main tourist areas.

Entry/Exit Requirements

A passport and visa are required for entry into India for tourism or business. All visitors, including those on official U.S. Government business, must obtain visas at an Indian Embassy or Consulate abroad prior to entering the country. There are no provisions for visas upon arrival, and those arriving in India without visas bearing the correct validity dates and number of entries are subject to deportation. The U.S. Embassy in New Delhi can offer very little assistance when U.S. citizens arrive without visas.

When a U.S. citizen is issued a replacement passport in India after a passport has been lost or stolen, he/she must take the replacement passport to the Foreigners Regional Registration Office (FRRO) to receive an exit visa. The exit visa allows the traveler a specified period of time (usually a few days) in which to leave the country legally. Depending on the circumstances and the duration of the stay requested, various fees may be charged. There is a Rs. 500 departure tax for all travelers.

For further entry information, the traveler can contact the Embassy of India at 2536 Massachusetts Avenue N.W., Washington, D.C. 20008, telephone (202) 939-9849 or 939-9806 or the Indian consulates in Chicago, New York, San Francisco, and Houston. The Internet address of the Embassy of India is **http://www.indianembassy.org**. Outside the United States, inquiries should be made at the nearest Embassy or Consulate of India.

The Department notes that the high level of tension between India and Pakistan that existed at the end of May and the beginning of June has further subsided. This condition reflects continuing diplomatic activity and a return to normalcy in most aspects of public and economic life in India. However, a military presence on both sides remains in place along the Line of Control in Kashmir and the risk of renewed tensions remains high in that area.

As always, U.S. citizens who travel to or reside in India should monitor the media for existing conditions and should obtain updated information from the U.S. Embassy or the nearest Consulate.

The Department recommends that Americans avoid travel to all border areas between India and Pakistan, including the border regions within the states of Gujarat, Punjab, and Rajasthan, and in all of the state of Jammu & Kashmir. The Indian Government has closed land and air links with Pakistan. Military movements continue along the Line of Control in Kashmir. Terrorist groups, some of which are linked to al-Qaeda and have previously been implicated in attacks on Americans, are active in India and have attacked and killed civilians. Citizens should therefore exercise vigilance when in the vicinity of government installations, visiting tourist sites, or attending public events throughout India.

U.S. Embassy and Consulate Contacts

U.S. citizens are urged to register and obtain updated security information at the Embassy or the nearest Consulate. The location and phone numbers of the U.S. Embassy and the Consulates General in India are as follows:

U.S. Embassy in New Delhi
Shantipath, Chanakyapuri
New Delhi 110021
Tel: 91-11-2419-800
Fax: 91-11-2419-0017

Web site: **http://usembassy.state.gov/posts/in1/wwwhmain.html**

U.S. Consulate General in Mumbai
Lincoln House
78 Bhulabhai Desai Rd.
Mumbai 400026
Tel: 91-22-2363-3611
Fax: 91-22-2363-0350
Web site: **http://usembassy.state.gov/mumbai**

U.S. Consulate General in Chennai
220 Anna Salai
Chennai 600006
Tel: 91-44-811-2000
Fax: 91-44-811-2027
Web site: **http://usembassy.state.gov/chennai**

U.S. Consulate General in Calcutta (also known as Kolkata)
5/1 Ho Chi Minh Sarani
Calcutta 700071
Tel: 91-33-2282-3611
Fax: 91-33-2282-2335
Web site: **http://usembassy.state.gov/calcutta**

Americans traveling and residing abroad should regularly monitor the Department's Internet Web site at **http://travel.state.gov**, where further general information regarding travel to India may be found. Please see also the current Worldwide Caution Public Announcement.

