

Financing Firms in India*

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Abstract

We examine the legal and business environments, financing channels and governance mechanisms of various types of firms in India, and compare them to those from other countries. Despite its English common-law origin, strong legal protection provided by the law and a democratic government, corruption within India's legal system and government significantly weakens investor protection in practice. External financing of firms has been dominated by non-market sources of financing, while the characteristics of listed firms are similar to those from countries with weak investor protection. Our evidence, including results based on a survey of small- and medium-scale private firms, shows that alternative financing channels provides the most important source of funds. We also find that informal governance mechanisms, such as those based on reputation, trust and relationships, are more important than formal mechanisms (e.g., courts) in resolving disputes, overcoming corruption and supporting growth.

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

JEL Classifications: O5; K0; G0

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Abstract

We examine the legal and business environments, financing channels and governance mechanisms of various types of firms in India, and compare them to those from other countries. Despite its English common-law origin, strong legal protection provided by the law and a democratic government, corruption within India's legal system and government significantly weakens investor protection in practice. External financing of firms has been dominated by non-market sources of financing, while the characteristics of listed firms are similar to those from countries with weak investor protection. Our evidence, including results based on a survey of small- and medium-scale private firms, shows that alternative financing channels provides the most important source of funds. We also find that informal governance mechanisms, such as those based on reputation, trust and relationships, are more important than formal mechanisms (e.g., courts) in resolving disputes, overcoming corruption and supporting growth.

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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 large samples of cross-country studies, the law and finance literature (pioneered by La Porta, Lopez-de-Silanes, Shleifer, and Vishny 1998; LLSV hereafter) finds that stronger legal protection of investors is associated with more efficient institutions and better financial and economic ‘outcomes’.¹ The second strand of literature champions the view that the development of a financial system that includes a stock market and intermediation contributes to a country’s overall economic growth (e.g., McKinnon, 1973).² The third strand of literature 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).

Despite the connections from legal origin to institutions to financial and economic outcomes, much less is known about the *causality* of these links. For example, time series evidence on financial development has challenged some of the correlations documented by LLSV (e.g., Rajan and Zingales 2003a), while the cost of improving the legal system can be prohibitively high for emerging countries.³ Proponents of institutional development argue that, instead of a country’s legal origin, the 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).

In a recent paper, Allen, Qian and Qian (2005, hereafter AQQ) demonstrate that China

¹ LLSV (1998) find that countries with the English common-law origin provide the strongest legal protection to both shareholders and creditors, while countries with the French civil-law origin provide the weakest.

² 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).

³ 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 twenty-five years around the globe.

provides a significant counterexample to the findings in the law, institutions, finance and growth literature. Despite its poor legal and financial systems and a corrupt and autocratic government, China has (in Purchasing Power Parity (PPP) terms) one of the largest and fastest growing economies. Moreover, AQQ document that alternative financing channels and informal governance mechanisms have substituted for formal channels and mechanisms to support corporate as well as overall economic growth in China.⁴

In this paper, we examine 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 already has the world's *fourth* largest economy measured in PPP terms (Table 1-A). During the period of 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 India's English common-law origin, the legal protection of investors provided by the law is one of the strongest in the world. However, widespread corruption within India's legal system and government significantly weakens legal protection in practice. We find that formal external financing for firms has been dominated by non-market sources of funds in India, while listed firms behave more like those from countries with weak investor protection. Our evidence, including results based on a survey of small- and medium-scale (private) firms, demonstrates that alternative financing channels provides the most important source of funds. Our survey evidence also shows that entrepreneurs and investors rely more on informal governance mechanisms, such as those based on reputation, trust and relationships, than formal mechanisms to resolve disputes, overcome corruption and finance corporate growth.

Our results, along with the findings of AQQ (2005) on China, illustrate that, alternative financing channels and informal governance mechanisms, rather than legal protection and political

⁴ The literature on economies of transition (from Socialist, central planning systems to market-based economies) also documents the important role of alternative mechanisms in promoting the development of markets and institutions (e.g., McMillan, 1997; McMillan and Woodruff, 2002).

institutions (e.g., lack of government corruption) documented in most of the existing literature, have supported the growth of non-government firms in these two countries. As of 2005, they have a combined population of 40% of the entire world, and their combined GDPs (in PPP terms) are almost as large as that of the U.S. and equal to 19% of the world total. Given the status of these two countries, our findings call for more research in order to better understand whether similar “substitute” mechanisms that have worked well in China and India have also supported the growth of firms in other economies where formal mechanisms are not available.

We first find that India, a long-time British colony, has the best investor protection on paper. India has a *perfect* score on the Creditor Rights index (4 out of 4),⁵ 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. However, wide-spread government corruption and overburdened courts lead to poor legal protection in practice.⁶ Perhaps not surprisingly, India’s stock market has not played a dominant role in resource allocation and providing external financing to firms. External financing through financial markets (equity and bond) has been dominated by banking and alternative sources, although the size and importance of the stock markets have grown significantly in recent years. Since the deregulation and financial liberalizations in the early 1990s, the entry and competition from non-state owned banks have stimulated the growth of the banking sector, which has maintained a low level of non-performing loans (NPLs) and a high level of efficiency in part due to stringent lending standards.

We next separately examine financing channels, corporate governance, and the growth of three groups of firms. First, the importance of the *state sector* (public sector undertakings, or PSUs)

⁵ 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).

⁶ 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.

in the economy has been decreasing relative to non-state sectors, even though as a group PSUs have been growing at comparable rates to the non-state sector. The reason is there is an ongoing privatization process in the state sector, including selected PSUs being publicly listed. Second, our empirical results on *listed firms* of the non-state sector are based on a sample of more than 850 firms over the period 1995 - 2004. We find that the equity ownership is highly concentrated within the founder's family and/or the controlling shareholder. These findings are similar to those for 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), both the dividend ratio and valuation 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.

More interesting results are found for the *non-state, non-listed* firms, and in particular, small- and medium-sized firms. These firms have grown faster than the rest of the economy during the past fifteen years, while the financing of this sector is clearly different from the state and listed firms. Due to the lack of publicly available firm-level data, our evidence, by necessity, is mainly based on a survey of 213 entrepreneurs and executives of firms located in and around the *southern* Indian city of Hyderabad (76 firms) and the Delhi-Gurgaon area of *northern* India (136 firms). Our survey firms operate in manufacturing industries with firms ranging in age from less than a year to 85 years (the median is 21 years). These firms employ two to 350 workers (the median is ten).

In about 85% of the firms surveyed, the largest owner is the founder's family, while over half of the firms have *unlimited* liability. When asked how the owners (with unlimited liability) would protect their personal assets in case of business failure, 151 out of 157 respondents would negotiate with lenders for an extension; only 22 respondents said they would also file personal bankruptcy. The three most important financing channels for these firms during their start-up and growth periods are founders' family and friends, trade credits and loans from financial institutions, including state-

owned banks and banks specialized in lending to small- and medium-sized firms (e.g. the Small Industry Development Bank of India, or SIDBI, and State Financial Corporations, or SFCs).

However, credit availability is not uniform across the surveyed firms, and the market for bank credit is clearly relationship-driven. Over 70% of the respondents said that their firms had to meet operating/profitability criterion to obtain their largest loans, while the median “monitoring” frequency of the banks (bank staff contacting borrower about the loan) is once per quarter.

We also find that informal governance mechanisms based on trust, reputation and relationships are much more important than legal remedies in resolving disputes and enforcing contracts. For example, when asked about the consequences of delay of (or non-)payments and breach of contracts, the respondents ranked loss of future business opportunities, reputation and personal assets as main concerns, while fear of legal remedies was 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 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% said they would go to courts but would leave negotiation possibilities open. Finally, when asked about government regulatory authorities (e.g., obtaining a license to start a business), our survey indicate corruption is part of doing business. The two most common methods to overcome corruption are bribes and using friends of government officials.

Our paper extends the literature on law, institutions, finance and growth. Many cross-country studies focus on one or two dimensions of a country’s legal and financial systems, and treat each country in their sample 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 legal and financial institutions because they can be tailored to

these countries' needs at low costs.⁷ By contrast, this paper studies *all* aspects of the financial system in 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. Our paper thus complements cross-country studies, and can further advance the understanding of growth mechanisms.

We also utilize surveys to examine small- and medium-scale private firms, which is one of the most vibrant corporate sectors in India. Survey-based research has made significant contributions to the law, institutions, finance and growth literature.⁸ In particular, 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 ways. 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 the most comprehensive and detailed information on all the financing channels (standard and alternative) and governance mechanisms (formal and informal) at different stages of 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, and Section III describes the size and growth of the different sectors of the Indian economy. In Section IV, we examine the financing patterns, valuation, and dividend policies of firms in the Listed Sector. Section V presents our survey results of small- and medium-scale firms. Finally, Section VI concludes. Appendix A contains the explanations of all the variables used in the paper.

II. India: An Overview

⁷ Moreover, Stulz (2005) argues that there are limits to globalization, including the improvement of institutions, due to a “twin” agency problem of governments and corporate insiders in emerging countries.

⁸ 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.

Home to the second largest population in the world (1.08 billion as of 2004), 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-A). The largest democracy in the world with a press as free and vocal as anywhere else, it is relatively conservative in social mores by Western standards and considerably more so in rural areas where over 70% of the population resides. The birthplace of at least three major religions, India is replete with Buddhist, Islamic and Western influences though Hinduism is the dominant faith today. With 25 major languages and over a hundred dialects, India defies generalizations. An illiteracy rate of 35% co-exists with a crowd of information technology professionals and a young English-speaking urban workforce competing for service sector jobs with their U.S. counterparts. Despite its rising economic might, a third of its population languishes in terrible poverty. In short, India is as large and diverse as any other country in the world. Table 1-B provides a snapshot of India's socio-economic conditions.

II.1 The Indian Economy – A Historical Perspective

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. It had four functioning stock exchanges (the oldest one predating the Tokyo Stock Exchange) with clearly defined rules governing listing, trading and settlements; a well-developed equity culture if only among the urban rich; and a banking system with well-developed lending norms and recovery procedures. In terms of corporate laws and financial system, India emerged far better endowed than most other erstwhile colonies. The 1956 Indian Companies Act, as well as other laws governing the functioning of joint-stock companies and protecting the investors' rights, were built on this foundation.

Corporate development in India had begun with the managing agency system. It led to more dispersed equity ownership but also gave rise to the practice of management enjoying control rights

disproportionately greater than their stock ownership.⁹ India's turn towards socialism after independence put in place a regime and culture of licensing, protection and widespread red-tape that bred corruption and stilted the growth of corporate sectors. Heavy industries and strategic sectors were off-limits for private enterprise – the state had to control the “commanding heights” of the economy. Two rounds of nationalization brought about 90% of the banking sector under government control. On the other hand, to promote employment as well as to pay homage to Mahatma Gandhi's vision of village self-sufficiency, India restricted several areas for the “small scale sector”, where individual businesses could not grow beyond a certain size. Formal non-state enterprises, such as joint-stock corporations, were severely restricted to a middle area between these two sectors, subject to the “License Raj” where government permission was required for an unending and ever-increasing list of business decisions. Corruption, nepotism and inefficiency became the hallmarks of the Indian corporate sectors. Exorbitant tax rates encouraged creative accounting practices and complicated compensation structures designed to beat the system.

The economy reached the end of this road in 1990-91 with a severe balance of payments crisis, threatening a default in India's foreign debt payments. While some reforms (more “business-friendly”) had begun in the early and mid-1980s, this crisis, and the conditions imposed by the IMF assistance package that followed, ushered in an era of reforms. As in many other countries around the globe, this constituted deregulation, liberalization of the external sector and partial privatization of some of the state sector enterprises. In many ways the reforms that started in 1991 have transformed the economy through the twin forces of globalization and competition.

