

Financing Firms in India *

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Abstract

We examine legal and business environments, financing channels, and governance mechanisms of various types of firms in India. Despite its English common-law origin, strong legal protection provided by the law and a democratic government, corruption and inefficiencies within India’s legal system and government significantly weaken investor protection in practice. Accordingly, firm financing has been dominated by internal sources and non-market, relationship-based channels such as trade credits, while firm characteristics, especially those of the small and medium enterprises (SMEs), resemble those from countries with weak investor protection. Our evidence, including results based on surveys of private firms in the SME sector, also shows that informal governance mechanisms, such as those based on reputation, trust, and relationships, are more important than formal mechanisms in resolving disputes, enforcing contracts, and overcoming corruption. Finally, the SME sector, relying on informal financing and governance mechanisms, has grown faster than large scale firms, which operate in environments with stronger legal protection and have better access to formal financing.

Keywords: India, law and finance, institutions, informal mechanisms, SME sector.

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I. Introduction

Understanding mechanisms that contribute to sustainable long-term growth has long been one of the central missions for economists. In recent years, several related strands of literature in law, finance and economic growth have significantly advanced our knowledge of growth mechanisms. First, based on cross-country studies, the law and finance literature (pioneered by La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1997, 1998; LLSV hereafter) finds that countries with the English common-law (French civil-law) origin provide the strongest (weakest) legal protection to both shareholders and creditors, and that stronger legal protection of investors is associated with more efficient institutions and better financial and economic ‘outcomes’. A second strand of literature champions the view that the development of a financial system that includes a stock market and financial intermediation contributes to a country’s overall economic growth (e.g., McKinnon, 1973).¹ The third strand provides evidence for the link among law, finance, and growth at the country, industry, and firm level (e.g., Demirgüç-Kunt and Maksimovic, 1998; Levine, 1999; Beck and Levine, 2002).

In this paper, we examine the legal and business environments, financing channels and governance mechanisms of firms in the second largest emerging economy in the world, India. At the end of 2005, with a population of almost 1.1 billion (second largest behind China), India had the world’s fourth largest economy measured in Purchasing Power Parity (PPP) terms (see Table 1). During the period 1990 to 2005, India’s GDP (in PPP terms) had an annual growth rate of 7.9%, second highest among the world’s largest economies.

With its English common-law origin, legal protection of investors in India is one of the strongest on paper in the world. For example, India has a perfect score on the Creditor Rights index (4 out of 4),² and scores 5 out of 6 for the Anti-Director Rights index, the highest among more than 100 countries studied in Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2005; hereafter DLLS). Moreover, India has had a British-style judicial system and a democratic government for a long time. Given the implications from the law and finance literature, it is perhaps natural to attribute India’s recent economic performance to its superior investor protection by the law. However, we find that the level of *effective* legal protection is weak in India due to corruption and inefficiencies

¹ Recently, researchers have strengthened this view by presenting supporting empirical evidence at the country level (e.g., King and Levine, 1993; Levine and Zervos, 1998), as well as at the industry and firm level (e.g., Rajan and Zingales, 1998; Jayaratne and Strahan, 1996).

² This score was revised from 4/4 in LLSV (1998), which was based on the Company’s Act (1956), to 2/4 in DMS (2005), which was based on the Sick Industrial Companies Act (1985).

within its legal system and government.³

In order to understand why weak investor protection and institutions have not slowed down growth at firm-level and economy-wide in India, we examine large samples of firms of various types, including surveys of *private* firms from two regions in the small- and medium-enterprises sector (SME). We find that Indian firms, especially those in the SME sector, rely on informal mechanisms, such as those based on reputation, trust and relationships, rather than formal mechanisms, to resolve disputes and overcome corruption, while the financing of firm growth is predominantly based on non-market and non-bank channels including trade credits and other relationship-based sources. Overall, our results suggest that formal legal protection and institutions have played a limited role for firms in India, while informal mechanisms, serving as institutional ‘substitutes,’ have been much more effective behind the success of Indian firms and economy.

Our empirical results on the ownership structure, financing channels, corporate governance, and growth of Indian firms are based on two data sets. The first is a sample of over 2,700 non-financial firms compiled from the Prowess database of Centre for Monitoring Indian Economy (CMIE), comprising large (mainly state-owned and/or listed) corporations and large SME firms. We find that the equity ownership is highly concentrated within the founder’s family and/or the controlling shareholder, similar to that of firms from other Asian countries (e.g., Claessens, Djankov, and Lang 2000; Claessens, Djankov, Fan, and Lang 2002). When compared to listed firms studied in LLSV (2000b, 2002), the dividend payout and valuation (as measured by market-to-book ratios) of Indian firms are much lower compared to similar firms operating in countries with strong investor protection, but similar to those listed firms in countries with weak protection.

The characteristics of large corporations versus smaller, SME firms within the Prowess sample also reveal the existence of a “dual economy” in India. For example, as compared to large firms, the SME firms are on average much more closely-held, rely (proportionally) less on internal financing and more on trade credits, indicating limited access to formal financing. They also have considerably lower dividend payout ratios than the larger firms. Overall, SME firms exhibit stronger signs of those from a low investor protection regime than the large firms. However, SME firms have recorded significantly higher growth rates (both in terms of sales and size of assets) than large firms, and this finding holds in both manufacturing and services industries.

³ Other studies also document this. For example, DLLS (2005) construct the anti-self-dealing index (control of corporate insiders) for more than 100 countries. India’s score of 0.55 (out of 1) is lower than the average (0.67) of English common-law countries.

The contrast between the SME sector and large firms prompted us to conduct a more in-depth analysis of financing, governance, and growth mechanisms within the SME sector. To overcome the lack of publicly available firm-level data for most of such firms, we conduct surveys among 213 entrepreneurs and executives of SMEs located in and around the southern Indian city of Hyderabad (76 firms) and the Delhi-Gurgaon area in northern India (136 firms). Our survey firms operate in manufacturing industries with the median size of (book) assets in the range of \$0.22 to \$1.1 million. These firms range in age from less than one year to 85 years (median is 19 years), and employ two to 350 workers (median is ten).

Our survey evidence demonstrates that firms rely mostly on informal financing sources such as the firms' founders and executives' families, friends, and business partners, often without a formal contract, to finance their investment, operations, and growth. The results from Ordered Probit regressions show that the proportion of informal finance to total finance increases significantly as the costs of accessing formal financing (as measured by the requirements and contingency conditions for receiving bank and institutional credit) increase. Not surprisingly, smaller firms depend more on informal financing than larger firms, consistent with evidence from other countries (e.g., see Petersen and Rajan (1994) and Berger and Udell (1995, 1998) for evidence on small U.S. firms).

Our survey evidence also indicates that informal mechanisms are much more important than legal remedies and formal institutions in resolving disputes and enforcing contracts. For example, when asked about the consequences of delay or cessation of payments and breach of contracts, the respondents rank loss of future business opportunities, reputation and personal assets as main concerns, while fear of legal remedies is the least important. When asked who would be the best mediator for disputes (multiple choices allowed), 46% of the respondents specify "mutual friends and business partners" and 26% specify a non-government organization like a trade association as their top choice, and only 20% of respondents choose "going to courts." When asked how a firm ensures payments, 53% of the respondents screen their business partners carefully so that such issues do not occur, while 59% say they would go to courts but would leave the option of negotiations open. Finally, when asked about government regulatory authorities (e.g., obtaining a license to start a business), our survey indicates that corruption is part of doing business. The two most common methods to overcome corruption are bribes and using friends of government officials.

Our paper contributes to and extends the literature on law, institutions, finance, and growth.

Our results indicate that India provides a significant counterexample to most of the existing literature. First, India provides a case study that protection in practice can be very different from protection on paper; more importantly, firm-level evidence reveals that strong legal protection is not necessary for growth as long as there exist effective ‘institutional substitutes.’ Second, proponents of institutional development argue that a country’s institutions, in particular, those political economy institutions restraining the government and powerful elites, determine the country’s long-run economic growth (e.g., Rajan and Zingales 2003b; Acemoglu and Johnson 2005). However, the cost of improving these formal institutions (and the legal system) can be prohibitively high for emerging countries during early stages of growth.⁴ In this regard, our evidence from India shows that high growth is possible without well-functioning political economy institutions. Finally, in contrast to the finance and growth literature, our evidence on the relative importance of financing channels illustrates that formal financing channels based on markets and banks are not necessary for firm growth as long as informal financing sources pick up the financing slack.

Many existing studies use cross-country data sets and examine one or two dimensions of the sample countries’ legal and financial systems with the focus on formal governance mechanisms and financing channels, and in the process treat each country on an equal-weight basis. We might expect that, compared to large and diverse countries (e.g., India and China), small homogeneous economies (e.g., Hong Kong and Singapore) could have more effective formal legal and financial institutions because they can be tailored to these countries’ needs at low costs. By contrast, our paper provides a more comprehensive view of the financial system *within* the second largest developing country, and finds that many results based on existing cross-country studies to a large degree do not apply to India. In particular, informal governance mechanisms and financing channels, ignored in most of the existing studies, seem to be the main driver for growth in India.

Recently, other single-country studies have helped us better understand the complex relationships among law, institutions, and finance in a given country.⁵ In particular, Allen, Qian, and Qian (2005, hereafter AQQ) demonstrate that China has one of the largest and fastest growing economies despite its poor legal and financial systems and a corrupt and autocratic government. On the one hand, our study on India complements the AQQ (2005) paper in that alternative financing

⁴ For example, Djankov, McLiesh and Shleifer (hereafter DMS, 2005) find that, despite apparent significant economic benefits from reform, there is very little time variation of creditor rights over the past 25 years around the globe.

⁵ For example, Franks et al. (2005) study the evolution of investor protection, equity financing, and corporate ownership in the U.K. over the 20th century and conclude that formal regulations had little impact on equity issues and dispersion of ownership and that financial development in the U.K. relied more on informal relations of trust.

channels and informal governance mechanisms, rather than legal protection and political institutions (e.g., lack of government corruption) documented in most of the existing literature, have supported the growth of private firms in both of these countries. Given the status of these two countries (as of 2005, China and India have a combined population of 40% of the world and their combined GDPs in PPP terms equal to 19% of the world total), the findings from both papers call for more research to better understand whether similar “substitute” mechanisms that work well in China and India have also supported the growth of firms in other economies where formal mechanisms are ineffective. On the other hand, our paper differs from the AQQ paper in part because India presents a distinctively different case from China. Transiting from a socialist system to a market-based system, China had no formal legal system and associated institutions in place when its economy began to take off in the 1980s. Endowed with the English common-law origin, India’s formal legal and financial systems are among the best in the developing world, yet our paper shows that the formal systems are of limited importance for the majority of firms in the country.

Survey methodology and evidence provide the basis of a number of important results of the present study, and have made significant contributions to the law, institutions, finance and growth literature in general.⁶ For example, the World Bank has carried out a series of country- and firm-level surveys on the business environment in more than 80 countries, including both India and China (e.g., Cull and Xu 2005). Our survey differs from the World Bank surveys in two important aspects. First, the main goal of the World Bank surveys is to examine the degree of “convergence” of institutional development in emerging countries toward institutions in developed countries (in particular, the U.S.), while our goal is to uncover and analyze factors that can be effective for extended periods in supporting firm- and economy-wide growth. Second, our surveys provide comprehensive and detailed information on all the financing channels (standard and alternative) and governance mechanisms (formal and informal) at different stages for non-state, non-listed firms, which have been generally overlooked in the literature.

The rest of the paper is organized as follows. Section II provides background information on India. Section III describes the size and growth of the different sectors of the Indian economy. We also examine the financing patterns, valuation, and dividend policies of firms using secondary data in Section III. Section IV presents our survey results of small- and medium-scale firms. Section V concludes. Appendix A contains the explanations of all the variables used in the paper.

⁶ For example, DLLS (2003) conduct worldwide surveys on the efficiency of judicial systems, while Johnson, McMillan, and Woodruff (2002) conduct firm-level surveys in economies of transition on property rights and finance.

II. India – An Overview

II.1 The Indian Economy

The second most populated country in the world (1.11 billion), India currently has the fourth largest economy in PPP terms, and is closing in at the heels of the third largest economy, Japan (Table 1). At independence from the British in 1947, India inherited one of the world's poorest economies (the manufacturing sector accounted for only one tenth of the national product), but also one with arguably the best formal financial markets in the developing world, with four functioning stock exchanges (the oldest one predating the Tokyo Stock Exchange) and clearly defined rules governing listing, trading and settlements; a well-developed equity culture if only among the urban rich; a banking system with clear lending norms and recovery procedures; and better corporate laws than most other erstwhile colonies. The 1956 Indian Companies Act, as well as other corporate laws and laws protecting the investors' rights, were built on this foundation.

After independence, a decades-long turn towards socialism put in place a regime and culture of licensing, protection and widespread red-tape breeding corruption. In 1990-91 India faced a severe balance of payments crisis ushering in an era of reforms comprising deregulation, liberalization of the external sector and partial privatization of some of the state sector enterprises. For about three decades after independence, India grew at an average rate of 3.5% (infamously labeled "the Hindu rate of growth") and then accelerated to an average of about 5.6% since the 1980's. The growth surge actually started in the mid-1970s except for a disastrous single year, 1979-80. As we have seen in Table 1, the annual GDP growth rate of 7.9% during 1990-2005 is the second highest among the world's largest economies, behind only China's 11.8%.

In 2004, 52% of India's GDP was generated in the services sector, while manufacturing (agriculture) produced 26% (22%) of GDP. In terms of employment, however, agriculture accounts for about two-thirds of the half a billion labor force, indicating both poor productivity and widespread underemployment. Over 90% of the labor force works in the "unorganized sector."⁷

II.2 Law, Institutions and Business Environment

The most striking fact about India's legal system is the difference between investor protection provided *by the law* as opposed to protection *in practice*. Table 2 (panels A and B)

⁷ According to the official definition, the unorganized sector is comprised of: 1) all the enterprises except units registered under Section 2m(i) and 2m(ii) of the Factories Act, 1948, and Bidi and Cigar Workers (condition of employment) Act, 1966; and 2) all enterprises except those run by the government (central, state and local bodies) or Public Sector Enterprises.

compares India's scores relative to the world, different legal-origin country groups, and other emerging markets on several different dimensions of law and institutions. As discussed above, with the English common-law system, India has strong protection of investors on paper. For example, the scores on both creditor rights (Table 2-A, with a score of 4/4 in LLSV (1998), based on the Company's Act of 1956, to 2/4 in DMS (2005), based on the Sick Industrial Companies Act of 1985) and shareholder rights (5/6 in Table 2-A) are the highest of any country in the world.

