Chapter-1

Introduction

Efficient and developed financial markets are necessary for the increased economic growth of any nation. It improves the efficiency of allocation and utilization of savings in the economy. A well-functioning financial system eases the external financing constraints that restrict the expansion of the industries and the firms. The financial markets as a part of the financial system play an important role in the economic development for any country. One of the functions of an effective financial system is to bring the necessary economic reforms to provide impetus to the investment and growth in the economy.

India is one of the five countries classified as big emerging market economies by the World Bank. The other four countries are People’s Republic of China (PRC), Indonesia, Brazil, and Russia. The World Bank has predicted that these five biggest emerging markets’ share of world output will have more than doubled from 7.8% in 1992 to 16.1% by 2020.¹ India has been an attraction of the world economies due to its size and demographic advantage. India is growing and is contributing significantly to the trade and business and thus to world economic growth. Due to this reason it becomes all the more important to look at the manner in which financial development has been taking place in India. A detailed study of the reform initiatives taken by India to improve its performance and economic progress becomes imperative. Further, it is desirable to study what more India must do to join the league of countries known for their efficient allocation of resources and improved standard of living through efficient financial system.

¹ World Bank (1997).
Genesis of Economic Reforms

Until 1990’s the Indian economy was functioning in a highly protective and government regulated environment. Some reforms were undertaken in 1970’s and 1980’s, but the economy continued to be highly controlled. India faced a severe balance of payments crisis in the year 1990-91. In response to this, India launched a series of economic reforms, many of which directly or indirectly led to a substantial liberalization of the corporate sector.

These economic reforms provided both challenges and opportunities to the corporate sector. On the one side it reduced the bureaucratic control over economic activity, but on the other side, it attracted more competition through imports. In the new regime, the corporate sector got more freedom to set up the new units, and to expand their current businesses. The financial reforms widened the scope for raising resources. The financial system either bank based or market based facilitates the movement of surplus funds from household sector (saving sector) to the corporate sector for investments.

The reform measures, set in motion in early 1991 enhanced the performance of the corporate sector and the economy. These reforms put an end to the ‘license raj,’ and liberalized the foreign trade sector and the financial sector. The abolition of Capital Issues Control Act initiated a new chapter in the capital markets. The foreign investors brought huge investments and finance for the business sector and gave am impetus to the Indian economy.

But this momentum could not sustain after 1995-96. While India withstood the Asian financial crisis of 1997–98 comparatively well, but economists realised that the corporate sector could play an instrumental role in transmitting financial shocks and putting the financial sector at risk. There were huge mismatches in the corporate sector’s balance sheet which were subject to both domestic and external vulnerabilities. Some of the outcomes of this crisis were deterioration in creditworthiness of the corporate sector, sharp increase in nonperforming loans, curtailed new investment and foreign funds outflow. All of this adversely affected economic activity as a whole.
In the year 1997, second set of financial reforms were announced by the government which showed some improvement in the economic activity. The reforms continued thereafter and became a continuous process.

The reform momentum has picked up in India since 2011 again. Some of the reforms undertaken by the government of India in the recent past include – a major expansion of social protection coverage with the passage of the National Food Security Act. The National Food Security Act entitles two-thirds of the population to subsidized food grains. The National Food Security legislation was cleared by the Parliament and approved by the President in September 2013, making access to food a legal right. The Act entitles 67 percent of the country’s population to five kilograms of subsidized food grains per person per month, procured and distributed through the existing Targeted Public Distribution System (TPDS).

The new Land Acquisition Bill proposes to reduce uncertainty and address structural constraints to growth. Replacing the Land Acquisition Act of 1894, a new Land Acquisition, Rehabilitation, and Resettlement Bill was passed by the Parliament in September 2013. The Bill proposes to reduce uncertainty in land acquisitions by outlining clear guidelines on the process of acquiring land and fair compensation to those displaced.

The Pension Bill allows foreigners to invest in Indian pension fund companies. The Pension Fund Regulatory and Development Authority (PFRDA) Bill was passed by the Parliament in September 2013, nearly a decade after the New Pension System – now rechristened the National Pension System (NPS) – was implemented in 2004. A Banking Laws Bill that allows for new banking licenses, a Companies Bill that replaces sixty-year old legislation and increases transparency and corporate accountability, and the raising of ceilings and/or FDI - easing reforms in a number of sectors.

Since assuming office in May 2014, the new government has undertaken a number of new reform measures whose cumulative impact could be substantial. These include - Deregulating diesel prices, Raising gas prices from US$ 4.2 per million British thermal unit to US$ 5.6, and linking pricing to international prices so as to provide incentives for greater gas supply and thereby relieving the power sector bottlenecks, taxing energy products,
replacing the cooking gas subsidy by direct transfers on a national scale, passing an ordinance to reform the coal sector via auctions, instituting a major program for financial inclusion—The Pradhan Mantri Jan Dhan Yojana under which over 12.5 crore new accounts have been opened till mid-February 2014, increasing FDI caps in defense and passing the Mines and Minerals (Development and Regulation) (MMDR) Amendment Ordinance, 2015 which is a significant step in revival of the hitherto stagnant mining sector in the country. Following these economic reforms, the Indian economy has been performing extremely well.

India’s GDP growth was 8% plus per annum during 2001-11. In the five years prior to the global financial crisis of 2008, the Indian economy had averaged 9 per cent annual GDP growth. In the aftermath of the crisis, there has been a slowdown. While RBI estimates that the trend/potential growth rate of the Indian economy, which averaged around 8.5 per cent during 2005-06 to 2007-08, dipped gradually thereafter and presently stands at about 7%, the draft Twelfth Five Year Plan (2012-2017) document prepared by Government of India indicates that India’s full growth potential remains around 9%.2

As per World Bank data3 India is now the 10th largest economy in the world in terms of nominal Gross Domestic Product (GDP) which stood at US$1377.26 billion in 2009 and the 4th largest in terms of purchasing power parity (US$ 3808.44 billion in 2009). The country’s GDP per capita (PPP) recorded at US$ 2,993 (at constant 2005 international dollar) in 2009, as against US$ 1831.66 in 2001 and US$ 1232.19 in 1991.

The gross domestic capital formation (GDCF) stood at 36.5 per cent of GDP in 2009-10 as against 26 per cent in 1990-91 and gross domestic savings stood at 33.7 per cent of GDP in 2009-10 as against 22.8 per cent in 1990-91. The

2 Dr. K. C. Chakrabarty, Deputy Governor, Reserve Bank of India at International Factors Group’s Annual Conference on October 7, 2013 in New Delhi.

industry and services sectors continued to fuel the economic growth. Industry’s contribution (including construction sector) to GDP has steadily increased from 25.92 per cent in 1990-91 to 28.47 per cent in 2009-10, while services sector continued to contribute about 57 per cent to GDP in 2009-10. The economy has been doing well in the external sector, especially in trade, foreign investment, and accumulating foreign reserves. The volume of exports and imports recorded at Rs. 845534 crore and Rs. 1363736 crore respectively and the foreign exchange reserves stood at Rs. 1149650 crore in 2009-10.4

The capital market, an important constituent of the financial system plays a pivotal role in the growth of the industry and commerce of the country that eventually affects the economy of the country to a great extent. That is reason that the government, industry and even the central banks of the country keep a close watch on the happenings of the stock market. A developed capital market provides a platform to the corporate sector to raise the funds required for the new investment projects. Stock market provides an additional channel along with banks and other financial institutions, for encouraging and mobilising domestic savings. It provides the basis for improved managerial efficiency through market allocation of capital. A stock market contributes to the real economy because a) it provides an additional channel for encouraging and mobilizing domestic savings b) it improves the efficiency of capital by providing market measures of returns on capital and c) it improves gearing and helps to reduce dependence on borrowing.5

An efficient financial system has been identified as an important determinant in achieving long-term economic growth (Walter 1993)6. Recent research suggests that there may be a correlation between the level of stock market

4 'Indian Economy after Liberalisation Performance and Challenges’ edited by Dilip Saikia, SSDN publishers and Distributors, New Delhi.


development and that of financial institutions (Demirguc-Kunt and Levine 1996)\textsuperscript{7}, and that these components are complementary parts of the financial system.

In the light of this background, it is proposed to study the impact of these reform measures on the performance of the corporate sector in India. The basic purpose of the current study is to investigate whether the economic reforms and the economic development has any relationship with the financial performance of these corporate houses.

The Indian corporate sector responded to this policy change in a variety of ways in the initial years of economic reforms.\textsuperscript{8} There was vigorous business consolidation and restructuring by the companies in a few selected areas to correct the inefficiencies caused by over-diversification in the pre-reform era.

This entailed a significant increase in the number of mergers and acquisitions (M&As) with majority of them being horizontal in nature (Khanna, 1997; Basant, 2000; Beena 2000; Mishra, 2005)\textsuperscript{9}.

\textbf{1.1 Financial System, Economic Reforms and the Economic Development}

The financial system of any country consists of specialized and non-specialized financial institutions, organised and unorganized financial markets and financial instruments and services which facilitates the transfer of funds. The main role of a financial system is to bring together economic agents with surplus financial resources, such as households, and those in need of finances, such as companies and government. A well-developed capital market allows companies not to depend on debt route and they can choose to increase their equity financing. Thus if the capital market is underdeveloped, the banking institutions dominate and give rise to a more regulated environment. In a


\textsuperscript{8} Basant (2000) provides an initial analysis of these responses in the 1990s.

\textsuperscript{9} The number of mergers more than doubled only during 1990-1994 as compared to that during 1985-89 (Beena, 1998).
market based economy, companies cover most of their financing needs by issuing financial securities (shares, bonds, commercial paper, etc.) directly to investors.

The importance and functions of financial system in the economic development cannot be underestimated. The various theories throw light on the impact of financial development on the savings and investment. The financial system facilitates the allocation of resources across the space and time in an uncertain environment. Financial system (a) facilitates separating, distributing, trading, hedging, diversifying, pooling and reducing risks, (b) allocates resources, (c) monitors managers and exerts corporate control, (d) mobilises savings and (e) facilitates exchange of goods and services, (f) enhances liquidity of financial claims through securities trading, and (g) facilitates better portfolio management.10

There is a growing body of empirical analyses, including firm-level studies, industry-level studies, individual country studies, and cross-country comparisons, that prove this strong, positive link between the functioning of the financial system and long-run economic growth. Specifically, financial systems facilitate the trading, hedging, diversifying, and pooling of risk. In addition, they better allocate resources, monitor managers and exert corporate control, mobilize savings, and facilitate the exchange of goods and services11.

It is now widely acknowledged that there is a linkage between the financial system and the economy. Walter Ingo (1993)12 notes that “the structure, conduct and performance of financial systems are highly relevant in setting the agenda of economic growth”. He further points out that “high-performance financial systems are increasingly important as determinants of sustainable economic progress and stability”. Economies with a sophisticated financial

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11 Levine (1997).

system seem to be more capable of evaluating assets whose real value is
difficult to determine. More specifically, the role of the stock market in
providing risk diversification, liquidity, information processing, and capital
mobilisation, may be a factor in promoting economic growth (Demirguc-Kunt

Some theories provide a conceptual basis for the belief that larger, more
efficient stock markets boost economic growth. This article examines whether
there is a strong empirical association between stock market development and
long-run economic growth. Cross-country growth regressions suggest that the
predetermined component of stock market development is positively and
robustly associated with long-run economic growth. The data suggest that
stock market development is positively associated with economic growth. And
this relationship remains strong even after controlling for initial conditions,
inflation, and the size of the government, the black market exchange rate
premium, and the predetermined component of financial depth. They have
shown that countries which reduce barriers to international capital flows enjoy
rapid improvements in the functioning of their stock markets. According to
them, although stock market volatility may rise in the short term because of
liberalisation but in the long run tend to be less volatile than those without

Although India had already started working on reducing the government control
in 1980’s, but the economic liberalisation was formally announced in the year
1991 when the Indian economy was opened up for the global market. The foreign
exchange deficit, the inefficiency of the public sector and the reluctance of the
private sector due to red tapism and bureaucratic set up were the main reasons
behind the slowdown of Indian economy. The foreign capital flows started
pouring in 1990’s due to which the activities in the real sector and in the stock market increased substantially. Foreign equity investment can be beneficial to developing countries because of its risk-sharing characteristics and effects on resource mobilization and allocation. All the developing countries opened up their economies and India also followed this path. A distinguished International Study Group for the ‘World Institute for Development Economic Research’ (WIDER) has argued that the developing countries should liberalise their financial markets in order to attract foreign portfolio equity flow. The study group’s essential argument has been that the huge amount of financial capital available in the developed countries through pension and investment funds could be attracted to the developing countries provided the latter liberalised their markets externally and developed their stock market internally. The importance of capital markets is now recognised in the developing countries’ financial system and is given a special focus in all economic policies.

The economic reforms initiated by developing countries bring both benefits and challenges to the corporate sector. On the one side, it allowed the corporates to take the benefit of increased capital availability through international channels for the new investment opportunities but on the other side they had to compete in a highly competitive environment with the international players. Other benefits include knowledge spillover effect, improved resource allocation through the financial markets, the increasing safety of financial operations, and strengthening of domestic financial markets through the financial sector reforms. The recent trend in the international financial markets has also led to the development and growth of the primary and secondary capital market of India. Now when all the economies are globally connected, developed nations find a huge scope of improving their returns by investing in these developing countries. These developing nations have now become increasingly attractive destinations for international investors due to integration with world financial markets, and this increased integration implies a lower risk-adjusted cost of capital, which is possible by diversifying the risk.
The last two decades have seen a huge change in the financial markets. The functioning of the market has completely changed due to technological advances in computers and telecommunications and the integration of the banking and commerce worldwide. The increased competition throughout the world has resulted in a much more efficient, internationally linked market, but far more complex. The positive developments of the financial markets have improved efficiency but at the same time increased complications for the policy makers.

The integration of the world markets has necessitated the greater cooperation among regulators at the international level. The various committees formed at the different platform are working towards better functioning. Individual countries are reluctant to give up control over their national monetary policies. Still regulators are unanimous about the need to close the gap in the supervision of worldwide markets. The recent global financial crisis of 2007-08 has been an eye opener for all the policy makers. This sub-prime crisis in U.S. has shaken the economies of all the nations worldwide. It is only the coordinated efforts of all developed and developing nations that the economies are recovering from this economic disaster.

However these need to be managed properly. In the absence of safeguard in place, the events like Lehman Brothers failure can take place in India also. The volatility of Indian financial market may also increase due to reversals of capital flows by foreign institutional investors.