For over 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

⁹ The Managing Agency System was a corporate governance system that existed in British India, where the Board of Directors would hire a "Managing Agency" to run the company. These agencies often ran companies in various industries and practically controlled massive conglomerates. The system was abolished in 1970.

1980's. As we have seen in Table 1-A, the annual 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."¹⁰

II.2 Law, Institutions and Business Environment

The most striking fact about India's legal system is the difference between protection of investors *by law* as opposed to protection *in practice*. Table 2 (panels A through E) 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": The scores on both creditor rights (Table 2-B, 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-C) are the highest of any country in the world.

Tables 2-D and 2-E compare 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, the legal formalism (DLS 2003) index, based on extensive surveys of lawyers and judges, measures how efficiently the courts of a country enforce contracts. DLS have constructed measures based on how courts handle two types of cases: Collection of a bounced check, and eviction of a (non-paying) tenant. A higher score in either

¹⁰ 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.

category implies that the court system is slower (with more bureaucracy) and less efficient. We took the average of these (highly positively correlated) indexes to construct a single formalism index. From Table 2-D, India's has a higher formalism index than the average of English origin countries, and is only lower than that of the French origin countries.

Transparency International's survey-based annual reports provide the most comprehensive examination of corruption within the government and legal institutions around the world. Based on its 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). In the 2003 survey, India has a score of 2.8/10 and ranked 95 out of 145 countries.¹¹ From Table 2-E, India has one of the lowest scores among major emerging countries, only ahead of Pakistan (Argentina has a score of 2.8). Further, in its survey of investment climates around the world, the World Bank (*World Development Report 2005*) found that corruption was the number one constraint for firms in South Asia. Another survey by the same organization, "Corruption in South Asia in 2002" found 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.

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

¹¹ For more information, go to the website of Transparency International (http://www.transparency.org/pressreleases_archive/2002/dnld/south_asia_report.pdf).

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 last category of Table 2-D is the legality index, a composite measure of the effectiveness of a country's legal institutions. It 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.¹² In keeping with its socialist moorings during the first three decades after independence, India created a panoply of laws as well as government departments to monitor and control the private sector on the one hand, and to promote and finance small enterprises through government assistance on the other. 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.

¹² 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%.

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 government.

II.3 The Financial Sector

Despite the history of India's stock markets and large number of listed firms, 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. 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 ahead of the world average. On the other hand, total capitalization of the stock market is 34% of GDP, while the size of the (private) corporate bond market is miniscule.

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.¹³ "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-

¹³ 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).

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 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.

Financial Markets

The number of India’s stock exchanges has grown from four at Independence (1947) to 23 today. India also boasts the largest number of listed companies in the world – well over 10,000. However, the equity markets were not important as a source of funding for the non-state sector until as recently as the early 1980s. Before then, the Indian capital markets were a closed club of brokers with few primary market offerings and little trade and marginal participation of the common public, a state of affairs caused mostly by the lack of transparency in Indian businesses and little protection of minority shareholders. 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).

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. 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 Mumbai Stock Exchange (formerly the

Bombay Stock Exchange, or BSE) Index than from investing in the S&P 500 Index and other indices in the U.K., China, and Japan during the period of 1992-2005. 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.¹⁴

Table 3-C shows the comparative position of the two major Indian exchanges (the NYSE-type “floor exchange”, the BSE, and the NASDAQ-type electronic exchange, National Stock Exchange, (NSE)) vis-à-vis other major exchanges in the world. At the end of 2004, BSE was the sixteenth largest stock market in the world in terms of market capitalization, while NSE ranked next at seventeenth. Table 3-C also shows that trading in the BSE is the most concentrated among the largest exchanges in the world, with the top 5% of companies (in terms of market capitalization) accounting for close to 90% of all trades, but the (share) turnover velocity of BSE (43.1% for the year) is much lower than that of exchanges with similar concentration ratios. These results are consistent with our prior conclusion that the majority of shares in the BSE are not frequently traded. By contrast, the trading patterns at the NSE are similar to those of NASDAQ with more stocks actively and frequently traded (lower concentration ratio and higher turnover velocity).¹⁵

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

¹⁴ 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 equals 11.58% of GDP in 2005, as compared to 0.03% in 1990.

¹⁵ 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.

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.¹⁶ 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.

Banking Sector

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.

While the problem of NPLs does exist for some public sector banks (also a "new" private sector bank almost collapsed in 2003 when it was bailed out by merging with another bank), compared to most Asian countries the Indian banking system has done better in managing this

¹⁶ 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.

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. Table 3-E provides comparative statistics on this issue. In terms of profitability, Indian banks have also performed well compared to the banking sector in other Asian economies, as the returns to bank assets and equity in Table 3-F 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 is small relative to the economy while its roles of resource allocation and provider of external financing are expected to become much more important in the near future.

III. Aggregate Evidence on India’s Corporate Sectors: Organization, Financing and Growth

Since Independence India has sought to follow a “mixed economy” model with co-existing state and non-state sectors. In reality, the next four decades saw the widening and strengthening of the state sector with simultaneous crippling of the non-state sectors through severe controls, including limits to investment and industrial licensing. During the last decade and a half of liberalization, initiated in 1992, the non-state sectors have gained some long-overdue momentum. Before we compare the scale and growth of various sectors, some clarifications on the definitions of corporate sectors are in order. First, the state sector comprises of PSUs, in which the government has majority (at least 50%) ownership and control. Second, the Companies Act (1956) of India defines a ‘public’ company as a (non-state) company that has a minimum paid-up capital of Indian

rupees (Rs.) 500,000 (US\$ 11,100) and more than 50 shareholders. A fraction of the 76,621 public companies (more than 10,000) are listed and publicly traded on one or more of the exchanges.

Third, the rest of the (smaller) registered, non-state companies with less than 50 shareholders are called 'private' companies. Finally, there is the unorganized sector that consists of firms that are not PSUs, public or private companies.

A focus of our paper is small- and medium-scale private firms.¹⁷ The official definition of a firm in the Small and Medium Enterprises (SME) sector is one that has investments in fixed assets of plant and machinery less than Rs. 50 million (US\$ 1.11 million, at original cost). The SME sector includes the Small Scale Industry (SSI) sector, where a (mostly manufacturing) firm has fixed assets less than Rs. 10 million (US\$ 222,000), and the medium sector, where firms' fixed assets range from Rs. 10 to 50 million. Largely to create greater employment since independence, the government has sought to "protect" certain industries from large scale, capital intensive companies by establishing investment limits to define this sector. For example, the production of certain products is exclusively reserved for the SSI units.¹⁸ Non-manufacturing small enterprises with less than Rs. 1 million (US\$ 22,000) investment in plant and machinery are classified as the Small Scale Service and Business Enterprises (SSSBE).

Table 4 presents comparisons of state and non-state sectors during the period 1990-2003. Within the non-state sectors we focus on the sector of public and private companies (non-state corporations) and the SSI Sector, a subset of the SME sector. First, in terms of the size of the labor force, the SSI dominates the other sectors: With an annual growth rate of almost 4%, the size of the labor force in the SSI sector as of 2003 was 19.97 million as compared to 8.50 million for the state

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 Currently the production of 506 items, most of which are consumer products and food, are reserved exclusively for SSIs. For a complete list, visit this website: <http://www.smallindustryindia.com/publications/reserveditems/resvex.htm>.

sector. In fact, the actual employment number in small firms is actually much larger than the reported figure of 19.97 million, which does not include all the (non-agriculture) firms and their employees in the unorganized sector (as explained above, firms in the unorganized sector are not PSUs, public or private companies). Second, in terms of the size and growth of the output of the sectors, we can see that all sectors have been growing fast, while the annual growth rate of output in the SSI sector (9.8%; data on the output of all firms in the non-state sectors not available) is higher than that of the state-sector (8.5%). In terms of contribution to GDP, the size of the state-sector (excluding government spending) has been around one fifth of the non-state sectors (excluding agriculture) during 1990-2003.¹⁹ Third, in terms of fund raising and investment, non-state sectors have also 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%. By contrast, paid-up capital in non-state corporations (including listed firms) has been growing at an annual rate of 21.51%.²⁰

Table 5 provides evidence on the sources of (new) funds for non-financial Indian firms during the 14-year period of 1991-2004, based on the *Prowess* database of the Centre for Monitoring the Indian Economy (CMIE). The firm categories (among the firms in the non-state sectors) are not always mutually exclusive but they show the breakdown between listed and unlisted firms, and, in the small-scale sector, between manufacturing (SSI) and services (SSSBE) sectors.²¹ For all firms in the state and non-state sectors, the most important source of funds is “internal sources” (e.g.,

¹⁹ 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.

²⁰ 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.

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. CMIE is a Mumbai-based economic and business information and research organization.

retained earnings) accounting for over one third of all sources. However, the most striking finding from the table is the importance of short-term financing through trade credits, other current liabilities and provisions, reflected in the “Others” category. Across all firm categories short-term sources on an average accounted for close to 30% of all sources of funds. The importance of this source increases dramatically in the small scale segment accounting for over half and almost two-thirds of all financing for the SSI and SSSBE sectors, respectively. Since many firms in the SSSBE sector are engaged in wholesale and retail trade and with current liabilities playing an important role in financing and business activities, this finding is perhaps not too surprising.

The overall marginal debt-equity ratio, with debt equaling the sum of “debt” and “borrowing from banks or intermediaries” (part of this category may be short-term in nature) comes out to be approximately 1.5. Firms in the two small-scale sectors have negligible debt in their marginal capital structure. Firms in the state sector have the highest marginal leverage (over 1.8), followed by listed companies, unlisted companies, and small scale sector firms in that (expected) order. While there has been considerable temporal variation in the relative importance of individual sources of financing in the last decade and a half, the overall patterns noted above remain unaltered. Overall, the results shown in Table 5 are largely consistent with the findings of Love et al. (2004), who find evidence of stronger credit constraints for smaller (and younger) firms. Our results are also generally consistent with those from the *Reserve Bank of India* (2005).²²

The patterns above appear to suggest that external long-term finance has remained an important bottleneck in Indian industry, particularly for the SME sector. Recent studies by other researchers have found evidence of “under-lending” by Indian banks to the corporate sector. Under-lending is present when the marginal rupee lent to a borrower yields a higher marginal product than

²² Using financial reports of around 2,000 *public* companies, the *Reserve Bank of India* finds that internal sources accounted for about 40% of total funds until 1999-2000, and then jumped to about 60%. They treat “provisions” as part of “internal sources”, while our data source, CMIE Prowess, includes it in “others” category.

its interest cost.²³ 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 under the equilibrium levels. 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. In many countries, the SME sector faces impediments to bank financing, and depends heavily on short-term borrowing.²⁴ India perhaps presents a rather extreme example of this phenomenon, with the SME sector facing a severe shortage of financing. About 50% of the respondents in a recent National Sample Survey Organization (NSSO) survey said that they faced an acute shortage of capital.²⁵ The mean loan outstanding was less than 3% of gross fixed asset (at market prices). About 93% of SME units had no outstanding loans from banks or financial institutions. About half of the respondents in the NSSO survey without loans mentioned that getting a loan is very difficult. About half of the loans to this sector came from specialized central financial institutions like the Small Industry Development Bank of India (SIDBI) and state financial institutions (SFCs). The average annual credit flow to the SSI during the late 1990s hovered between US\$ 2.4 and 3.6 billion.

It is important to point out that, while formal financing (equity and public/private debt through markets as well as through other means involving formal contracting) remains scarce and costly for firms in India's SME sector (and in other emerging economies), informal and alternative financing sources can provide an effective (partial) substitute for formal channels and support the growth of these firms. In Section V below, we provide firm-level evidence on formal and informal financing channels based on our own surveys of firms. To summarize our findings in this section,

²³ For example, 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.

²⁴ See Voordeckers and Steijvers (2005) for the Belgian case, and see Poutziouris et al. (2005) for the situation in the U.K. 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).