Terrorism

In July 1995, several western tourists, including two Americans, were kidnapped by terrorists in Kashmir. One hostage was brutally murdered and one escaped. The remaining hostages, including one American, have not been released and their whereabouts are unknown. In 1994 several tourists, including an American, were held for weeks by Kashmiri militants before police rescued them. Since January 1996, New Delhi has been the site of a dozen terrorist bombing attacks, some with multiple explosive devices (four exploded in October 1997 alone). These bomb blasts have occurred in public places, as well as on public transportation (common carriers), such as trains and buses. There was a terrorist attack on the Indian Parliament building on 13 December 2001 that resulted in a number of casualties. Travelers are advised to increase their vigilance near key government installations, while visiting tourist sites or attending major public events in India. While no U.S. citizens were among the victims, other foreign visitors have been reportedly injured. There is no pattern that has emerged in these attacks, nor is there any indication that they are directed against foreigners in general or Americans in particular. Nevertheless U.S. citizens should be alert to suspicious packages in public places, and avoid crowds, political demonstrations, and other manifestations of civil unrest.

4.9.3 Areas of Instability

Civil Disturbances

Major civil disturbances can pose risks to a traveler's personal safety and can disrupt transportation systems and city services. In response to such violence, Indian authorities may occasionally impose curfews and restrict travel. Political rallies and demonstrations in India have the potential for violence, especially during periods immediately preceding and following elections. In addition, the potential exists for religious and inter-caste violence. While such violence has not usually specifically targeted foreigners, mobs have attacked Christian workers, including foreigners. Missionary activity has aroused strong reactions in some areas and an Australian missionary and his two sons were murdered by a mob in the eastern state of Orissa in January 1999. Nevertheless, the principal risk for foreigners appears to be that of becoming inadvertent victims. U.S. citizens should contact the U.S. Embassy or the nearest U.S. Consulate for further information about the current situation in areas where they wish to travel.

Kashmir

The Department of State strongly urges private U.S. citizens to avoid all travel to the Kashmir valley and Doda district of the state of Jammu and Kashmir. American and other western tourists were taken hostage (and at least one murdered) in Kashmir by terrorists in 1995. In 1999 the terrorist organization Harakat-ul-Mujahideen issued a ban on Americans, including tourists, visiting Kashmir. Within the state, the Leh district of the Ladakh region has been largely unaffected by terrorist violence. Srinagar, the Kashmir valley and Doda district of Jammu remain very dangerous places where terrorist activities and violent civil disturbances continue. U.S. government employees are prohibited from traveling to the state of Jammu and Kashmir without permission from the U.S. Embassy in New Delhi.

Western India

Serious communal violence occurred in the State of Gujarat in Western India in February – April 2002. Violent incidents resulted several hundred people killed. Curfews were imposed in some areas for a limited time. Travelers are advised to exercise caution and to monitor developments through the media before confirming travel arrangements.

Northeast States

Sporadic incidents of violence by ethnic insurgent groups, including the bombing of buses and trains, are reported from parts of Assam, Manipur, Nagaland, Tripura, and Meghalaya. While U.S. citizens have not been specifically targeted, visitors are cautioned not to travel outside major cities at night. Security laws are in force, and security personnel have been deployed by the central government in New Delhi to several northeast states. Travelers may check with the U.S. Consulate in Calcutta for information on current conditions.

India-Pakistan Border

Tensions run high between India and Pakistan, particularly over Kashmir. The only official India-Pakistan border crossing point is between Atari, India, and Wagah, Pakistan. A Pakistani visa is required for entry into Pakistan.

Both India and Pakistan claim an area of the Karakoram Mountain range that includes the Siachen Glacier. The two countries have military outposts in the region, and armed clashes have occurred. Because of this situation, U.S. citizens traveling to or climbing peaks anywhere in the disputed areas face significant risk of injury and death. The disputed area includes the following peaks:

- Rimo Peak
- Apsarasas I, II and III
- Tegam Kangri I, II and III
- Suingri Kangri
- Ghiant I and II
- Indira Col

- Sia Kangri

Restricted Areas

Permission from the Indian government (from Indian diplomatic missions abroad or in some cases from the Ministry of Home Affairs) is required to visit the states of Mizoram, Manipur, parts Nagaland, Arunachal Pradesh, Sikkim, parts of Kulu district and Spiti District of Himachal Pradesh, parts of Jammu and Kashmir, areas of Uttar Pradesh, the area west of National Highway no. 15 running from Ganganagar to Sanchar in Rajasthan, the Andaman and Nicobar Islands, and the Union Territory of the Laccadive Islands.