The economic reforms have been directed towards making the corporate sector more competitive and efficient. The new measures spanned a wide area covering industrial and import licensing, taxation, foreign investment, financial markets and exports. Reforms have been manifested in physical as well as financial aspects.

**Origin of Global Financial Crisis – The Indian Perspective**

The global financial crisis originated in the US and then spread to Europe. Europe has lapsed into recession again. The continuing uncertainty in the euro
area poses a major risk to the global economy today. It has affected the growth prospects of both advanced and emerging market economies through trade, financial and confidence channels. Given the interconnectedness of global financial markets, the principal risk to emerging markets and developing countries (EMDEs) arise from ‘risk on’ and ‘risk off’ behaviour of global financial market. Of late through following resolute policy actions, financial conditions have improved in the euro area (IMF, 2013)\textsuperscript{15}. However, the real economy has shown no sign of improvement.

The euro area crisis first surfaced in 2009 when Portugal, Ireland, Greece and Spain slipped into recession with exceedingly high budget deficits. The crisis deepened further in 2010 with credit rating agencies downgrading the sovereigns and banks in the peripheral Europe. This significantly dented confidence, even threatening the very existence of the euro. Consequently, the risks to the global economy rose.

The problems in the euro area are largely structural in nature and existed even prior to the crisis. The global crisis only amplified the weaknesses in the system. “In the years preceding the crisis, the EU became divided between countries with positive trade balances and sound budgets – the core - and those with growing budget deficits and external deficits financed by private credit flows increasingly sourced from the first group of countries for unproductive spending – the periphery. With the onset of global financial crisis, the external deficits, budget deficits and levels of public debt of the countries in the second group largely became unsustainable once they were no longer financed by the rest of the EU (Draghi, 2013)\textsuperscript{16}.”

Indian economy is significantly integrated with the euro area. The impact so far has been mainly through trade and finance channels. As a result of

\textsuperscript{15} Deepak Mohanty, Executive Director, Reserve Bank of India at the SAARC FINANCE Group Meeting on 18th June, 2013 at Islamabad, Pakistan.

\textsuperscript{16} Draghi, Mario (2013): ‘The euro, monetary policy and reforms’, Speech on the occasion of receiving an honorary degree in political science at LUISS “Guido Carli” University, Rome, 6 May.
slowdown in euro area, the India’s merchandise exports to the region declined from US$ 42.7 billion in 2011 to US$ 37.8 billion in 2012. Consequently, its share in India’s total exports declined from 13.9 per cent to 12.8 per cent. In fact, euro area’s share in India’s exports was much higher at 16 per cent in 2008. Furthermore, the share of India’s software services exports to Europe declined from 26 per cent of total software export earnings in 2009-10 to 24 per cent in 2011-12. The consolidated claims of the European banks on India declined from US$ 146 billion in December 2010 to US$ 139 billion in December 2012.17

The recent financial crisis has amply demonstrated the need for effective regulation. Reserve Bank of India has followed the approach to regulation and development of the financial markets based on the following three principles.

a) The list of financial products available to meet the financial requirement and to hedge emergent risks should be enlarged.

b) The new products should be acceptable to the market participants and

c) The robustness of the market infrastructure for trading, settlement and reporting of existing as well as new financial products should be improved.

The focus of RBI Governor, Dr. Raghuram Rajan is to broaden and deepen financial markets and increase their liquidity and resilience. This will allow allocating and absorbing the risks entailed in financing India’s growth. Efforts of Reserve Bank has been to strike a balance between market development and financial stability.

In this background, where the various policy and reforms initiatives are made during the last two and a half decades to reform the Indian economy in general and corporate sector in particular, the present study attempts to assess how the

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Deepak Mohanty, Executive Director, Reserve Bank of India at the SAARC FINANCE Group Meeting on 18th June, 2013 at Islamabad, Pakistan.
firms have responded to these policy measures. In view of this, the review of the existing literature is being done.

1.2 Existing Literature

There are numerous articles published in various journals of repute. A little research leading to doctoral degree or its equivalent is also being carried on by various scholars. The literature is being reviewed in three parts: Growth of Indian economy, performance of the Indian Corporate sector and how the corporate sector has responded to these reform measures.

An effort is being made here to present some of the important contributions made to this field of study.

1.21 Growth of Indian Economy

K.P.Krishnan\textsuperscript{18} : He tried to assess the financial sector reforms in India and the way going forward since the global financial crisis of 2008. He diagnosed that the extent and pace of reforms in a segment of financial markets in India appear to be shaped by two factors: a clearly defined regulatory framework and the extent of public sector presence. The debt markets in India illustrate this. The debt market has had a strong public sector presence. The dominant traded instruments are Government of India securities, and the dominant trading participants are banks, with a large fraction being the public sector banks. When the Securities and Exchange Board of India (SEBI) was created to regulate “securities markets,” the markets for bonds did not fall within its mandate due to confusion in the financial architecture prevalent in the country. Despite the fact that the legal definition of the word securities included “bonds,” due to a variety of reasons, including the fact that RBI was the investment banker to the Government of India and the regulator of the banking sector (which is the dominant player in the bond market), SEBI did not become the sole regulator for the bond market. Even now there is legal

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confusion over who regulates the government securities market, with the RBI exercising a lot of regulatory powers. Thus the bond market did not benefit from an independent regulator, as the equity markets did. The approach of reforms in equity markets was through an independent regulator, the SEBI. However, the development of bond markets took place in the context of this conflict of jurisdiction. There were considerable lags in institutional development in the Indian debt markets as compared to equity and commodities markets.

Similarly, as regards the impact of public sector presence on the pace and direction of reforms, one finds that in India, the pace of reforms has been the slowest where the government had a dominant presence. For example, the government dominated the insurance and banking sector, where the pace of the reforms has been the slowest. The government had a lower involvement in commodity markets, and the least in the case of equity, where reforms have made huge strides in institutional development and change.

Some of the other reasons for the varying pace of development in different sectors of the financial markets are bans or restrictions on products and participants. A policy environment that bans products and markets clearly hinders the development of liquid and efficient markets. As an example, exchange-traded currency futures were banned until August 2008, and commodity options are currently banned, obviously impeding the development of liquidity and efficiency in these markets. Equally problematic, a missing market can hamper the efficiency of other markets as well. For example, an efficient and deep corporate bond market is still lacking in India, inter alia, because the related markets for corporate repos, interest rate derivatives, and credit derivatives are either altogether missing or have only been allowed with multiple restrictions, which lead to stunted development.
In many cases, while an outright product ban is not in place, there are restrictions on participation. These include regulatory restrictions on some kinds of activities (for example, banks are prohibited from adopting long positions on interest rate futures) or quantitative restrictions (for example, all FIIs combined are required to keep their aggregate ownership of corporate bonds below US$15 billion).

The equity market—the only element of Indian finance that has achieved immediacy, depth, and resilience—has few restrictions on participation in both spot and derivatives markets. As a consequence, the equity market, especially for large stocks, has developed a distribution capability that reaches millions of market participants, including many around the world. All kinds of economic agents come together into a unified market to make the price. Competitive conditions hold for the most part as no one player is large enough to distort the price. The diverse views and needs of a range of participants impart resilience, depth, and market efficiency. Competition between the NSE and BSE has helped improve technology and reduce costs. The most important feature of the equity market has been free entry and exit for financial firms that become members of the NSE and BSE, and the free entry and exit for the economic agents who trade on these markets through exchange members. Such an open environment is critically important for achieving liquidity and efficiency in all the other elements of Indian financial markets.

In a growing and increasingly complex market-oriented economy such as India’s, which is experiencing increased integration with global trade and finance, the financial system would be an important element in the country’s future growth trajectory. Further steps are required to make the financial markets deeper, more efficient, and well-regulated. Based on various expert committee reports, he recommended the following policy actions for further development of financial markets in India:
1. Regulatory Architecture: Regulatory structures need to be streamlined to avoid regulatory inconsistencies, gaps, overlap, and arbitrage. Steps in this direction should include a reduction in the number of regulators, defining their jurisdiction wherever possible in terms of functions rather than the forms of the players, and ensuring a level playing field by making all players performing a function report to the same regulator regardless of their size or ownership.

There is merit in moving toward greater convergence of financial market regulation. The regulatory convergence based on recommendations of various government committees fall into two main categories. The first category is convergence of the commodity derivatives and securities market, that is, one regulator for the equity, corporate debt, equity derivatives, and commodity derivatives markets. The second category concerns policy level convergence. This would mean that all financial sector regulation and regulators would be covered under a single legislative enactment and under a single department, even with multiple regulators. Each of these alternatives needs to be explored.

2. Financial Inclusion: A robust financial system is not as socially relevant if most people in the country do not have access to it. Financial inclusion is a key priority for India, especially rural India. The following are some recent initiatives for achieving greater financial inclusion:

i. The list of banking correspondents has been expanded to include individual petty, medical, and fair price shop owners and agents of small savings schemes of the Government of India, insurance companies, and retired teachers.

ii. Establishment of off-site ATMs has been de-licensed.

iii. RBI is presently reviewing the priority sector lending guidelines and the feasibility of trading in priority sector lending certificates, as recommended by the CFSR.

iv. A proposal to grant a few more licenses to local area banks for a fixed period of time is also under consideration.
v. A working group of RBI has recommended removing the interest rate ceiling on loans up to Rs 200,000.

3. Government Debt Management: A key issue confronting the government securities markets is that the central bank is also the manager of public debt in the country, which leads to a series of conflicts. There is a strong international consensus that a well-run economy should have a dedicated, consolidated public debt management office. Thus a DMO would set the stage for modernization of the bond markets and establishing of the bond-currency-derivatives nexus, complementing the strategy for financial sector reforms in the country.

4. Framework for Institutional Investments: Various segments of the financial markets can develop and thrive only when participation in them is not artificially constrained. The most successful parts of Indian finance at present are those in which non-institutional participants have taken a lead and engaged in speculative price discovery. This large mass of retail participation in financial markets is a unique edge that India has when compared with other international financial markets.

5. Competition: Lack of sufficient competition in parts of the financial services industry, the pervasiveness of public ownership, and over-compartmentalization of subsectors have resulted in suboptimal performance by existing market players. Competition need to be across larger, more capable players rather than among a plethora of small, weak, undercapitalized players that cannot capture economies of scale or make the kinds of investments in people, training, technology, and research into product development that supports innovation. The Indian financial sector needs a wave of consolidation—through acquisitions and mergers among private and publicly owned institutions—for its financial firms to be strong enough to compete as aggressively as they should with each other, and with foreign firms, in Indian and global markets.
6. Financial Stability: All this points to the need for improved inter-regulatory coordination and for strengthening and consolidating regulatory structures to deal with large, complex, systemically important financial conglomerates, on the one hand, and with the needs of the consumer, on the other. It is important to examine practices that are evolving in other jurisdictions and formalize a structure for handling issues of financial stability.

Conclusion: Has the global financial crisis necessitated a change in India’s approach and commitment to financial sector development on the lines of recommendations of certain recent government committees? I am of the opinion that it has not. As can be seen from the discussion in the section of this chapter, which traced the development of various segments of India’s financial markets, the Indian approach to development of financial markets has focused on gradual, phased, and calibrated opening of the domestic financial and external sectors, taking into account reforms in other sectors of the economy. This continues to be the overall stand on reforms, even after the global crisis, though policies for the financial sector seem to be a little more cautious. However, given that a lot of the agenda of financial sector reforms in India has consisted of permitting formerly banned financial markets, strengthening regulation, plugging regulatory gaps, and strengthening regulatory coordination, recent global developments in no way have diluted this agenda.

An important issue that is being debated at various domestic and international forums following the crisis is the perils of OTC products. There is a move toward mandating a transparent trading framework for these products and more regulatory oversight. India has always favored exchange-traded financial products over OTC products due to the firm belief that OTC markets carry with them large and unknown counterparty credit risks, are not transparent, hinder competition, and, given all this, have systemic implications for financial stability.
Among the right lessons that can be drawn from the crisis are:

i. Innovation in financial markets should not be strangled. However, it should be ensured that the complexities of new products are understood, especially if they are traded off exchanges, as OTC products. When widely distributed and poorly understood, such products are dangerous to systemic stability.

ii. Too much risk aversion on part of regulators can impede growth and development.

iii. There is no perfect regulatory architecture, but institutional design needs to be in tune with markets and requirements.

Inclusion, growth, and stability are the three objectives of any reform process, and these objectives are contradictory. With the right reforms, the financial sector can be an enormous source of job creation both directly as well as indirectly, through the enterprise and consumption it can support with financing. Without reforms, however, the financial sector could become an increasing source of risk, as the mismatches between the capacity and needs of the real economy and the capabilities of the financial sector widen.

India has been a case study of how financial sector reforms can play a supporting role in the growth of an emerging market economy. The challenge is how to bootstrap from these past successes to escalate to the next level of financial sector development, so that it can continue to support the growth that India faces going forward.

Ashok Kotwal, Bharat Ramaswami, Wilima Wadhwa19: The fast and stable growth accompanied by a decline in poverty has also raised many questions: What triggered growth in India? What is the Indian model? Is it replicable in other developing countries? Is it sustainable? How does it

19 Ashok Kotwal, University of British Columbia, Vancouver, Bharat Ramaswami, Indian Statistical Institute, Delhi, Wilima Wadhwa, Indian Statistical Institute, Delhi and ASER Centre, Delhi, “Economic Liberalization and Indian Economic Growth: What’s the evidence?” May 2010.
compare with the East Asian model in its growth as well as distributional consequences? How does the growth process impinge on India’s central problem – its mass poverty? Our objective in this paper is to take stock of what progress the literature has made in answering these questions and come up with a plausible story of Indian development during the period of 1980 – 2004.

India makes a fascinating case study. On the face of it, the improved growth performance in India seems to have been achieved by following the orthodox prescription of removing the constraints on entrepreneurship. However, Indian economic growth, during 1980-2004, seems to have little in common with the so-called ‘Asian Model’. Its savings rate has improved over time but has not reached the East Asian level. Its growth so far has not been driven by manufactured exports. Nor has it attracted massive inflows of foreign investment. There is no industrial policy targeted toward developing specific industries. On the contrary, it is the service sector that has led the charge in the Indian growth experience. Another aspect of the Indian experience that makes it very different from that of other Asian countries is that despite a fast growing non-agricultural part of the economy, the share of agriculture in the total labor force has declined very slowly. In fact, the agricultural labor force in absolute numbers has increased since 1980’s, dampening the process of poverty decline.