Table 2-B also compares law enforcement and the quality of institutions in India and other countries. We did not use the measures from LLSV (1998) because they are dated and do not accurately capture the current protection of investors in India. We employ four sets of up-to-date and widely used measures for our purpose. First, corruption is a major systemic problem in many developing countries and is of particular importance for India. Studies by the World Bank (*World Development Report 2005*) have found that corruption was the number one constraint for firms in South Asia and that the two most corrupt public institutions identified by the respondents in India (as well as in most countries in South Asia) were the police and the judiciary. Based on Transparency International's 2005 Corruption Perception Index, India has a score of 2.9 out of 10 (a higher score means less corruption), which ranked 88 out of 140 countries (with the range being 1.5 to 9.7), and the ranking relative to other countries has not improved much over the past ten years.⁸

Next, we have two measures for the quality of accounting systems. The disclosure requirements index (from 0 to 1, higher score means more disclosure; LLS 2006) measures the extent to which listed firms have to disclose their ownership structure, business operations and corporate governance mechanisms to legal authorities and the public. India's score of 0.92 is higher than the averages of all LLSV subgroups of countries, including the English origin countries, suggesting that Indian firms must disclose a large amount of information. However, this does not imply the quality of disclosure is also good. In terms of the degree of earnings management (higher score means more earnings management; Leuz, Nanda, and Wysocki 2003), India's score is much higher than the average of English origin countries, and is only lower than the German origin countries, suggesting that investors have a difficult time in evaluating Indian companies based on publicly available reports.

The efficiency and effectiveness of the legal system is of primary importance for contract enforcement, and we have two measures. First, according to the legal formalism (DLS 2003)

⁸ For more information, go to the website of Transparency International (http://www.transparency.org/pressreleases_archive/2002/dnld/south_asia_report.pdf).

index, India has a higher formalism index than the average of English origin countries, and is only lower than that of the French origin countries. The legality index, a composite measure of the effectiveness of a country's legal institutions, is based on the weighted average of five categories of the quality of legal institutions and government in the country (see Berkowitz, Pistor, and Richard 2003). Consistent with other measures, India's score is lower than the averages of all the subgroups of LLSV countries, suggesting that India's legal institutions are *less* effective than those of many countries, and that it will be more difficult for India to adopt and enforce new legal rules and regulations than other countries.

Finally, as for the business environment in India, a recent World Bank survey found that, among the top ten obstacles to Indian businesses, the three which the firms surveyed considered to be a "major" or "very severe" obstacle and exceeding the world average are corruption (the most important problem), availability of electricity, and labor regulations. Threat of nationalization or direct government intervention in business is no longer a major issue in India. With rampant tax evasion, the shadow economy in India is significant. It is estimated to be about 23% of GDP.⁹ Creditor and investor rights were largely unprotected in practice, with banks having little bargaining power against willful defaulters. Large corporate houses often got away with default, or got poor projects financed through the state-owned banking sector, often by using connections with influential politicians and bureaucrats.

Since the beginning of liberalization in 1991, two major improvements have taken place in the area of creditor rights protection – the establishment of the quasi-legal Debt Recovery Tribunals that have reduced delinquency and consequently lending rates (Visaria (2005)); and the passing of the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act in 2002 and the subsequent Enforcement of Security Interest and Recovery of Debts Laws (Amendment) Act in 2004. These laws have paved the way for the establishment of Asset Reconstruction Companies and allow banks and financial institutions to act decisively against defaulting borrowers.

To summarize, despite strong protection provided by the law, legal protection is considerably weakened in practice due to an inefficient judicial system, characterized by overburdened courts, slow judicial process, and widespread corruption within the legal system and

⁹ This figure is 22.4% according to Schneider and Enste (2000), and 23.1% by Schneider (2002) (World Bank). Popular perception, however, would put it significantly larger, particularly given that the average figure of OECD countries themselves is about 12%.

government. While the need for judicial and legal reforms has long been recognized, little legislative action has actually taken place so far (Debroy (2000)). Currently, the government is trying to emulate the success of China by following the Special Economic Zone approach rather than overhauling the entire legal system.

II.3 The Financial Sector

Despite the history of India's stock exchanges (4 at independence to 23 today) and the large number of listed firms (over 10,000), the size and role in terms of allocating resources of the markets are dominated by those of the banking sector, similar to many other emerging economies. The equity markets were not important as a source of funding for the non-state sector until as recently as the early 1980s. The ratio of India's market capitalization to GDP rose from about 3.5% in the early 1980's to over 34% in 2003, which ranks 41st among 89 countries (Table 3-A) while the size of the (private) corporate bond market is small. On the other hand, from Table 3-A, total bank deposits (of over \$385 billion dollars) are equivalent to 50% of GDP in 2003, and constitute three-quarters of the country's total financial assets. The efficiency of the banking sector, measured by the concentration and overhead costs, is above the world average.

In Table 3-B we compare India's financial system (2003 figures) to those of the LLSV-sample countries (LLSV, 1997a, 1998), using measures from Levine (2002). In terms of the size (bank private credit over GDP), India's banking sector is much smaller than the (value-weighted) average of LLSV sample countries, even though its efficiency (overhead cost as fraction of total banking assets) compares favorably to most countries. The size of India's stock market, measured by the total market capitalization as fraction of GDP, is actually slightly larger than that of the banking sector, although this figure is still below the LLSV average. However, in terms of the "floating supply" of the market, or the tradable fraction of the total market capitalization, India's stock market is only half of its banking sector.¹⁰

"Structure activity" and "Structure size" measure whether a financial system is dominated by the market or banks. India's activity (size) figure is below (above) even the average of English origin countries, suggesting that India has a market-dominated system; but this is mainly due to the small amount of bank private credit (relative to GDP) rather than the size of the stock market. In terms of relative efficiency ("Structure efficiency") of the market vs. banks, India's banks are much

¹⁰ We estimate that 45% of the total market capitalization of listed firms is actively traded in India, and hence a value traded/GDP ratio of 0.16. The float supply figure of 45% is based on our own calculation of free float adjustment factor of about 1,000 large firms listed on the BSE (small firms are less frequently traded than large firms).

more efficient than the market (due to the low overhead cost), and this dominance of banks over market is stronger in India than for the average level of LLSV countries. Finally, in terms of the development of the financial system, including both banks and markets, we find that India's overall financial market size ("Finance activity" and "Finance size") is much smaller than the LLSV-sample average level. Overall, based on the above evidence, we can conclude that both India's stock market and banking sector are small relative to the size of its economy, and the financial system is dominated by an efficient (low overhead cost) but significantly under-utilized (in terms of lending to non-state sectors) banking sector.

However, the situation has changed considerably in recent years: Since the middle of 2003 through the first quarter of 2006, Indian stock prices have appreciated rapidly, with the popular Sensex index rising from about 3000 to over 10,000 in a period of less than three years.¹¹ In fact, as shown in Figure 1, the rise of the Indian equity market in this period allowed investors to earn a higher return ("buy and hold return") from investing in the Bombay Stock Exchange, or BSE's SENSEX Index than from investing in the S&P 500 Index and other indices in the U.K., China, and Japan during the period of 1992-2006 (end of November). Many credit the continuing reforms and more or less steady growth as well as increasing foreign direct and portfolio investment in the country for this explosion in share values.¹²

Table 3-C shows the comparative position of the two major Indian exchanges (the NYSE-type "floor exchange", the Bombay Stock Exchange (BSE), and the NASDAQ-type electronic exchange, National Stock Exchange, (NSE)) vis-à-vis other major exchanges in the world. At the end of 2005, BSE was the sixteenth largest stock market in the world in terms of market capitalization, while NSE ranked eighteenth. Table 3-C also shows that trading in the BSE is one of the most concentrated among the largest exchanges in the world, with the top 5% of companies (in terms of market capitalization) accounting for over 72% of all trades, but the (share) turnover velocity of BSE (35.4% for the year) is much lower than that of exchanges with similar concentration ratios.¹³

¹¹ The Sensex raced on to reach a peak of over 12,600 in mid-2006 before a major correction brought it back to around the 10,000 mark. By October 2006, it had again crossed the 12,600 mark.

¹² According to the Reserve Bank of India's *Handbook of Indian Statistics*, both foreign direct investment and portfolio investment (in stocks and bonds) have been growing fast during the past 15 years, with the latter twice the size of the former. The cumulative foreign investment inflows equal 11.58% of GDP in 2005, as compared to 0.03% in 1990.

¹³ Morck et al. (2000) find that stock prices are more synchronous in emerging countries than in developed countries. They contribute this phenomenon to poor minority investor protection and imperfect regulation of markets in emerging markets. While stock prices in India co-move less frequently than those in China (one of the worst in the world), they are much more synchronous than those in the developed markets such as the U.S.

In 2004-05, non-government Indian companies raised about 2.7 billion USD from the market through the issue of common stock, and US\$378 million by selling bonds/debentures (no preferred shares were issued). Despite the size of the new issuance, Indian's financial markets, relative to the size of its economy and population, are much smaller than those in many other countries. Table 3-D presents a comparison of external markets (stock and bonds) in India and different country groups (by legal origin) using measures from LLSV (1997a). Figure 2 plots the size and depth of a country's external markets vs. the degree of protection of investors based on data in Table 3-D. The horizontal axis measures overall investor protection (protection provided by the law, rule of law, and government corruption) in each country, while the vertical axis measures the (relative) size and efficiency of that country's external markets.¹⁴ Most countries with English common-law systems (French civil-law systems) lie in the top-right region (bottom-left region) of the graph. India is located in the south-eastern region of the graph with relatively strong legal protection (in particular, protection provided by law) but relatively small financial markets.

Over the decades, India's banking sector has grown steadily in size, measured in terms of total deposits, at a fairly uniform average annual growth rate of about 18%. There are about 100 commercial banks in operation with about 30 state owned banks, about 30 private sector banks and over 40 foreign banks. Still massively dominated by state-owned banks (they account for over 80% of deposits and assets), the years since liberalization have seen the emergence of new private sector banks as well as the entry of several new foreign banks. This has resulted in a much lower concentration ratio in India than in other emerging economies (Table 3-A, and Demirgüç-Kunt and Levine 2001). Competition has clearly increased with the Herfindahl index (a measure of concentration) for advances and assets dropping by over 28% and about 20% respectively between 1991-1992 and 2000-2001 (Koeva 2003). Within a decade of its formation, a private bank, the ICICI Bank has become the second largest bank in India.

Compared to most Asian countries the Indian banking system has done better in managing its NPL problem. The "healthy" status of the Indian banking system is in part due to its high standards in selecting borrowers (in fact, many firms complained about the stringent standards and lack of sufficient funding), though there is some concern about "ever-greening" of loans to avoid being categorized as NPLs. In terms of profitability, Indian banks have also performed well

¹⁴ Following LLSV, the score on the horizontal axis is the sum of (overall) creditor rights, shareholder rights, rule of law, and government corruption. The score of the vertical axis indicates the distance of a country's overall external markets score (external cap/GNP, domestic firms/Pop, IPOs/Pop, Debt/GNP, and Log GNP) to the mean of all countries, with a positive (negative) figure indicating that this country's overall score is higher (lower) than the mean.

compared to the banking sector in other Asian economies, as the returns to bank assets and equity in Table 3-E convey.

We close this section by emphasizing three facts about the Indian society and economy. First, a large and diverse country, India has had recent success in its overall economic development. Second, despite strong investor protection purportedly provided by the law, actual protection is weak in India owing to the inefficiency of legal institutions and corruption. Third, despite the development and growth of India's financial system (both banking sector and markets), its size and role in resource allocation and provision of external financing is small relative to the economy.

III. The Indian corporate sector

III.1. Overview

The organized sector of the Indian economy consists of the state and the non-state (private) sectors. The state sector comprises Public Sector Undertakings (PSUs), in which the government has majority (at least 50%) ownership and effective control. Almost all the PSUs are “public companies” as defined by the Indian Companies Act of 1956 (a company that has a minimum paid-up capital of Indian rupees 500,000 (or US\$11,100) and more than 50 shareholders). The non-state sector includes over 76,000 public companies and numerous smaller ‘private’ companies (with less than 50 shareholders). Over 10,000 of the “public” companies are listed on one or more of the stock exchanges, though a small fraction of them actually trade. Finally, there is an unorganized sector that consists of smaller businesses that do not belong to any of the above categories. Verifiable data about the unorganized sector is typically scarce. The figures and analysis we present in this paper cover only the organized sector.

In terms of contribution to GDP, the size of the state-sector (excluding government spending) during 1990-2003 has been around one fifth of the non-state sectors (excluding agriculture).¹⁵ In terms of capital base also, non-state sectors have been growing faster than the state sector. During 1990-2003, total paid-up capital in the state sector grew at an annual rate of 3.37%, with its share in the total declining from 73% to 28%.¹⁶ By contrast, paid-up capital in non-state corporations has been growing at an annual rate of 21.51%.

¹⁵ Among non-state sectors, we find that firms operating in the services industries (e.g., commerce & hotels, community & business services) had surpassed traditional manufacturing industries in terms of number of units and investments.

¹⁶ Paid-up capital is the actual amount that investors have paid for the share capital (excluding retained earnings), and equals to the sum of face value and share premium. For PSUs, equity investors include the government and non-government investors, while for non-state (public and private) firms paid-up capital includes equity capital raised from the stock market (for listed firms) and private equity.

Small and Medium Enterprises (SMEs) constitute an important segment of the Indian economy contributing to over 40% of the value added in manufacturing (according to O. S. Kanwar, the President of FICCI, a national chamber of commerce in India.).¹⁷ The official definition of an SME is different for manufacturing and services sectors (the “Micro, Small and Medium Enterprises Development Act 2006,” Government of India): A manufacturing firm that has investments in fixed assets of plant and machinery below Rs. 100 million (US\$ 2.22 million) qualifies as an SME; for firms in the services sector, the ceiling is Rs. 50 million (US\$ 1.11 million) in fixed assets.

In the remainder of this section, we analyze the patterns of ownership, financing, and growth and their determinants for public companies in manufacturing and services. Verifiable financial data for private companies are not available from organized sources.¹⁸

III.2 Sample Description

Our sample includes both listed and unlisted companies. However, only listed companies are required to disclose their ownership patterns (Clause 35 of Listing Agreement, Securities and Exchanges Board of India). We examine the ownership distribution (wherever available) and financing patterns for the firms in our sample, and relate the patterns to legal protection of investors in India. We also examine whether these relations are different from firms in other countries studied in previous papers (LLS, 1999; LLSV, 1997a, 2000b, 2002). A caveat is in order here. Shares of a large majority of listed firms in India trade very infrequently, if at all. Consequently, market variables based on their share price (such as market capitalization or Tobin’s Q) may be less trustworthy than accounting information.

Our sample includes 2,754 non-financial firms over the period 2000 to 2004 and is collected and compiled from the CMIE *Prowess* database.¹⁹ Since investigation of financial patterns and financial constraints is the main objective of our study, we decided to exclude financial firms from our sample. The firms in our sample fall into four categories:

¹⁷ The importance of small and medium private firms is hardly unique to India – high-growth economies are typically marked by such a vibrant sector. Using a sample of 76 countries (India not included), Beck et al. (2005) find a strong association between the importance of SMEs and GDP per capita growth. However, they are not able to establish that SMEs exert a causal impact on growth or poverty reduction.

¹⁸ Public companies under the Indian Companies Act of 1956 are required to make their financial statements public.

¹⁹ CMIE is a Mumbai-based economic and business information and research organization. Its *Prowess* database provides financial statements, ratio analysis, funds flows, product profiles, returns and risks on the stock markets, etc., of over 9,000 Indian companies.

1. Large Enterprises in the manufacturing sector (LE-M): 1,374 firms;
2. Small and Medium Enterprises in the manufacturing sector (SME-M): 655 firms;
3. Large Enterprises in the services sector (LE-S): 387 firms;
4. Small and Medium Enterprises (SMEs) in the services sector (SME-S): 338 firms.