4.9.4 Crime Information

Petty crime, especially theft of personal property, can occur. However, violent crime directed at foreigners is rare, though some Westerners, including Americans, have been robbed. Violent attacks have resulted in serious injuries, and in one recent case, death. The common thread for serious attacks on foreign travelers has been that the individuals were on their own, usually in remote areas.

The loss or theft of a U.S. passport abroad should be reported immediately to local police and the nearest U.S. Embassy or Consulate. U.S. citizens may refer to the Department of State's pamphlets. A Safe Trip Abroad and Tips for Travelers to South Asia for ways to promote a more trouble-free journey. The pamphlets are available by mail from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20420; via the Internet at **http://www.access.gpo.gov/su_docs**, or from the Bureau of Consular Affairs home page at **http://travel.state.gov**.

4.9.5 Health

Medical Facilities

Adequate medical care is available in the major population centers, but is usually limited in the rural areas of the country. Doctors and hospitals often expect immediate payment in cash for health services. The Medicare/Medicaid program does not provide for payment of medical services outside the United States. Serious medical problems requiring hospitalization and/or medical evacuation can be extremely costly.

Medical Insurance

Check with your own insurance company to confirm whether your policy applies overseas, including provision for medical evacuation. Ascertain whether payment will be made to the overseas hospital or doctor or whether you will be reimbursed later for expenses you incur. Some insurance policies also include coverage for psychiatric treatment and for disposition of remains in the event of death. Useful information on medical emergencies abroad, including overseas insurance programs, is provided in the Department of State, Bureau of Consular Affairs brochure Medical Information for Americans Traveling Abroad, available on the Bureau of Consular Affairs Internet Web site or by auto fax at (202) 647-3000.

Other Health Information

Information on vaccinations and other health precautions may be obtained from the Centers for Disease Control and Prevention's international traveler's hotline at telephone 1-877-FYI-TRIP (1--877-394-8747); fax 1-888-CDC-FAXX (1-888-232-3299), or by visiting the CDC Internet Web site at **http://www.cdc.gov**.

4.9.6 Travel Conditions

While in a foreign country, U.S. citizens may encounter road conditions that differ significantly from those in the United States. The information below concerning traffic safety and road conditions in India is provided for general reference only, and may not be totally accurate in a particular location or circumstance.

Safety of public transportation	Poor
Urban road condition/maintenance	Poor
Rural road condition/maintenance	Poor
Availability of roadside assistance	Poor

Traffic moves on the left in India. Travel by road in India can be dangerous. Outside major cities, main roads and highways are poorly maintained and always congested. Even main roads often have only two lanes, with poor visibility and inadequate warning markers. Heavy traffic, including overloaded trucks and buses, scooters, pedestrians, and livestock, is the norm. Travel at night is particularly hazardous. In March 1996, a tour bus crashed at night near the city of Agra, claiming the lives of five Americans. A number of other Americans have suffered fatal accidents in recent times.

For specific information concerning Indian driver's permits, vehicle inspection, road tax and mandatory insurance, contact the Indian National Tourist Organization Offices via the Internet at **http://www.tourisminindia.com**.

Aviation Safety Oversight

The U.S. Federal Aviation Administration (FAA) has assessed the Government of India's Civil Aviation Authority as Category 1 -- in compliance with international aviation safety standards for oversight of India's air carrier operations. For further information, travelers may contact the Department of Transportation within the U.S. at 1-800-322-7873, or visit the FAA's Internet Web site at **http://www.faa.gov/avr/iasa.htm**. The U.S. Department of Defense (DOD) separately assesses some foreign air carriers for suitability as official providers of air services. For information regarding the DOD policy on specific carriers, travelers may contact the DOD at 1-618-229-4801.