Why do we expect economic liberalization to produce growth? First, import liberalization provides domestic firms access to capital equipment embodied with new technologies, better intermediate inputs and expands their choice set to act. A freedom to invest and enter the market increases the extent of competition and puts pressure on the incumbents to upgrade their technologies often through imported machinery. With the entry of new firms in a more competitive market, the process of creative destruction goes to work. Efficient firms drive out inefficient firms, factors gets reallocated to more productive use increasing the overall productivity of factors in the economy. Due to
technology transfer, productivity in industry and service sectors grows rapidly attracting labor from agriculture. The re-allocation of labor from agriculture to more productive sectors contributes further to growth. This process also makes the workers left behind in agriculture better off because the real wage rises as labor markets tighten in agriculture.

Is this what has been happening in India? One might think so. But do we see this in the data? These are the motivating questions for this paper.

2. Why Disaggregation is Necessary: The Unorganized Sector

This is why we need to examine the disaggregated picture. What processes were unleashed by the reform measures that would move labor to more productive activities? What are the skill intensities in the organized and unorganized sectors? What was the impact on unskilled employment? What is happening to the structure of the labor force? Is the educational system transforming unskilled labor into skilled labor at a fast enough rate?

An important caveat to our observations (and a challenge to subsequent analysis) is that the output statistics on the unorganized sector suffer from incomplete coverage, indirect estimation methods, frequently outdated benchmark surveys and unknown biases (Rangarajan, 2001), Shetty (2007)).

3. The License-Permit-Quota Raj and Economic Reforms

The ‘license-permit – quota raj’ is a short-hand description of the licenses and quotas that characterized Indian economic policies before 1991. There were four major elements of the pre-reform regime that were addressed by the reforms starting in 1991. The driving principle of the License Raj regime was ‘self-reliance’. This meant anything that could be produced at home should not be imported irrespective of the cost. Consequently, strong incentives were given to capital intensive industrial sectors where India had no comparative advantage. The policy also had implications for the educational priorities. Educational expenditure was heavily biased toward post-secondary education rather than toward primary education and mass literacy. As we will see later, this lopsided educational structure happened to play an important role in the
mid-nineties in the surprising development of the software and other high tech sectors in India. However, the undesirable consequence was perhaps the disappointing development of India’s labor intensive manufacturing sector.

4. Growth Acceleration is the timing of the structural break important? The discussion in the literature about the structural break takes place in the belief that it could offer clues about what policies led to the shift in the economy’s growth rate. Such inference is problematic because statistical methods alone are unlikely to provide a precise timing. Judgments about outliers, the period of analysis, and the sectors that are considered, matter. An additional complication is that policy measures do not have instantaneous results. The delay would be especially pronounced if the benefits flow from a structural change. It is therefore unwise to correlate the changes in economic variables to the policy changes that immediately preceded them. These caveats notwithstanding, the economy does seem to have moved to a higher growth trajectory sometime in the mid to late 1970s or early 1980s, well before the economic reforms of 1991. What could have triggered the growth acceleration in the 1980s (or earlier) when extensive reforms such as the abolition of the industrial licensing system and trade liberalization happened only in 1991 and later? If liberalization leads to growth because it encourages competition and entrepreneurship, then what about the 1980s when reforms were so minimal that the business environment of entrepreneurs was hardly much freer than in the earlier two decades. Yet the average annual growth rate from 1980-81 to 1990-91 was not much different from that between 1991-92 and 2004-05 (5.8% and 6.1% respectively). What was driving growth in the 1980s? This is the puzzle, and the debate on Indian economic growth has thrown up various explanations.

5. The Impact of Reforms
The reforms that began in 1991 completely changed the direction of economic policies. As explained in Section 3, India moved away from a state-led closed economy framework in favor of greater integration with the world economy,
lesser controls on private business activity especially in manufacturing, and
substantially lowers entry barriers to prospective entrants, whether domestic or
foreign. In principle, the removal of licensing and the barriers to trade, should
allow greater competition as well as access to cheaper factor services. TFP
should rise and as inefficient firms exit, factors should get reallocated to their
most productive use further increasing TFP. Did this happen?
It should be noted that an entrepreneur in the pre-reform period was subject to
many controls which operating together would have been more restrictive than
the sum of the effect of any one of them separately. Therefore, the success of a
reform measure that lifts a constraint depends crucially on the existence of
other constraints that may still persist. The impact of liberalization of any one
of the controls (say an industrial license) would be limited unless the other
controls (such as import licenses) were relaxed as well. Similarly, lowering of
tariff on inputs to a particular industry may not pay the same dividend if the
industry is still under small scale reservation policy that disallows large
manufacturing plants. According to the theory of second best, under certain
circumstances even the coefficient of a reform measure could have a wrong
sign. It is therefore important to consider the interaction among controls and
their liberalization in analyzing the impact of reforms.
6. Poverty Decline
Official poverty estimates in India are based on nationally representative
consumer expenditure surveys conducted by the National Sample Survey
Organization (NSSO). While such surveys are now undertaken every year, the
so-called “thick rounds” which take place approximately every five years are
regarded as more reliable. The official estimates of the head-count ratio of
poverty are reported only for the thick rounds.
7. What is distinct about India’s experience?
It is clear from the earlier sections that the growth episode in India since the
1980’s is not another instance of State driven growth in Asia. Instead, it is the
co-incidence of the ready availability of new technologies and having the
skilled manpower that would be necessary to take advantage of these new technologies. Technology transfers in the 1980s and early 1990s took place mostly through easier and cheaper access to imported machinery that was made possible by trade liberalization. Improved communications (especially cell phones) and the diffusion of internet were other technologies that played a big role in driving growth from the mid-1990s on. It is inconceivable that without the breakup of government monopolies and the advent of competition in the communication sector, there would have been a revolution in communication technology in India. And, without such a revolution, the fastest growing sectors (e.g., business services) would not have taken off in India. The sustained growth that we have seen since the mid 1990’s would clearly not have been possible without the liberalizing reforms of 1991. The importance of liberalization measures can be appreciated by imagining the counterfactual that India had stayed in its pre-reform state of constraints on entrepreneurial freedoms to invest and import. New technologies would not have diffused at such a speed and growth would have been much slower.

At the same time, as stressed by Kochhar et al (2006), it should be acknowledged that some aspects of the earlier economic regime played a positive role in the pattern of development later. For example: the creation of a diverse set of skills through import substitution, an emphasis on tertiary education creating a pool of university graduates for sophisticated service sector jobs and a government induced expansion of banking network that helped in mobilizing savings. The initial conditions and their interaction with the fortuitous arrival of new technologies created a distinctive pattern of growth that would have been hard to predict at the time of liberalization.

Another distinctive feature of the Indian growth experience is the dominance of the service sector. In East and Southeast Asia, it was the manufacturing sector. One could look at this in several different ways. If we compare China with India, it is indeed the manufacturing sector that grew the fastest in China and vice versa in India. However, both sectors grew faster in both countries
than in the rest of the world and both sectors grew faster in China than in India. Yes, even services grew faster in China than in India. The main distinction is in terms of what comprised their exports. Here it is services for India and manufacturing for China. Indeed, it is the software exports to the developed countries that spread the word that India was unique as a developing country to have developed a comparative advantage in high-end services. In a curious way, this was the reason for it being accepted as a development success story despite the fact that it continues to house more of the world’s poor than any other country.

What are the implications of the fast growing component of the exports being high-end services as opposed to manufacturing? For one thing, manufacturing uses unskilled labor more intensively. In the Indian context, this is especially true of unorganized manufacturing and it is conceivable that manufacturing exports would have generated a great deal of sub-contracting to the unorganized sector. This, in turn, would have drawn labor out of agriculture to a greater extent.

Indeed, one major feature of India’s development pattern is that the share of agriculture in employment has not come down rapidly. In fact, the absolute amount of labor in agriculture has risen continuously in India while it fell in all countries now developed during their comparable development phases. An important component of growth – moving labor from low to high productivity activities – has been conspicuous by its absence in India. Also, as the labor to land ratio grows, it becomes that much more difficult to increase agricultural wages and reduce poverty.

There has been much discussion in the literature as to why the manufacturing sector has not grown faster in India. Inadequate infrastructure, restrictive labor laws and small scale reservation policy have been identified as the main reasons (e.g., Panagariya (2008)). It is very possible that these factors reduced the possibility of India emerging as an exporter of labor intensive manufacturers – a possibility that would have hastened the decline in poverty.
Finding export markets in high-income countries makes the choice set of production activities independent of domestic demand composition. The growth in domestic demand will depend on the composition of income growth. In other words, if the growth in incomes is skewed in favor of high skilled and therefore high-income groups, it will be the kind of goods and services catered to by the rich that will be found lucrative by investors. Few of them will be unskilled labor intensive. As a result, the trickle down to the unskilled (and hence the poor) will be weak. One possible bottleneck for the Indian pattern of growth is ‘educated workforce’. Given that the educational premia have been rising rapidly, it does seem like a real possibility.

Most of the fast growing sectors are completely dependent on skilled manpower. If they run into a serious bottleneck, growth may get choked. A related question is that of quality. According to a report by the McKinsey Global Institute (2005), “India's vast supply of graduates is smaller than it seems once their suitability for employment by multinational companies is considered.” The report stresses that the government must “adjust the country's educational policy to ward off the looming squeeze on talent”. McKinsey estimates that India has 14 million young university graduates (those with seven years or less of work experience). This pool is 1.5 times the size of China's and almost twice that of the United States. Every year 2.5 million new graduates are added to this pool. However, according to the report, while the numbers seem encouraging at first glance, a closer look reveals that India is likely to face a talent crunch in the coming years.

The problem might get further exacerbated with the current state of primary schooling in India. ASER (Annual Status of Education Report) (2010), a unique survey of learning in rural India, estimates that about 47% of rural Indian children in class 5 cannot read a simple class 2 level text. Even, in class 8, about 17% children cannot read a class 2 level text. Many of these children may never reach university, but those who do not go to university will join the labor force and ASER’s results are indicative of the future quality of the labor
force. The Right of Children to Free and Compulsory Education Act, which was passed by the Parliament in April 2010, makes sure that no child will be held back till the age of 14 (approximately class 8), regardless of how they perform. This will mean that children could easily pass middle school (class 7/8) without being tested on any learning indicators. Even if they drop out after class 8, they would enter the skilled labor force (by our definition) and could be potentially unemployable. Therefore, it is quite possible that the so-called demographic dividend may disappear if the quality of the labor force is not improved, even if the non-farm sector creates sufficient jobs to absorb the increase in labor force.

A larger point is that India’s economic growth is not accompanied by an equally fast improvement in the functioning of India’s institutions such as the legal system, the governance and the educational system (Subramanian, 2007). Indeed, it is easier and faster to transfer technology and bring about productivity improvements. But it is harder and slower to bring about institutional improvements for sustaining and stabilizing the growth process.

One important lesson from the Indian experience and especially from its comparison with other Asian countries is that a country can neglect agriculture at its own peril. The growth process in India was accompanied by a reduction in poverty at the lower level (Rs.356 per capita per month or approximately $1.08 per day). If we consider double the poverty level ($2.16 per day), a staggering 80% of India’s population was poor in 1983 and the number is about the same in 2004. This is a startling fact and indicates that there are two India: one of educated managers and engineers who have been able to take advantage of the opportunities made available through globalization and the other – a huge mass of undereducated mass of people who are making a living in low productivity jobs in the informal sector – the largest of which is still ‘agriculture’. The most direct impact on the second India could only come about through improvements in agricultural productivity. But unfortunately, agriculture is dependent on well-functioning rural institutions. In general, the
productivity improvements in the informal sector depend crucially on access to
credit, knowhow and skills and therefore on the quality of institutions. India’s
future will depend a great deal on how these institutional improvements shape
up.

Lt Col D G Naik Grenville Savio Noronha Gnanasundaram C
Kaushik K: Leading Indicators are useful tools for forecasting and planning
– both for the Policy makers and Business houses. The accuracy of forecast
based on leading indicator will depend up on the quality of data which has been
relied upon and the process followed to construct this indicators. Some of the
indicators – though not meticulously constructed provide a useful clue to the
way ahead for the growth of economy as a whole for India, are given below:

• Trends in Gross Domestic Product (GDP): Contribution of agriculture,
  Industry and Services
• Purchasing Power Parity (PPP) Index
• Fiscal Deficit
• Trends in Inflation Rate
• Interest Rates
• Credit Off-take
• Balance of Payment
• Foreign Exchange Reserves
• Crude Oil Rates
• Foreign Direct Investment (FDI) and Foreign Institutional Investment (FII)
  Trends
• Rain fall Index
• Sensex
• Exchange Rate
• Savings/GDP Ratio
• Human Development Index
• Electric Power Generation

20 Lt Col D G Naik Grenville Savio Noronha Gnanasundaram C Kaushik K, “Leading
Indicators of the Indian Economy”, Course Project Report of HS 700 – Applied
1.22 Performance of Indian Corporate Sector

Petia Topalova: This paper uses firm-level data to examine the performance of India’s nonfinancial corporate sector since 1989 and evaluate its financial vulnerabilities. India launched a series of economic reforms in 1991 in response to a severe balance of payments crisis, many of which directly or indirectly led to a substantial liberalization of the corporate sector. The reforms aimed at easing restrictions on firms’ activities and enhancing overall competition by putting an end to the ‘license raj,’ liberalizing the foreign trade regime, and opening the financial sector. The freeing of capital markets and entry of foreign investors brought new financing and ownership opportunities and significantly raised the volume of new equity issues.

While India withstood the Asian financial crisis of 1997–98 comparatively well, the fallout from the crisis demonstrated that the corporate sector could play an important role in transmitting financial shocks and putting the financial sector at risk. Mismatches in the corporate sector’s balance sheet brought to light both domestic and external vulnerabilities. As evidenced in the Asian crisis, the deterioration in creditworthiness of large segments of the corporate sector sharply increased nonperforming loans (NPLs), curtailed new investment, and contributed to capital flight, all of which adversely affected economic activity as a whole.

The remainder of this paper is organized as follows. Section II gives an overview of India’s corporate sector through 2002, including its size and composition, regulatory framework, and recent reforms. Section III analyzes the financial performance of the corporate sector during 1989–2002 using firm-level data, focusing on capital structure, profitability measures, and debt repayment capacity to ascertain financial vulnerability of Indian companies. Section IV concludes with a discussion of the empirical results and their

II. OVERVIEW OF THE CORPORATE SECTOR

India’s corporate sector has grown steadily over the past two decades in terms of number of registered companies and amount of paid up capital (Table 1). The corporate sector consists of closely held (private limited) and publicly held (public limited) companies, with approximately 619,000 registered companies as of June 2003, about 40 percent of which are in the manufacturing sector. Private limited companies comprise the majority of firms in the corporate sector, but account for less than one-third of total paid up capital (Table 2). Government-owned enterprises (both public and private limited) are comparatively view in number but large in size, accounting for more than 25 percent of the paid up capital. The share of total output by government enterprises has been declining since the start of reforms, falling from 32 percent of gross industrial value added in 1991 to 25 percent in 2002.