To qualify for inclusion in either of the two SME categories of our sample, a firm had to satisfy the definition of SME in *each* year of the sample period. Similarly the firms in our two Large Enterprises categories had fixed assets larger than the SME ceiling in each year. Our sample includes all firms in the *Prowess* database which satisfy the inclusion criteria for the above categories. For each group of firms, data on ownership patterns, financials and market variables are collected. Due to missing data items, our samples for specific variables reported could be smaller.

Table 4 provides some descriptive statistics of the sample firms in the year 2004. The table shows the breakdown between firms in the SME sector and large enterprises, as well as between manufacturing and services sectors. It reports the maximum, median and minimum values of sales, assets and age of the firms.

III.3 Ownership Structure

Table 5 compares the ownership structure of Indian firms to those from the LLS (1999) sample of over 1,000 publicly listed and traded firms from 27 countries (India *not* included), the Claessens et al., (2000) sample of listed Asian firms (excluding Japan) and the AQQ (2005) sample of over 1,100 listed firms from China. The controlling interests in over 77% of the 2,754 firms in India reside with a particular individual or family.²⁰ Less than 2% are widely held, i.e., no shareholder owns more than 10% of stocks.

Our findings on ownership structure of India's firms are similar to those of other Asian countries (e.g., Claessens, Djankov and Lang 2000; Claessens, Djankov, Fan and Lang 2002; and AQQ 2005). In fact, India has the *highest* proportion of family/individual held firms among *all* country groups studied before. This pattern holds for India full sample as well as for all partitions of the sample (all large firms, all SMEs, LE-M, SME-M, LE-S, and SME-S).

Further, the proportion of widely-held firms in India is the second *lowest* (after China where

²⁰ Since we do not have detailed information on the identities of all the largest shareholders of these firms (e.g., whether they belong to the same family or a *group* of a few unrelated block-holders), our figure (77%) may be biased. However, we are certain that the largest block of equity of these firms is *not* held by organizations, the government, or a large number of disperse shareholders.

government ownership is the norm) among the different country groups. Again, this pattern holds for India full sample as well as for all partitions of the sample

The main result of LLS (1999) is that countries that protect minority shareholders poorly (strongly) tend to have more concentrated (dispersed) ownership. Despite India's strong investor protection in law, ownership structure of Indian firms is more concentrated than even other Asian countries (with family ownership) and countries with weak investor protection. However, if we take into account India's weak law enforcement and institutions (e.g., using the anti self-dealing index in DLLS 2005 and the revised creditor rights score in DMS 2005), then the observed ownership structure is by and large consistent with the spirit of LLS (1999).

III.4 Financing Patterns

Table 6-A provides evidence on the sources of funds for the firms in our sample during the 4-year period of 2001-2004. For the four categories of firms in our sample (LE-M, SME-M, LE-S, SME-S), the table indicates the average proportion of funds obtained from different sources, namely, internal sources, private and public equity, various types of debt, trade credit and other liabilities. Each number in the table represents the average over the sample years as well as across all firms in the given category.²¹

For large firms in manufacturing as well as service sectors, the most important source of funds is "internal sources," accounting for nearly 67% and 47% of all funds respectively. The average across manufacturing and service firms is almost 54%. The next most important source of funds is different for large manufacturing and large service firms. Trade credit accounts for about 13% of all funds for large firms in manufacturing, while debt raised from capital markets accounts for over 19% for service firms. However, the average market debt across manufacturing and service firms is almost 12%, making it the second most important source of funding for large firms.

The financing pattern for SME firms is strikingly different. First, trade credit is,²² by far, the most important source of finance, accounting for close to two-thirds of all funds for SMEs in the

²¹ The numbers in the table are *flow* variables. For a certain type of firm, the percentages reported in the table are obtained by first calculating the percentage of total *new* funds in a given year for each funding source and then by taking the average from 1990 through 2004.

²² The definition of trade credits from Prowess database is: "liabilities due in the next twelve months for purchase of goods/services and expenses; bills payable/acceptances are also included." This is consistent with how trade credit is defined in the usual context.

services sector and nearly 44% of all funds for SMEs in the manufacturing sector. Across all SME firms the proportion is almost 59%. Second, the next most important source of funds is private and public equity, accounting for over 15% for all SMEs (due to lack of data availability we cannot break down total equity into public and private components). Third, internal sources constitute a relatively unimportant funding source for SMEs. They account for about 10% on average for all SME firms as opposed to about 54% for the average large firm. Finally, debt raised from the market accounts for less than 2% for SMEs. As noted above, the corresponding figure for large enterprises is about 12%.

Interestingly, loans from banks and financial institutions account for roughly the same proportion of all sources for both large enterprises and SMEs (roughly 7%). Also for both groups, the proportion is higher for service companies (8-9%) than for manufacturing firms (close to 4%). However, these proportions are considerably lower than the corresponding figures in advanced countries like the U.S. (see, e.g., Brealy, Myers, and Allen, 2006).

The considerably greater importance of trade credit as a source of funds for SMEs vis-à-vis large enterprises stands in sharp contrast to the opposite findings in developed countries like the U.S. Petersen and Rajan (1997) report that the ratios of accounts payable and accounts receivables to sales are significantly higher for large firms than for small businesses in the U.S. Given that typically trade credit is significantly costlier than institutional credit, this may be interpreted as evidence that Indian SME firms are credit-constrained (Petersen and Rajan (1994)).

Overall, the results shown in Table 6-A are largely consistent with the findings in the *Reserve Bank of India* (2005).²³ Other recent studies (see Banerjee and Duflo (2003) and Banerjee et al. (2004)) have also found evidence of “under-lending” by Indian banks to the corporate sector.²⁴ It is a system-wide feature, indicating that companies cannot get adequate credit, not just from a single bank but from the banking system in general.²⁵

Table 6-B presents the summary statistics for a “snapshot” of the sample firms at the end of

²³ Using financial reports of around 2,000 *public* companies from 1990-91 to 2002-03, the *Reserve Bank of India* (2005) finds that internal sources accounted for about 40% of total funds on average. Besides, smaller firms depend much more heavily on trade credit for their funding needs.

²⁴ Under-lending is present when the marginal rupee lent to a borrower yields a higher marginal product than its interest cost. Banerjee and Duflo (2003) find that, even after six years of liberalization, bank credit was scarce while interest rates, though high by world standards, appeared to be below equilibrium levels. Banerjee et al. (2004) estimate that, for profitable firms (mean profit Rs. 36,700) in India, an increase of Rs. 1,000 in lending (average loan size Rs. 86,800; not fixing other financing sources) causes an increase in annual profit of Rs. 756.13. This finding indicates that companies may enhance profits by borrowing more from the banks.

²⁵ In other countries too, SME firms often face problems in accessing institutional finance. In the U.S., small firms also have difficulties in obtaining bank loans, but part of the funding slack has been provided by private equity (including angel financing and venture capital) and privately placed and public bonds (Berger and Udell 1995, 1998).

2004. From Panel A, the average market cap of the full sample is US\$127.81 million (the median is US\$4.11 million, indicating a heavily skewed distribution), with the large firms significantly larger than the SME firms in both manufacturing and service sectors. Panels B to F present information on key financial items such as earnings per share (EPS), net income, retained earnings, external financing through seasoned equity offerings (SEOs), and long-term borrowings for each group of sample firms. For all firms in the sample, the retained earnings are a significant proportion of net income (Panels C and D), implying high internal re-investment rates. This is consistent with the finding from Table 6-A that retained earnings constitute a vital source of financing. Not surprisingly perhaps, large firms seem to have greater access to SEOs than other types of firms (Panel E). The difference is considerably more marked in the case of long-term borrowing. A comparison of Panels A and F indicates that even after adjusting for market capitalization, large firms enjoy greater availability of long-term debt than the SME firms.

Panel A of Table 6-C compares external financing sources at the firm level for India and the country groups studied in LLSV (1997a).²⁶ The figures for all countries other than India are taken from LLSV (1997a), while the figures for India are based on our sample. Indian firms appear to rely much less on equity financing than LLSV firms: ratios of market capitalization both to sales and to cash flow for the full sample of Indian firms are much lower than not only the average for LLSV firms, but also each one of its subgroups including the civil law countries. Among the four groups of Indian firms, large manufacturing firms rely least on equity financing, while SME firms in the services sector rely most. This finding is again consistent with Table 6-A above. However, equity financing in this context includes non-market equity, including contribution by the founder's friends and family. On the other hand, Indian firms, in particular, large firms, rely much more heavily on debt financing (including loans from financial institutions) than LLSV firms: ratios of debt both to sales and to cash flow for the full sample of Indian firms are higher than all LLSV subgroups of firms. When we combine equity and debt financing (sum of rows 1 and 3 or 2 and 4), it appears that the Indian firms rely on external market and bank financing to a similar or even greater degree compared to their counterparts in LLSV countries. However, the caveat here is that, as we noted above and in Table 6-A, external financing in India is not restricted to formal market-based sources of funds only but includes relationship-based financing (debt as well as equity)

²⁶ In LLSV (1997a), a ratio (e.g., market cap/sales) for a country is obtained by first finding the *median* of this ratio across firms within various industries, and then by taking the *average* of the medians across industries. Each ratio for LLSV countries in Table 6-C is the *median* of the ratios of countries with the same legal origin. For Indian firms, we follow the approach in AQQ (2005), who take the average ratios of all the sample firms in China.

including trade credit, as well.

III.5 Dividend Policy and Firm Valuation

Next, we examine the dividend policy and valuations of firms in India, and compare the results to those studied by LLSV (2000b, 2002).²⁷ LLSV (2000b) find that firms in countries with poor protection of outside shareholders tend to have low dividend payout ratios due to severe agency problems. LLSV (2002) find that firms in countries with poor protection of outside shareholders tend to have low valuation, as reflected in the Tobin's Q (or lower market-to-book assets ratio).

Panel G of Table 6-B reports the dividend ratios of the different groups of Indian firms. The majority of our sample firms (over 60%), and in particular, SME firms (over 80%), did not pay dividends in 2004, while proportionally many more large firms paid dividends and in considerably larger amounts. The Dividend/Earnings and Dividend/Sales figures for India (Table 6-C, Panel B) both indicate much lower levels of dividend payments when compared with the LLSV averages for not only the English common-law origin countries, but even that of the French civil-law origin countries. When we use the "synthetic firm" approach of LLSV (2000b) and calculate the predicted value of dividend payout using the LLSV cross-country regression for our sample of firms, we find that the predicted value overestimates the actual dividend payout ratio by over 3 times the standard error of residuals for the regression (results available upon request). Clearly the actual dividend policy is not consistent with India's *de jure* level of investor protection as per the LLSV model. The dividend policies of Indian firms are consistent with a low investor protection regime.

In terms of firm valuation (as measured by the Tobin's Q, Table 6-C, Panel B), India's figures not only fall below the median for common as well as civil-law countries considered in LLSV (2002), they are in fact lower than every single of the 27 countries considered in LLSV (2002). Overall India's low dividend policy and valuation for India sharply contrast with the general perception of India's high investor protection in law. However, given that investor protection *in practice* as opposed to in law is poor in India, as we have noted in Section II before, our results are consistent with the LLSV predictions with India as a *low* investor protection country.

III.6 Growth Patterns of SME vis-à-vis Large Enterprises

²⁷ LLSV (2002) examine Tobin's Q of 539 firms in 27 wealthy economies and India is excluded. LLSV (2000) examine dividend policies of over 4,000 companies in 33 countries, but only one Indian firm is included in the sample.

The above results have highlighted the striking difference in the financial reality of large versus SME firms in India. SME firms generate proportionally less financing from internal sources. They have less access to long-term debt and rely far more on trade credit. Both features indicate that SMEs are more credit-constrained. SMEs also rely on equity financing, though to a less extent than trade credit. As our evidence from SME survey reported in the next section indicates, a great deal of the private equity and trade credit financing that SMEs use are not backed by any formal, legally enforceable contract. We call this kind of financing informal financing. We have noted other striking differences. SMEs in India are more closely-held. They have considerably lower dividend-payout and valuation (Tobin's Q) ratios than their larger counterparts. While Indian businesses in general exhibit signs of belonging to a low investor protection regime, the signs are stronger for SMEs.

Given this "dual economy" nature of large firms and SMEs, and given the relatively weaker investor protection in the SME sector, one would expect to see considerable difference in the growth patterns of these sectors, particularly in light of the law, finance and growth literature. According to the generally held conclusions of this literature, one would expect to see the SME sector grow at a considerably slower rate than large enterprises.

It is difficult, if not impossible, to find comprehensive secondary data comparing the growth rates of SME firms and large firms in India in *all* sectors. Therefore, in order to compare the growth rates of firms in the two groups, we look at all the SMEs and all the large firms in manufacturing and services sectors covered by the *Prowess* database in 2000 and track their sales for the next four years subject to data availability.²⁸ Table 7 provides evidence on the comparisons of growth rates of the two groups of firms during the period 2000-2004. Panel A (B) presents univariate comparisons on the growth rates of sales (total assets), with the cross-sectional simple averages of 4-year CAGRs of the firms in the different sub-samples are reported. To compare the growth rates between manufacturing SMEs and large manufacturing firms, service sector SMEs and large service firms as well as between all SMEs and all large firms, we conducted F-tests for difference in means of firm CAGRs between the relevant sub-samples (ANOVA). The *F* statistic and the *p*-values are reported in the table.

It is evident from Panel A that in aggregate as well as in each of the industry groups, SMEs

²⁸ We cannot use our existing sample (2,754 firms) for this comparison since in creating the sample we had required SME and large firms to fulfill their respective asset limit conditions in *all* 5 years, thereby introducing biases in the average growth rates.

have grown significantly faster than the large enterprises. The 4-year CAGR of manufacturing SMEs is about 7.7% and for large manufacturing firms is 5.7% – a difference that is statistically significant at the 1% level. For the services sector, the growth rate is again higher for the SMEs – 16.8% as opposed to 11.3% for large firms – once again significant at the 1% level. Overall, the average SME firm has grown at a CAGR of 10.6% compared of a CAGR of 6.8% for the average large enterprise (statistically significant at 1% level). The total asset growth figures reported in Panel B mirror the growth patterns in sales observed in Panel A.

Panel C of Table 7 presents results from cross-sectional regressions with the CAGRs of sales during 2000-2004 of a firm as dependent variable. The results confirm those from univariate tests in Panels A and B. After controlling for whether a firm operates in manufacturing or services industries (industry dummy), log of age of the firm and assets turnover (sales/total assets) in the base year (2000), we observe a negative and statistically significant relationship between size and growth rates in sales (significant at 5% in all four models; regressions using CAGR of assets as dependent variable yield very similar results).

To summarize, in spite of their relatively poorer investor protection as compared to large firms, Indian SMEs appear not only to have kept pace with the larger firms in their growth – both in terms of sales as well as total assets – but the average SME firm seems to have actually grown significantly faster than the average large firm.

III.7 Discussion

Our empirical analysis on a sample that spans different firm-sizes in India demonstrates that India does not conform to LLSV's predictions for a high investor protection country. However, considering that investor protection in India is poor *in practice*, our analysis is not inconsistent with the spirit of LLSV predictions. With English common-law origin and strong investor protection by law but not in practice, the average Indian firm actually behaves more like a firm from a country with poor investor protection. Arm's length external sources constitute a relatively small fraction of sources of funds for Indian firms, particularly for the SME firms. The equity ownership of Indian firms is highly concentrated within the founder's family or the controlling (individual) shareholder; and they tend to pay lower dividend and have low valuations compared to companies from countries with strong legal protection.