²⁵ "The Indian SME Sector" – A report by India Development Foundation and Indicus Analytics (March 2004).

with aggregate data (at industry-level) we first show that financing through internal and alternative channels provides the most important funding source for Indian firms. We also find that the growth of the non-state sectors, in particular, the SSI sector which is part of the SME sector, has been the most impressive among all firms in India.

IV. Evidence on Listed Firms

In this section, we focus on publicly listed and traded companies and examine their financing and investment decisions. We also relate these firm characteristics to legal protection of investors in India, and examine whether these relations are different from firms studied in previous papers (LLS, 1999; LLSV, 1997a, 2000b, 2002). Before doing so, we first look at different types of listed firms and corporate governance mechanisms in listed firms.

IV.1 Types of Listed Firms and Corporate Governance

Although the majority of listed firms belong to non-state sectors, an important component of the listed Sector is partially privatized and listed state-owned enterprises, usually known as public sector undertakings (PSUs). Privatization of PSUs has been a key element of India's continuing economic reforms that began in 1991. The repeatedly declared goal of the privatization process has been to reduce state shareholding in all PSUs, except defense, atomic energy and railways, to 26% or lower. However, progress on this front has been extremely slow, largely owing to political opposition (see Gupta (2005)). By March 2001, the federal government had sold shares in 41 out of 258 PSUs, of which in 39 cases the state still retained majority shareholding; the median "disinvestment" was only 16% of shares. The disinvestments have taken various forms including sale of shares to domestic and foreign institutional investors and the public through open auctions, public offerings, and global depository receipts in international stock markets. In most cases, the partial or complete privatization has involved listing of PSUs on major exchanges and active trading

in these shares.²⁶

Next, we briefly examine standard corporate governance mechanisms in the listed sector. In the years since independence, with less developed stock markets, three national level development finance institutions together with the state financial corporations have been the main providers of long-term finance to companies. Along with the government owned mutual fund company, the Unit Trust of India, they also held large blocks of shares in the companies that they lent to and invariably had board representations. In this respect, the corporate governance system resembled the bank-based German model. The institutions were traditionally evaluated on the quantity rather than quality of their lending and thus had little incentive for effective monitoring. Their nominee directors routinely served as rubber-stamps of the management of the day. With their support, promoters of businesses in India could frequently enjoy managerial control with very little equity investment of their own. This makes it relatively easy for the promoters and other insiders to recoup their investment in a short period by self-dealing and other strategies.²⁷

India's formal bankruptcy and reorganization process is slow and inefficient. This process is governed by the 1985 Sick Industrial Companies Act. Under this Act the Board for Industrial and Financial Reconstruction (BIFR) provides immediate protection from the creditors' claims for at least four years. Between 1987 and 1992, BIFR took well over two years on an average to decide on a case. Since then, delay has roughly doubled. Very few companies have emerged successfully from BIFR, and even for those that needed to be liquidated, the legal process takes over 10 years on an average, in many cases rendering the assets of the company practically worthless.

Given this reality of the weak protection of creditors' rights, it is hardly surprising that banks,

²⁶ The Bombay Stock Exchange has a separate index, the BSE PSU index, consisting of 47 partially privatized public sector undertakings. On March 31, 2006, these 47 companies had a combined market capitalization of over 166 billion US dollars, accounting for just over 25% of the total Bombay Stock Exchange market capitalization.

²⁷ There is some evidence on the "tunneling" of funds from one group company to another. Bertrand *et al* (2002) estimate that an industry shock leads to a 30% lower earnings increase for business group firms compared to stand-alone firms in the same industry. However, there is also evidence (e.g., Khanna and Palepu 2000) that firms associated with business groups have superior performance than stand-alone firms.

flush with depositors' funds, routinely decide to lend only to blue chip companies and park their funds in government securities. Consistent with evidence of credit-constrained firms (Banerjee et al. 2004), investments in government securities accounted for 37% of the total assets of Indian banks while advances accounted for 49%. Indian companies are also marked by limited dispersion of shareholding. Even as recently as 2002, the average shareholding of promoters in all Indian companies was as high as 48.1% (Topalova 2004). In recent years, however, corporate governance has received considerable attention among investors, regulators and the media, and several initiatives to improve the level of corporate governance are being debated and adopted in India (see Chakrabarti 2006).

As noted before, corruption and weak enforcement of corporate laws have corroded the level of actual protection despite extensive investor protection on the books. The World Bank's Report on the Observance of Standards and Codes, in its 2004 analysis of the observance of the OECD's corporate governance codes in India, identified several areas for reform, while noting improvements since 2000. These include developing deterrents to help align business practices with the legal and regulatory framework, in particular with respect to related party transactions and insider trading; changing the fragmented structure of regulatory agencies that give rise to regulatory arbitrage and weak enforcement; rules governing decision-making processes in corporate boards; and improving the role of institutional investors acting in a fiduciary capacity in forming and enforcing corporate governance policy, including voting and board representation.

Finally, the market for corporate control in India is at an emerging stage. Promoters typically maintain control of listed firms with relatively small shareholding given the support of lending institutions. Hostile takeovers were not allowed by the Securities and Exchanges Board of India (SEBI) as recently as 1997. There have been close to 600 public offers for corporate takeovers since

then. Nevertheless, regulations and the ownership structure of listed firms make it difficult for attempts at hostile acquisitions to succeed (e.g., Kripalani 2000; Vaidyanathan 2002).

To summarize, despite extensive and strong investor protection on paper, actual protection of investors and standard corporate governance mechanisms are weak in the listed sector. We provide a discussion of the role of alternative and informal governance mechanisms in Section V.6 below.

IV.2 Empirical evidence on ownership, financing, dividend, and valuations of listed firms

In this subsection, we examine and compare various characteristics of listed firms in India with those of other countries. Our initial sample of 1,395 listed firms (panel data set for the period 1995 to 2004) is collected and compiled from the CMIE *Prowess* database (same database for Table 5 above). There are four groups of listed firms in our sample (there are no PSUs in the sample).

1. Small manufacturing firms: SSI firms (definition in Section III);
2. Large manufacturing firms: Non-SSI or NSSI firms;
3. Small non-manufacturing firms: SSSBE firms (definition in Section III);
4. Large non-manufacturing firms: Non-SSSBE or NSSSBE firms.

For each group of firms, data on financials, market variables, and ownership patterns were collected. Due to missing data items, our final sample for most of our empirical tests consists of 854 firms. We first examine firms' ownership structure. Table 6-A compares the ownership structure of Indian firms to those from the LLS (1999) sample of over 1,000 firms from 27 countries (India *not* included), from the Claessens et al., (2000) sample of Asian firms (excluding Japan) and the AQQ (2005) sample of over 1,100 firms from China. In 80% of the 854 listed firms in India, the largest shareholder (controlling shareholder) is the founder's family or a different family or individual.²⁸ Among 15% of the 854 firms, the largest shareholder is another corporation (or organization), and thus cross-holding is also a prevalent ownership pattern in India. Since we do not have detailed

²⁸ 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 blockholders), our figure (80%) 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.

information on the ownership patterns of the corporate owners, we do not know whether the corporate owners themselves are widely held or not. However, given the fact that family (individual) ownership is prevalent among listed firms, it is reasonable to assume that these corporate owners are not widely held. Only 1.76% of the 854 firms are widely held (i.e., no shareholder owns more than 10% of stocks).

Our findings on ownership structure of India's listed 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). The main result of LLS (1999) is that countries that protect minority shareholders poorly (strongly) tend to have more concentrated (dispersed) ownership. Our evidence on India contradicts this hypothesis, in that despite India's strong investor protection (by law) its ownership structure is close to 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 observed ownership structure is by and large consistent with the prediction of DLLS (2005).

Table 6-B presents the summary statistics for a "snapshot" of the sample firms at the end of 2004. From Panel A, the average market cap of the full sample is US\$16.98 million (median is US\$ 0.84 million), with the NSSI and NSSSBE firms significantly larger than the SSI and SSSBE firms. Panels B to G present key financial items such as earnings per share, net income, retained earnings, external financing through seasoned equity offerings (SEOs), and long-term borrowings and dividend payout ratios for each group of sample firms. For all firms in the sample, the retained earnings are very close to net income (Panels C and D), implying high internal re-investment rates. This is consistent with the finding from Table 5 that retained earnings constitute a vital source of financing. Not surprisingly perhaps, NSSI firms seem to have more access to SEOs than other types of firms (Panel E). Finally, the majority of our sample firms, in particular, small firms (SSI and

SSSBE firms), did not pay dividends in 2004 (Panel G), while the fraction of dividend-paying firms is much higher among large firms (NSSI and NSSSBE firms) and these firms pay higher dividends.

Table 6-C provides some evidence on external financing sources at the firm level. The ratios for all the countries (except for India) in the table are taken from LLSV (1997a).²⁹ Indian firms rely much less on equity financing than LLSV firms: Both ratios of market capitalization to sales and to cash flow for the full sample of Indian firms are much lower than the average of LLSV firms and most of the LLSV subgroups of firms. Among the four groups of Indian firms, large manufacturing firms (NSSI) rely least on equity financing, while small, non-manufacturing firms (SSSBE) rely most on equity financing. On the other hand, Indian firms, in particular, large firms (NSSI and NSSSBE firms), rely more on debt financing (bank loans and bonds) than LLSV firms: Both ratios of debt 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 listed Indian firms rely on external market and bank financing to a similar degree compared to their counterparts in LLSV countries.

Next, we examine dividend policy and valuations of listed firms in India, and compare the results to those studied by LLSV (2000b, 2002).³⁰ Following LLSV (2000b, 2002), we use the summary statistical data from their papers to create a “synthetic firm” for each country in their sample, and use our own data on Indian firms to create the synthetic firm for India; we then compare the predicted values based on the LLSV model with the actual values of the synthetic Indian firm to examine the predictive power of the LLSV model. Table 7 explains the details of the approach and presents regression results. First, LLSV (2000b) find that firms in countries with poor protection of

²⁹ 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.

³⁰ 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 including India, but with only one Indian firm in the sample.

outside shareholders tend to have low dividend payout ratios due to severe agency problems. This result is consistent with our findings, but the coefficients on low protection (dummy that equals 1 if the anti-director rights score is less than or equal to 3/6) and interaction between growth in sales and the low protection dummy from our regressions are not statistically significant. Second, LLSV (2002) find that firms in countries with poor protection of outside shareholders tend to have low valuation, proxied by the Tobin's Q (or lower market-to-book assets ratio). This result is confirmed with our "synthetic firm" approach: We find that both the cash-flow rights (percentage of shares owned by the largest shareholder) and anti-director rights are positively correlated with firm valuations.

We then investigate whether LLSV's predictions on dividend and valuation apply to India's synthetic firm. First, India belongs to the high protection group, so that the LLSV model suggests that Indian firms should have high dividend payout: This is the case if we use dividend/sales as the proxy for payout ratio, because the prediction error of India's synthetic firm (0.11) is smaller than the standard error of the regression residuals (2.16); but in terms of dividend/earnings ratio the LLSV prediction is incorrect as the prediction error is high (13.15 as compared to 11.84). LLSV's prediction on valuation is also incorrect as the prediction error of Tobin's Q of India's synthetic firm is high (0.75 vs. 0.32).

In conclusion, our empirical analysis on the listed firms in India demonstrates that India does not conform precisely to LLSV's predictions and findings on legal protection and firm characteristics. 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, India's listed firms actually behave more like firms from countries with poor investor protection: 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.

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

In order to go beyond reported statistics and secondary financial information, and understand better the business realities and financing decisions of small and medium businesses in India at the ground level, we conducted a survey of SME enterprises in India. Our surveys led to a number of interesting findings about the SME sector in India. They reinforced the difficulty in obtaining external funds from formal channels, a point mentioned in Section III above. What is perhaps an even more interesting finding is the role and importance of informal and alternative financing channels, as well as informal mechanisms in contract enforcement that characterize the environment in which these firms operate in India.