India’s corporate sector is supported by a well-established equity market. Currently, there are 23 registered stock exchanges in India, with total market capitalization of US$131 billion at end–2002, equivalent to 26 percent of GDP and compared with 21 percent in 1990. The equity market is dominated by the Bombay Stock Exchange—the oldest in Asia—and the National Stock Exchange (NSE). The NSE began operations in 1994 in response to a government effort to improve the efficiency and transparency of India’s equity market. It quickly established itself as the foremost stock exchange in the country. Efforts are under way to close and/or consolidate a number of regional stock exchanges that have been generally thinly traded but largely sustained by listing requirements governing publicly traded companies operating in a different region.

III. FINANCIAL PERFORMANCE OF THE CORPORATE SECTOR

During the reform period, India’s corporate sector initially strengthened, but in recent years, it has shown signs of weakening in line with the slowdown in policy implications.
economic growth and industrial production. Evidence of this weakening can be seen by reviewing various financial ratios:

**Leverage and Debt Structure**

The average debt-to-equity ratio for Indian companies bottomed out at 1.2 in 1996, but has since risen to 1.4 in 2002, close to the 1990 level (Figure 2). The aggregate picture, however, masks several interesting developments in the corporate sector.

The debt-to-equity ratios of the median firm of the corporate sector as a whole and of the median firm of various subcategories (by ownership) have fallen consistently during the sample period, largely due to faster growth of equity funding rather than debt reduction (during 1989–2002, the average rates of growth of net worth and gross borrowing for the median company were 8 and 4 percent, respectively). This partly reflects the fact that the development finance institutions (DFIs) initially created to foster industrialization by providing subsidized loans to industrial enterprises have reduced their lending activities in recent years, while commercial banks have yet to step in to fill the breach.

- The discrepancy between the aggregate and the firm-level data comes from the fact that while the majority of companies have become less leveraged during the sample period, about one-quarter of the companies in the sample (representing one-quarter of the total assets) have actually experienced a consistent increase in their debt-to-equity ratios since 1989 and are currently considered highly leveraged. This trend is more readily evident among government-owned companies and small enterprises. Highly-leveraged companies have also tended to be less profitable.

- The distribution of leverage ratios over time (Figure 3) gives a further understanding of the divergence between the aggregate and median ratios. The tightening of the distribution of leverage ratios until 1996 was associated with a smaller gap between the median and aggregate ratios. However, the fatter right hand tail of the 2002 distribution suggests an
increasing number of highly indebted companies are responsible for the reversal in the downward trend in aggregate leverage of the corporate sector.

**Liquidity** By several measures, Indian companies became relatively less liquid during the 1990s. The current ratio (the ratio of current assets to current liabilities), which measures the firm’s ability to meet short-term obligations through the quick sale of liquid assets, has weakened slightly. The aggregate current ratio dropped from 1.64 in 1990 to 1.49 in 2001 (1.57 to 1.32 for the median company) (Figure 4), although it is still at a relatively healthy level when compared to other countries (see Hviding and Papi, 2002 for a recent comparison). The distribution of the current ratio also widened substantially over time, as shown in Figure 5. Moreover, the share of companies with current ratio below 1—companies whose current assets would not be able to meet their current liabilities in the event of a credit cut off—rose from 11 percent of the companies in the sample in 1989 to 27 percent of the companies in 2002 (including 58 percent of government-owned enterprises), representing 40 percent of total assets in 2002.

**Interest Coverage and Potential NPLs**

In addition to being an indicator of liquidity and profitability of the corporate sector, the measure of interest coverage can provide a useful link between firms’ financial performance and the financial system’s asset quality by gauging the capacity of companies to generate sufficient cash flow to meet debt service obligations. In India, private and public sector companies account for roughly two-thirds of total bank credit. Thus, a sudden inability of the corporate sector to service its debt could have repercussions on the financial system.

In the case of India, the following observations can be made:

- The aggregate level of potential NPLs (as a share of total borrowings by the nonfinancial corporate sector) doubled between 1989 and 1999 to 38 percent.
Consistent with a rise in potential NPLs in the 1990s, the persistence in low ICRs also increased. Focusing on the 2,924 companies in the sample for which an ICR can be computed for each year during the period 1995–2000 reveals that 8 percent of the firms in 1995–97 (accounting for 7 percent of total reported borrowing at end-1997) had an ICR of less than one for each of the three years, compared to 22 percent of the firms in 1998–2000 (accounting for 11¼ percent of total reported borrowing at end-2000).

Since 2000, the measure of potential NPLs has shown signs of a modest decline consistent with corporate restructuring and improved performance. This is broadly in line with other measures of NPLs based on banking system data.

*Profitability*  Consistent with the ICR, Indian companies experienced major changes in profitability in the period 1989–2002. During 1991–1996, aggregate profitability improved rapidly, spurred by strong economic growth. This holds for various measures of profitability, including operating profits over net sales and profits before interest, depreciation and taxes over sales (Figure 10). In the second half of the 1990s, profitability declined to below pre-reform levels, although there were some signs of recovery in 2002. Government-owned enterprises and smaller companies were the hardest hit. These companies had already tended to generate lower profits. Therefore, the profitability gap between weaker and stronger firms only widened during the decade (Figure 11). The aggregate return on assets (as measured by profit before interest, tax and depreciation over gross fixed assets) generally has followed the trend in profitability. However, the median firm experienced a steady decline in returns over the sample period, given a relatively rapid accumulation of assets and a falling marginal product of capital in the Indian corporate sector in the first half of the 1990s.
CONCLUSION

The performance of the India’s corporate sector weakened after 1997, and many of the promising developments during the period of rapid economic growth following the economic reforms of 1991 were partially reversed. Aggregate leverage increased and the maturity structure of debt shifted slightly toward short-term borrowing. Companies also suffered from declining profitability. An analysis of ICRs reveals that more than 30 percent of the companies were unable to generate enough cash to cover their interest payments in 2002, which is a potential risk to lenders. Disaggregated data pointed to significant differences across companies. The distribution of financial ratios widened after the economic reforms as companies faced greater domestic and foreign competition and the need to raise funds on the liberalized capital markets.

Despite this weakening of the corporate sector in recent years, most indicators are still at comfortable levels and there were signs of improvement in almost all indicators in 2002, the last year in our sample, and in 2003, with the soft interest rate regime and ongoing economic recovery. Stress tests suggest that the financial health of the corporate sector would be moderately affected by adverse interest rate shocks. Given the comparatively low level of foreign debt as a source of funds for the corporate sector and India’s strong foreign exchange reserve position, the exposure of the Indian corporate sector to foreign exchange risk is generally low at this point of time. Changes in the legal and regulatory framework in the post-1991 period have been key to promoting greater competition, reducing the regulatory burden, and, of late, strengthening corporate governance, which will continue to be of key importance to India’s growth prospects.

Data Sources

The data used in this analysis are from a firm-level database on India’s corporate sector, compiled by the Centre for Monitoring the Indian Economy, a private company in India. The Prowess database contains information
primarily from the income statements and balance sheets of listed companies, which account for more than 70 percent of the economic activity in the organized industrial sector of India. Because the dataset begins in 1989, we have disaggregated data for only two years of the pre-reform period. The size of the dataset varies by year, as demonstrated in Table I.1 in this appendix. In some cases, companies exit and reenter the database. However, overall exit rates are very low. Data have been adjusted to a calendar basis, unless otherwise indicated. In 2001 and 2002, the number of companies is considerably lower than in preceding years because of partially reporting by companies’ accounts for that year at the time of compilation of the database. A total of 4,175 different companies (largely in the manufacturing sector) are included for at least one year in the Prowess database. Firms are categorized by industry according to the National Industrial Classification Code and span the range of industries in the Indian economy. The largest sectors in terms of number of companies are chemicals, basic metals, food and beverages, and textiles. The database contains information on equity ownership, with firms classified to four categories: stand-alone private Indian companies, private Indian companies associated with a business group, government-owned enterprises, and foreign companies. The stand-alone companies represent the largest block of companies (more than half of the total number of companies), but only account for 12 percent of total assets, sales, and net worth of all companies. More than 40 percent of the companies were incorporated in the past 18 years, but the older companies still control a large share of total assets and sales. Additional summary statistics on these companies are provided in Tables I.2 and I.3, including a breakdown by industry classification, ownership, and year of incorporation.
In looking into firm level financial performance, we will be concerned with two sets of performance measures – one based on capital market valuation of a firm and the other set based on accounting measures of profitability and financial performance. The rationale for choosing two sets of measures lies in the possibility that capital market-based valuations, to the extent that they are shaped by expectation of future profit streams and the presence of speculative bubbles, can get divorced from measures of current profitability (see, Shiller, 1989). We develop these arguments more fully in section II that follows this introductory exposition, wherein we present the research design and the rationale for our choice of independent predictor variables used in the study. Section III contains details about the methodology used in the study, including a definition of various dependent and independent variables and a brief description of the sample of firms. Section IV presents and discusses the results obtained from the econometric analysis of financial performance of the firms. Section V contains a summary of the important results derived from the research and possible implications of the same for practitioners and various capital market participants.

II. Research Design and Choice of Independent Variables

In this section, we will define the research design and the measures of financial performance with which we would be concerned in this study. We will also define the independent variables used and the rationale for our choice of variables. We begin by elaborating the measures of financial performance used in the study.

The Anglo-Saxon model of corporate governance places emphasis on shareholder value maximization as the objective of a business

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organization – shareholder value being derived in terms of market valuation of a firm in the securities market. Thus, the principle of shareholder value maximization provides a conceptual and operational framework for evaluating the performance of firms. Shareholder value, defined as the market valuation of a firm, is dependent on several factors. A firm's current profitability, its risk, its growth, which is a proxy for the potential future earning streams of the firm, and existence of speculative bubbles are the four major factors that impinge upon the market valuation of a firm (see, Fruhan, 1979; and Branch & Gale, 1983). There are, however, arguments (Brief & Lawson, 1992; and Peasnell, 1996) that accounting-based measures of financial performance are a sufficient predictor of a firm's market-based valuation and returns. But, we choose to retain multiple dimensions of performance in our analysis. Various factors that drive market valuation of a firm along with the measures used in this study to capture them.

Current financial performance of a firm directly influences its market valuation. In this study, we use CFM (Cash Flow Measure), ROA (Return on Asset), ROCE (Return on Capital Employed) and RONW (Return on Net Worth) as measures of current profitability of a firm. Profitability, moreover, can be decomposed into its components – sales turnover and profit margin (Figure 1). As argued by Ross et al. (1996), both these components of profitability can influence the overall profitability of a firm. While a higher sales turnover implies a better utilization of asset base of the firm and hence higher efficiency, a higher profit margin implies that the firm enjoys significant market power and hence can reap what economists call ‘producer surplus’ or ‘rents’. The effect of various determinants of firm performance on the two components of profitability (as identified above) can diverge and that possibility makes the inclusion of profitability dimensions as an object of inquiry an interesting endeavor.

Risk and Growth are the other two dimensions of firm performance that affects its market valuation. We use coefficient of variance of earnings as
measures of risk, and annual assets (or sales) growth rate as a measure of
growth of the firm. Since, market value of a firm is a function of its return,
given the level of its risk (Fruhan, 1979), risk of a firm becomes an important
determinant of its valuation. Growth is the other important component
influencing valuation because financial markets, it is argued, impute the expected
future profit streams as well as in determining the value of a firm (Varaiya et al.,
1987). Since, a high-growth firm can be expected to have a higher future profit
stream, growth has a positive influence on valuation of a firm. In this study,
we use historical data on growth and risk, assuming that it apprehends or
indicates the future risk and growth profile of the firm.

In this research, therefore, we would attempt to find the effect of a set of
independent variables (about which we discuss shortly) on market-based
measures of firm's financial performance and then try to find out how the
predictor variables affect current profitability (accounting measures) and its
components, i.e. profit margin and sales turnover, risk and growth of the
sample firms. One important factor that can influence the market valuation of a
firm is the existence of speculative bubbles or what observers call 'stock market
fancy' (Branch & Gale, 1983) remains beyond our analysis, principally
because it does not lend itself to empirical quantification. But, to the extent
that the effect of the predictor variables on market- based performance measures
and the accounting-based performance measures differ in our study, we can
attribute the difference to speculative forces that influence assets pricing in
equity markets.

Independent variables

Below, we discuss briefly about each independent variable and our rationale for
its inclusion as a possible determinant of firm performance. Broadly, there are
three sets of variables - a) factors, such as, the level of marketing spend of a
firm, which is (to a large extent) a reflection of ‘strategic choice’ of firm
managers or operating characteristic of the firm; b) factors such as, ownership
pattern of the firms’ equity that can affect its governance; and c) factors such
as, size and age of the firm that are shaped more by the history of its evolution.

- **Size**

Size is expected to be an important determinant of firm performance. Size can have a positive effect on firm performance, since larger firms can leverage their size to obtain better deals in financial as well as product or other factor markets (Mathur & Kenyon, 1998). This could operate through the ability of large firms’ to extract rents from product markets, where they are dominant, or through obtaining better access to key factor inputs, including human and non-human resources. These effects are more pervasive in institutional contexts of incomplete or imperfect markets that are more likely to be the case in developing economies such as India. On the other hand, Singh & Whittington (1968), and Banz (1981) argued that size had a negative effect on firm performance – as firm size grows it becomes more difficult for it to sustain impressive financial performance. We therefore include ‘firm size’ as an independent variable in the study, hypothesizing that large sized firms will have better financial performance.

- **Age**

Several earlier studies (Batra, 1999, Lumpkin & Dess, 1999) argued that firm age has an influence on its performance. Sorensen & Stuart (1999) argued that organizational inertia operating in old firms tend to make them inflexible and unable to appreciate changes in the environment. Newer and smaller firms, as a result, take away market share inspite of disadvantages like lack of capital, brand names and corporate reputation with older firms. Age, therefore, is included as a variable in our study; the hypothesis being that age will be negatively related to firm performance.

Some important issues on which the research provides insight, therefore, are:

a. What are the chief determinants of a firm’s market valuation, and its financial performance?

b. Are the factors determining the corporate shareholder value different from
the factors determining a firm’s accounting-based rates of return?
c. Does size of the firm, its financing pattern, its ownership pattern, strategic decisions/choices like its marketing expenditure, and its operating characteristics like working capital management affect its valuation?
The next section explains the methodology followed and briefly introduces the sample used for the study.