More importantly perhaps, our analysis emphasizes the “dual economy” nature of firms in India – one set of financial realities for the larger businesses and another one for the SMEs. The

latter segment is more closely-held, and because of its greater dependence on trade credit, appears to show signs of limited access to institutional credit. SMEs generate proportionally little financing from internal sources. They have considerably lower dividend-payout ratio than the larger firms as well as lower debt/sales ratio. On the whole, these firms exhibit even stronger signs of belonging to a low investor protection regime. Anecdotal evidence based on our discussions with a large number of owners of SME firms suggests that the SME segment is also marked by more relationship-based business transactions and relies more heavily on trust rather than access to the legal system. Despite this drawback, however, the average SME covered by the *Prowess* database appears to have grown significantly faster than the average large firm during the 2000-2004 period. Consequently, a closer analysis of the SME sector from the law, institutions and finance perspective is imperative for a more comprehensive understanding of determinants of firm financing in India.

However, several businesses in the SME segment are not even organized as joint-stock companies and do not, effectively, come under specific regulatory agencies that require periodic reporting of financial results. As a result, secondary data sources (including the *Prowess* database) have limited coverage of this segment and relying exclusively on secondary sources would give an incomplete picture of the Indian economy.²⁹ A direct survey study of SME firms appears to be the only way out. We attempt such a survey in the next section.

IV. Survey Evidence on India's Small- and Medium-sized Firms

IV.1 Survey Design and Administration

Our survey design focused on three broad areas: corporate financing and investments, ownership structure and corporate governance, law, institutions, and business environment. Based on a review of survey-based papers in the law and finance literature (e.g., DLLS (2003), McMillan and Woodruff (1999a, b), Johnson et al. (2002) and AQQ (2005)), we developed the survey questionnaire with special attention to the important issues in the semi-formal environment in which Indian SMEs operate, while trying to avoid biases induced by the questionnaire and maximizing the response rate. The final version of the survey included 36 questions (most with subparts) in four sections. The survey instrument and tabulated survey results (including the response rate for each question) are available at <http://www.prism.gatech.edu/~rc166/India-survey.zip/>.

We did not follow the mailed questionnaire method to administer the survey. The targets of

²⁹ For instance, though SME firms vastly outnumber large firms in India, they constituted only 15% of the number of firms covered in the *Prowess* database in 2005.

our survey are mostly small private firms that are typically reluctant to reveal in writing their key financial and business information. Further, the nature of our questions dealing with sensitive business information required us to ensure that the responses came from the owners or top executives of the surveyed units. Consequently, we deployed graduate students, as field investigators under the supervision of researchers from the Center of Analytical Finance at the Indian School of Business, Hyderabad, to administer the questionnaire to each of the respondents in face-to-face interviews. Our final sample consists of 136 SME units in and around New Delhi in North India and 76 SME units in and around the South Indian city of Hyderabad. The sample spans several industries including engineering, chemicals, packaging and software. The firms range in age from start-ups (less than one year old) to about 85-year old companies, with a more or less continuous distribution of firms started in the 1958 to 2005 period. Table 8 presents descriptive statistics for the firms in our survey.³⁰

IV.2 Ownership Structure and Corporate Governance

Our survey sheds light on the organization, ownership pattern and corporate governance mechanisms in Indian firms. In about 85% of the SMEs surveyed, the largest share block belonged to the founder and his (all firms in our sample had male founders) family. This number is slightly higher than 80% observed for the large sample of SME firms in section III above (see Table 5). About 70% of the businesses had unlimited liability. When asked how the owner planned to protect personal assets in case of business failure, 96% of the respondents preferred negotiating with debtors for an extension; 14% of these respondents also planned to file for personal bankruptcy.

There appears to be little separation between ownership and control in the typical SME environment, with the owner keeping a close watch over day-to-day functioning even with a hired CEO. About 50% of the units that had non-owner CEOs (or equivalent) indicated that the CEOs enjoyed “no discretion” or “little discretion” in their business decisions, and had to consult the owners for most decisions. When asked about the possibility of an outsider buying up a firm’s assets in case of bad management, 57% thought it was “very likely”.

³⁰ The firms were selected from several industrial parks in the New Delhi and Hyderabad areas that provided industrially diversified clusters of firms. The clusters include the Mayapuri Industrial Area, Naraina Industrial Area, WHS Kirtinagar cluster in Delhi and Patanchera and Jeedimetla Industrial Development Areas (IDAs), the Katedan Industrial Estate and the Bharat Heavy Electricals Ltd. (BHEL) Ancillary Industrial Estate at Ramachandrapuram in Hyderabad. Interviews were conducted with the owners or top level executives of the firms in the sample. On average an interview took about 45 minutes to complete. However, given the diversity of the business practices among the surveyed firms, a number of questions in the survey did not generate 100% response.

IV.3 Law, Institutions and Business Environment

Reliance on Law

In order to analyze methodically the responses to various survey questions probing different aspects of legal and financing mechanisms, we construct several indices based on the survey responses largely in line with the methodology of Johnson *et al* (2002). The distribution of responses to individual survey questions may be obtained from the web site mentioned above.

To capture the various dimensions of a firm's dependence on the available legal recourses, we construct a "Reliance on Law" (ROL) index. The index combines the responses to three questions in our survey enquiring about the respondent firm's preferred action if they face defaults, breaches of contract and dispute settlements. The survey provided various options to choose from, ranging from negotiations with the counterparties to involving intermediaries to legal recourse. To form this additive index, we assigned a value of 1 wherever the firm chose to settle matters through courts or other legal mechanisms; and a value of 0 for any other recourse. Thus, adding up the responses to all three questions, the minimum value of the index could be 0: this would happen when the firm did not resort to the legal system in any of the three situations. The maximum value could be 3, and this would happen if the firm chose to settle matters legally in all situations. Thus the value of the ROL index can range between 0 and 3. Panel A of Figure 3 shows the relative frequency distribution of the survey firms across the possible values of the index. For over 80% of surveyed firms the value of the index is zero. Further, the relative frequency declines monotonically in the value of the index.

We also analyze whether reliance on law varies across important firm characteristics, including sales, number of employees, assets size, or age. For each characteristic, the respondent firms are put in different size groups. Table 9 presents the results of our analysis. The results of F-tests reported in the table show that, for all firm characteristics, the average value of the index is the same across different groups. Further, regardless of the particular firm characteristic, the median value of the index for respondents in all groups combined is always zero. The evidence demonstrates clearly the limited reliance SMEs across the range have on the formal legal system in India. Informal channels of dispute resolution evidently play a far more important role for the SME firms.

The same finding comes through in responses to other questions in the survey as well. About 50% of the firms surveyed do *not* have a regular legal adviser. Of the other half that does,

less than 50% of these firms have “legal advisors” with a law degree or a license to practice law. When pressed for a reason, 63% of respondents who did not have legal advisors claimed they did not need lawyers as they knew all their business partners and could deal with them fairly. Clearly, the formal legal system takes a back seat while reputation, trust and informal personal relationships are the driving factors in screening counter-parties to do business with.³¹

The informal system, however, is not perfect in resolving disputes, and has its costs. When asked whether in the past three years they experienced a breach of contract or non-payment by a supplier or major customer, over 48% of the respondents replied in the positive. When asked further what they did about it (more than one answer allowed), 35% said they renegotiated while 43% said they did nothing but continued the business relationships with the defaulting parties. One possible reason for this is that there are insurance mechanisms in place, including long-term profit sharing, so that firms do not care as much about short-term gains and losses. Another possibility is that the large and powerful firms can at times get away with violations. Unfortunately, we are unable to distinguish between the possibilities.

Legal Deterrence

Orthogonal to reliance on law that determines whether a firm seeks legal recourse to redress a breach of contract and other disputes is concern for legal deterrence that may prevent it from perpetrating similar breaches itself. Our survey findings indicate that legal sanctions are far less important to the SMEs than the demands and responsibilities of the informal networks within which they exist and function. For instance, in the case of default on a payment, the primary concern is loss of reputation (2.48 on 1-3 scale), followed closely by loss of property (2.45). In the case of a breach of contract as well, loss of future business opportunities ranks the highest (2.58), followed by loss of reputation (2.46). Significantly, in both types of violation, the fear of legal consequences (adverse court sentence or jail term) is the *least* important concern (1.54 for default, 1.44 for breach of contract). Even threat to personal safety ranks higher than legal consequences (1.65 and 1.57 respectively). Clearly, violation of the “unwritten rules” of the informal networks in which these businesses operate can result in more serious penalties, including lost opportunities and physical harm, than legal consequences. Reputation and trust are pivotal for survival and growth in this environment.

³¹ However, the courts, while not the most popular method of dispute resolution, appear to have their utility as a negotiating tool. When asked what a firm does to ensure payment or repayment (more than one response allowed), about 59% replied that they would go to court while leaving negotiation possibilities open.

To capture these results systematically, we construct a “Legal Deterrence” (LD) index. The index combines the responses to questions probing the respondents’ main concerns if *their own* firms default or violate contracts. For each question the respondents rated their various concerns on a 1-3 scale (1 = Not concerned at all; 2 = somewhat concerned; 3 = very concerned). We average the ratings for legal penalty for the two questions to arrive at the LD index. In case of a non-response to one of the two questions, we take the value of the reported rating as the index value. Thus the value of the LD index can range between 1 and 3. Panel B of Figure 3 shows the relative frequency distribution of the index. Over half (52%) of the respondents are not concerned at all about the legal consequences of a default or breach, while less than 10% are very concerned. Thus, while legal deterrence is not altogether absent among SME firms in our sample, it is of limited effectiveness.

We also analyze whether effectiveness of legal deterrence varies across important firm characteristics, including sales, number of employees, assets size, or age. For each characteristic, the respondent firms are put in the same size groups as for the tests involving ROL index. Table 9 presents the results of our analysis. The results of F-tests reported in the table show that, for all firm characteristics, the average value of the index is the same across different groups. Further, regardless of the particular firm characteristic, the median value of the index for respondents in all groups combined is always 1, the lowest value possible. The evidence demonstrates clearly that the Indian SMEs across the range are little concerned about legal deterrence.

To analyze this issue further, we compare the effectiveness of legal deterrence with that of non-legal deterrence. We construct a Non-Legal Deterrence (NLD) Index by using the responses to the same question as in LD index. For this index, the ratings on a 1-3 scale (1 = Not concerned at all; 2 = somewhat concerned; 3 = very concerned), for non-legal concerns such as loss of reputation, personal safety etc were considered. We averaged the ranks of five such concerns which did not involve any legal penalty. Thus the value of the NLD index ranges between 1 and 3. We performed a Wilcoxon-Mann-Whitney test on the LD and NLD indices for all respondents in our sample (181 observations for the LD and 205 for the NLD index). The test decisively rejected the null hypothesis that the mean of the two indices are the same (z statistic -7.22 and $p < 0.0001$). The mean score of the NDL index (231.07) is more than that of the LD index (150.94), establishing that non-legal concerns of the kind mentioned above are far more effective than legal deterrence in preventing defaults and contract violations.

The picture that emerges of the SME sector from our surveys clearly indicates that the sector

has little confidence in the legal system. It relies little on the courts in settling disputes and enforcing contracts and is also not much concerned about legal consequences of infractions. Non-legal sanctions, on the other hand, are far more effective. This result appears to hold for firms across the range in sales, asset size, age, and employee strength.

IV.4 Financing an SME Firm

Financing during Start-up and Growth Phases

The picture of the legal environment for the SME sector in the sub-section above is clearly not conducive to formal external financing. Typically, formal financing requires formal contracts, and effective legal mechanisms to enforce contracts and deter infractions. According to LLSV (1997a): “To the extent that better legal protections enable the financiers to offer entrepreneurs money at better terms, ...the countries with better legal protections should have more external finance in the form of both higher valued and broader capital markets.” The legal environment that appears to exist among the surveyed firms does not seem to provide adequate protection of “arm’s length” external financiers. Consequently informal external finance, based on familiarity and social norms is likely to dominate the external financing of SMEs in India.

We analyze our survey results to gauge the importance of informal finance for an SME. As defined in Section III.6 above, informal finance represents financing not backed by a formal, legally enforceable contract. For our analysis, this type of finance includes friends and family financing as well as trade credit. Our survey responses indicate that in most cases the latter, like financing from friends and families, occurs without any formal contracting. Formal finance comprises all other sources of finance, including banks, private credit agencies and individuals, government funding and venture capital for the start-up phase, short-term and long-term bank credit, loans from specialized lending institutions like SIDBI and SFC as well as private equity/debt from investors within India.³² For each respondent firm, we create a Proportion of Informal Finance (PIF) index based on its responses to the question about the proportion of various sources of funds in the total funds. The question called for rating the sources on a scale of 1 to 4 (1 = least important or less than 10% of total financing, 4 = extremely important or more than 50% of total financing). We

³² Small Industry Development Bank of India (SIDBI) is a specialized financial institution created by the government of India for financing and promoting growth in the small scale sector. State Finance Corporations (SFCs) are state-level government financial institutions created for financing and promoting growth, often in the small scale sector. We exclude foreign and expatriate funding because of relatively low response rates. The respondents who rate these sources report much lower importance and access than for other sources.

average the ratings of family and friends and trade credit to form the PIF index. The index ranges from 1 to 4, with higher values indicating a greater proportion of informal finance in total sources of funds.

Figure 4 summarizes our survey findings about the relative importance of and access to formal vis-à-vis informal finance. The figure depicts the relative importance in the start-up phase and the ease of obtaining funding in the growth stage from informal and formal sources.³³ The average ratings of sources within the informal and formal groups are reported in the figure. It is evident from the figure that funds from informal sources are far more important than from formal sources in the start-up stage, and are considerably more accessible in the growth stage as well. This is consistent with our secondary-data findings reported in Table 6-A above.

Our surveys indicate that, though bank credit constitutes an important source of funds, particularly in the growth stage, of the 199 respondents who answered the query, 22% had no bank/financial institution credit. 48% of the respondents had loans from only one institution, indicating that bank credit could be relationship-driven. 14% had accounts with two banks or intermediaries, while only 2% had loans from three institutions.

Determinants of the Proportion of Informal Finance

To understand the obstacles, if any, that SMEs encounter in obtaining formal financing we define and use two different indices. Our index for requirements for formal finance, REQ Index, is based on the responses to the survey question asking the respondent firm to enlist the necessary conditions for accessing bank finance. We form an additive index for each firm. The index ranges from 0 to 6, with 6 indicating that the firm listed 6 requirements that were needed to improve their chances of accessing bank finance, 5 indicating that the firm listed 5 such requirements and so on; 0 indicating no requirement.³⁴ A higher value of this index, therefore, represents greater requirements for formal finance.

Our index for difficulty in accessing formal finance, DIFF Index, is based on the responses to the survey question about the level of difficulty in accessing: (i) short-term bank loans, (ii) long-term bank loans, and (iii) loans from specialized institutions such as SIDBI and SFC's. The

³³ For ease of access, the survey respondents were asked to rate each source on a 1-4 scale (1= little importance (extremely difficult and costly to access); 4 = extremely important (very easy and low cost)).