Piloting Civil Aircraft

In past years, there have been a number of incidents in which civil aircraft have been detained for deviating from approved flight plans. U.S. citizens piloting civil aircraft in India must file any changes to previous flight plans with the appropriate Indian authorities and may not fly over restricted airspace.

4.9.7 Legal Issues

Drug Penalties

Travelers are subject to the laws and legal practices of the country in which they travel. Penalties for possession of, use of, or trafficking in illegal drugs are strictly enforced. Convicted offenders in India can expect a minimum jail sentence of 10 years and fines.

Customs Considerations

Indian customs authorities strictly enforce the laws and regulations governing the declaration, importation, or possession of gold and gold objects. Travelers have sometimes been detained for possession of undeclared gold objects. It is advisable to contact the Embassy of India in Washington or one of India's consulates in the U.S. for specific information on customs requirements.

Criminal Penalties

While in a foreign country, a U.S. citizen is subject to that country's laws and regulations, which sometimes differ significantly from those in the United States and may not afford the protections available to the individual under U.S. law. Penalties for breaking the law can be more severe than those in the United States for similar offenses. Persons violating Indian laws, even unknowingly, may be expelled, arrested or imprisoned. Penalties for possession of, use of, or trafficking in illegal drugs in India are strict, and convicted offenders can expect jail sentences and heavy fines.

4.9.8 Infrastructure for Conducting Business

Transportation

Public transportation is available seven days a week in India. The most developed intra-city network is available in Mumbai with an elaborate railway and bus network in addition to private taxicabs and auto-rickshaws in the suburbs. Calcutta, Chennai and Delhi are among the other major cities with public transportation facilities.

The Indian Railways is virtually the lifeline of the country, catering to both freight and passenger traffic on a gigantic scale, covering 62,915 kilometers (38,752 miles). It is Asia's largest, and the world's fourth-largest railway system under a single management.

The central government is responsible for the upkeep and development of an elaborate national highway system and state governments maintain state highways, district roads and rural roads. Road transport in the country is fairly well developed, with nearly 60 state surface-mass-transportation systems deploying a fleet of about 100,000 vehicles. Freight traffic on the roads is also fairly high. The private sector almost entirely prefers using roads to using the railways.

India has a fairly well developed maritime transportation industry, with the sixteenth-largest fleet in the world. The growth of coastal shipping was, in the past, hindered by poor port or landing infrastructure. However, with the advent of economic liberalization, the industry is now growing and the government is ambitiously developing coastal shipping. India has 11 major ports on its east and west coasts, including the technically up-to-date ports in Chennai and Mumbai. India has 22 intermediate ports and 139 minor ports. The major ports in Mumbai, Chennai, and Calcutta are strategically located near the major east-west shipping lanes.

The Country's official international Air carrier is Air India. India's major domestic airline, Indian Airlines, also operates on certain international routes. As a consequence of the open sky policy introduced under economic liberalization, several private airlines operate on certain major trunk routes. India has bilateral air-service agreements with nearly 60 countries and about 42 foreign airlines operate nearly 260 services to and from India.

Communications

Telephone, telex, facsimile and electronic mail (Internet) services are available in India. The Indian telecommunications sector is equipped to handle approximately 27 million lines. The telecommunications network is growing at an annual rate of 20 percent.

India has more post offices than any country in the world. The country is divided into 19 postal circles under the Postal Services Board and is supported by a network of more than 152,792 post offices with over 136,000 of the offices in rural areas. India is a member of Universal Postal Union (UPU), the Asian Postal Union (APPU), and the Conference of Commonwealth Postal Administration (CCPA). An International Speed Post Service operated by public-sector postal authorities connects 39 countries. Major international courier companies are also well represented in India.