**III. Research Methodology**

**Data Sources**
The financial statement and capital market data for our research are obtained primarily from publicly available databases maintained by Centre for Monitoring the Indian Economy (CMIE). CMIE’s software database package is known as ‘PROWESS: It contains information drawn from annual reports, other regulatory reports (from stock market filings), and press releases from several thousands of companies in India, as well as daily stock prices for firms. Bombay Stock Exchange (BSE) Official Directory and Capitaline database were used to crosscheck and also fill minor gaps in the data set.

**Time Span of Study**
To avoid factors such as temporal stability and business cycles influencing our study, we used a longer time frame of study of 8-year period. The study was carried out for the recent period of 1992-2000. The significance of this period for the Indian firms needs hardly to be emphasized, as Indian economy had to go through a phase of increasing competition, deregulation, and restructuring. This 8-year period of study was divided into 2 sub-periods of 4 years each. Period 1 would be from financial year 1992-93 to financial year 1995-96, a period of post-liberalization growth. Period 2 was from 1996-97 to 1999-2000, a period of industrial recession during the post-liberalization phase. The rationale for selection of these time periods is given below:
The first period of the study would look into the reaction of the firms to a period of growth during the first phase of liberalization program. This was a
period when the economy had opened up, exporting industries were given extra benefits, and industrial growth rates were high.

The second period of study would look at the firms’ performance and their characteristics during the post-liberalization period when the industry growth rates slowed down. This was also a period when a lot of policy changes took effect and many institutions such as, Securities and Exchange Board of India (SEBI) and National Stock Exchange (NSE) streamlined themselves.

A longer time span of study spanning two equal periods of 4 years would generally make the performance analysis more rigorous to take the impact of business cycles on various industries.

**Sample:** Firms in the sample were selected on the following criteria:

1. They should be listed on either BSE or NSE with the required data and a listing history of at least 8 years (1992-2000).
2. They should have had an average market capitalization of more than Rs.1 crore during the period of study.
3. They should not have had negative (or abysmally low) values for total assets or average net worth during the period of study.

**Conclusions**

The primary objective of our study was to look into the nexus between Indian firm characteristics and their financial performance. In the Anglo-Saxon traditions, a firm’s primary goal is to maximize its shareholder value, which is determined by the firms’ profitability, its growth, its risk, and capital market conditions.

To look into the actual factors which drive the relationship of a firm’s shareholder value and its characteristics, we evaluated performance over several dimensions apart from shareholder value, namely - profitability, profitability components (margin and sales turnover), growth and risk of the firm. We performed an analysis of 566 Indian firms constituting over 55% of the total market capitalization of Indian companies over a time span of eight years, 1992-2000. This eight year time span was divided into two equal periods:

(a) Period 1: 1992-96 (post-liberalization period of Indian economy, and a
period of growth); and (c) Period 2: 1996-2000 (post-liberalization period of the economy, and a period of recession). We used a firm’s size, leverage, marketing expenditure, ownership, age, solvency position, international diversification, and net exports as independent variables, and industry fixed effects and business group affiliation as control variables.

We found that size, marketing expenditure and international diversification of a firm had a positive relation with its shareholder value. A size increase probably increases a firm’s financial clout and its market power - while an increase in the marketing spend by a firm probably increases its market share apart from increasing the size of the product market itself, helping the firm increase its sales. Both increased size and marketing expenditure also probably work positively in the investor’s mindset leading to more analysts and investors tracking the firm. The effect of ‘capital market conditions’ can be important because there was a certain amount of divergence in the effect of size and marketing spends as independent variables on accounting and market-based performance measures. The results show that international diversification (and exports) offers several advantages to firms. They allow firms to take advantage of new market possibilities and provide broader base of markets in order to obtain returns from innovation. Therefore, movement into international markets may allow firms to achieve a long-term strategic competitiveness and hence higher shareholder value.

We also found that the ownership pattern of a firm represented by equity stakes held by Public Shareholders (PUBLIC) and Domestic Institutional Investors (DIIS), and its capital structure in the form of the firm’s leverage, had a negative relation with its performance. The negative relation of shareholder value with leverage could be expected on the fact that increases in debt leads to an increase in the firm’s financial and bankruptcy risk. Lack of monitoring by the small retail PUBLIC investors and improper governance by DIIS presumably has led to bad performance of firms having higher equity stakes held by either of them.
Implications to Stakeholders

It can be argued that managers and/or regulators (even investors) won't have control over several dimensions of firm characteristics, while they will have partial or complete control over some. Firm managers, decision-makers, financial institutions, retail investors and policy makers can use various instruments to influence firm characteristics that are within their control to obtain a favorable outcome, i.e., a better financial performance of the firm. Before rounding off the discussion, we briefly reiterate the implications and utility of the insights obtained in the study for corporate strategists, policy makers, regulators, fund managers, equity investors and other stakeholders of a firm:

Domestic Financial Institutions: The negative effect of DIIS stake on firm performance strengthens the long held notion that financial institutions in India have been unable to perform a proper governance role, although with a simultaneous debt and equity exposure, they had the potential to emerge as significant monitors of large firms. The problem lies in the domain of political economy and the institutional-legal mechanisms in India, particularly those governing bankruptcies and treatment of firms during financial distress (see, Chakravarty, 1985). The State owned institutions could probably do well to

Limitations of the Study and Further Scope

One of the limitations of the study was its sample having a bias towards better performing and large firms. Since, we deleted all firms that had (a) a size lower than Rs. 1 crore during the period of study; and (b) negative net-worth during one of the periods of study. Research scope limitations and data constraints forced us in using a limited number of firm characteristics. Product diversification and organizational structure of a firm were, for instance, not considered. A larger study using other firm characteristics that effect firm performance might lead to more information and insight. Although large sample statistical research of the type of this study is a powerful means of identifying the general relationships between pairs of variables, it is a comparatively weak
method to gain insight into complex interactions between firm variables. A firm-level study limited to different industry sectors could reveal more information, as it would achieve better control for industry effects. A similar study utilizing non-parametric based techniques such as Neural Networks might reveal more by doing away with the assumptions made in the parametric techniques. Such information would complement the findings of this study.

The analysis in this study was carried out at the firm level - which is the usual practice, particularly with respect to the developed economies such as United States. In the introduction to the report we had indicated that there are arguments that ‘business groups’, rather than the firm is a better unit of analysis in the case of India. Firstly, more than two-third firms in India have an affiliation to a business group (even by market capitalization) and important decisions, particularly financial, are always taken at the group level rather than at the level of the firm. In this study, ‘business group’ affiliation was included as a control variable but it did not turn out to be significant. But, Kakani (2001a), in particular, found significantly better explanatory power for the regressions than those obtained here, using a very similar research design - but making the analysis at the level of the ‘business group’ rather than the ‘firm’. The choice of the ‘unit of analysis’ still remains a point of contention that remains to be resolved.

This was largely, an exploratory study that has, however, provided interesting insights on the likely causal relations. Further research, both quantitative and qualitative in nature, should take place to investigate these initial results on firm performance. This research would add to the growing body of knowledge on firm performance.
1.23 Economic Reforms and Performance of Indian Corporate Sector

Rakesh Basant and Pulak Mishra\textsuperscript{23}:

Economic reforms initiated in 1991 comprising a variety of deregulatory measures have significantly altered the environment in which the Indian corporate sector operates. The pace of economic reform has faltered in recent years but the overall direction of policy change remains the same and seeks to strengthen market discipline and enhance competition. The success of the new policy regime was expected to and is likely to depend on the strategies adopted by firms in response to these policies and fine tuning of policies by taking cognizance of emerging trends in firm level choices.

The Indian corporate sector responded to this policy change in a variety of ways in the initial years of economic reforms. For example, there was vigorous business consolidation and restructuring by the firms in a few chosen areas to correct the inefficiencies caused by over-diversification in the pre-reform era. This entailed a significant increase in the number of mergers and acquisitions (M&As) with majority of them being horizontal in nature (Khanna, 1997; Basant, 2000; Beena 2000; Mishra, 2005). Given the policy induced flexibilities, while the domestic firms (especially, the private sector enterprises) took the route of M&A to restructure their business and grow, the MNCs used the same to enter into and raise control in Indian industry. However, research and development activities did not see an upturn and export orientation was limited (Basant, 2000). Although many of the industries recorded significant increase in in-house R&D efforts, the average R&D intensity as well as the foreign technology purchase intensity remained very low during the early years of liberalization (Mishra, 2005).

Indeed, the firms in many of the technology intensive industries relied largely

on equity linked foreign technology collaborations. While firms spent less on product differentiation through Basant (2000) provides an initial analysis of these responses in the 1990s.

Investments in marketing and distribution related complementary assets, the emphasis on advertising based product differentiation increased at a faster rate (Basant, 2000; Mishra, 2005). However, enhanced competition in the market restricted the firms from increasing their profitability, but forced them to improve cost-efficiency, inventory management and export penetration (Mishra, 2005).

In so far as firms take time to develop an appropriate strategy mix to changing economic and policy environment, the earlier analyses only reflected the ‘initial’ response to economic reforms. Over time the corporate strategies are expected to become more concrete and stable, especially in a situation where regulatory changes are an ongoing process. Further, as the economic reform processes have continued and also have deepened in many areas like FDI, competition policy, privatization and intellectual property regulation, changes in the nature and intensity of corporate responses are very likely. Therefore, an exploration of the corporate strategies after two decades of reform would help us gain better insights on the impact of economic deregulation. In this perspective, the present paper examines the trends and patterns of firms’ responses to economic reforms in India in a long-run perspective using a wide range of strategic dimensions. The responses of firms would be explored with reference to the following inter-related questions: How has the rate and composition of domestic and foreign investment changed during the post-reform period? What types of restructuring processes (e.g., M&A) have been dominant in the Indian industrial sector? Have these restructuring processes been different across sectors and/or type of firms (e.g., domestic and foreign)? What has been the firm strategies vis-à-vis product differentiation? Has building of marketing and distribution related complementary assets dominated over advertising? What changes have come
about in the technology strategies of firms (e.g., R&D, embodied technology imports, technology licensing)? In other words, how the nature of non-price competition has changed in recent years? In what way the enhancement of ‘internal’ and ‘external’ competition changed the sourcing of inputs and in export orientation? Does one see signs of strategies of import substitution and/or export orientation being followed?

The paper uses data collected from secondary sources. While necessary data on industrial growth and investment are collected www.rbi.org.in and www.dipp.nic.in. Data on mergers and acquisitions and various aspects of corporate strategies and performance are collected from Business-Beacon and PROWESS database of the Centre for Monitoring Indian Economy (CMIE), Mumbai. The rest of the paper is divided into five sections. The key dimensions of policy changes are summarized in Section II. Section III discusses the major aspects of industrial growth and investment, and their implications for the Indian corporate sector. Strategies involving mergers and acquisitions, technology development, manufacturing and other aspects of non-price competition are discussed in the fourth section. Section V analyses the trends in efficiency, profitability, and inventory management. Section VI concludes the paper with a summary of major trends in the Indian corporate sector and their implications for competition and other policies.

Concluding Remarks

In the context of various policy initiatives made during the last two decades to reform the Indian economy in general and corporate sector in particular, the present paper attempts to assess how the firms have responded to these policy measures and the resultant changes in the business conditions in a long run perspective. During the post-reform as a whole the industry sector in general and the manufacturing sector in particular have grown at a consistent rate. However, the rate of growth of the Indian industry sector has not accelerated following economic reforms probably due to slow growth in agriculture and industrial productivity. On the positive side investment in general and FDI in
particular showed considerable increase in the decade of 2000 vis-à-vis that in the 1990s. Increase in competitive pressures during this period resulted in the Indian corporate sector adopting a variety of strategies. Earlier sections of the paper have discussed various trends in detail. Table 24 provides a summary to highlight a few major findings of the paper with respect to the trends in corporate response.

Firms have largely relied on mergers and acquisitions to restructure their business and grow. However, these strategies were largely concentrated in a few industries like food products, textiles, chemicals (more specifically in drugs and pharmaceuticals), metals and machinery. Moreover, merger as a strategic option was largely used by the private domestic firms of the same business group to consolidate their businesses and presumably enhance competitiveness. Foreign private firms, on the other hand, have been more active in using the route of acquisition to enter specific industry groups. State-owned enterprises did not restructure their business through merger and acquisitions possibly due to stiff resistance on the part of the employees. One of the outcomes of the M&A activity was that group firms consolidated their ownership and enhanced their share in equity; this share of equity increased dramatically from about 7.5 per cent to 23 per cent. M&A activity that corrected over-diversification of the pre-reform period can potentially provide efficiency benefits.

Technology strategies seem to have undergone a major change in recent years. While in-house R&D intensity (although still low) has seen significant growth, the role of embodied and disembodied technology purchase, both from foreign and domestic sources, has declined. This shift towards higher reliance on indigenous technology effort is welcome but this effort will need to be enhanced. Given the fact that FDI flows have increased in recent years, it is likely that equity linked transfer of foreign technologies have replaced disembodied technology purchase from foreign sources. From the available data it is difficult to understand the dynamics of the linkages between equity
linked technology flows and indigenous technology efforts. But this remains an area which needs to be explored.

The strategies of building marketing and distribution related complementary assets continue to dominate the strategy of product differentiation in terms of relative investments in marketing, distribution and advertising. However, selling expenses as a share of sales declined from about 7 per cent in early 1990s to less than 5 per cent towards the end of the last decade. This was essentially due to the relative reduction in marketing expenditures; the relative role of advertising and distribution expenses. But all types of selling expenses have not grown as rapidly as sales. It is possible that efficiency of these investments has improved partly due to the efficiencies derived from M&A driven consolidation. However, it is difficult to assess that possibility.

Competitive pressures unleashed by the introduction of deregulatory policy measures and stagnancy in growth of the industry sector in particular seems to have resulted in growing importance of business strategies of subcontracting and outsourcing manufacturing. Consequently, the degrees of vertical integration have declined. Besides, removal of restrictions on imports has increased reliance on imports and the degree of import-based competition in the market.

Despite all these strategies, cost-efficiencies in the Indian manufacturing sector do not show improvements; the share of production costs as a proportion of sales have increased largely on account of increasing expenses for raw materials. Wages and energy costs have actually declined as a proportion of sales. Insofar as this ratio also depends on the price of output, which has seen some downward pressures during the post reform period, the cost of production to sales ratio needs to be interpreted cautiously. In this context, it is useful know that inventory management has seen marginal improvements during the post-reform period.

