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Banking Sector Reform in India

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It is widely believed¹ that the reforms of 1991, both in the industrial sector and the financial sector, released a variety of forces that propelled India into a new growth trajectory.² In this paper, we are going to assess the role that the banks played in making this growth happen and the impact that these reforms had on banks.

We start with a brief history of banking regulation in India. We then move on to outline some of the principal reforms that were implemented in the 1990s and their impact on the banking sector. Although this section does present some data in support of its arguments, it is by no means a rigorous analysis of the issues at hand. It seeks instead to present ideas and hypotheses based principally on the insights gained by the authors through observing these developments as participants in the system. We suggest that this period created certain problems for the banking system, the sources of which remain largely unresolved. We propose that unless

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¹See DeLong (2003) and Clark and Wolcott (2003) for an alternate point of view.

²See, for example, Mohan (2005).

the unique set of circumstances³ that existed during the past decade manifest themselves in this decade, there is a possibility that the future could see the Indian banking system facing difficulties. We conclude by suggesting some reform strategies that could equip the financial sector to better address the challenges that lie ahead.

History of Bank Regulation in India

The financial sector in any country acts as an intermediary between suppliers of funds and borrowers. In many countries, banks have traditionally taken center stage among financial intermediaries. The banking regulatory framework that was put into place in many countries following the Great Depression of the 1930s had two broad goals. The wave of bank failures and the subsequent move by surviving banks into “safe haven” investments (typically government bonds) meant that credit availability shrank dramatically, exacerbating the economic downturn. Hence, one goal of the United States Federal Reserve Board was to prevent this scenario from recurring. The resulting regulations were formulated with the objective of reducing the risks inherent in banking. Regulation Q⁴ controlled the cost of deposits, and several restrictions were placed on how banks operated.⁵ Many central banks, including the Reserve Bank of India (RBI), followed these regulations. The second broad regulatory goal was to protect depositors from bank failures. By providing assurances of safety to depositors, the regulator could ensure that the supply of savings was not affected. In the United States, this took the form of a formal deposit insurance scheme by the Federal Deposit Insurance Corporation (FDIC), which was initiated in 1934. Diamond and Dybvig (1983) and Holmstrom and Tirole (1997) suggest that aggregate liquidity shortages provided the rationale for deposit insurance. These two regulatory goals were complementary in that both helped ensure the flow of credit, and the deposit insurance scheme was in a sense guaranteed by the regulated borrowing and lending rates. Implicit in this model of regulation was the notion that the failure of a bank could cause a run (Diamond and Rajan, 2001), which could spread to other banks and create a generalized credit shortage that could have severe adverse economic consequences.

³Specifically, a decline in interest rates and a rapid growth in the balance sheet size.

⁴The ceiling stipulated in Regulation Q became binding in the 1960s and was extended to all depository institutions after 1966.

⁵See, for example, Fabozzi and others (2002) for a description of regulations governing financial intermediaries and the changes that have taken place.

In India, neither externality was of consequence, given the practice of monetizing the budget deficit,⁶ the prevalence of directed credit, and the fact that the system of industrial licensing that was in force in India until 1991 served to provide significant “credit insurance” to banks, by protecting borrowers from meaningful economic competition.⁷ And even the possibility of a run was remote because the nationalization of the bulk of the banking sector in 1969 meant that an implicit guarantee from the government applied to deposits in certain categories of banks.⁸ Banking regulation in India, nonetheless, continued to follow the “classical” pattern and in practice meant the following:

- The regulator specified detailed procedural guidelines on each aspect of the banking business.
- The principal focus of inspection and supervision was ensuring that procedures were followed.
- There were fixed borrowing and lending rates, and a completely fixed set of interest rates and slowly moving exchange rates in the larger economy.
- Lending was directed toward certain “priority” sectors (such as agriculture and small-scale industries) and a specified class of “weaker” borrowers.
- There was a very tight separation between banks and nonbanks.⁹ Banks¹⁰ could offer checking and savings accounts to the general public but were constrained to maintain very high liquidity ratios and engage only in “safe” working capital finance. The nonbanks—which included the development finance institutions (DFIs), such

⁶This practice meant that an independent monetary policy was impossible (Reddy, 2002).

⁷As the paper later argues, the removal of this form of “credit insurance” in 1991 led to a significant buildup of nonperforming assets in the banking system, because banks lacked the capability to properly assess the enhanced level of credit risk.

⁸This has been further reinforced by the repeated injections of capital by the government into poorly performing government-owned banks and financial institutions, even in the past decade. Even the private sector banks have largely been free from the fear of failing owing to the government’s guarantee of taking over uncovered liabilities of the bank, whether private or nationalized, in the event of a failure. See Banerjee, Cole, and Duflo (2004).