³⁴ Our survey questionnaire asked how many of 5 features would facilitate obtaining bank loans. These were: firm is profitable and has good growth opportunities; size factor: easier for large firm to get government support even if it is not profitable; whether firm operates in "protected" industries; *business* connections between firm and government officials; political or personal connections between firm and government officials. In addition, respondents mentioned other features like "reputation of firm". In all, the maximum number of these factors (specifically asked plus proffered by respondents) was 7.

respondent firms were asked to rate these three independently on a scale of 1 to 4, (1 = very easy, 4 = very difficult). We form an average index from the ratings, the index ranging from 1 to 4 for each firm.³⁵ A higher value of this index indicates greater difficulty in accessing finance from banks and specialized institutions. Though higher values of both REQ and DIFF variables indicate greater hurdles in obtaining bank finance, they capture different aspects of access to formal finance. The sample correlation coefficient between the two variables is only 0.04.

Do Indian SMEs seek informal financing as a matter of choice, or because they have restricted access to formal financing? To address this question, we conducted ordered PROBIT regressions, with PIF index values as the dependent variable and REQ and DIFF indices as the independent variables. If informal finance is obtained as a matter of choice, then we should not expect any significant relationship between the dependent variable and the independent variables. If, however, informal finance is raised because access to formal finance is restricted, then we should expect a positive relationship between the variables: the harder it is to get formal finance, the greater should be the proportion of informal finance for the firms in our sample.

Our data on proportion of informal finance are categorical rather than continuous, and hence we use Ordered PROBIT regressions. Table 10 presents the results of the regressions. In Panel A, the dependent variable is the proportion of informal finance (as percentage of total funds) in the start-up phase, divided into four categories with a higher value indicating a higher dependence of informal finance. The independent variables include the index of Requirements for accessing formal finance (REQ), firm size at start-up (as measured by sales) and the number of employees.³⁶

The results are consistent with the hypothesis that the dependence on informal financing is not a choice of SME firms, but rather the result of limited access to formal financing channels. The dependence is significantly positively related to the difficulty in accessing formal finance (as measured by the REQ index; significant at 5% in all three models). Larger start-up firms (proxied by both the scale of sales and number of employees), however, rely on informal finance to a lesser degree, presumably because they have a relatively easier access to formal financing channels as compared to smaller start-ups that face more severe degrees of information asymmetry.

³⁵ For example, if the firm rated short-term bank loans as 2, long-term bank loans as 3 and loans from specialized institutions as 4, the index of difficulty in accessing formal finance for this firm is 3 $[(2+3+4)/3]$.

³⁶ For the level of sales (SALES), the survey responses fall in five categories. We group these responses with respect to the median sales into three categories: (1) below median sales, (2) median sales, and (3) above median sales. Thus the SALES variable has three categories from 1 to 3, a higher number indicating a higher level of sales. The employee size (EMP) variable is created analogously.

In Panel B, we examine whether the SME firms dependent on informal finance in the start-up phase continue to rely on informal financing channels in their growth phase, or can an SME firm transit successfully from informal finance in the start-up phase to more formal financing channels when it becomes more mature. On the one hand, as the firm matures (and becomes larger) it faces smaller degrees of information asymmetry as compared to its start-up phase, and accordingly may have an easier access to formal financing channels. On the other hand, if a firm builds long-term relationships with investors beginning with the informal financing during the start-up phase, it may continue to find formal financing more costly later on.

The results shown in Panel B seem to support the “stickiness” or persistence of informal financing over time (which may explain its prevalence from secondary data in Table 7). The dependent variable is the difficulty in accessing formal finance in growth phase, divided into 4 categories, with a higher value indicating a greater difficulty. Since we consider only firms in their growth phase (older than 5 years), this requirement truncates our original sample of 213 to 173 (we also run the same tests on the whole sample and obtain qualitatively similar results). While the difficulty in accessing formal financing during growth phase is somewhat eased for large firms (coefficient on number of employees is significant at 10% in models 3 and 4; not significant for log of firm age), the difficulty is significantly positively related to dependence on informal financing during the start-up stage.

In summary, greater requirements for formal finance and greater difficulty in accessing formal finance are associated with high proportions of informal finance across firm sizes and age, indicating that SME firms are driven to seek “informal” finance by the relative inaccessibility of formal finance. Also, smaller SMEs – both in terms of sales and employee size – rely more on informal finance, indicating that access to formal finance is even more restricted for them. However, we also find some evidence on the persistence of reliance on informal financing during growth stages, suggesting that once a relationship between the firm and investors is forged it becomes the cheaper way of financing for the firm even as it becomes more mature.

IV.5 Comparison of Survey Findings in New Delhi and Hyderabad Regions

The SME units in the two regions were surveyed independently. The surveys present a largely similar and consistent picture of SME financing and governance, inspiring confidence in our results. However, there are a few important differences. Average values of both the reliance on law (ROL) and the legal deterrence (LD) indices are statistically significantly higher for New Delhi

firms than for Hyderabad firms. Consistent with this fact, the proportion of informal finance (PIF) index is also statistically significantly higher for the New Delhi area firms. Further, both friends and family financing (in start-up as well as growth phases) and trade credits appear to be more important for the New Delhi respondents than for those in Hyderabad. On the other hand, bank loans and reinvestment of profits are more common for Hyderabad firms. These findings indicate considerable regional differences in the nature of SME financing and effectiveness of legal mechanisms *within* India. A cross-regional analysis of Indian SMEs would help shed more light in this area.

IV.6 Discussion

Our survey evidence suggests that the fast-growing SME sector in India depends overwhelmingly on informal financing channels and informal governance mechanisms. We find that the majority of entrepreneurs resolve disputes outside of courts, similar to survey results from other emerging countries. However, we do find that some Indian entrepreneurs and their business partners also rely to an extent on the legal system (e.g., courts) to resolve disputes and enforce contracts. We also find that informal finance plays a crucial role in the financing of SMEs and our regression analysis demonstrates that firms that find formal (or institutional) finance more difficult to access are the ones that obtain a greater proportion of their funding from informal sources. Also the smaller the firms, the higher the proportion of informal finance suggesting that institutional credit is even less accessible to smaller firms.

We briefly discuss alternative and informal mechanisms supporting the growth of India's SME sector. One of the most important informal mechanisms is reputation, trust and relationships. Greif (1989, 1993) argues that certain traders' organizations in the eleventh century were able to overcome problems of asymmetric information and the lack of legal and contract enforcement mechanisms, because they had developed institutions based on reputation, implicit contractual relations, and coalitions. Spagnolo (1999) develops a model of social capital to show how social and business relationships can mutually reinforce each other. AQQ (2005) find that informal mechanisms have supported the growth of China's Private Sector, and influenced how firms raise funds and contract with investors and business partners. In addition, Stulz and Williamson (2003) point out the importance of cultural and religious beliefs in the development of institutions, legal origin, and investor protection. These factors are of particular relevance and importance to India's institutional development. Despite the long British influence, India's own rich culture and history

have as much, if not stronger, impact on businesses and investors and their mutual interactions. The importance of reputation, trust and relationships in India's corporate sectors is reflected in our survey evidence, as well as in the software industry examined by Banerjee and Duflo (2000).

We also find that other governance mechanisms have supported the growth of Indian firms. First, Burkart, Panunzi, and Shleifer (2003) link the degree of separation of ownership and control to different legal environments, and show that *family-run* (professionally managed) firms will emerge as the dominant form of ownership structure in countries with *weak* (strong) minority shareholder protection. Our survey evidence in this section and empirical results in Section III above, along with similar evidence in other Asian countries, suggest that family firms are a norm in India and other Asian countries. In fact, the combination of family firms and reputation-based informal mechanism may be one of the important factors behind the success of many family and group-based (listed and unlisted) firms in India (e.g., Khanna and Palepu 2000; Khanna and Yafeh 2005; Gopalan et al. 2005) in spite of weak standard corporate governance mechanisms, as reputation concerns motivate all managers (affiliated with the founder's family) and member firms to take actions that maximize firm/group value, which in turn benefit non-controlling shareholders as well.

Second, Allen and Gale (2000a) show that, if cooperation among different suppliers of inputs is necessary and all suppliers benefit from the firm doing well, then a good equilibrium with no external governance is possible, as internal, mutual monitoring can ensure the optimal outcome. In section III and our survey of SME firms, we presented evidence on the importance of trade credits as a form of financing for firms in wholesale and retail industries. Cooperation and mutual monitoring can ensure payments (as long as funds are available) among business partners and group-affiliated firms despite the lack of external monitoring and contract enforcement. The importance of trade credits is also found in other emerging economies (e.g., survey-based results of Vietnamese firms in McMillan and Woodruff (1999a) and AQQ (2005) survey of Chinese firms), as well as in developed countries (see Berger and Udell 1998 for evidence on small firms in the U.S.).

It is worth mentioning how entrepreneurs and investors alleviate and overcome problems associated with government corruption. According to proponents of institutional development (e.g., Rajan and Zingales 2003b; Acemoglu and Johnson 2005), poor institutions, weak government and powerful elites should severely hinder India's long-run economic growth.³⁷ However, our

³⁷ In addition, LLSV (1999) find that governments in countries with French or socialist origins have lower quality (in terms of supporting economic growth) than those with English common laws and richer countries.

aggregate and disaggregate evidence shows that corruption has not prevented a high rate of growth for India's firms, in particular, firms in the SME sector, where legal protection is perhaps weaker and problems of corruption worse compared to firms in other sectors. Perhaps one of the most effective solutions for corruption for firms in this sector is the common goal of sharing high prospective profits. This common goal can align interests of the investors and government officials with entrepreneurs and managers to overcome numerous obstacles. Under this common goal in a multi-period setting, implicit contractual agreements and reputation can act as enforcement mechanisms to ensure that all parties, including government officials, fulfill their roles to make the firm successful. Another potential effective solution for corruption is *competition* among local governments/bureaucrats from different regions within the same country. Entrepreneurs can move from region to region to find the most supportive government officials for their private firms, which in turn motivates officials to lend "helping hands" rather than "grabbing hands," or else there will be an outflow of profitable private businesses from the region (Allen and Qian 2006). This remedy should be typically available in a big country with multiple regions like India.

Finally, in our surveys we find that the majority of entrepreneurs resolve disputes outside of courts, similar to survey results from other emerging countries (McMillan and Woodruff (1999a) survey of Vietnamese firms and AQQ (2005) survey of Chinese firms). However, we do find that some Indian entrepreneurs and their business partners also rely to an extent on the legal system (e.g., courts) to resolve disputes and enforce contracts. It is possible that, going forward, the legal system will play a more important role in supporting the development of stock markets and attracting more foreign capital inflows. In order for this to happen, we must consider the costs of improving the legal system, which vary significantly across countries. With a small and homogenous economy, a country can adjust its legal and financial systems to the strengths of its economy more economically than a large country. DMS (2005) find that, despite apparent significant economic benefits from reform, there is very little time variation of creditor rights over the past twenty-five years around the globe. This suggests that the costs of improving the legal system are, in fact, very high for many countries. On the other hand, the success of India's SME sector demonstrates that alternative mechanisms have substituted for formal mechanisms based on legal protection and supported the growth of non-state, non-listed firms in large and diversified economies such as India. It is possible that similar mechanisms/substitutes have also worked well in other countries, including developed countries (e.g., during their early stage of economic development when legal institutions were not as yet well developed).

V. Summary and Conclusion

In this paper, we examine legal and business environment surrounding large and SME firms from India and their financing channels and governance mechanisms, and compare our results to those from other countries. Unlike many cross-country studies that focus on one or two dimensions of a country's legal and financial systems, we focus on the financial system in the second largest developing country and find that many results based on existing cross-country studies do not apply to India. Our paper thus complements cross-country studies and advances the understanding of growth mechanisms.

Closer analysis reveals that with one of the largest and fastest growing economies in the world, India has a special feature among the countries studied in the law, institutions, finance, and growth literature: Despite its English common-law origin and British-style judicial system and democratic government, corruption within the legal system and government weakens legal protection of investors in practice. Financing of firms has been dominated by internal and short-term non-market sources, while firms have concentrated ownership and pay low dividends. They exhibit signs of firms from a country with weak legal protection of investor rights which corresponds with the effective investor protection situation in India as opposed to the *de jure* position that has generally received attention in the cross-country studies.

Our study also highlights the “dual-economy” nature of Indian firms where small and medium enterprises (SMEs) exhibit much stronger signs of poor investor protection as compared to large firms – they are more closely held, have much lower dividend-payout ratio and rely in a massive way on trade credit and other informal sources of finance. Nevertheless, contrary to the expectations created by the law, finance and growth literature, they seem to have grown at rates higher than those experienced by large firms during the first few years of the current decade.

Carrying out a survey of SME firms, we find that relationship-based financing channels, such as family and friends and trade credits provide the most important source of funds for these firms. Our Probit regression analysis shows that firms that find formal (or institutional) finance more difficult to access are the ones that obtain a greater proportion of their funding from informal sources. Also the smaller the firms, the higher the proportion of informal finance suggesting that institutional credit is even less accessible to smaller firms. We also find that entrepreneurs and investors rely more on informal governance mechanisms, such as those based on reputation, trust and relationships, than formal mechanisms (e.g., courts), to resolve disputes, overcome corruption and finance corporate growth.

Finally, perhaps the most important finding of the present study is that “substitute” legal and financing channels can play a critical role in a country like India, in spite of its strong investor protection laws on paper and long history of organized capital markets. Our results indicate that economic growth has happened in India *despite* poor effective legal protection of investor rights rather than because of strong protection. Our findings call for more within-country studies in other regions and countries to understand better the *effective* level of investor protection as opposed to that in the law and how it affects corporate financing and growth.