Export orientation of the firms has increased significantly in the current decade vis-à-vis that in the 1990s and this increase in exports intensity is spread across
the industries. The significantly high exports intensity and its increase across the major industries signals enhanced global competitiveness of Indian firms following economic reforms, though this increase is not high enough when compared with imports, which have grown faster.

Profitability of the firms measured as the ratio of PBIT to sales, rate of return on capital employed, and rate of return on assets showed a declining tendency till the initial years of the last decade and an increasing tendency thereafter. When the entire post-reform period is taken together, all indicators show increasing trend, though the rate of growth has been only marginal for PBIT to sales ratio. This means that reforms have forced the firms towards more efficient use of capital or assets.

Overall, the observed trends in the post-reform period seem to provide are interesting which need to be analysed more closely. More specifically, one need to systematically explore how in the liberalized scenario M&A led consolidation and flows of FDI are linked to the adoption of various non-price strategies relating to technology and product differentiation. As economic reform deepens and competitive pressures build up, an analysis of these interactions would provide useful insights for understanding corporate behaviour and for making policy choices.

**Mathew Joseph, Rupa R. Nitsure, L. Bhagirathi and Madan Sabnavis**

The performance of the Indian economy in the 1980s had been better than that in the earlier decade; GDP grew by 5.8 per cent per annum and industry by 7.8 per cent per annum compared to just 2.9 per cent per annum and 4.4 per cent per annum respectively in the 1970s. However, the high growth rate in the 1980s became unsustainable as it had been accompanied by large fiscal and current account deficits which in turn led

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to huge rise in both domestic and external debt. Growth collapsed in the early 1990s and India faced a severe economic crisis almost reaching the brink of default on external payments. The government undertook a series of stabilisation and structural adjustment measures following the crisis. The new policy initiatives have been aimed at unleashing the productive forces in the economy through removal of dysfunctional controls and induction of competition, and thereby leading the economy back to a sustainable high growth trajectory.

It has been pointed out, by researchers on transition economies, that the process of macroeconomic stabilisation and liberalisation involves a large contraction in output in virtually every country in its early stages of transition (Hernandez-Cata, 1997). Besides, there is considerable under utilisation of industrial capacity in early stages. In India although the industrial output did not decline, its growth slid in the initial years of adjustment to just 0.6 per cent in 1991-92 and 2.3 per cent in 1992-93 in comparison with a growth of nearly 8.0 per cent per annum in the 1980s. From a moderate growth during 1991-93, industry witnessed a sustained acceleration in growth of 6.0 per cent in 1993-94, 9.4 per cent in 1994-95 and 12.1 per cent in 1995-96. Similarly, exports in dollar terms which declined by 1.5 per cent in 1991-92, recovered to grow at 3.8 per cent in 1992-93, and the growth accelerated to about 20.0 per cent per annum in the next three years up to 1995-96.

However, the growth momentum weakened during the years 1996-97 and 1997-98 as industrial growth slowed to 7.1 per cent and 4.2 per cent respectively and growth in exports decelerated to 5.3 per cent in 1996-97 and 2.6 per cent in 1997-98.

This paper attempts to understand the response of the private corporate sector to the various economic reform measures introduced in India since 1991. The study tracks the corporate response in terms of financial performance, the build-up in productive capacity and its utilisation and finally,
the trade orientation. Besides the impact at the aggregate corporate level, attempts have been made to extend the query to firms of different sizes and also to various industry groups. The study also examines the sustainability of the impact considering of a slowdown in the growth momentum after 1995-96.

The rest of the paper is organised as follows. Section I outlines the major policy changes having a bearing on the operations of the corporate sector. Section II analyses the impact of reforms on the financial performance of the private corporate sector at the aggregate level. Sections III and IV examine the response of companies from this sector differentiated by size and industry grouping respectively. Section V analyses the trends in installed capacity and its utilisation in the private corporate sector classified into broad sectors and product groups. Section VI discusses the impact of reforms on the trade orientation of the private corporate sector. Section VII contains the summary and conclusions of the study.

**Summary and Conclusions**

The economic reforms introduced in India since 1991 had two basic dimensions: a physical one, representing loosening of controls and enhanced enterprise freedom and second, financial, involving better access to funds. The private corporate sector witnessed a higher growth in sales and net profits during the period of reforms than during the pre-reform period. This came about mainly due to external factors based on policy changes centred around low interest and tax rates, capital markets, foreign borrowings, etc. Internal factors in the form of cost reduction had a limited impact on profits. However, the rising profitability has also been accompanied by a falling return on capital employed signifying the continuing low utilisation of capacity built up during the reform period. An equity market boom along with the withdrawal of concessional funds for long-term lending helped the process of deleveraging of the corporate sector. Large companies performed better than the others in terms of growth in sales, cost reduction and growth in net profits. Their return on capital employed, however, has fallen the sharpest as
they accessed more debt and equity funds to create a large addition to manufacturing capacity. There has been significant variation in the performance of different industries in the private corporate sector. However, industries which successfully implemented cost reduction measures include telecommunications, silk textiles, pesticides, inorganic chemicals, two & three-wheelers, passenger cars, aluminium, nitrogenous fertilisers, woollen textiles, organic chemicals, drugs & pharmaceuticals and ceramic products. Overall, capacity build-up in real terms accelerated during 1994-97. There had been a gradual increase in capacity utilisation of the private corporate sector signifying somewhat faster growth in output than capacity. Still, the level of capacity utilisation has remained low indicating the presence of large excess capacity particularly in intermediate and capital goods. The capacity utilisation rates for basic goods and consumer durable goods increased steadily during 1994-97 reaching high levels by 1996-97.

Companies in the private corporate sector have become more outward oriented with both export and import intensities of their net sales increasing in the 1990s. In the post-reform period, export intensity of the private corporate sector has stayed higher than its import intensity, in sharp contrast to the trend in the pre-reform period.

Finally, the study has noted the reversal of trend in almost every indicator of corporate performance in 1996-97. This is indicative of the tailing off of the impact of the package of reform measures introduced so far and the need for a second round of reforms to further stimulate the corporate sector.

The next phase of reforms should focus on both physical and financial aspects of reforms. First of all, the corporate sector has been facing constraints in their attempts to reduce costs. Reforms should aim at removing these constraints in areas such as labour and land laws, infrastructure facilities and regulatory procedures relating to mergers and acquisition of companies. Further, imports should be more liberalised as this is necessary
for improving the efficiency of firms and also hastening the growth in exports. Financial reforms should usher in a low interest rate regime. There is further scope to improve the efficiency of the banking sector and it is also necessary to reduce the fiscal deficit of the government. Lastly, the revival of the equity market is essential to provide a boost to industrial investment.

The better performance of the private corporate sector during the post-reform period is predominantly due to the advantages stemming from policy induced external factors such as low interest rates, taxes and availability of cheap external sources of funds including domestic equity. There is no overwhelming evidence to show that firms have brought about large reduction in manufacturing costs. Unless, firms become more competitive through reducing their costs, the good corporate performance is not sustainable.

Mbubi Amos Mbithi25:

Introduction

This study had identified the listed companies in the Nairobi Securities Exchange as the study subjects. In August 2013, 46 questionnaires were administered to listed firms in the Nairobi Securities Exchange. Respondents were informed that responses to the questionnaires were to be confidential and identities of respondents and their firms would not be revealed. From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. The researcher had intended to establish the effect of unrealized foreign exchange gain or loss on Net Income of listed companies, to evaluate the effect of foreign exchange rates on listed companies in the NSE and import costs on the Net Income of listed companies and to determine the effects of foreign exchange on export sales towards the Net Income of listed companies.

5.2 Summary of Findings

From the findings on the department which deals with risk management in the firms listed in the Nairobi Securities Exchange, the study found that finance department and internal audit department were responsible for dealing with risk management in the firms listed in the Nairobi Securities Exchange. On whether listed firms had a written foreign exchange policy, the study found that majority of the firms listed in the Nairobi Securities Exchange had written foreign exchange policy as indicated by majority of the respondent who indicated yes. Those firms that had written foreign exchange policy the study revealed that majority of them were hedging fully, some were hedging partially whereas other firms didn’t hedge at all, this information shows that the firms listed in the Nairobi Securities Exchange that have written policy on foreign exchange rate risk are hedging fully while others are hedging partially. To those firms that didn’t have a written policy on foreign exchange the study revealed that they were hedging against foreign exchange risk. This shows that all the firms listed in the Nairobi Securities Exchange were hedging against foreign exchange risk. On those firms that were partially hedging against foreign exchange, the study revealed that their percentage of hedging ranged between 10% to 35%. The study also sought to determine the effectiveness of the foreign exchange policy for the firms listed in the Nairobi Securities Exchange; the study found that majority of the respondent firms indicated that the foreign exchange policy was good; this shows that foreign exchange policy used by the firms listed in the Nairobi Securities Exchange was above average.

On the most effective internal/natural hedging techniques that best suit the respondent firm, the study found that in terms of exports lead was effective in companies between 5% to 10%, lag 5% to 15%, netting 10% to 20%, invoicing in foreign currency 50% to 70% and money market between 5% to 40%. In terms of imports leads were effective between 5% to 15%, lags were between 10% to 15% netting were effective between 5% to 20% negotiating local price on imports between 50% to 60% and money market were between 10% to 20%. On the most effective external hedging techniques from the findings in the above table, the study found that in terms of exports spot were effective between 10% to 80%, forwards between 5% to 20%, currency swap between 40% to 50%,
currency option between 20% to 30% whereas futures were effective between 15% to 20%. In terms of imports the study found that spot were effective between 15% to 80%, forwards between 10% to 20%, currency swap between 20% to 40%, currency option between 20% to 30% whereas futures were effective between 10% to 15%. On the account posted with foreign exchange gains or losses, the study revealed that majority of firms used income statement whereas others firm used owner’s equity through reserves or retained earnings to post foreign exchange gains or losses.

These findings strongly reveal there is an effect in the company’s financial performance as a result of dealing with foreign exchange in the normal business operations. From the findings on the total purchases of the firms, the study found that total purchases of the firms listed in the Nairobi Securities Exchange ranged between 700 million to 29 billion Kenyan shillings with an import range of 140 million to 10.15 billion Kenya Shillings. On the percentage of the annual import purchases compared to total purchases, the study found that percentage of import purchases ranged between 15% to 75% of the total purchases an indication that firms listed in the Nairobi Security Exchange were prone to foreign exchange risk in their import purchases. The study sought to determine the percentage growth in annual import purchases in the last 10 years. From the findings, the study revealed that there was 10% to 50% growth in the annual import purchases in the last 10 years. On the currency used by the suppliers to invoice the firms listed in the Nairobi Securities Exchange, the study found that majority of the firms are invoiced using Kenyan shillings, US dollars, Euros, Sterling pound, and Japanese yen.

This shows that Kenya shilling, US dollar, Euro, GBP and Japanese yen were the currencies mostly used to invoice the firms listed in the Nairobi Securities Exchange by their suppliers. From the findings on the currency used in recording of purchases and accounts payable, the study revealed that the firms listed in the Nairobi Security Exchange used the following currencies to record the purchases and account payable; Kenyan shillings, US dollars, Euros, GBPs, Japanese Yens and South African rands. The study sought to determine the currency used to pay foreign accounts payable. From the findings, the study found that majority of the
firms listed in the Nairobi Securities Exchange used Kenyan shilling, US dollar and Euro to pay foreign accounts payable.

The study established that the total sales ranged between 900 million to 78.9 billion Kenyan Shillings with an export revenue range of 315 million to 35 billion Kenya Shillings. From the findings the study revealed that this ranged between 15% to 50%. This shows that there has been significant change in the annual total sales for firms listed in the Nairobi Securities Exchange.

The study further revealed that there had been 10% to 35% growth in the annual export sales in the last 10 years. From the findings on the currency used to invoice the export sales by the firms listed in the Nairobi Securities Exchange, the study found that most of the firms use US dollar, Euro and sterling pound, this shows that US dollar, Euro and sterling pound are the currencies mostly used by firms listed in the Nairobi Securities Exchange to invoice their export sales. The study further revealed those firms listed in the Nairobi Securities Exchange do not record all their sales and accounts receivables in Kenya shillings. The study sought to determine the currencies used to record sales and accounts receivables for firms listed in the Nairobi Securities Exchange. From the findings, the study found that most of the firms listed in the Nairobi Securities Exchange use US dollar, Euro and GBP to record their sales and accounts receivable as shown by 100% in each case in table 18 and figure 16.

5.3 Conclusion

The main purpose of this research is to study the effect of foreign exchange rate on the financial performance of listed companies in the NSE. From the findings the study found that firms listed in the Nairobi Securities Exchange use income statement and owners’ equity account to record foreign exchange differences. The study thus conclude that unrealized foreign exchange gains/losses had an effect on the Net Income of multinational companies as it was posted to either income statement or owners’ equity reserves. The study also found that there had been significant percentage change in imports for firms listed in the Nairobi Securities Exchange; the study thus concludes that use of foreign exchange has an effect on import costs and accounts payables with the net effect on the Net Income of multinational companies. The study also found that there were
significant changes in the annual exports by firms listed in the Nairobi Securities Exchange for the last decade.

The study examined the interest rate risk of listed firms on the Nairobi Securities Exchange to exchange rate risk for the period January 2002 to December 2012. The findings of the study are that, all the major hard currencies of international transaction are sources of foreign exchange risk to listed firms on the Nairobi Securities Exchange. The US dollar turned out to be the most dominant source of exchange rate risk at both the firm and sector levels. In general, most listed firms on the Nairobi Securities Exchange are significantly exposed to foreign exchange risk emanating from all the major hard currencies of international trade, namely, the US dollar, the Sterling pound, the Euro and the Japanese Yen.

The practical relevance of the research findings in foreign exchange management lies in the fact that, even though there are a number of techniques such as balance sheet hedging, use of derivatives, leading and lagging amongst others available to manage foreign exchange risk in most developed countries, these measures tend to be rather too sophisticated and difficult to implement in developing countries like Kenya with less developed financial systems. Nonetheless, given the degree of foreign exchange risk revealed in this study, corporate managers and investors in Kenya should endeavour to apply a combination of simple tools such as the use of forward contracts and swaps to supplement price adjustments and investment in foreign currency in order to minimize their exchange rate risk.

Despite the short-comings of the financial system in terms of availability of tools for managing foreign exchange rate risk instruments are still available to manage the risk. The study therefore concludes that foreign exchange affect the company’s financial performance through, imports and accounts payables and export sales and accounts receivables thus with the net effect on the Net Income of multinational companies through the income statement or the owners’ equity reserves.