V.1 Survey design and administration

Our survey design focused on three broad areas: Corporate financing and investment, ownership structure and corporate governance, and law, institutions and business environment. Based on a review of survey-based papers in the law and finance area³¹, 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/>.

Given that the target of our survey are mostly small and private firms that are typically reluctant to reveal in writing their key financial and business information, the response rate is likely

³¹ These papers included DLLS (2003), McMillan and Woodruff (1999a, b), Johnson et al. (2002) and AQQ (2005).

to be extremely low if we followed the mailed questionnaire method to administer the surveys.

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 in Hyderabad and New Delhi 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.³² 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.

V.2 Financing an SME unit

Figure 3 shows the relative importance of the various alternative sources of funds at the start-up (Panel A) and growth (Panel B) phases. In the start-up phase, family constitutes the “extremely important” source of funds for an overwhelming majority (over 85%) of the respondents. Trade credits come next in importance, representing an “extremely important” source of funds for 27% of the respondents. In comparison, bank loans from state – owned banks make up an “extremely important” source for 15%, and a “very important” source for about 17% of the firms surveyed. The role of bank financing seems to be somewhat more important in our sample survey than in the NSSO survey discussed in Section III above, though the role of family connections remains supreme as in

³² 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.

the NSSO survey. In the growth phase too, most firms (86%) find family and friends to be the easiest and least expensive source of funds. Again, as in the start – up phase, trade credits continue to be the next most important source. For 52% of the respondents, trade credits are the easiest source of funds. The importance of trade credits for SME firms is consistent with the importance of trade credits that we noted in section III above based on our analysis of secondary sources of financial information.

Internal funds appear to constitute a crucial source of funds at the growth stage. 27% of the respondents said they invested between 75% and 100% of their net income in the business in the first year they made profits. Again, the importance of internal sources underlined by the surveys is consistent with our analysis based on secondary sources of financial information in section III above.

There are, however, some evident differences in bank credit availability within our sample. In the growth stage, short-term bank credit was an easy and inexpensive source for 45% of the respondents, while long-term bank credit was similarly viewed by 33%. On the other hand, 22% (34%) of the respondents found short (long) term bank debt to be costly and difficult to get. Clearly, not all firms have similar experience with bank credit. Among the 199 respondents who answered the query, 22% had no bank/financial institution credit, while 48% had loans from only one institution. Only 14% of the respondents had accounts with two banks or intermediaries, while only 2% had loans from three institutions. Evidently, the market for bank credit is highly “relationship-driven,” reducing the bargaining power of the businesses vis-à-vis banks. 89% of the surveyed businesses with bank loans had borrowed from one or more state-owned banks, while 10% had loans outstanding from the SIDBI or SFCs (State Finance Corporations), specialized public sector institutions set up to finance growth of small industries. State-owned banks and SIDBI/SFCs are also the preferred loan providers, with 87% of the respondents wanting to borrow from the state-owned banks if possible and 4% wanting to borrow from the specialized institutions. While 20%

had loans from private sector banks/trusts/private credit agencies, none of the businesses surveyed had any loans from foreign banks. 2% of the respondents expressed the desire to borrow from a foreign bank if it were possible.

Over 70% of the respondents said that they had to meet operating/profitability standards to obtain their largest loans. In terms of transaction costs in obtaining bank loans, 40% of the respondents had their loans approved in less than a month, 32% had to wait between 1 and 2 months, 18% had their loans approved between 2 to 3 months, and 10% had to wait even longer. The median loan approval time, therefore, is 1-2 months. As for bank monitoring of the borrowers, 27% of the respondents said that bank staff contacted them on a monthly basis to check their performance. For 43% of firms, the contacts were on a quarterly basis, while 21% had the contacts once in six months or less frequently. 2% said bank staff were actively involved with their projects, while 7% said they had never been contacted by their banks after the loan was disbursed. Overall, the median monitoring of banks appears to be at the “once-a-quarter” level. These results on bank financing for SME firms in India are in general consistent with those from other countries, including developed countries (see Peterson and Rajan 1994 and Berger and Udell 1995 for evidence on small firms in the U.S.).

V.3 Ownership structure and corporate governance

Our survey also 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. Two companies (1%) had some foreign (including expatriate Indian) investment. The remaining 14% firms had their largest share block held by the founder (and his family) jointly with unrelated partners. 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.

In terms of corporate governance, about 37% of all units surveyed that had non-owner CEOs (or equivalent), indicated that the CEOs enjoyed “little discretion” in their business decisions and had to consult the owners for most decisions. The proportion of firms with CEOs with “no discretion” and “full discretion” were 13% and 8% respectively, while 43% indicated they had some to a lot of discretion and needed to consult the owners only in critical matters (the total exceeds 100% owing to multiple answers in some cases). Clearly there is not much 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. 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”, with 22% considering it “somewhat likely” and 21% “not likely.”

V.4 Law, institutions and business environment

The picture that emerges of the SME sector from our surveys clearly indicates that the sector deals with widespread corruption and has little recourse to the legal system. Informal mechanisms based on trust, reciprocity and reputation play a much more important role than legal remedies in settling disputes and enforcing contracts. As for their dealings with the regulatory authorities, corruption is taken for granted as part of doing business.

Over 80% of the firms we surveyed needed a license to start a business, and for about 47% obtaining the license was a difficult process. In about two-thirds (63%) of the latter cases, the difficulty was caused by government officials. Payment of bribes was the most frequent complaint. When asked how they thought other firms dealt with such problems, 87% of the respondents who answered said bribes were regularly paid. The second most common response (about 23% of the respondents who answered this question) was using friends of government officials to negotiate for

them. Clearly, networks and connections are of crucial importance in negotiating the government bureaucracy.

As for conducting day-to-day business, while the firms claimed not to function outside the scope of law, legal concerns are far less important to them than the demands and responsibilities of the informal networks within which they exist and function. Panels A and B of Figure 4 show the mean score (on a scale of 1-3) of the importance attributed to the various consequences of non-payment of dues and breach of contract respectively. In the first type of violation involving default (Panel A), the primary concern is loss of reputation, followed closely by loss of property. In the second type of violation (breach of contract; Panel B), loss of future business opportunities ranks the highest, followed by loss of reputation. Significantly, in both types of violation, the fear of legal consequences (adverse court sentence or jail term) is the least important concern. Even threat to personal safety ranks higher than legal consequences. Clearly, violation of the “unwritten rules” of the informal networks in which these businesses operate can result in serious penalties including lost opportunities and physical harm, and they act as effective deterrents to outright dishonesty in business dealings. Reputation and trust are pivotal for survival and growth in this environment.

About 50% of the firms we 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. When asked who would be the most helpful entity to turn to for mediation in a business dispute or to enforce a contract (Panel C of Figure 4), about 45% (the respondents were allowed more than one choice) of the respondents chose “mutual friends or business partners,” followed closely by “settling

out of court with the help of legal advisers” (45%), while non-government organizations like trade associations came in third with 26%. Only 20% of the respondents mentioned going to courts as the first option indicating that the legal system, while not as effective as the informal mechanisms, is not altogether absent. 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 leaving negotiation possibilities open, while 53% said that they screen their borrowers/clients so well that such issues do not arise. 12% asserted they would seize the defaulters’ personal assets themselves. Clearly, the courts, while not the most popular method of conflict resolution, do have their utility as a negotiating tool.

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 with 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 interpretation of 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 interpretation is that the large and powerful firms can at times get away with violations. Unfortunately, we are unable to distinguish between the possibilities.

To summarize, the general image of the business environment of the SME sector based on our survey is characterized by the presence of strong informal mechanisms. Family ties, reputation and trust are key elements in this environment. Legal remedies are not altogether absent, but are far less important than the rules of the networks in which they operate. Ownership and management are not effectively separated. Consistent with this environment, external finance comes mostly from family and friends, followed by trade credits. While some firms obtain bank credit others find it hard to get, indicating that bank loans are not made at arm’s length but are relationship driven.

V.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 conclusions about the Indian business environment in general. However, there are a few important differences. For instance, trade credits appear to be far more important for the New Delhi respondents than for those in Hyderabad. Further, the New Delhi firms appear to be comparatively more dependent on family and friends for funding in both start-up and growth stages. On the other hand, bank loans seem to be more important for the Hyderabad firms. However, bank loans seem to be disbursed sooner in Delhi (90% received their loans within 2 months) than in Hyderabad (52%). Reinvestment of a large proportion of profits, however, seems to be more prevalent among Hyderabad firms.

In terms of corporate governance, the New Delhi firms are more often held closely by the founder's family, have unlimited liability and seem to give greater discretion to CEOs. The market for a firm's assets seems to be more liquid in New Delhi too, with a significantly greater proportion of respondents believing that an outsider acquiring a firm's assets in case of bad management "very likely." New Delhi firms tend to have "legal advisors" more often than Hyderabad firms, although the advisors are often not trained lawyers.

V.6 Discussion

In this subsection we discuss mechanisms supporting the growth of India's small and medium firms. We believe the most important reason for the growth is the effectiveness of alternative financing channels and informal governance mechanisms. 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, Greif (1994) and 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 on the listed firms in section IV 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.³³ However, our 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

³³ 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.

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. 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).

VI. Summary and Conclusions

In this paper, we examine legal and business environment surrounding various types of Indian firms 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 study *all* aspects of 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. We also provide both aggregate and firm-level evidence. Our paper thus complements cross-country studies and advances the understanding of growth mechanisms.

With one of the largest and fastest growing economies in the world, India is unique 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 alternative sources of financing, while listed firms have concentrated ownership and low valuations and pay low dividends relative to firms from countries with strong legal protection.

Our evidence also includes results from firm surveys of small- and medium-sized private firms, one of the most successful sectors in the Indian economy. We find that alternative financing channels, such as internal financing and trade credits, provide the most important source of funds. 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. Our results call for more within-country studies in other regions and countries if we seek to understand better how these informal mechanisms work where formal mechanisms are not available or work imperfectly.