Appendix

Indices and variables based on survey data

- 1. Proportion of Informal Finance (PIF):** This is an average index formed from the responses to the question asking the firm to indicate the proportion of various forms of finance in the total sources of funds, by ranking the sources on a scale of 1 to 4 (1=least important, 4=very important). These rankings in order of importance reflect the underlying proportion of the various sources to total sources of finance. We average the ranks of family and friends and trade credit to form the index of proportion of informal finance. The index ranges from 1 to 4, with higher values indicating a greater proportion of informal finance to total sources of funds.
- 2. Index for requirements for formal finance (REQ):** To construct this index, we combine the responses to the question asking the firm to enlist the necessary conditions for accessing bank finance. We form an additive index for each firm. The index ranges from 0 to 6, with 6 indicating that the firm listed 6 requirements that were needed to improve their chances of accessing bank finance, 6 indicating that the firm listed 6 such requirements and so on; 0 indicating no requirement. A higher value of this index therefore, represents greater requirements for formal finance.
- 3. Index for difficulty in accessing formal finance (DIFF):** For this index we combine the responses to the question asking the firm to assess the level of difficulty in accessing (i) short-term bank loans (ii) long-term bank loans (iii) loans from specialized institutions such as SIDBI and SFC's. The respondent was asked to rank these three independently on a scale of 1 to 4, (1=very easy, 4=very difficult). We form an average index from the rankings, the index ranging from 1 to 4 for each firm. E.g if the firm ranked (i) as 2, (ii) as 3 and (iii) as 4, the index of difficulty in accessing formal finance for this firm is 3 $[(2+3+4)/3]$. A higher value of this index indicates a greater difficulty in accessing finance from banks and specialized institutions.
- 4. Level of sales (SALES):** The firms in our sample fall under five levels of sales. We group these firms with respect to the median sales into three categories viz, (1) below median sales, (2) median sales and (3) above median sales. Thus the variable has three categories from 1 to 3, a higher number indicating a higher level of sales.
- 5. Category of employee size (EMP):** We group the firms with respect to the median number of employees into three categories viz, (1) below median number of employees, (2) median number of employees and (3) above median number of employees. Thus this variable has three categories from 1 to 3, a higher number indicating a higher number of employees.
- 6. Reliance on Law (ROL) Index:** To construct this index we combine the responses to three questions asking the firm's recourse in case of defaults, breach of contract (by counter-parties) and dispute settlements. The respondents were given various options to choose from, ranging from negotiations among the parties to legal recourse. To form this additive index we assigned a value of 1 wherever the firm chose to settle matters through courts or other legal mechanisms; and a value of 0 for any other recourse. Thus adding up the responses to all three questions, the minimum value of the index could be 0: this would happen when the firm did not resort to courts in any of the three questions asked. The maximum value could be 3 and this would happen if the firm chose to settle matters legally in all three questions. Thus the value of the index can range between 0 and 3.
- 7. Legal Deterrence (LD) Index:** We construct this index by combining the responses to questions probing the respondents' main concerns if *their* own firms default or breach contracts. For each question the respondents rated their various concerns on a 1-3 scale (1=Not concerned at all; 2=somewhat concerned; 3=very concerned). We average the ratings legal penalty for the two questions ("not concerned" on both questions) to arrive at the "Legal Deterrence" index. In case of a non-response to one of the two questions, we take the value of the reported rating as the index value. Thus the value of the "Legal Deterrence" Index can range between 1 and 3.
- 8. Non-Legal (NLD) Index:** We construct this index using the responses to the same question as in Legal Deterrence Index. For this index, the ratings on a 1-3 scale (1=Not concerned at all; 2=somewhat concerned; 3=very concerned), for non-legal concerns such as loss of reputation, personal safety etc were considered. We averaged the ranks of five such concerns that did not involve any legal penalty. Thus the value of the "Non- Legal Deterrence" Index can range between 1 and 3.

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Table 1 The Largest 20 Economies in the World: GDP and Growth

Rank	GDP in 2005			GDP in 2005 using PPP*		
	Country	GDP (US\$bil.)	Annual growth rate (%; 90-05)	Country / Region	GDP (Int'l \$bil.)	Annual growth rate (%; 90-05)
1	U. S.	12,452	5.2	U. S.	12,332	5.2
2	Japan	4,672	2.9	China	8,092	11.8
3	Germany	2,800	4.0	Japan	4,009	3.7
4	U. K.	2,197	5.4	India	3,603	7.9
5	France	2,113	3.6	Germany	2,498	3.7
6	China	1,910	11.2	U. K.	1,826	4.6
7	Italy	1,719	3.0	France	1,812	4.0
8	Spain	1,124	5.2	Italy	1,695	3.6
9	Canada	1,106	4.4	Russia	1,585	1.4
10	Korea	800	7.7	Brazil	1,553	4.6
11	Brazil	789	3.6	Canada	1,112	5.0
12	Russia	772	n/a	Korea	1,099	7.6
13	Mexico	758	7.4	Mexico	1,065	5.1
14	India	746	6.0	Spain	1,026	4.8
15	Australia	684	5.5	Indonesia	864	6.2
16	Netherlands	623	5.1	Australia	639	5.5
17	Belgium	365	4.2	Taiwan	630	7.4
18	Switzerland	365	2.9	Turkey	571	5.7
19	Sweden	354	2.6	Iran	560	6.8
20	Turkey	353	5.9	Thailand	559	6.9

Notes: *The PPP conversion factor is obtained from The World Bank Development Indicator (Table 5.6, World Bank. For details on how to calculate the indicator, see "Handbook of the International Program." United Nations, New York, 1992).

Source: IMF World Economic Outlook Database 2006.

Table 2-A India's Position relative to the World Average: Law and Institutions

Index	India	World Average	English-origin average	French-origin average	German-origin average	Scandinavian-origin average	LLSV sample average
Comparison of law enforcement:^a							
Legal Formalism Index	3.42		2.72	3.99	3.42	3.11	3.23
Corruption Perception Index	2.90		7.50	5.54	7.51	9.28	7.08
Disclosure Requirement	0.92		0.85	0.54	0.63	0.56	0.71
Earnings Management Score	19.10		4.14	18.72	21.46	9.81	11.98
Legality Index	11.35		15.56	13.11	15.53	16.42	14.98
Regulation of securities markets:^b							
Disclosure Requirements	0.92	0.60	0.85	0.54	0.63	0.56	0.71
Liability Standard	0.66	0.47					
Supervisor characteristics (Independence)	0.33	0.45					
Rule-making power	0.50	0.66					
Investigative powers	1.00	0.60					
Orders to issuers, distributors, accountants	0.67	0.38					
Criminal Sanctions	0.83	0.50					
Public enforcement	0.67	0.52					
Creditor rights and information sharing institutions:^c							
Creditor Rights (0- 4 scale)	4 (2) ^c	1.79	3.11 (53%) [#]	1.58 (14%) [#]	2.33 (0%) [#]	2 (0%) [#]	2.3 (25%) [#]
Legal reserve required as % of capital	0.00		0.01	0.21	0.41	0.16	0.15
Information Sharing institutions (binary: 0 or 1)	0	0.80					
Shareholder rights and Self-dealing:^d							
Anti-Director Rights (0 – 6 scale)	5	3.39	4 (35%) [#]	2.33 (05%) [#]	2.33 (0%) [#]	3 (0%) [#]	3 (15%) [#]
Anti-self-dealing Index (0 – 1, continuous)	0.55	0.46					
Mandatory dividend	0		0	0.11	0	0	0.05
One share – one vote	0		0.17	0.29	0.33	0	0.22
Regulation of labor:^e							
Employment laws index	0.44	0.49					
Collective relations laws index	0.38	0.44					
Social security laws index	0.40	0.57					
Left of center political orientation (chief of largest party in congress, 1928-1995)	1.00	0.56					

Investment climate indicators:^f

Starting a business – days (procedures)	89 (11)	50.8 (9.9)
Enforcing a contract – days (procedures)	425 (40)	388.3 (31.2)
Registering property – days (procedures)	67 (6)	81.4 (6.2)
Resolving insolvency – years	10	3.2
Investment profile (Country Risk)	8	8.8
Intensity of local competition	5.6	4.7
Transparency of government policymaking	4.1	3.9
Regional disparities of business environment	2.5	3.4

^a Source: Legal Formalism Index, DLLS (2003); Corruption Perception Index, Transparency International (2005); Disclosure Requirement, LLS (2006); Earnings Management Score, Leuz, Nanda and Wysocki (2003); Legality Index, Berkowitz, Pistor and Richard (2003).; ^b LLS (2005a); ^c LLSV (1998) gave India a score of 4 out of 4 on creditor rights based on the Company Act (1956), while DMS (2005) lower this score to 2/4 based on the Sick Industrial Companies Act (1985) and assigned a score of 0 (out of 1) for information sharing agencies.

^d DLLS (2005); ^e Botero et al. (2004); ^f World Bank (2005).

#=numbers in the bracket indicate percentage of countries in the sub-sample (excluding India where applicable) whose measure is equal to 4 (India's measure).

Table 2-B A Comparison of Legal Systems: India and Major Emerging Economies

	Corruption Perception Index	Anti-director Rights	Creditor Rights	Disclosure Requirement	Earnings Management Score	Legal Formalism Index	Legality Index
India (E)	2.9	5	4 (2)	0.92	19.1	3.42	11.35
China	3.2	3	2	N/a	N/a	3.40	N/a
Pakistan (E)	2.1	4	4	0.58	17.8	3.75	8.27
S. Africa (E)	4.5	4	4	0.83	5.6	2.68	11.95
Argentina (F)	2.8	4	1	0.50	N/a	5.44	10.31
Brazil (F)	3.7	3	2	0.25	N/a	3.44	11.43
Mexico (F)	3.5	0	0	0.58	N/a	4.76	10.79

For definition of each of the variables, see Appendix A.1. Source: See Table 2-A.

Table 3-A Selected Indicators of India's Financial System in 2003

Measure of Financial Structure	India	World	Rank	N
Deposit money bank vs. central bank assets	0.96	0.82	59	165
Liquid liabilities to GDP	0.60	0.57	29	93
Central Bank Assets to GDP	0.03	0.07	47	99
Deposit Money Bank Assets to GDP	0.51	0.60	47	106
Private credit by deposit money banks to GDP	0.31	0.50	53	105
Bank deposits as a share of GDP	0.50	0.65	45	106
Financial system deposits as a share of GDP	0.50	0.66	46	106
Concentration in banking ^a	0.40	0.69	9	144
Overhead Costs of banks (share of total assets)	0.02	0.05	35	142
Net Interest Margin	0.03	0.05	87	140
Life insurance penetration (volume/GDP)	0.02	0.03	30	59
Non-life insurance penetration (volume/GDP)	0.01	0.02	57	59
Stock market capitalization to GDP	0.34	0.45	41	89
Stock market total value traded to GDP	0.48	0.28	22	87
Stock market turnover ratio	1.39	0.50	6	92
Private bond market capitalization to GDP	0.00	0.31	35	39
Public bond market capitalization to GDP	0.29	0.38	24	43

^a Share of 3 largest banks in total assets of all commercial banks; Source: World Bank's World Financial Structure.

Table 3-B Comparing Financial Systems: Banks vs. Markets (Value-weighted approach)

Measures		English origin *	French origin *	German origin *	Scandinavian origin *	LLSV average	India
Bank and market size	Bank credit/GDP	0.62	0.55	0.99	0.49	0.73	0.31
	Overhead cost/Bank total assets	0.04	0.05	0.02	0.03	0.03	0.02
	Float supply of Market Cap/GDP	0.31	0.07	0.37	0.08	0.27	0.16
	Market capitalization/GDP	0.58	0.18	0.55	0.25	0.47	0.34
Structure indices: Markets vs. banks**	Structure activity	-0.76	-2.03	-1.14	-1.83	-1.19	-0.66
	Structure size	-0.10	-1.05	-0.77	-0.69	-0.55	0.11
	Structure efficiency	-4.69	-6.00	-5.17	-6.17	-5.17	-5.59
	Structure regulatory	7.02	8.21	10.15	7.72	8.95	10
Financial development (banking and market sectors)	Finance activity	-1.18	-3.38	-0.84	-2.86	-1.58	-3.03
	Finance size	0.69	0.47	0.75	0.55	0.65	-0.43
	Finance efficiency	2.18	0.44	2.85	1.04	2.01	1.90

Notes: All the measures are taken from Levine (2002) or calculated from the World Bank Financial Database using the definitions in Levine (2002) (using 2003 figures for India); (see Appendix A.2 for list of definitions)
 *—the numerical results for countries of each legal origin group is calculated based on a value- (GDP of each country) weighted approach. **=measuring whether a country's financial system is market- or bank-dominated; the higher the measure, the more the system is dominated by markets.

Table 3-C A Comparison of the Largest Stock Markets in the World (01/01-12/31, 2005)

Rank	Stock Exchange	Total Market Cap (US\$ million)	Concentration (%)	Turnover Velocity (%)
1	NYSE	13,310,591.6	38.2	99.1
2	Tokyo SE	4,572,901.0	53.9	115.3
3	Nasdaq	3,603,984.9	78.9	250.4
4	London SE	3,058,182.4	85.9	110.1
5	Osaka SE	2,969,814.6	65.6	8.5
6	Euronext	2,706,803.5	59.5	112.8
7	TSX Group	1,482,184.6	64.5	69.2
8	Deutsche Börse	1,221,106.1	78.9	149.4
9	Hong Kong Exchanges	1,054,999.3	74.7	50.3
10	BME Spanish Exchanges	959,910.4	--	161.2
11	Swiss Exchange	935,448.3	72.4	114.7
12	Australian SE	804,014.8	90.9	84.0
13	OMX	802,561.4	78.8	116.7
14	Borsa Italiana	798,072.9	66.2	160.0
15	Korea Exchange	718,010.7	47.9	206.9
16	Bombay SE	553,073.7	72.8	35.4
17	JSE	549,310.3	65.7	44.6
18	National Stock Exchange India	515,972.5	48.5	75.6
19	Taiwan SE Corp.	476,018.0	47.9	131.4
20	Sao Paulo SE	474,646.9	61.3	42.8
21	Shanghai SE	286,190.3	31.7	82.1
22	Singapore Exchange	257,340.6	56.3	48.4

Notes:

1. All figures are from <http://www.world-exchanges.org>, the web site of the international organization of stock exchanges.
2. Concentration is the fraction of total turnover of an exchange within a year coming from the turnover of the companies with the largest market cap (top 5%).
3. Turnover velocity is the total turnover for the year expressed as a percentage of the total market capitalization.

Table 3-D A Comparison of (Mean) External Capital Markets (Stocks and Bonds)

Country	English- origin average	French- origin average	German- origin average	Scandinavian- origin average	LLSV Sample average	India
External capital/GNP	0.60	0.21	0.46	0.30	0.40	0.31
Domestic firms/Pop	35.45	10.00	16.79	27.26	21.59	7.79
IPOs/Population	2.23	0.19	0.12	2.14	1.02	1.24
Total debt/GNP	0.68	0.45	0.97	0.57	0.59	0.29
GDP growth (1-year)	4.30	3.18	5.29	2.42	3.79	4.34
Rule of law	6.46	6.05	8.68	10.00	6.85	4.17
Anti-director rights	3.39	1.76	2.00	2.50	2.44	5
One share - one vote	0.22	0.24	0.33	0.00	0.22	0
Creditor rights	3.11	1.58	2.33	2.00	2.30	4

Sources: LLSV (1997a)

Table 3-E A Cross-country Comparison of Banking System Profitability

The profitability is measured as the return on average equity (ROAE), and return on average assets (ROAA). The latter is presented in the brackets.

	1997	1998	1999	2000	2001	2002
China	6.6 (0.2)	4.0 (0.2)	3.2 (0.18)	3.9 (0.2)	3.5 (0.2)	4.16 (0.2)
Hong Kong	18.7 (1.8)	11.0 (1.0)	18.2 (1.6)	18.8 (1.6)	15.7 (1.4)	15.6 (1.4)
India	17.0 (0.9)	9.7 (0.5)	14.2 (0.7)	0.9 (0.5)	19.2 (0.9)	19.6 (1.0)
Indonesia	-3.8 (-0.3)	N/a	N/a	15.9 (0.3)	9.7 (0.6)	21.1 (1.4)
Japan	-18.6(-0.6)	-19.2(-0.7)	2.7 (0.1)	-0.7 (0.0)	-10.4 (-0.5)	-14.5 (-0.6)
South Korea	-12.5(-0.6)	-80.4(-3.0)	-34.0 (-1.5)	-7.0(-0.3)	15.8 (0.7)	13.1 (0.6)
Taiwan	11.2 (0.9)	9.5 (0.8)	6.9 (0.6)	5.1(0.4)	4.0 (0.3)	-5.2 (-0.4)

Source: The Asian Banker data center 2003, <http://www.theasianbanker.com>.

Table 4 Descriptive Statistics of the Prowess Sample of Firms

This table provides the descriptive statistics of our sample of non-financial Indian firms in the year 2004, based on the *Prowess* database of CMIE. The table shows the breakdown between firms in the small and medium enterprises (SME) sector and large enterprises (LE), as well as between manufacturing and services sectors. It reports the maximum, median and minimum values of sales, assets and age of the firms.