Housing

Houses and apartments are available in the major metropolitan areas and in large and medium-size towns. Housing costs tend to be higher in areas closer to central business districts and lower in the suburbs. Apartments and houses are usually available for rent for maximum renewable periods of 11 months. Deposits equivalent to 10 or 15 times the monthly rent are generally required.

The annual cost of residential property in the major cities ranges from USD 140 up to USD 9,300 per square meter in areas close to central business districts. Exclusive residential areas command premiums that may be larger. In the suburbs, annual rates vary from USD 232 per square meter to USD 2,325 per square meter.

Leisure and Tourism

Recreational leisure facilities in urban areas are generally restricted to exclusive clubs. Most of the major cities boast a handful of these clubs. Beach resorts and hill stations are available for leisure activities within reasonable proximity of major cities. Major cities also have golf courses, tennis courts, and cricket pitches.

Additional leisure facilities include several wildlife and game sanctuaries, winter sports facilities in the northern region, and water sports facilities in beach towns. The States of Goa, Kerala, Maharashtra, Orissa, Tamil Nadu have attractive beaches, that are popular destinations for visiting foreign tourists.

Several of world's largest hotel and motel chains have a presence in India, as do certain leading time-share resort groups.

Medical Services

India has a fairly widespread and reasonably well-developed network of medical facilities, but services are hampered by a shortage of doctors, midwives, nurses, and laboratory technicians, especially at primary health centers functioning in rural areas. Government statistics (1999) show that the number of registered doctors per 100,000 persons is approximately 50, and that there are more than 15,000 hospitals and 28,000 dispensaries. According to estimates, India has approximately 22,000 primary health centers and 2,600 community health centers. Private enterprises and trusts operate a well-developed infrastructure of hospitals and polyclinics in major metropolitan areas and in small and medium-size towns. These facilities are equipped with modern equipment and know-how.

Food

Special care should be taken while eating food in India. It is safe to consume food at five star hotels. If well-cooked, hot food is eaten, most food borne infections can be avoided. Raw fruits should be eaten only when they have unbroken skin and are peeled. Raw vegetables and salads should be avoided, because they are often contaminated with parasite cysts or worm eggs. Scrubbing green leafy vegetables, soaking them in a proper chlorine solution, and then rinsing them in boiled water should eliminate most, but perhaps not all, parasites. Potassium permanganate (Pinky's solution) and quaternary ammonium compounds such as Roccal are not recommended for soaking vegetables. Unless dairy products are known to be hygienically prepared and properly refrigerated, they should be avoided. Even if refrigerated, custards, cream pastries, potato salads, and shellfish should be avoided. These are all excellent vehicles for growth of pathogenic organisms that cause food poisoning. When fresh fruits and vegetables cannot be obtained or eaten, multivitamin supplementation should be taken. Eating raw or undercooked local beef, pork, or fish can lead to trichinosis, tapeworm, or fluke infections. Smoking, salting, pickling, or drying meat or fish alone is not effective in killing parasites. Heating meat or fish to at least 55 degrees Centigrade for 1 hour or freezing at minus 10 degree Centigrade for 20 days will kill parasites.

Language

The official language of the Indian Union is Hindi. It is also the language spoken by the largest number of people in India. However, 18 other major languages and 700 dialects are spoken. English has become a sort of “lingua franca” and is the accepted language for business and government.

Entering Temporary Imports

Laptop computers can be hand-carried into India. However, visitors should ensure that on arrival, these are endorsed by customs authorities in their passports on arrival in India, along with their serial number. This is the most practical way for a visitor to bring a laptop into India without payment of duty. At the time of departure, ensure that a customs officer deletes the endorsement from the passport. There is a nil rate of import duty on software. Therefore, software can be brought into India without any problems, provided it is a licensed copy. Imports for demonstration and test marketing are allowed only for Indian Trade Promotion Organization-approved trade events, and then against a required bank guarantee. Imports for private demonstration of equipment are not allowed. Imports under ATA carnet are also not allowed. Imports of exhibits (including the construction and decorative materials) that are required for display at international exhibitions and trade fairs are permitted for a period of six months on a re-export basis. A certificate from an Under Secretary in the Ministry of Commerce or an office of the Indian Trade Promotion Organization (ITPO) is required, stating that the exhibition is approved by the GOI and is being held in the public interest.