Appendix A: Brief description of our variables and their sources

A.1. Creditor/Shareholder Rights Variables, (Tables 2-A, 2-B, 2-C, 2-D, and 2-E)

Variables	Description	Sources
Legal origin	Identifies the legal origin of the company law or commercial code of each country.	Reynolds & Flores (1989); LLSV(1997a, 1998)
One share-one vote	1) Equals one if ordinary shares carry one vote per share, and zero otherwise; 2) equals one, when the law prohibits the existence of both multiple-voting and nonvoting ordinary shares and does not allow firms to set a maximum number of votes per shareholder irrespective of the number of shares owned, and zero otherwise.	Company law or commercial code; LLSV(1997a, 1998)
Proxy by mail allowed	Equals one if shareholders can mail their proxy vote to the firm, and zero otherwise.	Company law or commercial code; LLSV (1998)
Shares not blocked before meeting	Equals ones if firms cannot require shareholders to deposit their shares prior to a general shareholders' meeting (to prevent selling shares), and zero otherwise.	Company law or commercial code; LLSV (1998)
Cumulative voting or proportional representation	Equals one if shareholders can cast all their votes for one candidate to the board of directors (cumulative voting) or a mechanism of proportional representation in the board by which minority interests may name a proportional number of directors to the board is allowed, and zero otherwise.	Company law or commercial code; LLSV (1998)
Oppressed minorities mechanism	Equals one if minority shareholders have either a judicial venue to challenge the decisions of management or the assembly or the right to step out of the company by requiring the company to purchase their shares when they object to certain fundamental changes (e.g., mergers and asset dispositions); equals zero otherwise. Minority shareholders are defined as those shareholders who own 10% of shares or less.	Company law or commercial code; LLSV (1998)
Preemptive rights	Equals one when grants shareholders the first opportunity to buy new issues of stock, and this right can be waived only by a shareholders' vote; equals zero otherwise.	Company law or commercial code; LLSV (1998)
Percentage of share capital to call an extraordinary shareholders' meeting	The minimum percentage of ownership of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting; ranges from 1% to 33%.	Company law or commercial code; LLSV (1998)
Antidirector rights	The index is formed by adding one when: (1) the country allows shareholders to mail their proxy vote to the firm; (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting; (3) cumulative voting or proportional representation of minorities in the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a share- holder to call for an extraordinary shareholders' meeting is less than or equal to 10% (the sample median); or, (6) shareholders have preemptive rights that can be waived only by a shareholders' vote. The index ranges from zero to six.	Company law or commercial code; LLSV (1998)
Mandatory dividend	Equals the percentage of net income that the company law or commercial code requires firms to distribute as dividends among ordinary stockholders. It equals zero for countries without such a restriction.	Company law or commercial code; LLSV (1998)
Restrictions for going into reorganization	Equals one if the reorganization procedure imposes restrictions, such as creditors consent; equals zero otherwise.	Bankruptcy and reorganization laws; LLSV (1998)
No automatic stay on secured assets	Equals one if the reorganization procedure does not impose an	Bankruptcy and reorganization laws;

	automatic stay on the assets of the firm on filing the reorganization petition. Automatic stay prevents secured creditors from gaining possession of their security. It equals zero if such a restriction does exist in the law.	LLSV (1998)
Secured creditors first	Equals one if secured creditors are ranked first in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm. Equals zero if non-secured creditors, such as the government and workers, are given absolute priority.	Bankruptcy and reorganization laws; LLSV (1998)
Management does not stay	Equals 1 when an official appointed by the court, or by the creditors, is responsible for the operation of the business during reorganization. Equivalently, this variable equals one if the debtor does not keep the administration of its property pending the resolution of the reorganization process. Equals zero otherwise.	Bankruptcy and reorganization laws; LLSV (1998)
Creditor rights	An index aggregating different creditor rights. The index is formed by adding “one” when: (1) the country imposes restrictions, such as creditors' consent or minimum dividends to file for reorganization; (2) secured creditors are able to gain possession of their security once the reorganization petition has been approved (no automatic stay); (3) secured creditors are ranked <i>first</i> in the distribution of the proceeds that result from the disposition of the assets of a bankrupt firm; and, (4) the debtor does not retain the administration of its property pending the resolution of the reorganization. The index ranges from zero to four.	Bankruptcy and reorganization laws; LLSV (1998)
Legal reserve requirement	The minimum percentage of total share capital mandated by corporate law to avoid the dissolution of an existing firm. It takes a value of zero for countries without such a restriction.	Company law or commercial code; LLSV (1998)
Legal Formalism Index	The index measures substantive and procedural statutory intervention in two types of judicial cases (collection of a bounced check and eviction of a non-paying tenant; we took the average of these two indexes) at lower-level civil trial courts, and is formed by adding up the following dummies: (i) professionals vs. laymen, (ii) written vs. oral elements, (iii) legal justification, (iv) statutory regulation of evidence, (v) control of superior review, (vi) engagement formalities, and (vii) independent procedural actions. The index ranges from 0 to 7, where 0 means a lowest level and 7 means a higher level of control or intervention in the judicial process.	Survey of judges and lawyers from Lex Mundi; DLLS (2003)
Corruption Perception Index	The index (and ranking) is based on the survey of businessman on whether corruption is prevalent in government and legal institutions when conducting business in a country. It ranges from 0 to 10, with 0 meaning most corrupted and 10 meaning most clean.	Transparency International (2005)
Disclosure Requirement	The index of disclosure equals the arithmetic mean of scores on the disclosure requirements of: (1) Prospect; (2) Compensation; (3) Shareholders; (4) Inside ownership; (5) Contracts Irregular; (6) and Transactions; each of them is a dummy variable. One means the disclosure of an item is required. The Index ranges from zero to one, with zero meaning no disclosure requirement for anything, and one meaning disclosure of everything.	LLS (2006)
Earnings Management Score	The “aggregate earnings management score” is the average rank across four measures of earnings management. <i>Higher</i> scores implies <i>more</i> earnings management and lower score implies <i>less</i> earnings management.	Leuz, Nanda and Wysocki (2003)
Legality Index	Composite index measuring the effectiveness of legal institutions: Use 5 legality proxies (each range from 0 to 10) from LLSV(1998) and principal components analysis to aggregate the individual legality proxies into a single Legality Index. The first component accounts for 84.6 percent of the total variance, and is given by Legality = $0.381*(\text{Efficiency of Judiciary}) + 0.578*(\text{Rule of Law}) +$	International Country Risk Guide; Berkowitz, Pistor, and Richard (2003)

0.503*(Absence of Corruption) + 0.347*(Risk of Expropriation) + 0.384*(Risk of Contract Repudiation). The index ranges from 0 to 21 with a higher score meaning better legal environment.

A.2. Financial System Variables, (Tables 3-B and 3-C)

Variables	Definition	Original Source
Bank Credit	Ratio of total credit deposited into banks from private sectors /GDP.	IFS, WDI, and country specific publications
(Total) value traded	Ratio of domestic equity traded on domestic exchanges /GDP.	IFS, WDI, EMFB, and country specific publications
Market capitalization	Ratio of domestic equities listed on domestic exchanges/GDP.	Int'l Financial Statistics (IFS), World Development Indicators (WDI), Emerging Markets Factbook (EMFB), and country specific publications
Overhead cost	Overhead cost divided by total bank system assets.	Levine's calculations (2002)
Structure- size	Log(Market capitalization/Bank credit); measure size of markets and banks.	Levine (2002)
Structure-activity	Log(Value traded/Bank credit); measure size/trading volume of markets and banks.	Levine (2002)
Structure-efficiency	Log(Market capitalization ratio × Overhead cost ratio); measures relative efficiency of markets vs. banks.	Levine (2002)
Structure regulation	Sum of the four categories in regulatory restriction.	National regulatory authorities
Regulatory restriction	The degree to which commercial banks are allowed to engage in security, firm operation, insurance, and real estate: 1- unrestricted; 2-permit to conduct through subsidiary; 3-full range not permitted in subsidiaries; and 4-strictly prohibited.	National regulatory authorities
Finance-size	Log (Market capitalization ratio + Private credit ratio)	Levine (2002)
Finance-activity	Log (Total value traded ratio × Private credit ratio)	Levine (2002)
Finance-efficiency	Log (Total value traded ratio/Overhead cost)	Levine (2002)

Secondary source: Demirgüç-Kunt and Levine (2002), and Levine (2002).

A.3. External Financing Variables, (Table 3-B and Figure 2)

Variable	Description	Sources
External cap / GNP	The ratio of the stock market capitalization held by minorities to GNP in 1994. The first variable is computed as the product of the aggregate stock market capitalization and the average percentage of common shares not owned by the top three shareholders in the ten largest nonfinancial, privately- owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder.	Moodys International, CIFAR, EXTEL, WorldScope, 20-Fs, PriceWaterhouse, and various country sources
Domestic firms / Pop	Ratio of the number of domestic firms listed in a given country to its population (in millions) in 1994.	Emerging Market Factbook and World Development Report (WDR) 1996.
IPOs/Pop	Ratio of the number of initial public offerings of equity in a given country to its population (in millions) for the period 1995:7-1996:6.	SDC, AsiaMoney, LatinFinance, GT Guide to World Equity Markets, and WDR 1996.
Debt/GNP	Ratio of the sum of bank debt of the private sector and outstanding nonfinancial bonds to GNP in 1994, or last available.	International Financial Statistics, World Bondmarket Factbook. WDR 1995.
GDP growth	Average annual percent growth of per capita gross domestic product for the period 1970-1993.	
Market cap/ sales	The median ratio of the stock market capitalization held by minorities to sales in 1994 for all nonfinancial firms in a given country on the WorldScope database. Firm's stock market capitalization held by minorities is computed as the product of the stock market capitalization of the firm and the average percentage of common shares not owned by the top three shareholders in the ten largest nonfinancial, privately owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it.	WorldScope.
Market cap/ cash-flow	The median ratio of the stock market capitalization held by minorities to cash flow in 1994 for all nonfinancial firms in a given country on the WorldScope database. The firm's stock market capitalization held by minorities is computed as the product of the stock market capitalization of the firm and the average percentage of common shares not owned by the top three shareholders in the ten largest nonfinancial, privately owned domestic firms in a given country. A firm is considered privately owned if the State is not a known shareholder in it.	WorldScope.
Debt/sales	Median of the total-debt-to-sales ratio in 1994 for all firms in a given country on the WorldScope database.	WorldScope.
Debt/cash flow	Median of the total-debt-to-cash-flow ratio for all firms in a given country on the WorldScope database.	WorldScope.

Secondary source: LLSV(1998), China details from Shanghai and Shen Zhen Stock exchanges, and firms' annual reports.

A.4. Definitions of different types of firms and banks in India

1. **Public Sector Undertakings (PSUs):** Companies with federal and/or state government as the majority or sole shareholder. Includes partially privatized companies. Different from departmental undertakings like railways that are non-corporate in organizational structure. The government is the de facto owner, and they choose managers to run the firm.
2. **Small and Medium Enterprises (SME):** Firms with less than Indian Rupees (Rs.) 50 million (about US\$ 1.11 million) in plant and machinery at original cost. Includes the small industry (less than Rs. 10 million or (about US\$ 222,000) and the medium sector (Rs. 10-50 million).
3. **Small Scale Industry (SSIs):** Firms with less than Rs. 10 million (about US\$ 222,000) in plant and machinery at original cost and (mostly) engaged in manufacturing activity.
4. **Small Scale Sector Business Enterprise (SSSBE):** Firms with less than Rs. 1 million (about US\$22,000) in plant and machinery at original cost and engaged in non-manufacturing activity.
5. **Non-SSI (NSSI):** A firm that is not an SSI.
6. **Non-SSSBE (NSSSBE):** A firm that is not an SSSBE
7. **Small Industry Development Bank of India (SIDBI):** Specialized financial institution (not a commercial bank) created by the government of India for financing and promoting growth in the small scale sector.
8. **State Finance Corporations (SFCs):** State-level government financial institutions (not commercial banks) for financing and promoting growth, often in the small scale sector.

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Table 1-A: 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 1-B: A Socio-economic Snapshot of India

		Year	India	World	
Development Indicators	Population	Millions	2004	1,079.7	6,345.1
		Avg. annual % growth	2000-2004	1.5	1.2
		Density people per sq. km	2004	363	49
	Gross national income (GNI)	Billions of dollars	2004	674.6	39,833.6
		Per capita dollars	2004	620	6,280
	GNI (PPP)	Billions of dollars	2004	3,347	55,584
		Per capita dollars	2004	3,100	8,760
	Gross domestic product per capita % growth	2003-2004	5.4	2.9	
	Life expectancy at birth (male; female)	2003	63; 64	65; 69	
	Under-5 mortality rate per 1000	2003	87	84	
	Adult literacy rate % of people 15 and above	1998-2004	61	82	
	Carbon dioxide emissions Millions of tons	2000	1,070.9	22,994.5	
Poverty and Income Distributions	Population below \$1 a day %		1999-00	35.3	--
	Population below \$2 a day %			80.6	--
	Gini index		1999-00	0.33	--
	Percentage share of income or consumption	Lowest 20%		8.9	--
		Highest 20%		41.6	--
	Agricultural productivity (Agr. Value added per agricultural worker 2000 dollars)		2001-2003	397	817
			2000-2002	401	1,051
	Value added as % of GDP	Agricultural	2004	22	--
		Industry		26	--
		Services		52	--
	Household final cons. Expenditure % of GDP		2004	67	62
	General gov't final cons. expenditure % of GDP		2004	11	17
	Gross capital formation % of GDP		2004	23	21
External balance of goods and services % of GDP		2004	-1	0	
GDP implicit deflator Avg. annual % growth		2000-2004	3.9	--	
Trade, Aid and Finance	Merchandise trade	Exports: (Millions USD)	2004	72,530	9,122,837
		Imports: (Millions USD)		95,156	9,338,667
	Manufactured exports % of total merchandise exports		2003	77	77
	High technology exports % of manufactured exports		2003	5	18
	Current account balance (Million USD)		2004	6,853	--
	Net private capital flows (Million USD)		2003	10,651	--
	Foreign direct investment (Million USD)		2003	4,269	572,774
	Per Capita Official development assistance (USD)		2003	1	12
	External debt	Total Millions of dollars	2003	113,467	--
		Present value % of GNI	2003	19	--
Domestic credit provided by banking sector (% of GDP)		2004	59.9	171.1	

Source: World Bank (2005)

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

Index	India	World Average
Formalism in law index: ^a	3.51	3.58
Regulation of securities markets: ^b		
Disclosure Requirements	0.92	0.60
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
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
Anti-self-dealing Index (0 – 1, continuous)	0.55	0.46
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 DLLS (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).