Firm Category		SME-manufacturing	Large-Manufacturing	SME-Service	Large-Service	All SMEs	All Large Enterprises	All Enterprises
Number of Observations		655	1374	338	387	993	1761	2754
Sales (Million USD)	Max	123.6	30841.3	1301.5	8343.9	1301.5	30841.3	30841.3
	Median	1.3	30.5	0.6	57.1	1.0	32.7	12.6
	Min.	0	0	0	0	0	0	0
Total Assets (Million USD)	Max	81.2	16036.4	775.6	90682.8	775.6	90682.8	90682.8
	Median	1.7	0.7	1.4	113.3	1.6	38.6	15.5
	Min	0	30.9	0	1.6	0	0.7	0
Firm Age (years)	Max	128	135	94	139	128	139	136
	Median	18	20	14	20	16	20	16
	Min	2	0	0	2	0	0	0

Table 5 Ownership Structures of Indian Firms vis-à-vis Other Country Groups

Panels A and B are taken from LLS (1999). The first row in Panel C shows the average of the Asian countries (excluding Japan) examined in Claessens et al. (2000). The second row shows the average for Chinese firms in Allen, Qian and Qian (2005). Our sample of 2754 firms from India (panel data set for the period 2000 to 2004) is collected and compiled from the CMIE *Prowess* database. Among them 1388 firms' ownership data are observed. The ratio of ownership type is calculated at firm*year (6432) level for India firms and presented in the last 5 rows.

Controlling shareholder*	Foreign	Widely-held (%)	State/Govt. (%)	Family/Individual (%)	Financial corporation (%)	Non-Financial Corporation (%)
Panel A:						
LLS (1999) sample of large firms						
High-antidirector average		34.2	15.8	30.4	5.0	5.8
Low-antidirector average		16.0	23.7	38.3	11.0	2.0
Sample average		24.0	20.2	34.8	8.3	3.7
Panel B:						
LLS (1999) sample of medium firms						
High-antidirector average		16.7	10.3	50.9	5.8	1.7
Low-antidirector average		6.0	20.9	53.8	6.7	2.7
Sample average		10.7	16.2	52.5	6.3	2.2
Panel C:						
Asian firms						
Asia (no Japan, Claessens et al., 2000)		3.1	9.4	59.4	9.7	18.6
China (Allen, Qian, and Qian 2005)		0.4	60.0	13.6	1.8	24.2
Panel D:						
	NRI/OCB**			a	b	c
India full sample	10.7	1.9	0.4	77.6	1.0	8.8
SME - Manufacturing	5.4	0.7	0.0	84.0	0.1	9.7
Large Enterprises - Manufacturing	13.4	1.0	0.3	79.6	0.4	5.6
SME - Service	0.7	2.9	0.0	75.2	0.0	21.3
Large Enterprises - Service	11.5	4.0	0.8	70.4	3.2	10.9
All Small and Medium Enterprises (SME)	3.5	1.6	0.0	80.4	0.1	14.4
All Large firms	12.8	1.9	0.5	76.7	1.3	7.2

Notes:

*: We list these "controlling shareholders" (% indicate fraction of sample firms having a particular type of controlling shareholder): 1) "Widely-held" firms are defined as no single large shareholder owns more than 10% of shares; 2) "State" firms are those with the controlling shareholder being the state/government; 3) "Family" firms are those with the controlling shareholder being the founder's family; 4) "Financial" ("Non-financial") are firms with a widely-held financial (non-financial) corporation as the controlling shareholder.

** : Non-Resident Indians (NRIs) are individuals of Indian nationality or Indian origin resident outside India. Overseas Corporate Bodies (OCBs) include overseas companies, partnership firms, societies and other corporate bodies which are owned predominantly (at least 60%) by individuals of Indian nationality or Indian origin resident outside India.

a: For these Indian firms, we identify the dominant shareholder to be private block-holders, but we are not sure how many blockholders there are and whether they are related or not.

b: For these Indian firms, we identify the dominant shareholder to be a financial company, but we are not sure whether the financial company is widely held or not.

c: For these Indian firms, we identify the dominant shareholder to be another listed and traded corporation, but we are not sure whether this corporation is widely held or not.

Table 6-A Sources of Funds for Non-financial Firms (percentage of total funding; 2001-2004)

This table provides evidence on the sources of (new) funds for non-financial Indian firms during the 4-year period of 2001-2004, based on the *Prowess* database of CMIE. The table shows the breakdown between firms in the small and medium enterprises (SME) sector and large enterprises, as well as between manufacturing and services sectors. For a particular firm category, the reported percentages of total funding are obtained by first calculating the percentage of total *new* funding in a given year for each funding source and then by taking the average from 2001 to 2004.

	Large Enterprises			Small & Medium Enterprises			All
	All Large enterprises	Large-Manufacturing	Large-Service	All SMEs	SME-manufacturing	SME-Service	
Internal Sources	53.85%	66.90%	46.81%	10.13%	24.14%	2.60%	53.42%
Equity (Private + Public)	6.68%	7.25%	6.37%	15.40%	11.89%	17.29%	6.76%
Capital Market-Debt	12.04%	-0.38%	18.73%	1.42%	0.03%	2.16%	11.93%
Debt from Banks & FI's	7.33%	4.32%	8.95%	6.75%	3.83%	8.32%	7.32%
Debt from Group Co's / Promoters	0.75%	1.72%	0.22%	-0.27%	5.44%	-3.34%	0.74%
Trade Credit	9.24%	13.25%	7.07%	58.60%	43.61%	66.66%	9.72%
Others	10.13%	6.93%	11.85%	7.98%	11.07%	6.32%	10.11%
Number of Observations	1761	1374	387	993	655	338	2754

Source: The source of the data is *Prowess* database compiled by the Centre for Monitoring Indian Economy (CMIE).

Table 6-B Summary Statistics of Financial Items of Listed Firms (as of Dec. 2004)

Our sample of 2754 firms from India (panel data set of 2000 to 2004; no PSUs) is collected and compiled from the CMIE *Prowess* database. This table summarizes key financial items of these listed firms at 2000-2004. The calculations are based on an exchange rate of US \$ 1 = 45 Rupees.

	Mean	Median	Std. Dev	% of non-zero obs.
<i>Panel A: Market capitalization (US\$ million)</i>				
India full sample	127.81	4.11	809.56	
SME - Manufacturing	0.82	0.44	1.63	
Large Enterprises - Manufacturing	89.62	5.63	569.96	
SME - Service	3.61	0.63	14.90	
Large Enterprises - Service	357.15	25.71	1466.16	
<i>Panel B: EPS (US\$)</i>				
India full sample	0.16	0.05	0.96	
SME - Manufacturing	-0.01	0.00	0.37	
Large Enterprises - Manufacturing	0.14	0.07	0.97	
SME - Service	0.001	0.002	0.16	
Large Enterprises - Service	0.35	0.13	1.25	
<i>Panel C: Net income (US\$ million)</i>				
India full sample	6.50	0.09	61.53	
SME - Manufacturing	-0.02	0.007	0.48	
Large Enterprises - Manufacturing	3.60	0.42	44.30	
SME - Service	-0.01	0.01	0.80	
Large Enterprises - Service	26.06	2.32	122.60	
<i>Panel D: Retained earnings (US\$ million)</i>				
India full sample	4.05	0.06	43.16	
SME - Manufacturing	-0.036	0.004	0.47	
Large Enterprises - Manufacturing	1.68	0.28	32.65	
SME - Service	-0.03	0.01	0.78	
Large Enterprises - Service	17.72	1.56	84.53	
<i>Panel E: Proceeds from stock sales (US\$ million)</i>				
India full sample	1.01	0.00	13.38	15.65
SME - Manufacturing	0.02	0.00	0.21	5.50
Large Enterprises - Manufacturing	0.55	0.00	7.43	18.12
SME - Service	0.08	0.00	0.71	8.45
Large Enterprises - Service	3.99	0.00	28.59	26.41
<i>Panel F: Proceeds from Long term borrowing (US\$ million)</i>				
India full sample	7.29	0.00	61.70	37.82
SME - Manufacturing	0.03	0.00	0.18	22.56
Large Enterprises - Manufacturing	6.05	0.00	62.65	48.88
SME - Service	0.05	0.00	0.66	14.02
Large Enterprises - Service	24.03	0.00	101.30	44.03
<i>Panel G: Dividend Payout Ratio (dividend payment over Profits after Taxes; %)</i>				
India full sample	0.21	0.00	5.86	39.73
SME - Manufacturing	0.10	0.00	0.58	18.49
Large Enterprises - Manufacturing	0.29	0.00	8.46	47.64
SME - Service	0.08	0.00	0.33	15.14
Large Enterprises - Service	0.23	0.13	0.88	60.20

Table 6-C Comparing Firm Level External Financing, Dividend and Valuation

Observations for LLSV countries are from LLSV (1997a) and LLSV(2000b). The average of country medians for all countries within the same legal origin is presented. Indian firms: 2754 firms (panel data set for the period 2001 to 2004, among them 1691 firms' market data are observed) are from the CMIE *Prowess* database, with each ratio being the median of the pooled panel of firms during the same time period. The total debt uses total liabilities. The ratio in the parenthesis uses total borrowing as debt. For dividend and valuation, the mean of the observations are in the parenthesis.

<i>Panel A: External Financing (Compared with LLSV (1997a))</i>											
Country	English origin average	French origin average	German origin average	Nordic origin average	LLSV sample average	India					
						Full Sample	SME -mfg	Large -mfg	SME -svc	Large -svc	
Market cap/sales	0.69	0.51	0.63	0.37	0.58	0.28	0.32	0.20	1.24	0.56	
Market cap/cash flow	5.16	3.85	7.48	3.25	4.77	2.54	1.76	2.27	4.54	3.57	
Debt/sales	0.26	0.27	0.3	0.28	0.27	1.27	1.14	1.09	1.90	3.19	
						(0.35)	(0.25)	(0.41)	(0.08)	(0.48)	
Debt/cash flow	2.01	2.06	3.18	2.42	2.24	11.22	10.65	10.49	15.34	13.66	
						(2.03)	(0.75)	(3.04)	(0.00)	(0.60)	
<i>Panel B: Dividend and Valuation (Compared with LLSV 2000b (dividend), 2002 (valuation))</i>											
	Civil Law origin			Common Law origin							
Dividend/Earnings	0.30		0.37				0	0	0	0	0.12
							(0.21)	(0.09)	(0.29)	(0.08)	(0.23)
Dividend/Sales	0.018		0.024				0	0	0	0	0.01
							(0.01)	(0.02)	(0.01)	(0.01)	(0.03)
Tobin's Q	1.20		1.37				0.93	0.86	0.92	0.82	0.99
							(1.11)	(0.97)	(1.08)	(1.18)	(1.29)

Table 7 Comparing Growth Rates of Non-financial firms (2000-2004)

This table provides evidence on the rates of growth in sales and total assets for non-financial Indian firms during the 4-year period of 2001-2004, based on the *Prowess* database of CMIE. The table shows the breakdown between firms in the small and medium enterprises (SME) sector and large enterprises (LE), as well as between manufacturing and services sectors. Panel A reports the growth in sales and Panel B in total assets. The table reports the four-year CAGR and standard deviations in growth for each category. The last two columns show the *F*-statistics and *p*- values, refer to the test of equality of the growth rates for small manufacturing and large manufacturing; small service and large services; and all small and large enterprises. The source of the data is *Prowess* database compiled by the Centre for Monitoring Indian Economy (CMIE)

Panel A: Growth in Sales

Category	Number of observations	Mean CAGR (2000-2004)	Standard Deviation	<i>F</i> Statistic	<i>p</i>- value
SME-Manufacturing	1112	7.69%	35.78%		
Large Firms-Manufacturing	1257	5.69%	21.83%	3.73	<.0001
SME-Service	510	16.79%	60.94%		
Large Firms-Service	292	11.26%	29.25%	2.69	<.0001
All SMEs	1622	10.55%	45.4%		
All Large Enterprises	1549	6.74%	23.5%	4.34	<.0001
All Enterprises	3171	8.14%	35.32%	-	

Panel B: Growth in Total Assets

Category	Number of observations	Mean CAGR (2000-2004)	Standard Deviation	<i>F</i> Statistic	<i>p</i>- value
SME-Manufacturing	1216	4.36%	18.82%		
Large Firms-Manufacturing	1277	3.50%	12.4%	2.89	<.0001
SME-Service	567	11.69%	30.43%		
Large Firms-Service	300	8.62%	17.87%	2.30	<.0001
All SMEs	1783	6.69%	23.39%		
All Large Enterprises	1577	4.47%	13.75%	2.90	<.0001
All Enterprises	3360	5.65%	19.50%	--	--

Panel C: Regression Analysis Comparing Growth Rates of Non-financial firms (2000-2004)

This table provides evidence on the rates of growth in sales for non-financial Indian firms during the 5-year period of 2000-2004, based on the *Prowess* database of CMIE. The table shows the results of the linear regression, with CAGR of sales (2000 to 2004) as the dependent variable. The independent variables are scale (0=small, 1=large) and industry (0=services, 1=manufacturing) in 2004. The control variables are log of age and turnover in the base year (2000). *, ** and *** denote statistical significance at 10%, 5% and 1% levels, respectively.

Variable	(1)	(2)	(3)	(4)
Intercept	0.1055*** (0.009)	0.1581*** (0.0137)	0.1897*** (0.0250)	0.2141*** (0.0253)
Scale	-0.0381*** (0.0129)	-0.0285** (0.013)	-0.0254** (0.0132)	-0.031** (0.0132)
Industry		-0.0767*** (0.0150)	-0.0740*** (0.0152)	-0.0752*** (0.0151)
Log of age (Lage)			-0.0122 (0.0083)	-0.0119 (0.0083)
Turnover				-0.0199*** (0.0038)
Number of observations	3171	3171	3168	3168
R-squared	0.0027	0.0109	0.0118	0.0202

Table 8 Survey Firms – Descriptive Statistics

The firms in the sample were selected from several industrial parks in the New Delhi (northern India) and Hyderabad (southern India) areas that provided industrially diversified clusters of firms. The clusters include the Mayapuri Industrial Area, Naraina Industrial Area, WHS Kirtinagar cluster in Delhi and Patanchera and Jeedimetla Industrial Development Areas (IDAs), the Katedan Industrial Estate and the Bharat Heavy Electricals Ltd. (BHEL) Ancillary Industrial Estate at Ramachandrapuram in Hyderabad. Interviews were conducted with the owners or top level executives of the firms in the sample. On an average an interview took about 45 minutes to complete. The survey contained 36 questions (most with subparts) in four sections. The survey instrument as well as tabulated results are available at <http://www.prism.gatech.edu/~rc166/India-survey.zip/>.