5.4 Limitations

The study carries over some of the weaknesses inherent in using questionnaires for data collection purpose. Apart from the possibility of misinterpretation of questions by respondents, answers to the questions may reflect an ideal situation rather than what exactly happens in the companies. Out of the 46 eligible
respondents, the researcher managed to get 41 responses which translated into 90% of the total eligible respondents. Despite repeated requests, the other 5 companies declined to fill the questionnaire citing information confidentiality. And no doubt their responses would have enriched the study. Correlational methods commonly suggest that variables are linearly related to one another. Since the data is nonlinear as informed by nonlinearity test, the correlational method reduces the strength of the relationship. The outliers, observations that are quite a bit different from the remaining observations also reduce the strength of the relationship.

The extent to which the findings can be generalized beyond the sample period studied is unclear. The number of observations is too limited for broad generalization. Further empirical evaluations, however, are needed to replicate the findings in larger sample including performance since the findings from the sample may not reflect the behavior of the entire population.

**Recommendations**

From the findings of this research, the study recommends that firms listed in the Nairobi Securities Exchange should explore avenues to enhance capacities within firms for managing foreign currency risk. They should explore the route of continued education for those in workplaces through short term training that should be very practical oriented, this could involve professional organizations for finance specialists, bankers, accountants and consultants. Such training should ideally be out of site because of the need to meet participants from diverse businesses and orientations for training and assessment to avoid internal interruptions. These trainings should not only cover foreign currency risk alone but rather could be preceded by introductory contents on the import-export trade and the practical market challenges facing the industries.

As found out in this study, the exchange rate risk faced by firms forms a significant component of their risk profile. It is therefore imperative that listed firms and generally all firms in Kenya with and without international operations effectively manage their risk to minimize their foreign exchange rate risk. In an increasingly globalizing economy, domestic corporations, their suppliers, and their customers are not insulated from the effects of international economic cycles, currency movements, and global competition. However, the foreign exchange rate
risk of domestic companies has not been fully investigated in prior literature a good suggestion worth of future research.

Policy Recommendations

Basing on the results of the study, the following recommendations could be of help to the listed companies in the NSE. The companies should develop a robust foreign exchange risk management framework which clearly shows its currency risk assessment procedure and implementation of foreign exchange risk management strategies. This should be regularly monitored and adjustments made where necessary. The company should emphasize the use of currency risk transfer strategies through hedging, insuring and diversification of foreign exchange risk. These are the most commonly recognized foreign exchange risk management strategies. With currency risk transfer strategies, the risk is completely transferred. However, the danger is to outlook other FERM strategies.

Although there was a significant and positive correlation between foreign exchange risk retention and financial performance of company, it would be a suitable technique to adopt when the potential costs or gains are small relative to the size of the company’s business and profits. But if the losses and gains from exchange rates movements are high, the company should be less inclined to take a risk retention attitude and ought to consider risk transfer, reduction and control currency risk management strategies.

Based on the findings of the study, the study presents recommendations pertinent to the policy makers, investors, financial market regulators and future researchers. The study recommends that the government through its policy makers should come up with measures and policies that will help control and stabilize foreign exchange rate fluctuation thus creating investor confidence in the securities market.

Suggestions for further Research

This study sought to investigate the effect of foreign exchange rates on the financial performance of listed companies in the NSE. Foreign exchange rates can be a major stumbling block for the financial performance and investment in small and developing economies. The NSE being an important institution in any economy and for a country to experience growth, the forex market should be efficient. Future researcher may conduct further studies and identify
other macro-economic factors that significantly affect a firm’s financial performance. Therefore further study should focus on macro-economic factors such as: interest rate, money supply, monetary policy, fiscal policy and industrial production.

Further studies on persistence of news on foreign exchange rates will be useful to companies in making rational foreign exchange decisions and aid the regulator in policy formulation.

This study opens up a wide range of areas in foreign exchange rates risks and risk management which can be studied. One of the question which is unanswered in this study is whether there is a relationship between the companies’ value and the strength of its forex policies. Such a study would need a more detailed analysis on the strengths of the chosen companies’ forex.

As found out in this study, the exchange rate risk faced by firms forms a significant component of their risk profile. It is therefore imperative that listed firms and generally all firms in Kenya with and without international operations effectively manage their risk to minimize their foreign exchange rate risk. In an increasingly globalizing economy, domestic corporations, their suppliers, and their customers are not insulated from the effects of international economic cycles, currency movements, and global competition. However, the foreign rates exchange risk of domestic companies has not been fully investigated in prior literature a good suggestion worth of future research.

**Rami Zeitun, Gary Tian and Steve Keen**

The central objective of this study is to investigate the impact of aggregate economy risk on company performance and failure in a cross-sectional time-series (panel data) sample representative of 167 Jordanian companies in 1989-2003. The key macroeconomic indicators used in this study were the nominal interest rate, changes in money supply, the production manufacturing index, inflation, exports, and the availability of credit, including Islamic credit. The unanticipated changes in interest rate negatively.
and significantly affect firms performance ROA. That is, the increase in interest rate rise the cost of debt at which the required rate of return will be lower than the cost of debt, therefore firms reject profitable projects due to the high cost of borrowing, which affected negatively firm’s profit. Unanticipated changes in inflation, money supply, and credit availability negatively and insignificantly affect firm’s performance ROA. The production manufacturing index and Islamic credit facilities positively and significantly affect firm’s performance, while export was found not to have any significant impact on firm’s performance ROA. The positive and significant impact of Islamic credit facilities reflect the importance and the significant role of Islamic credit facilities in increasing firm’s performance ROA. The macroeconomic variables found to have a strong impact on MBVR performance measure compared with ROA measure.

**John H. Boyd, Ross Levine and Bruce D. Smith**

*Introduction*

There is now a substantial body of evidence indicating that sustained and, therefore, likely predictable high rates of inflation can have adverse consequences either for an economy's long-run rate of real growth or for its long-run level of real activity. This finding raises an obvious question. By what mechanisms can a perfectly understood and permanent increase in the inflation rate affect long-run real output?

A growing theoretical literature describes mechanisms whereby even predictable increases in the rate of inflation interfere with the ability of the financial sector to allocate resources effectively. More specifically, recent theories emphasize the importance of informational asymmetries in credit markets and demonstrate how increases in the rate of inflation adversely

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27 John H. Boyd, Ross Levine and Bruce D. Smith, “The Impact of Inflation on Financial Sector Performance”, at seminar of the Financial Markets Group, London School of Economics, February 2000. The three authors are - John H. Boyd, Carlson School of Management, University of Minnesota, Minneapolis, MN 55455, USA, Ross Levine, Carlson School of Management, University of Minnesota, Minneapolis, MN 55455, USA, Bruce D. Smith, Department of Economics, University of Texas-Austin, Austin, TX 78712, USA.
affect credit market frictions with negative repercussions for financial sector (both banks and equity market) performance and therefore long-run real activity [Huybens and Smith 1998, 1999]. The common feature of these theories is that there is an informational friction whose severity is endogenous. Given this feature, an increase in the rate of inflation drives down the real rate of return not just on money, but on assets in general. The implied reduction in real returns exacerbates credit market frictions. Since these market frictions lead to the rationing of credit, credit rationing becomes more severe as inflation rises. As a result, the financial sector makes fewer loans, resource allocation is less efficient, and intermediary activity diminishes with adverse implications for capital investment. The reduction in capital formation negatively influences both long-run economic performance and equity market activity, where claims to capital ownership are traded [Huybens and Smith 1999 and Boyd and Smith 1996].

Existing models also emphasize that only when inflation exceeds certain “critical” rates do informational frictions necessarily play a substantial role. For example, in Azariadis and Smith (1996) or Boyd, Choi, and Smith (1997), when inflation is very low, credit market frictions may be “nonbinding,” so that inflation does not distort the flow of information or interfere with resource allocation and growth. However, once the rate of inflation exceeds some threshold level, credit market frictions become binding, and there is a discrete drop in financial sector performance as credit rationing intensifies. These models further predict the existence of a second threshold rate of inflation. Once inflation exceeds this threshold, perfect foresight dynamics are associated with endogenous oscillation in all variables, so that inflation is highly correlated with inflation variability and asset return volatility.

Furthermore, related models suggest the existence of a third inflation threshold [Boyd and Smith 1998; Huybens and Smith 1998, 1999]. In some cases, once the rate of inflation exceeds this critical level, perfect
foresight dynamics do not allow an economy to converge to a steady state displaying either an active financial system or a high level of real activity. When this occurs, further increases in inflation have no additional detrimental effects on the financial system. Thus, in effect, these models imply that once the rate of inflation reaches a certain critical threshold, “all of the damage to the financial system has already been done.” Further increases in inflation will have no additional consequences for financial sector performance or economic growth. Thus, the theoretical literature on credit market frictions, finance, and growth delivers empirically testable implications regarding the consequences of higher long-run or permanent rates of inflation.

2. Higher inflation implies less long-run financial activity. In economies with high inflation, intermediaries will lend less and allocate capital less effectively, and equity markets will be smaller and less liquid.

3. Several inflation thresholds may characterize the relationship between inflation and financial sector conditions. Most prominently, once inflation exceeds a critical level, incremental increases in the (long-run) rate of inflation may have no additional impact on financial sector activity.

4. Higher long-run inflation implies lower long-run levels of real activity and/or slower long-run growth rates.

This paper evaluates these theoretical predictions regarding the impact of predictable inflation on the financial system. We concentrate on the links between sustained inflation and financial sector performance because a large and growing literature already shows that the financial system influences long-run rates of economic growth. Thus, we employ data on inflation, banking sector activity, equity market size, equity market liquidity, and the rates of return on stocks for up to 100 countries over the period 1960–1995 (data permitting). Since the specific theoretical predictions that we study concern the consequences of different long-run rates of inflation, we primarily use data averaged over the entire period, so that we have one
observation per country. We then examine the cross-sectional relationship between inflation and financial sector conditions. Aggregating the data enables us to focus on the long-run, as opposed to the cyclical relationship between inflation and financial sector activity. As described below, however, we also conduct a panel estimation to exploit the time-series dimension of the data and control for possible endogeneity and omitted variable bias associated with the pure cross-sectional estimator.

Methodologically, we also examine potential non-linearities in the data and we consider alternative theories regarding the relationship between inflation and financial sector performance. One alternative theory is a fiscal story: governments combine high inflation with various restrictions on the financial sector to help fund expenditures. As a result, they have both poorly developed financial systems and high inflation. A second story is a purely passive one: higher growth (whose sources may be sought elsewhere) implies lower inflation, ceteris paribus. If financial services are a normal good, higher real activity also implies that rapidly growing economies have more rapidly developing financial systems than slower growing economies. Hence, when viewed over long periods, there may be a negative relationship between inflation and financial development from this source alone.

Consequently, we regress each of our measures of financial sector conditions on inflation plus a conditioning information set selected to control for other theories of the finance-inflation relationship. Specifically, we include a measure of fiscal conditions (to control for the degree of government temptation to engage in financial repression), and a set of variables designed to control for economic development and other factors influencing financial sector development. Further, in some econometric specifications, we allow for non-linearities in the relationship between financial sector performance and inflation. In one specification, we examine threshold relationships by allowing (a) the intercept in the finance-inflation relationship to shift once inflation exceeds some threshold rate and (b) the slope of the finance-
inflation relationship to change also. In a second specification, we transform the data to allow for non-linearities that are not characterized by discrete thresholds.

The results we obtain are as follows:

1. At low-to-moderate rates of inflation, there is a strong negative association between inflation and (a) lending by the financial sector to the private sector, (b) the quantity of bank assets, and (c) the volume of liabilities issued by banks.

2. At low-to-moderate rates of inflation, there is a pronounced inverse relationship between inflation and measures of stock market liquidity and trading volume. There is a robust positive relationship between inflation and stock return volatility.

3. The data strongly support the presence of a nonlinear relationship between inflation and financial sector performance, perhaps driven by threshold rates of inflation. As inflation rises, financial sector performance falls, but the marginal impact of additional inflation on the financial sector also diminishes rapidly. Thus, for example, we find that once the average rate of inflation exceeds 15 percent per year, financial sector performance drops precipitously, but at the same time, the partial correlation between inflation and measures of intermediary or equity market activity essentially disappears.

4. The data support the presence of a nonlinear relationship between inflation and nominal equity returns.

Again, this non-linearity may be driven by threshold rates of inflation. For example, we find that for economies with average rates of inflation below 15 percent per year, nominal equity returns are approximately uncorrelated with inflation. For economies with inflation rates above this threshold, however, inflation and nominal equity returns vary essentially one-for-one.

Based on pure cross-sectional regressions, this paper’s findings are consistent with models that emphasize that predictable inflation can exacerbate informational frictions and impede financial sector performance with negative
repercussions for economic activity. Since past work demonstrates that the functioning of banks and equity markets can materially affect long-run economic growth, this paper focuses only on the relationship between sustained inflation and the functioning of banks and equity markets. Thus, its main contribution is to elucidate the impact of sustained inflation rates on financial sector performance. To assess the confidence with which we can make this causal statement, we augment our cross-sectional investigation with an alternative estimation strategy.

More specifically, we also employ a dynamic-panel, Generalized-Method-of-Moments (GMM) estimator proposed by Arellano and Bover (1995) and Blundell and Bond (1997). While the cross-sectional methods are standard ones for looking at long-run relationships, they also have various shortcomings. Purely cross-sectional analyses do not (1) exploit the time-series dimension of the data, (2) control for potential simultaneity bias, or (3) control for country-specific effects, which may induce omitted variable bias. The panel-GMM estimator confronts each of these issues.

Using the panel-GMM estimator, our findings are completely unaltered. For countries with low-to-moderate rates of inflation, there is a very strong negative association between inflation and financial intermediary development. Furthermore, as inflation rates rise, the partial correlation between inflation and intermediary activity falls. These results are again very supportive of the theoretical predictions outlined above and thereby illuminate one mechanism via which predictable increases in the inflation rate interfere with resource allocation and economic growth.

The remainder of the paper proceeds as follows. Section 2 describes the data, and presents simple correlations. Section 3 undertakes a formal analysis of these correlations, controlling for a number of factors that might affect both the rate of inflation, and the development of the financial system. Section 4 evaluates the sensitivity of our cross-sectional analyses to changes in the sample of countries, sample period, conditioning information set, and
estimation technique. Here, we use the system, dynamic-panel GMM estimator to control for potential biases induced by country-specific effects and endogeneity. Section 5 offers some concluding remarks.

2. Data and Summary Statistics

To investigate the inflation-finance relationship, we use two datasets based on longitudinal availability.