Table 2-B. A Comparison of Creditor Rights: India and LLSV Countries

Country	English-origin average	French-origin average	German-origin average	Scandinavian-origin average	LLSV sample average	India
No automatic stay on assets	0.72	0.26	0.67	0.25	0.49	1
Secured creditors first paid	0.89	0.65	1	1	0.81	1
Restrictions for going into reorganization	0.72	0.42	0.33	0.75	0.55	1
Management does not stay in reorganization	0.78	0.26	0.33	0	0.45	1
(Overall) Creditor rights*	3.11 (53%) [#]	1.58 (14%) [#]	2.33 (0%) [#]	2 (0%) [#]	2.3 (25%) [#]	4 (2)**
Legal reserve required as % of capital	0.01	0.21	0.41	0.16	0.15	0.00

Notes: *=equals the sum of the scores of the four categories above, where 1 = Creditor protection is in the law, 0 otherwise. **: LLSV 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);

[#]=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).

Source: LLSV countries – LLSV (1998)

Table 2-C. A Comparison of Shareholder Rights: India and LLSV Countries

Country	English-origin average	French-origin average	German-origin average	Scandinavian-origin average	LLSV sample average	India
Proxy by mail allowed	0.39	0.05	0	0.25	0.18	0
Shares not blocked before meeting	1	0.57	0.17	1	0.71	1
Cumulative voting/ Proportional representation	0.28	0.29	0.3	0	0.27	1
Oppressed minority	0.94	0.29	0.5	0	0.53	1
Preemptive right to new issue	0.44	0.62	0.33	0.75	0.53	1
Percentage of share capital to call an extraordinary shareholder meeting	0.09	0.15	0.05	0.1	0.11	0.1
Antidirector rights*	4 (35%) [#]	2.33 (05%) [#]	2.33 (0%) [#]	3 (0%) [#]	3 (15%) [#]	5
Mandatory dividend	0	0.11	0	0	0.05	0
One share – one vote	0.17	0.29	0.33	0	0.22	0

Notes: * is the sum of the scores on Rows (1), (2), (3), (4), (5) and (6), where score =1, when the protection is in the law; 0 otherwise. For Percentage of share capital to call an extraordinary shareholder meeting, score =1 if the percentage of share capital ≤ 10%, 0 otherwise. For the definitions of all other variables see Appendix A.1.

[#]=numbers in the bracket indicate percentage of countries in the sub-sample (excluding India where applicable) whose measure is higher or equal to **5** (India's measure).

Source: LLSV (1998).

Table 2-D. A Comparison of Law Enforcement: India and LLSV Countries

Country	English origin average	French-origin average	German origin average	Scandinavian origin average	LLSV sample average	India
Legal Formalism Index	2.72	3.99	3.42	3.11	3.23	3.42
Corruption Perception Index	7.50	5.54	7.51	9.28	7.08	2.90
Disclosure Requirement	0.85	0.54	0.63	0.56	0.71	0.92
Earnings Management Score	4.14	18.72	21.46	9.81	11.98	19.10
Legality Index	15.56	13.11	15.53	16.42	14.98	11.35

For definition of each of the variables, see Appendix A.1.

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).

Table 2-E. 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(2)	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 Tables 2-B, 2-C and 2-D.

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, 2004)

Rank	Stock Exchange	Total Market Cap (US\$ billion)	Concentration (%)	Turnover Velocity (%)
1	NYSE	12,707,578.3	55.8	89.8
2	Tokyo SE	3,557,674.4	56.9	97.1
3	NASDAQ	3,532,912.0	59.3	124.8
4	London SE	2,865,243.2	82.2	116.6
5	Euronext	2,441,261.4	68.8	115.0
6	Osaka SE	2,287,047.8	56.7	5.9
7	Deutsche Börse	1,194,516.8	73.2	67.9
8	TSX Group	1,177,517.6	63.1	66.2
9	BME Spanish Exchanges	940,672.9	NA	57.7
10	Hong Kong Exchange	861,462.9	78.6	39.7
11	Swiss Exchange	826,040.8	76.0	100.5
12	Borsa Italiana	789,562.6	61.9	134.9
13	Australian SE	776,402.8	79.8	81.1
14	JSE South Africa	442,525.5	53.8	47.2
15	Taiwan SE Corp.	441,435.8	60.6	177.3
16	Korea Exchange	389,473.4	74.5	147.2
17	BSE, The SE Mumbai	386,321.1	89.2	43.1
18	OMX Stockholm SE	376,781.1	64.7	130.5
19	NSE – India	363,276.0	66.7	101.5
20	Sao Paulo SE	330,346.6	62.0	43.0
21	Shanghai SE (China)	314,315.7	46.0	87.0
22	Singapore Exchange	217,617.8	68.3	60.8

Notes:

1. All figures are from <http://www.fibv.com>, 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) paper.

Table 3-E. A Comparison of Non-performing Loans of Banking Systems

	1997	1998	1999	2000	2001	2002
China	N/a	2.0 (2.2)	9.5 (10.6)	18.9 (24.9)	16.9 (22.7)	12.6 (15.2)
Hong Kong	1.3 (3.0)	4.3 (10.2)	6.3 (13.9)	5.2 (12.6)	4.9 (12.9)	3.7 (9.6)
India	n/a	7.8 (1.6)	7.0 (1.6)	6.6 (1.6)	4.6 (1.7)	2.2 (0.8)
Indonesia	0.3 (0.2)	11.8 (4.6)	8.1 (2.0)	13.6 (3.2)	9.9 (2.2)	4.5 (0.9)
Japan	2.7 (5.4)	5.1 (10.8)	5.3 (10.9)	5.8 (11.5)	9.2 (15.3)	7.4 (12.8)
South Korea	2.9 (5.1)	4.8 (6.3)	12.9 (12.9)	8.0 (8.6)	3.4 (3.4)	2.5 (2.6)
Taiwan	2.4 (3.2)	3.0 (3.9)	4.0 (5.7)	5.2 (7.6)	6.2 (9.4)	4.1 (5.2)

Notes: NPL is measured as % of total loans made, and as % of GDP (numbers in brackets). Both the loan and NPL are the aggregate of all banks in a country. Source: The Asian Banker data center 2003, <http://www.theasianbanker.com>.

Table 3-F. 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.
Comparing the State and Non-state Sectors: 1990-2003 (in US\$ billions)

	State Sector					Non-State Sectors							GDP from all Non-State Sectors ^{b,e}
	<i>Public Sector Undertakings (PSUs)</i>					<i>Non-state corporations* (listed and unlisted)</i>			<i>Small Scale Industries**</i>				
	Number of units ('000)	Paid-up capital ^a	Employment (million)	State Sector Output ^b	State Sector GDP ^{b,c}	Number of units ('000)	Paid-up capital ^a	Employment (million)	Number of units ('000)	Fixed Investment	Output ^b	Employment ^d (million)	
1990-91	1.16	15.26	19.06	--	20.03	200.97	5.53	7.68	1,948	--	49.96	12.53	96.19
1991-92	1.17	17.45	19.21	--	24.94	223.29	6.51	7.85	2,082	--	57.23	12.98	156.26
1992-93	1.18	18.90	19.33	--	28.10	249.18	8.72	7.85	2,246	--	68.29	13.41	126.56
1993-94	1.19	19.28	19.45	83.80	33.25	274.47	10.49	7.93	2,388	1.13	77.04	13.94	140.84
1994-95	--	--	19.47	98.18	35.85	304.42	14.79	8.06	2,571	1.30	95.19	14.66	169.13
1995-96	1.20	21.91	19.43	115.26	39.16	352.09	18.75	8.51	2,658	1.48	108.42	15.26	194.04
1996-97	1.22	21.68	19.56	115.57	37.75	407.93	24.54	8.69	2,803	1.54	116.02	16.00	210.40
1997-98	1.22	22.69	19.42	122.48	41.11	449.73	28.58	8.75	2,944	1.63	124.48	16.72	222.72
1998-99	1.22	21.15	19.41	119.92	43.88	483.28	30.59	8.70	3,080	2.05	123.76	17.16	223.54
1999-00	1.23	22.14	19.31	141.65	43.15	510.76	38.64	8.65	3,212	1.68	132.21	17.85	248.86
2000-01	1.24	21.43	19.14	155.97	43.55	541.19	42.90	8.65	3,312	1.74	139.88	18.56	265.68
2001-02	1.27	21.87	18.77	157.85	51.22	567.83	49.67	8.43	3,442	1.77	144.74	19.22	276.50
2002-03	1.26	22.71	18.58	174.64	64.41	587.99	57.26	8.42	3,572	1.87	153.32	19.97	302.94
CAGR	0.70	3.37	-0.21	8.50	10.22	9.36	21.51	0.77	5.18	5.77	9.80	3.96	10.03

Notes: All (nominal) figures are in US\$ billions (inflation during this period was low and not volatile), with conversions made at average exchange rates during each year. *: These include all listed and unlisted (but registered) companies that are larger than firms in the SSI sector;

** : Including both registered and unregistered small scale firms;

^a: Paid-up capital is what the investors actually have paid for the share capital, and equals 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; ^b: Output and GDP figures exclude agriculture; ^c: Total (non-agriculture) GDP generated from all non-state sector firms; ^d: Includes labor force from both registered and unregistered firms but not all SSI firms in the unorganized sector.

Source: India-Stat, Central Statistical Organization and the Reserve Bank of India.

Table 5. Sources of (New) Funds for Non-financial Firms (percentage of total funding; 1990-2004)

This table provides evidence on the sources of (new) funds for non-financial Indian firms during the 14-year period of 1991-2004, based on the *Prowess* database of CMIE. The firm categories (among the firms in the non-state sectors) are not always mutually exclusive. The table shows the breakdown between listed and unlisted firms, and, in the small-scale sector, between manufacturing (SSI) and services (SSSBE) 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 1990-91 through 2003-04.

Sources of Funds	All Firms	State Sector	Non – state sectors				
			Overall	Listed	Unlisted	SSI	SSSBE
Internal Sources	36.3	42.0	33.1	35.0	28.8	6.4	12.5
Capital markets (broadly defined)* of which	17.8	12.6	20.9	20.0	22.4	31.2	28.6
Equity	13.3	8.5	16.1	15.7	16.6	29.2	27.7
Debt	4.5	4.1	4.8	4.3	5.8	2	0.9
Banks/Financial Institutions	15.9	11.5	19.0	19.7	17.3	9.4	-8.7
Group Companies/Promoters/Directors	0.9	1.2	0.6	0.3	1.3	2.1	1.0
Others (including current liabilities & provisions)	29.1	32.7	26.3	25.0	30.3	50.9	66.6

Notes:

*: Fund flows from *Capital Markets*: 1) Capital markets include both primary and secondary markets for listed firms (issuance of both equity and bonds), while debt also includes privately placed bonds; 2) for firms in the State Sector (PSUs), equity includes (new) share capital raised from the government and non-government investors (including new equity capital raised from the stock market if an PSU is also publicly listed and traded; 3) for non-state, non-listed firms, these categories (equity and debt) indicate *private* equity and debt.