U.S. firms that plan to participate in international trade shows in India should contact the U.S. Embassy’s Commercial Service for assistance with importing exhibits duty-free in India. In lieu of a bank guarantee, Commercial Service offices provide an Embassy bond to facilitate the duty free entry for an American exhibitor’s material into India. For issuing such a bond, an indemnity letter from the participating U.S. firm to comply with Indian customs regulations, and a fee of USD 75 is payable to U.S. Embassy to cover administrative costs.

4.9.9 Country Data

People

Population: 1,029,991,145 (July 2001 est.)

Age structure:

- 0-14 years: 33.12% (male 175,630,537; female 165,540,672)
- 15-64 years: 62.2% (male 331,790,850; female 308,902,864)
- 65 years and over: 4.68% (male 24,439,022; female 23,687,200) (2001 est.)

Population growth rate: 1.55% (2001 est.)

Birth rate: 24.28 births/1,000 population (2001 est.)

Death rate: 8.74 deaths/1,000 population (2001 est.)

Net migration rate: 0.08 migrant(s)/1,000 population (2001 est.)

Sex ratio:

- At birth: 1.05 male(s)/female

- Under 15 years: 1.06 male(s)/female
- 15-64 years: 1.07 male(s)/female
- 65 years and over: 1.03 male(s)/female

Total population: 1.07 male(s)/female (2001 est.)

Infant mortality rate: 63.19 deaths/1,000 live births (2001 est.)

Life expectancy at birth:

- Total population: 62.86 years
- Male: 62.22 years
- Female: 63.53 years (2001 est.)

Nationality:

- Noun: Indian(s)
- Adjective: Indian

Ethnic groups:

- Indo-Aryan 72%
- Dravidian 25%
- Mongoloid and other 3%

Religions:

- Hindu: 81.3%
- Muslim: 12%
- Christian: 2.3%
- Sikh: 1.9%
- Buddhist: 0.7%
- Jains: 0.5%
- Other: 1.3%

Languages:

- English enjoys associate status, but is the most important language in national, political, and commercial communications. Hindi is the national language and primary tongue of 30 percent of the people.
- India’s other official languages are: Bengali, Telugu, Marathi, Tamil, Urdu, Gujarati, Malayalam, Kannada, Oriya, Punjabi, Assamese, Kashmiri, Sindhi and Sanskrit. Hindustani, a popular variant of Hindi/Urdu is spoken widely throughout northern India.
- Note: There are 24 languages, each spoken by a million or more persons; numerous other languages and dialects are, for the most part, mutually unintelligible

Literacy:

- Definition: Age 15 and over who can read and write
- Total population: 52%
- Male: 65.5%
- Female: 37.7% (1995 est.)

Political Data

Country name:

- Conventional long form: Republic of India
- Conventional short form: India

Government type: Federal republic

Capital: New Delhi

Administrative divisions: 29 states and 6 union territories(*); Andaman and Nicobar Islands*, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chandigarh*, Dadra and Nagar Haveli*, Daman and Diu*, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Karnataka, Kerala, Lakshadweep*, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry*, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, West Bengal, Jharkhand, Uttaranchal, Chattisgarh.

Independence: 15 August 1947 (from U.K.)

Constitution: 26 January 1950

Other

Legal system: Based on English common law; limited judicial review of legislative acts; accepts compulsory ICJ jurisdiction, with reservations

Suffrage: 18 years of age; universal

Length of work week: Monday to Saturday. Many offices work half day on Saturday. Government offices are closed on Saturday.