		New Delhi	Hyderabad	Combined
Number of Observations*		136	76	212
Firm Age (years)	Max.	85	38	85
	Median	21	11	19
	Min.	< 1	< 1	< 1
Total Assets (US\$ million)	Max.	1.1 to 3.3	0.222 to 1.1	1.1 to 3.3
	Median	0.222 to 1.1	< 0.222	0.222 to 1.1
	Min.	< 0.222	< 0.222	< 0.222
Sales (US\$ million)	Max.	> 0.222	> 0.222	> 0.222
	Median	0.0555 to 0.111	0.0555 to 0.111	0.0555 to 0.111
	Min.	< 0.0555	< 0.0555	< 0.0555
Number of employees	Max.	350	50	350
	Median	10	20	10
	Min.	2	7	2

* Number of interviews made. Numbers of responses to individual questions vary

Table 9 Reliance on Law and Legal Deterrence

This table provides evidence on reliance on law and deterrence posed by law for SMEs included in our surveys. For both indices, a lower value indicates lower potency of law. The firms have been categorized by sales, number of employees, asset size and age, and classified into different size groups within each category. For each category, the absolute number of respondents in different groups is shown with the percentage of total respondents in parenthesis. Mean (median) indicates the mean (median) value of the index for *all* respondents within a category. The F statistics report results of the tests of the hypothesis that the average value of the index is constant across the different groups within a category.

Category	Value of Reliance on Law Index				Value of Legal Deterrence Index		
	0	1	2	3	1	2	3
Sales in Rs. million	Number of Observations (percentage)						
<1	39 (83.0%)	8 (17.0%)	0	0	25 (53.2%)	16 (34.0%)	6 (12.8%)
1- 2.5	23 (85.2%)	4 (14.8%)	0	0	17 (47.2%)	17 (47.2%)	2 (5.6%)
>2.5	47 (78.3%)	11 (18.3%)	2 (3.3%)	0	40 (60.6%)	21 (31.8%)	5 (7.6%)
F stat (p value)	0.68 (0.5066)				0.22 (0.806)		
Mean (Median)	0.20 (0)				1.53 (1)		
Number of Observations	134				149		
Number of Employees	Number of Observations (percentage)						
<10	30 (69.8%)	13 (30.2%)	0	0	23 (51.1%)	22 (48.9%)	0
10	17 (81.0%)	4 (19.0%)	0	0	59 (56.7%)	32 (30.8%)	13 (12.5%)
>10	44 (89.8%)	3 (6.1%)	2 (4.1%)	0	29 (56.9%)	18 (35.3%)	4 (7.8%)
F stat (p value)	1.15 (0.3216)				0.63 (0.5347)		
Mean (Median)	0.21 (0)				1.53 (1)		
Number of Observations	113				200		
Asset Size in Rs. million	Number of Observations (percentage)						
<10	40 (74.1%)	12 (22.2%)	2 (3.7%)	0	33 (56.9%)	17 (29.3%)	8 (13.8%)
10 to 50	45 (88.2%)	6 (11.8%)	0	0	30 (48.4%)	29 (46.8%)	3 (4.8%)
>50	3 (100.0%)	0	0	0	2 (50.0%)	1 (25.0%)	1 (25.0%)
F stat (p value)	3.82 (0.0534)				0.39 (0.6789)		
Mean (Median)	0.20 (0)				1.56 (1)		
Number of Observations	108				124		
Age in years	Number of Observations (percentage)						
<10	34 (82.9%)	7 (17.1%)	0	0	27 (61.4%)	13 (29.5%)	4 (9.1%)
10 to 20	46 (88.5%)	6 (11.5%)	0	0	24 (52.2%)	18 (39.1%)	4 (8.7%)
20 to 30	15 (71.4%)	5 (23.8%)	1 (4.8%)	0	14 (45.2%)	13 (41.9%)	4 (12.9%)
>30	14 (70.0%)	5 (25.0%)	1 (5.0%)	0	17 (60.7%)	10 (35.7%)	1 (3.6%)
F stat (p value)	0.22 (0.806)				1.1 (0.3354)		
Mean (Median)	0.20 (0)				1.54 (1)		
Number of Observations	134				149		

Table 10 Ordered Probit Regressions on the Importance of Informal Financing

Panel A Proportion of Informal Finance at Start-up Phase

Regressions are ordered probits. The dependent variable is the proportion of informal finance in start-up phase, divided into 4 categories, with a higher value indicating a higher proportion of informal finance as a percentage of total sources of funds. Numbers in parenthesis are the standard errors for the mean coefficient estimates reported. *, ** and *** denote statistical significance at 10%, 5% and 1% levels, respectively. Chi-square and *p*-values are reported for every additional variable in the equation.

Independent Variables	(1)	(2)	(3)
Index for requirements for formal finance (REQ)	0.1704*** (0.0653)	0.1603** (0.0656)	0.2033*** (0.0777)
Sales Level (SALES)		-0.2805*** (0.0879)	-0.3091*** (0.0975)
Dummy for employees (EMP)			-0.4421** (0.1775)
Number of observations	203	203	193
Chi-square	6.81	10.1700	6.2011
Probability	0.0091	0.0014	0.0128

**Panel B Difficulty in Accessing Formal Finance in Growth Phase
(firm age is greater or equal to 5 yers)**

Regressions are ordered probits. The dependent variable is the difficulty in accessing formal finance in growth phase, divided into 4 categories, with a higher value indicating a greater difficulty. Numbers in parenthesis are the standard errors for the mean coefficient estimates reported. *, ** and *** denote statistical significance at 10%, 5% and 1% levels, respectively. Chi-square and *p*-values are reported for every additional variable in the equation.

Independent Variables	(1)	(2)	(3)	(4)	(5)
Requirements for formal finance (REQ)	-0.0266 (0.0781)	-0.0279 (0.0781)	-0.0766 (0.0896)	-0.0739 (0.0899)	-0.1696* (0.0940)
Sales Level (SALES)		-0.1995* (0.1044)	-0.1524 (0.1129)	-0.1588 (0.1137)	-0.0259 (0.1208)
Dummy for employees (EMP)			-0.3608* (0.2064)	-0.3595* (0.2064)	-0.2298 (0.2166)
Log of age (LAGE)				0.1056 (0.2147)	-0.0138 (0.2251)
Proportion of Informal Finance in start-up phase (PIFS)					0.6791*** (0.1472)
Number of observations	159	159	134	134	134
Chi-square	0.1158	3.6495	3.0578	0.2421	21.2840
Probability	0.7336	0.0561	0.0804	0.6227	<.0001

Figure 1 A Comparison of Performance of Stock Indexes
 (“Buy and Hold” returns during 1992-2006 Nov.)

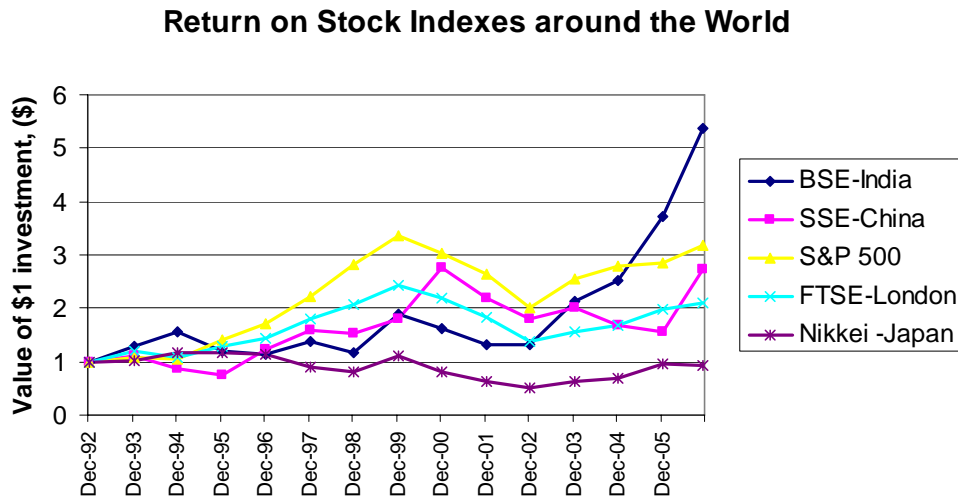


Figure 2 Investor Protection and External Markets – International Comparison

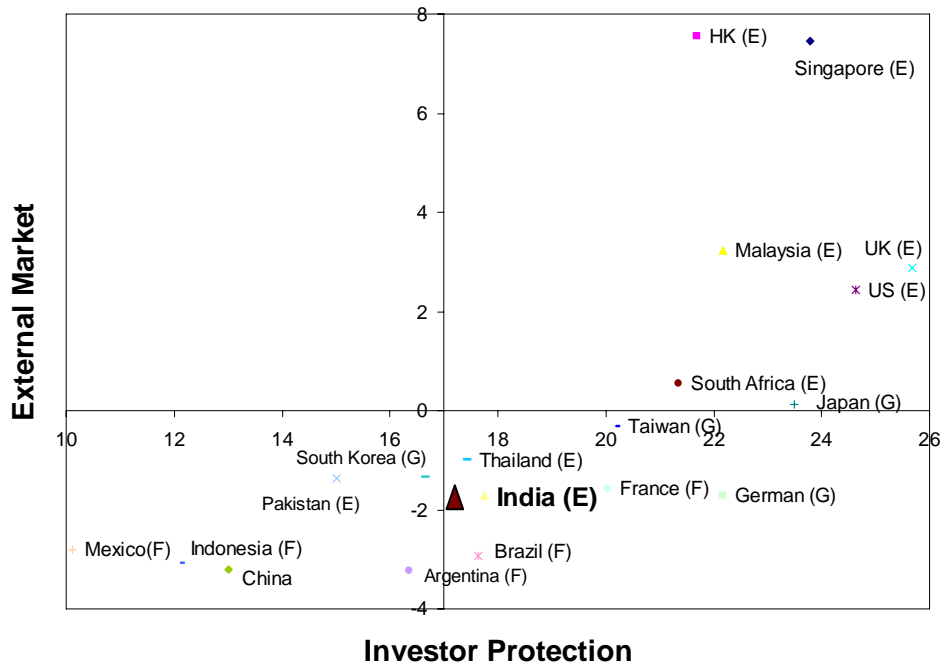
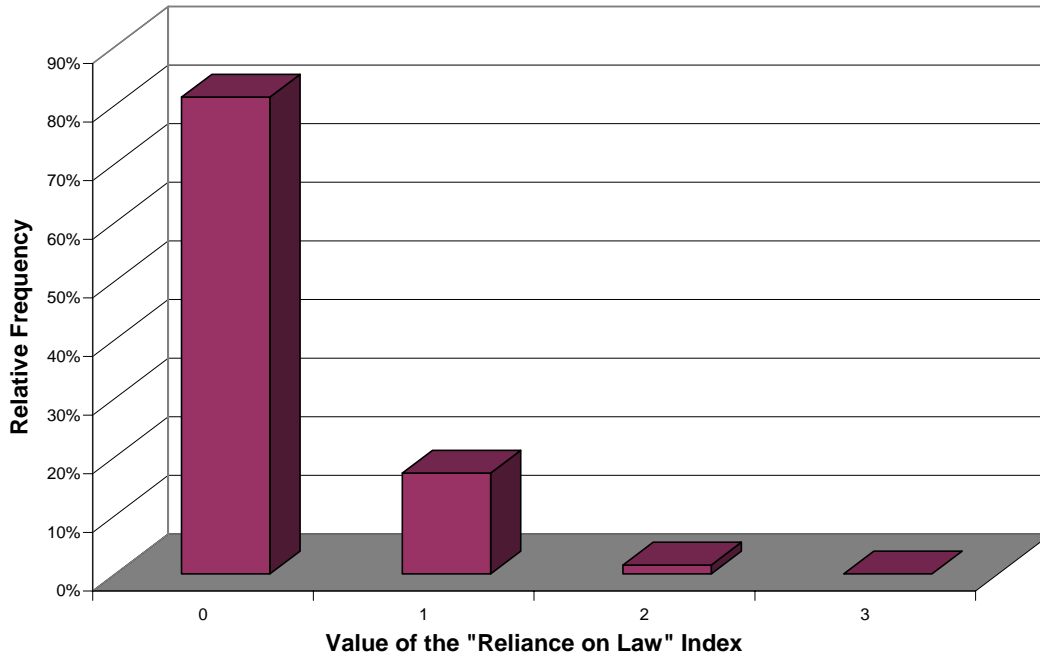


Figure 2 compares India’s legal system and external financial markets to those of LLSV countries (LLSV, 1997a, 1998) and China. Following LLSV (1997a, 1998), the score on the horizontal axis measures overall investor protection in a country. It is the sum of (overall) creditor rights, shareholder rights, rule of law, and government corruption. The vertical axis measures the (relative) size and efficiency of that country’s external markets. The score of a country measures the distance of the country’s overall external markets score (external cap/GNP, domestic firms/Pop, IPOs/Pop, Debt/GNP, and Log GNP) to the mean of all countries, with a positive (negative) figure indicating that this country’s overall score is higher (lower) than the mean.

Figure 3 Effects of the Legal System on Survey Firms

Panel A

Reliance on Law



Panel B

Legal Deterrence

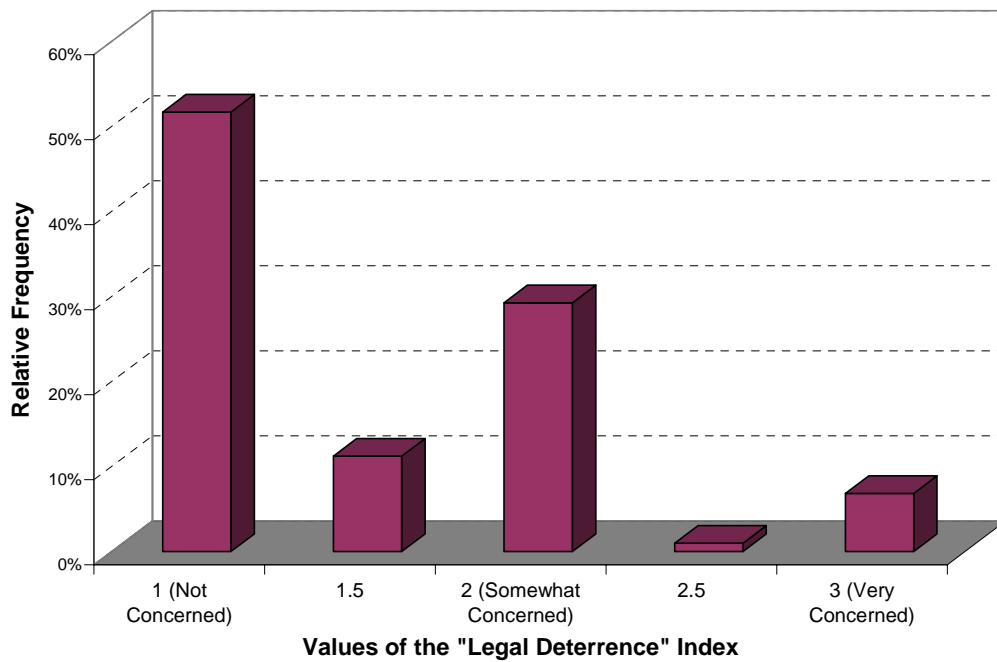


Figure 4 Financing Channels for Survey Firms

This figure highlights the relative importance in the start-up phase and the ease of obtaining funding in the growth stage from informal and formal sources. Informal financing includes financing from friends and family and trade credit. Formal finance includes banks, private credit agencies and individuals, government funding and venture capital for the start-up phase and short-term and long-term bank credit, loans from specialized lending institutions like SIDBI and SFC as well as private equity/debt from investors within India. Survey respondents rate each source on a 1-4 scale (1= little importance (extremely difficult and costly to access); 4= extremely important (very easy and low cost)). The average ratings of sources within the informal and formal groups are reported in the figure.