Source: The source of the data is *Prowess* database compiled by the Centre for Monitoring Indian Economy (CMIE). CMIE is a Mumbai-based economic and business information and research organization. *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.

Table 6-A. Comparing Ownership Structure of Listed Firms.

Panels A and B are taken from LLS (1999). The first row in Panel C is the average of the Asian countries (excluding Japan) examined in Claessens et al. (2000). The second row is the average of Chinese firms in Allen, Qian and Qian (2005). Our sample of 854 listed firms from India (panel data set for the period 1995 to 2004) is collected and compiled from the CMIE *Prowess* database. The average ownership structures during 2001-2004 are presented in the last 5 rows of the table.

	Controlling Shareholder*	Widely-held (%)	State/Govt. (%)	Family/Individual (%)	Widely-held Financial (%)	Widely-held 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	3.8	1.8	0.3	81.1	0.2	15.4
Small manufacturing firms, SSI	1.2	0.2	0.0	83.8	0.0	14.7
Larger manufacturing firms, NSSI	11.5	3.2	0.6	85.9	0.6	7.3
Small non-manufacturing firms, SSSBE	0.4	2.3	0.0	74.7	0.0	22.5
Large non-manufacturing firms, NSSSBE	1.2	1.2	0.7	79.1	0.0	17.8

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) “Widely-held financial” (“Widely-held corporation”) are those firms with the controlling shareholder being a widely-held financial company (widely-held corporation).

** : 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-B. Summary Statistics of Financial Items of Listed Firms (as of December 2004)

Our sample of 854 listed firms from India (panel data set of 1995 to 2004; no PSUs) is collected and compiled from the CMIE *Prowess* database. This table summarizes key financial items of these listed firms at Dec 2004.

	Mean	Median	Min	Max	Std. Dev	# of obs.
<i>Panel A: Market capitalization (US\$ million)</i>						
Full sample	16.98	0.84	0.00	731.53	70.10	520
Small manufacturing firms, SSI	1.27	0.51	0.00	21.85	2.70	122
Large manufacturing firms, NSSI	26.88	2.92	0.05	604.36	81.59	191
Small non-manufacturing firms, SSSBE	3.10	0.32	0.00	114.04	12.38	105
Large non-manufacturing firms, NSSSBE	29.52	1.14	0.06	731.53	105.00	102
<i>Panel B: EPS (US\$)</i>						
Full sample	0.07	0.012	-1.32	1.95	0.26	505
Small manufacturing firms, SSI	0.01	0.001	-1.17	1.07	0.17	122
Large manufacturing firms, NSSI	0.12	0.051	-1.32	1.95	0.33	187
Small non-manufacturing firms, SSSBE	0.03	0.006	-0.32	0.79	0.12	94
Large non-manufacturing firms, NSSSBE	0.10	0.014	-0.36	1.43	0.30	102
<i>Panel C: Net income (US\$ million)</i>						
Full sample	1.60	0.022	-40.98	164.17	10.89	827
Small manufacturing firms, SSI	0.01	0.004	-2.09	1.08	0.28	195
Large manufacturing firms, NSSI	3.60	0.298	-40.98	164.17	17.14	222
Small non-manufacturing firms, SSSBE	0.04	0.011	-10.10	3.17	0.82	228
Large non-manufacturing firms, NSSSBE	2.68	0.011	-2.85	120.37	12.64	182
<i>Panel D: Retained earnings (US\$ million)</i>						
Full sample	9.49	0.11	-409.80	1006.71	69.16	827
Small manufacturing firms, SSI	-0.01	0.02	-20.93	10.84	2.71	195
Large manufacturing firms, NSSI	20.49	1.44	-409.80	1006.71	102.84	222
Small non-manufacturing firms, SSSBE	0.16	0.07	-101.04	26.60	8.09	217
Large non-manufacturing firms, NSSSBE	16.93	0.07	-28.47	781.38	89.09	193
<i>Panel E: Proceeds from stock sales (US\$ million)</i>						
Full sample	0.69	0.00	-16.67	103.78	5.62	826 (71) ^a
Small manufacturing firms, SSI	0.20	0.00	-0.98	18.09	1.64	195 (12) ^a
Large manufacturing firms, NSSI	1.91	0.00	-16.67	103.78	10.00	222 (46) ^a
Small non-manufacturing firms, SSSBE	0.51	0.00	-0.78	46.96	3.80	216 (12) ^a
Large non-manufacturing firms, NSSSBE	0.01	0.00	0.00	1.49	0.11	193 (1) ^a
<i>Panel F: Proceeds from Long term borrowing (US\$ million)</i>						
Full sample	7.47	0.00	-1.20	1107.38	62.93	826 (188) ^a
Small manufacturing firms, SSI	0.60	0.00	-0.18	34.71	3.18	195 (34) ^a
Large manufacturing firms, NSSI	23.58	0.00	0.00	1107.38	118.73	222 (89) ^a
Small non-manufacturing firms, SSSBE	1.44	0.00	-1.20	182.78	13.24	216 (29) ^a
Large non-manufacturing firms, NSSSBE	2.64	0.00	0.00	111.11	12.98	193 (36) ^a
<i>Panel G: Dividend Payout Ratio (dividend payment over Profits after Taxes; %)</i>						
Full sample	8.40	0.00	-12.00	220.00	22.00	772 (157) ^a
Small manufacturing firms, SSI	5.60	0.00	0.00	220.00	24.00	184 (17) ^a
Large manufacturing firms, NSSI	14.50	0.00	0.00	151.00	26.00	223 (85) ^a
Small non-manufacturing firms, SSSBE	2.70	0.00	-2.00	100.00	13.00	210 (15) ^a
Large non-manufacturing firms, NSSSBE	10.00	0.00	-12.00	102.00	22.00	164 (40) ^a

^a: Number of none-zero observations. The calculations are based on an exchange rate of US \$ 1 = 45 Rupees.

Table 6-C. External Funding at Firm Level

Country	English origin average	French origin average	German origin average	Nordic origin average	LLSV sample average	India Full Sample	SSI	NSSI	SSSBE	NSSS BE
Market cap/sales	0.69	0.51	0.63	0.37	0.58	0.41	0.63	0.05	3.42	0.73
Market cap/cash flow	5.16	3.85	7.48	3.25	4.77	3.03	6.05	0.55	12.6	2.85
Debt/sales	0.26	0.27	0.3	0.28	0.27	0.47	0.32	0.53	0.50	0.58
Debt/cash flow	2.01	2.06	3.18	2.42	2.24	3.53	2.96	4.17	2.14	2.95

Sources: LLSV countries— LLSV (1997a); Indian firms: 854 listed firms (panel data set for the period 1995 to 2004) are from the CMIE *Prowess* database, with each ratio being the mean of the pooled panel of firms during the same time period.

Table 7. Empirical Tests on Listed Firms in India and Other Countries

Data: Our sample of 854 listed firms from India (panel data set for the period 1995 to 2004) is collected and compiled from the CMIE *Prowess* database. We compare these India firms with other firms studied in LLSV (2000b, 2002; 4,103 firms from 33 countries during the 1989–1994 period, and India was included). We do not have detailed firm-level data for LLSV samples, but we do have: (1) the cross-sectional summary statistics by country; (2) the regression results across countries.

Empirical Methodologies: Step 1: Using the summary statistics from LLSV samples, we create a “synthetic firm” for each of the 33 countries. For this synthetic firm, each firm characteristic is equal to the median of the same variable across all the firms in that country. **Step 2:** Three OLS regressions are run on the 33 (LLSV countries) “synthetic” observations. The dependent variables in these tests are: (1) dividend/earnings ratio; (2) dividend/sales ratio; and, (3) Tobin’s Q (measured by market-to-book assets ratio). The independent variables are the same ones used in LLSV (2000b, 2002). Based on the results from each of the three regressions. **Step 3:** Since India is included in the LLSV sample, we compare the predicted in-sample prediction on India’s synthetic firm with its true observation in LLSV to see whether India is an outlier, by examining the residuals from the regression.

The following table presents the coefficients estimates, t ratios, prediction error, and standard errors of the residuals from the regression on 33 synthetic firms for dividend policy and 27 synthetic firms for valuation analysis. For the valuation analysis, the prediction on India is an out-of-sample prediction.

<i>Panel A: Payout</i>	Dividend/earnings	Dividend/sales	<i>Panel B: Valuation</i>	Tobin’s Q
Intercept	42.44 (3.79)	1.30 (0.64)	Intercept	-0.58 (-0.58)
Civil law dummy	3.42 (0.33)	-1.06 (-0.56)	Growth in sales	0.00 (0.17)
Low protection dummy	-9.09 (-0.91)	1.57 (0.86)	Common law	0.30 (0.30)
Growth in Sales	0.47 (0.72)	0.16 (1.36)	Anti-director rights	0.65 (1.81)
GS * Civil law dummy	-1.12 (-1.18)	0.00 (0.00)	Cash Flow rights	5.87 (1.89)
GS*Low protection dummy	0.86 (0.89)	-0.20 (-1.13)	CF rights * Common Law	-0.52 (-0.15)
Div tax advantage	-10.54 (-0.85)	0.25 (0.11)	CF rights * Anti-director	-2.12 (-1.78)
R-squared	0.16	0.09	R-square	0.39
No of observations	33	33	No of observations	27
Residuals of India	13.15	0.11	Residuals of India	0.75
Standard error of residuals	11.84	2.16	Standard error of the residuals	0.32

Table 8: Survey Firms – Descriptive Statistics

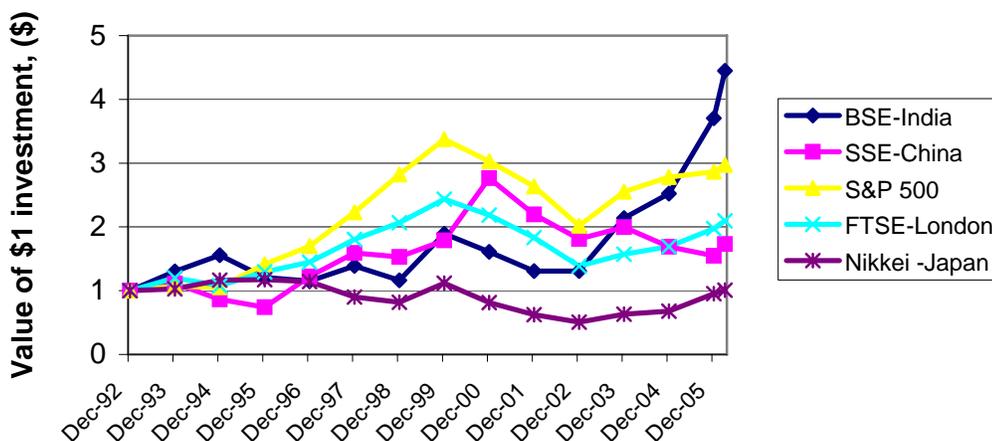
The firms in the sample were selected from several industrial parks in the New Delhi (northern India) and Hyderabad (southern India) areas that provided industrially diversified clusters of firms. The clusters include the Mayapuri Industrial Area, Naraina Industrial Area, WHS Kirtinagar cluster in Delhi 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

Figure 1.