4.10 KEY CONTACTS

Mr. Geoff Jackson
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U.S. Trade and Development Agency
1611 North Kent Street, Suite 200
Arlington, VA 22209 - 2131
Tel: 703-875-4357
Fax: 703-875-4009
Web site: **www.tda.gov**

Mr. F. Carl Reinhardt
Regional Business Development Manager
Overseas Private Investment Corporation
1100 New York Avenue, N.W.
Washington, D.C. 20527
Tel: 202-336-8400
Fax: 202-408-9859

Mr. David Chavern
Vice President
Export-Import Bank of the United States
811 Vermont Avenue, N.W.
Washington, D.C. 20571
Tel: 202-565-3579
Fax: 202-565-3584

Dr. Michael Clark
Executive Director
U.S.-India Business Council
U.S. Chamber of Commerce
1615 H. Street, N.W.
Washington, D.C. 20062-2000
Tel: 202-463-5492
Fax: 202-463-3173
E-mail: india@us-india.org

Mr. James Robb
Trade Information Center (Room 7424)
U.S. Department of Commerce
14th and Constitution Avenue, NW
Washington, D.C. 20230
Tel: 1-800-872-8723 or 202-482-0543
Fax: 202-482-4473

India Sanctions Hotline
Tel: (202)482-2955
http://www.mac.doc.gov/India

Bureau of Industry & Security
(Formerly Bureau of Export Administration)
Exporter Counseling Division
Tel: (202) 482-4811

4.10.1 Important Web Sites of U.S. Organizations

U.S. Department of Commerce
www.mac.doc.gov

Bureau of Industrial Security Administration (BXA)
www.bxa.doc.gov

U.S. Department of Commerce

Department of Treasury
www.ustreas.gov

State Department
www.state.gov

Export-Import Bank of the United States
www.exim.gov

Overseas Private Investment Corporation (OPIC)
www.opic.gov

United States Agency for International Development
www.info.usaid.gov

U.S. Trade & Development Agency
www.tda.gov

The U.S. Commercial Service
www.export.gov
www.buyusa.com

4.10.2 U.S. Embassy Contacts

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The Commercial Service
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Fax: 91-80-220-6405
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Fax: 91-79-656 0763
E-mail: Ahmedabad.Office.Box@mail.doc.gov

P. Radhakishore
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The Commercial Service
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#555, E Level, Road No. 1, Banjara Hills
Hyderabad 500 034
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Fax: 91-40-3309030
E-mail: Hyderabad.office.box.@mail.doc.gov

4.10.3 Chambers of Commerce

Mr. Tarun Das
Director General
Confederation of Indian Industry (CII)
23-26 Institutional Area
Lodi Road
New Delhi 110003, India
Tel: 91-11-462-9994; 463-3168
Fax: 91-11-463-3168; 462-6149
E-mail: cii@co.cii.ernet.in
www.Ciionline.org

Dr. Amit Mitra
Secretary General
Federation of Indian Chambers of Commerce & Industry (FICCI)
Federation House, Tansen Marg
New Delhi 110001, India
Tel: 91-11-373-8760-65; 331-5442
Fax: 91-11-372-1504; 332-0714

Mr. Raghu Mody
President
The Associated Chambers of Commerce
& Industry of India (ASSOCHAM)
11, Community Center
Zamrudpur, New Delhi 110 048
Tel: 91-11-629-2321, 629-2310-13
Fax: 91-11-645-1981, 629-2319
www.assochem.org
E-mail: assochem@sansad.nic.in

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PHD House, Opp.Asian Games Village
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www.indous.org

Mr. Larry D'Souza
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Web site: **www.bombaychamber.com**

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Fax: 91-22-204-8508
E-mail: imc@imcnet.org
www.incnet.org

4.10.4 Trade Associations

Mr. Kiran Karnik
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National Association of Software and Service Companies (NASSCOM)
International Youth Centre
Teen Murti Marg
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New Delhi - 110021, India
Tel: 91-11-301-0199
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www.nasscom.org

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www.mait.com

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4.10.5 Government Agencies

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www.nic.in

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TPCC Trade Information Center
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United States Trade Representative
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