The “banking data set” focuses on measures of banking development. It covers the period 1960–1995. There is a maximum of 97 countries, though most of the analysis focuses on 65 countries. We present results on three measures of financial intermediary development.

*LIQUID LIABILITIES* is the ratio of liquid liabilities of the financial sector (currency plus demand and interest-bearing liabilities of banks and non-bank financial intermediaries) to *GDP*.

This indicator measures the overall size of the formal financial intermediary sector, and has been found to be very strongly associated with both the level and rate of change of real per capital *GDP* (King and Levine 1993a,b, c).

An alternative measure is *BANK ASSETS*, which is the ratio of total assets of “deposit money banks” (commercial banks and other deposit taking banks) divided by *GDP*. This variable measures the importance of deposit money banks, as reflected in their total assets, relative to the economy. Both *LIQUID LIABILITIES* and *BANK ASSETS* are expressed as a percent of *GDP*.11 *LIQUID LIABILITIES* and *BANK ASSETS* are size measures and do not consider the allocation of capital between the private and public sectors.

Finally, our preferred financial intermediary development measure is *PRIVATE CREDIT*. This measure equals banking institution credits to the private sector as a percent of *GDP*.12 Thus *PRIVATE CREDIT* is not merely a measure of size. It isolates credits to the private sector and
excludes credits issued to the government, government agencies, and public enterprises. This measure of financial development has been found to exert a causal impact on economic growth (Levine, Loayza, and Beck 2000).

For inflation \((PI)\), we compute an Ordinary Least Squares (OLS) measure of average inflation from the CPI data. Our results are unaltered when we compute the inflation rate using simple logarithmic differences.

All three of the financial development indicators are negatively and significantly correlated with inflation at the one-percent confidence level. All the financial variables are positively and significantly correlated with each other at high confidence levels.

The first noteworthy feature is that the inflation rate in the highest inflation quartile dramatically exceeds that in the rest of the sample. The second noteworthy feature is that as inflation rises across quartiles, the three banking sector performance measures tend to fall, and often decline very substantially. Note, however, that most of the “action” occurs at the extremes—in the sense that the two middle quartile groupings differ substantially from the lowest and highest inflation quartiles. The second and third quartiles, however, do not exhibit much difference in banking development, suggesting that the finance-inflation relationship may be nonlinear.


The “stock market data set” covers the period 1970–95, includes data on a maximum of 49 countries, and incorporates five financial performance measures.\(^{15}\) Except where specifically indicated stock market data were obtained from the International Finance Corporation's *Emerging Markets Data Base.*

\(MCAP\) equals the value of listed domestic company shares on each country's major stock exchanges as a percent of \(GDP\). \(MCAP\) measures the overall size of markets. Analysts frequently use this as an indicator of stock market development, although of course \(MCAP\) does not measure stock market activity, but merely the value of listed shares. While positively associated
with the level of economic development (Demirguc-Kunt and Levine 1996), MCAP is not robustly linked to economic growth (Levine and Zervos 1998). VALUE TRADED equals the total value of domestic equities traded on each country's major stock exchanges as a percent of GDP. The total value traded ratio measures the organized trading of equities as a share of national output. VALUE TRADED complements the market capitalization ratio (MCAP) because VALUE TRADED reflects the actual volume of market transactions along with the overall size of the market. TURNOVER equals the total value of domestic shares traded (times 100) divided by the total value of domestic shares (that is, VALUE TRADED*100/MCAP). Thus, TURNOVER measures trading volume relative to the size of the market. Both VALUE TRADED and TURNOVER are frequently used as indicators of market liquidity—the ability to trade equities easily. The measures complement one another since VALUE TRADED measures trading relative to the size of the economy and TURNOVER measures trading relative to the size of the market. Both VALUE TRADED and TURNOVER is very highly correlated with the level of real per capita GDP as well as its rate of growth (Demirguc-Kunt and Levine 1996 and Levine and Zervos 1998).

VOLATILITY is a measure of stock market volatility and is computed as a twelve-month rolling standard deviation estimate that is based on market returns. We cleanse the return series of monthly means and twelve months of autocorrelations following the procedure defined by Schwert (1989). We then multiply this by 100 to make it comparable with the other variables. Finally, EQUITY RETURNS is the rate of growth of the nominal stock market price index for each country. Thus, this measures the nominal rate of return (excluding dividends) from holding the index portfolio of each country's major stock exchange. We then multiply this by 100 to make it comparable with the other variables.
Stock return volatility is positively and highly significantly correlated with inflation. Although MCAP, VALUE TRADED, AND TURNOVER are negatively correlated with inflation, these simple correlations are not significant at the 0.05 level. Nominal stock returns are strongly positively correlated with inflation, with a correlation coefficient of 0.97. However, we will show below that both the weak simple correlations between stock market activity and inflation and the strong correlation between inflation and nominal equity returns mask a richer and more interesting pattern of relationships. The lowest inflation quartile of countries clearly has both the largest and the most liquid stock markets. The highest inflation quartile of countries clearly has the smallest and least liquid stock markets. The most substantial differences in the degree of equity market development, however, are between the lowest inflation quartiles, and all the others. As with the banking development indicators, there is evidence of a negative correlation between inflation and equity market activity, and evidence of non-linearities in the empirical relationships. Finally, note that the nominal equity returns – and nominal equity return volatility – differ very little across the three lowest inflation quartiles. However, both are notably large in the highest inflation quartile.

Conclusions
Recent theoretical work stresses that predictable increases in inflation can intensify informational asymmetries, leading to less intermediary or equity market activity. Recent empirical work shows that deterioration in financial sector performance has large, negative implications for economic growth. Theory further predicts that the inflation-finance relationship may exhibit strong non-linearities. For example, informational frictions may become binding only when inflation exceeds certain thresholds. When inflation passes these thresholds, some theories suggest that we will observe a corresponding collapse in financial system performance with adverse effects on resource allocation and economic activity. Since previous empirical work
highlights the impact of financial sector development on economic growth, this paper focuses on empirically assessing these theoretical predictions regarding the impact of sustained inflation rates on financial sector performance.

The evidence indicates that there is a significant, and economically important, negative relationship between inflation and financial development. This correlation emerges essentially independently of the time period considered, the empirical procedure employed, or the set of variables that appear in the conditioning information set. It is also not sensitive to inclusion or exclusion of countries that have experienced extraordinarily high rates of inflation. Finally, the negative relationship between inflation and financial sector performance emerges even after controlling for simultaneity and omitted variable biases. Thus, a preponderance of evidence indicates that sustained inflation and financial sector performance display a strongly negative association.

Moreover, we have found that the empirical relationship between inflation and financial sector activity is highly nonlinear. For example, in low-inflation countries, the data indicate that more inflation is not matched by greater nominal equity returns. This finding is consistent with the theories outlined in the Introduction. In high-inflation economies, however, nominal stock returns move essentially one-for-one with marginal increases in inflation rates. In terms of banking and stock market development, the data also exhibit nonlinearities. Bank lending activity, bank liability issues, stock market size and liquidity display strong negative correlations with inflation, but only for countries with low-to-moderate rates of inflation. As inflation rises, the marginal impact of additional inflation on banking and stock market development diminishes rapidly. Furthermore, we find evidence of thresholds. The data suggest that for economies with annual inflation rates above about 15 percent, there is a large discrete drop in financial sector development relative to countries with inflation rates below this threshold.
Since financial sector development is strongly linked with long-run economic performance, our findings are consistent with the view that as inflation – even predictable inflation – passes certain critical values, there will be negative implications for long-run economic performance.

1.3 Rationale of the Study

Review of existing studies suggests that the impact of the economic reforms on the financial performance of the Indian Corporate Sector is studied in detail by previous studies but in aggregate terms only. No detailed firm level study has been conducted so far which can focus on impact of these economic reforms on the performance of the Indian Corporate Sector. Most of the studies either refer to the impact of reforms on the economic development which is measured through selected indicators, or simply evaluate the corporate performance over the period. This study attempts to find out how the economic reforms undertaken by the Indian government (measured through leading indicators) impacted the financial performance of the Indian Corporate Sector using the company wise analysis.

The study is timely in the sense that all the global financial markets are facing the heat of sub-prime crisis. Most of the global economies are trying to recover from this crisis using one or the other reform process. In India also, the government regulatory authorities and RBI have introduced a number of policy initiatives and guidelines for improving the operational and allocative efficiency of Indian industry. These reforms are expected to have a positive effect on the performance of the corporate houses. It becomes relevant in the current scenario to find out whether the economic reforms have any impact on the financial performance of the Indian Corporate Sector or not.

For the present study, the growth of the Indian economy has been examined empirically. Further the empirical investigation of the performance of the corporate sector over the period of 14 years has been done. Finally the impact
of reforms on the performance of the companies has been examined empirically.

### 1.4 Objectives of the Study

The basic objective of the study is to examine the relationship between economic reforms and the performance of Indian corporate sector. Under the guideline of this primary objective, the specific objectives set in the study are:

1. To take stock of the economic reforms undertaken by the government and their impact on the performance of the Indian Economy.
2. To measure the financial performance of the Indian Corporate Sector through selected indicators.
3. To analyse the relationship between economic reforms and financial performance of Indian Corporate Sector.

### Hypotheses

The following hypotheses have been formulated to examine the different objectives of the study:

1. To examine the first objective, the study will test the following null hypotheses:
   1.1 Ho : The GDP has not increased over the period of the study.
   1.2 Ho : The inflation rate has remained same over the period.
   1.3 Ho : The interest rate has not changed much over the period under study.
   1.4 Ho : The position of FDI and FPI has not improved over the period.
   1.5 Ho : The dollar-rupee exchange rate has not changed.
   1.6 Ho : Balance of payments and Foreign exchange reserves have depleted over the period under study.
   1.7 Ho : Fiscal deficit as a percentage of GDP for India has deteriorated over the period under study.
   1.8 Ho : Tax Revenue, Gross savings and Capital formation as a percentage of GDP has not increased.
2. To examine the second objective, the study will test the following null hypothesis:
2.1 Ho: The operating profit ratio has declined over the years
2.2 Ho: Return on assets (ROA) has declined over the period under study.
2.3 Ho: Return on capital employed (ROCE) has declined over the period of study.
2.4 Ho: The cost efficiency of the firms has not improved over the period.
2.5 Ho: The proportion of debt in the capital employed has not gone down and
2.6 Ho: The liquidity position of the firm has not changed.

3. To examine the third objective, the study will test the following null hypothesis:
3.1 Ho: There is no relationship between economic development and operating profits of corporate sector.
3.2 Ho: There is no relationship between economic development and return on assets of corporate sector.
3.3 Ho: There is no relationship between economic development and return on capital employed of corporate sector.
3.4 Ho: There is no relationship between economic development and the raw material cost ratio of the corporate sector.
3.5 Ho: There is no relationship between economic development and the wage cost ratio of the corporate sector.
3.6 Ho: There is no relationship between economic development and the selling and distribution cost ratio of the corporate sector.
3.7 Ho: There is no relationship between economic development and debt equity ratio of corporate sector
3.8 Ho: There is no relationship between economic development and current ratio of corporate sector.
1.5 Research Methodology

In order to accomplish the objectives of the study, a number of statistical tools are used. The details of the data and methodology used in the study are explained in the following section.

The basic data for the study is secondary in nature. The data about the financial statements and the financial structure is being collected from ‘PROWESS’ data base available in the public domain and maintained by Centre for Monitoring Indian Economy (CMIE). This data base has collected information for thousands of companies from regulatory reports, official websites and the press releases from the respective companies. The other sources used to supplement the basic data are the various publications and the respective websites of the regulator of capital markets (SEBI), the Reserve Bank of India (RBI), other institutions and intermediaries (NSDL, CDSL etc.).

To avoid the impact of temporary factors and the business cycle, a longer time frame of study of 12 years period i.e. 2002-03 to 2013-14 has been used. The significance of the period chosen lies in the fact that the Indian economy witnessed major structural reforms during this period. It is only during this period that the Indian industries and the stock markets grew at a very fast pace. For the analysis in this section, the income statement and balance sheet data for the nifty fifty companies has been used. The present study covers the data of 50 companies of which 3 were deleted because of late entry of these companies in the nifty index. Thus the study is based on a sample of 47 companies spread over different sectors of the economy for a period of 12 years starting from 2003 to 2014 divided into two sub periods – pre global financial crisis (2003-2008) and post global financial crisis (2009-2014). The financial ratios, a widely accepted tool of financial analysis, and statistical tools (explained in next chapter) have been relied upon to analyse the impact of economic reforms on the financial performance of the Indian Corporate Sector.
1.6 Organisation of the Study

The present chapter which is introductory in nature has been divided into three sections. The first section highlights the circumstances which necessitated the reform process, the relationship between Indian financial system, economic reforms and the economic development and the impact of global financial crisis which emerged from the developed economies on the developing economies in general and on Indian economy in particular has been viewed. The second part of the chapter tries to review the existing literature on the subject. The existing literature has been reviewed in three parts – the impact of reforms on the economic development studied through selected indicators, the performance of the Indian Corporate sector over the period of study and thirdly the impact of these reforms measured through development indicators on the performance of the Indian Corporate Sector. The third section of the present chapter explains the objectives, hypothesis and relevance of the present study.

The second chapter discusses in detail the sample used, source of data and research methodology (also the statistical tools used) adopted during the study. The third chapter provides an overview of the structural economic reforms undertaken by the government. This chapter also depicts the development and growth of Indian economy through selected indicators. The empirical investigations and findings on the development of Indian economy are also presented in this chapter.

The fourth chapter empirically examines the performance of the Indian corporate sector.

The impact of economic reforms on the performance of the Indian Corporate Sector is examined in fifth chapter.

The last chapter sums up the major findings and makes some concluding observations.
1.7 Limitations of the Study

The present study on the impact of economic reforms on the performance of Indian Corporate Sector has some constraints.

First, the study is based on a sample of 47 companies which are part of Nifty fifty companies listed on the National Stock Exchange. Such companies are generally large compared to other unlisted and small companies. The exclusion of small sized companies renders the applicability of the findings to only a class of relatively large companies. The inclusion of all size of companies could have improved the results.

Second, the study is confined to external factors of the corporate sector at macro level only and does not consider company specific factors affecting the performance of the companies at micro level. The impact of the internal management and efficiency of the companies is not considered in measuring the performance of the corporate sector.

Thirdly, the technique of ratio analysis has been used to measure the performance of the corporate sector, which has its own limitations.

Fourthly, the data availability is restricted. Many other aspects relating to liquidity, solvency and operating performance of the corporate sector could not be analysed due to non-availability of the data.