Return on Stock Indexes around the World



The Y-axis represents the buy-and-hold return of \$1 investment in December 1992, and the X-axis represents the time period. Returns of five indices are compared: They are BSE-India (Bombay Sensex), SSE-China (Shanghai), S&P 500, FTSE-London, and Nikkei-Japan. The Sample period is from December 1992 to March 2006.

Figure 2. Investor Protection and External Markets – International Comparison

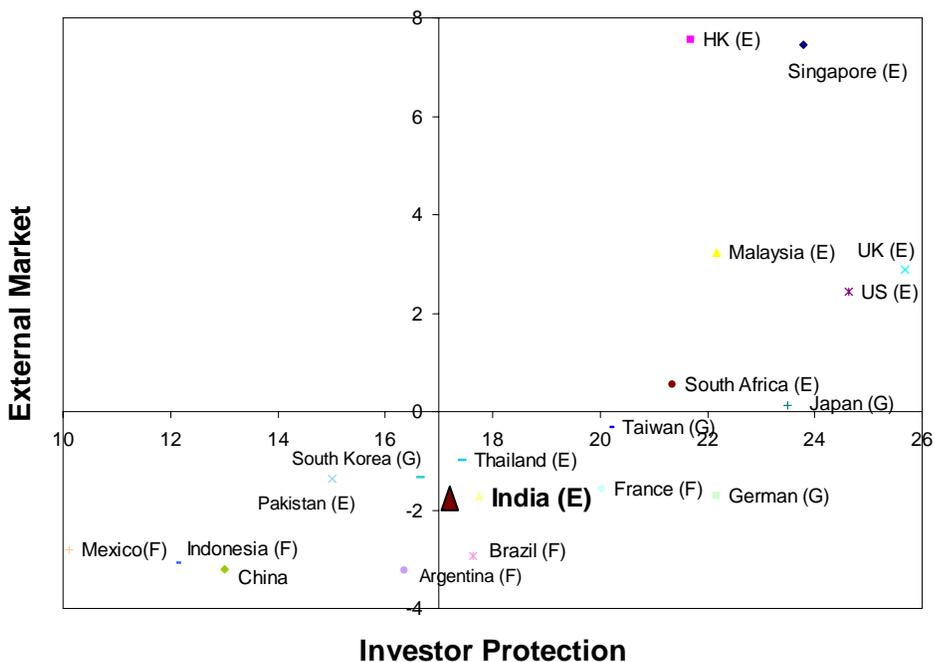
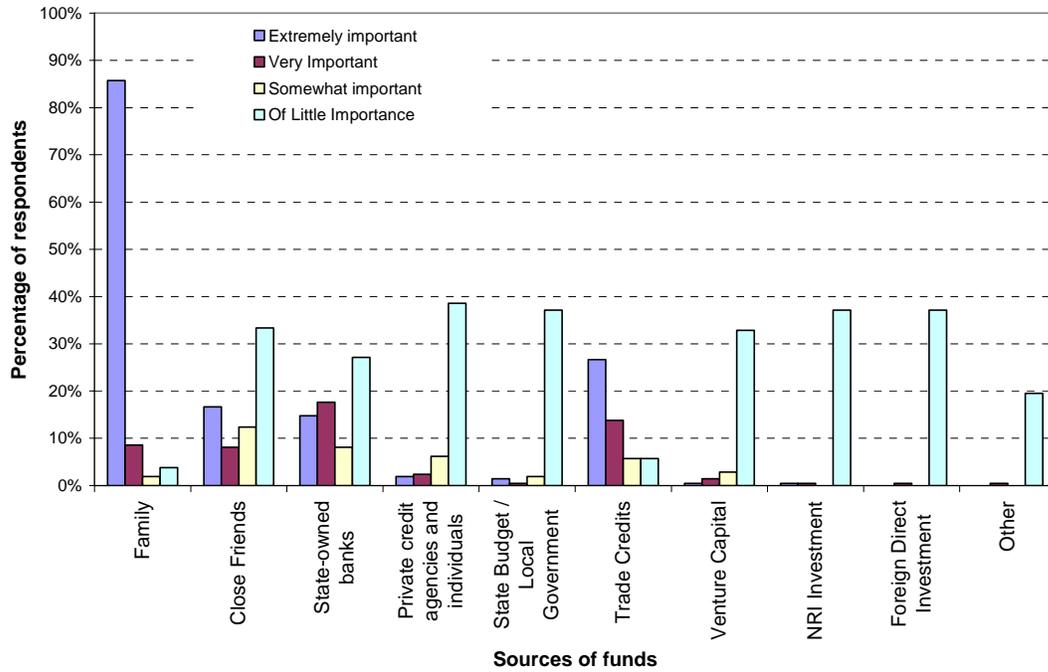


Figure 2 compares India's legal system and external financial markets to those of LLSV countries (LLSV, 1997a, 1998) and China. Following LLSV (1997a, 1998), the score on the horizontal axis measures overall investor protection in a country. It is the sum of (overall) creditor rights, shareholder rights, 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. Financing Channels for Survey Firms

Panel A

Importance of various sources of funds at start-up



Panel B

Ease of obtaining funds during growth stage

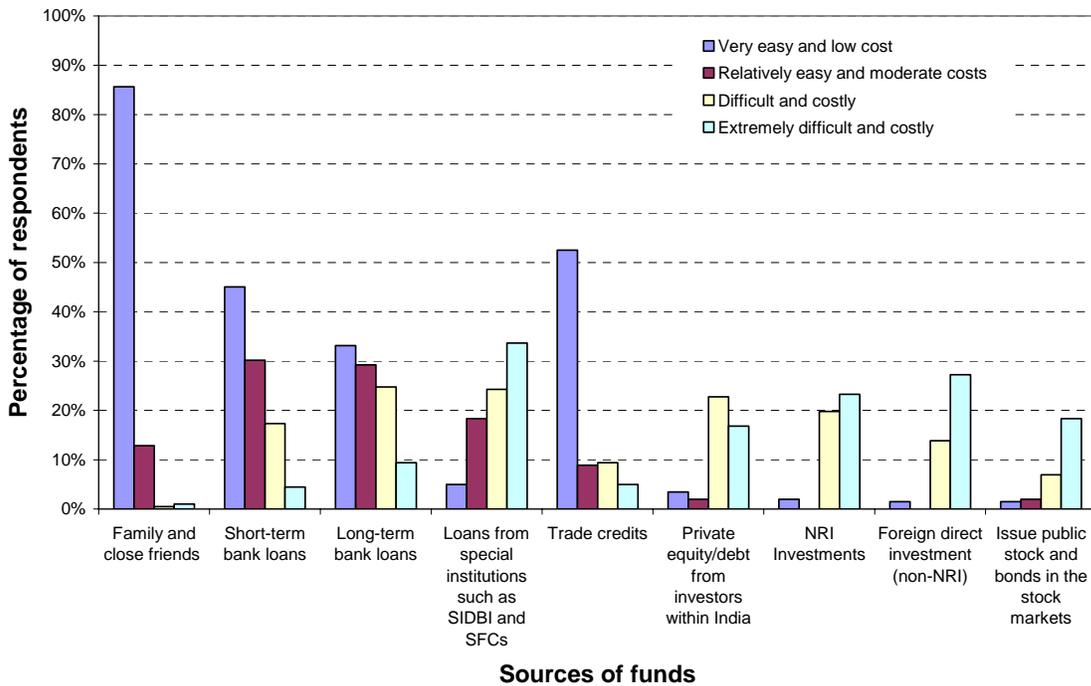
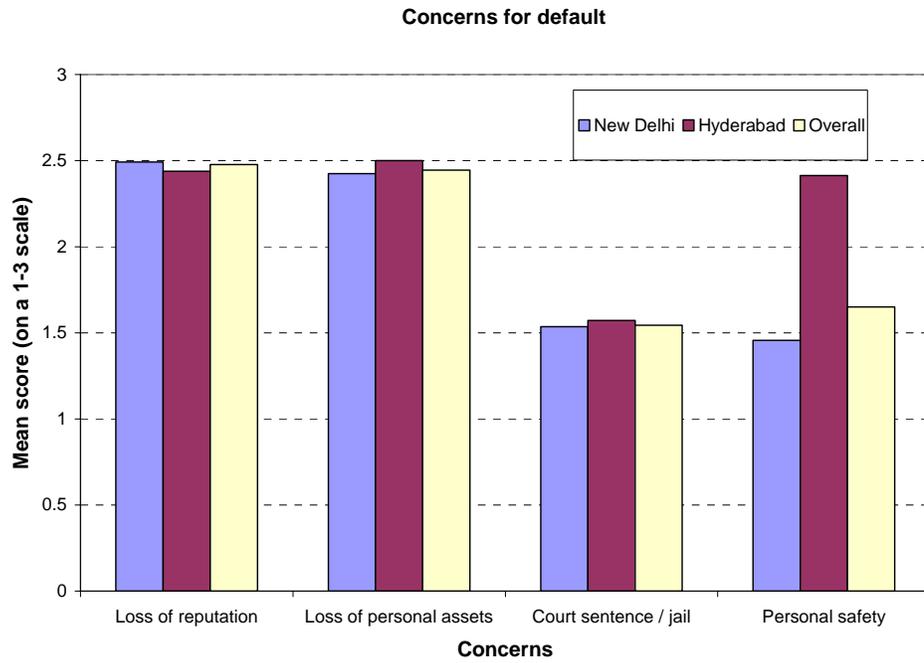
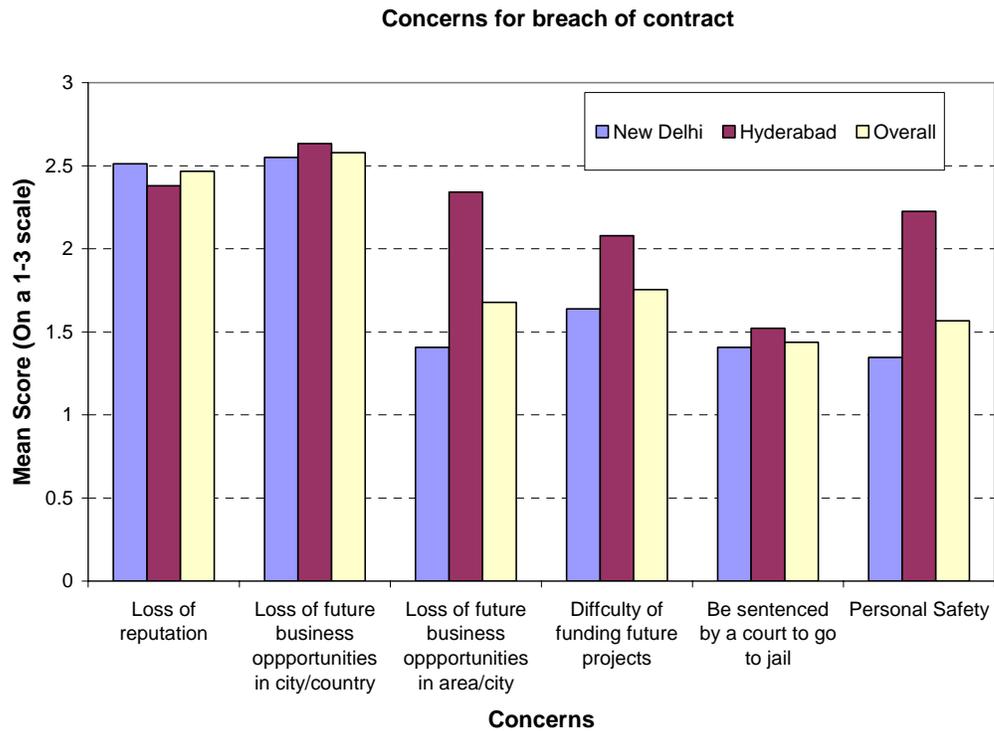


Figure 4. Law and Business Environment of Survey Firms

Panel A



Panel B



Panel C

Preferred Mechanisms of Dispute Resolution