⁹India, while very particular about this separation for a variety of reasons, does not seem to have toyed with implementing Glass-Steagall type regulation.

¹⁰Unfortunately, even though the regulatory intent may have been to let only highly regulated and well-capitalized institutions into this “club,” whether by design or by accident, relatively poorly capitalized and poorly regulated entities, such as cooperative banks and regional rural banks, were also permitted entry.

as the Industrial Development Bank of India (IDBI), the Industrial Finance Corporation of India (IFCI), and the Industrial Credit and Investment Corporation of India (ICICI), and a large group of non-bank finance companies (NBFCs)—were given a much wider latitude in their lending operations but were allowed to borrow only from wholesale sources and capital markets. By offering term deposits to retail individuals (not checking or savings accounts), they were not allowed to participate in the interbank market or clearing.

Essentially, the banking process became the focus of regulation and supervision. Consequently, the delivery of credit and the risks assumed by the banking sector received very little attention from the regulator. Although it is possible that there were large economic costs paid by the country of this process-driven approach, it is generally believed that the system held together, albeit with periodic blowouts (“scams”). In this paper, we attempt to show that the reforms of the 1990s not only failed to address the basic philosophical underpinnings of the regulatory process but also removed some of the key “safeguards” that kept the structure broadly intact, and that it is fortuitous that we are not in a major banking crisis today.

Reforms of the 1990s

Although there is some debate on whether the reforms of 1991 were the single point of departure for the reforms process within India (see Clark and Wolcott, 2003), there is no doubt that the measures that were announced then (and shortly thereafter) had a profound impact. Because the details of the full reform process are easily available elsewhere (see Mohan, 2005), the following paragraphs discuss only a few of these measures.

Industrial licensing was effectively dismantled and entrepreneurs were essentially free to set up any capacity, subject only to obtaining some minimal clearances (Rajaraman, 1993). However, because there were very few business houses and even they had very little capital, the only real constraint became the availability of finance from the DFIs. Given the manner in which banks and DFIs were being regulated, as described earlier, industrial licensing combined with fixed interest rates was the most important form of implicit “credit insurance” available to the financial system. The removal of this safeguard, given the shallow project finance competencies that DFIs had built by then, was significant.¹¹ The sections

¹¹Neither the industrialists nor the bankers had any real experience dealing with risk (credit risk and market risk) implications of free markets. They therefore financed proj-

below on drivers of post-liberalization growth of the Indian economy, the rapid buildup of gross nonperforming assets of banks and nonbanks, and the annexed case study on the steel industry show that many decisions taken by the banking system after this liberalization were consistent with the hypothesis of a serious lack of competency. The commercial banks were historically permitted to participate only in working capital finance.¹² They were therefore largely insulated from the vicissitudes of the Indian economy, because they always enjoyed the protection of equity from the promoter and the capital markets, and long-term debt from the project financier. The reforms of the 1990s permitted them entry into project and other long-term financing. To that extent, the removal of this “safeguard” affected them directly. Even in their core business of working capital finance, they experienced a similar consequence—they did not have as much “protection” from equity and long-term debt—in the case of small and medium enterprises and priority-sector lending.

Pricing of Some Financial Assets Determined by Market Forces

In particular on the lending side for nonpriority sector debt, commercial banks and DFIs were given complete freedom to lend money at rates of interest that they could freely determine (Reddy, 2002). As there were no market benchmarks and very little liquidity in either the government of India securities market or the corporate bond market, this effectively meant that each lender was free to determine its own methodologies for arriving at these prices. However, it was this partial deregulation that created a high level of distortion in the interest rate market because, very importantly, the rates of interest on the savings and current accounts were kept

ects in a mechanical manner and at historically fixed rates of interest, despite multiyear drawdowns. For example, published information for ICICI shows that there was a swing of more than 2 percent in the net interest margin, from 5.22 percent in 1993–94 to 3.37 percent in 1995–96. This swing, in all likelihood, was entirely due to lack of experience among bankers because during this period market interest rates and therefore funding costs rose by 2 percent (see Figure 1.4). There were very few business houses, and the reform had the effect of transferring the decision-making process from a few members in the planning commission (who at least had the benefit and the incentive to look at economy-wide demand-supply gaps) to a few businessmen who had neither the incentive nor the competency to fully understand market dynamics of demand and supply in a rapidly globalizing marketplace.

¹²Working capital finance in cash-flow terms always has first charge on the borrower’s cash and goes up and down with the actual sales or production of the company.

regulated¹³ across the banking system, and only commercial banks (not NBFCs and DFIs) were allowed to access these low-cost funds. Because these accounts together accounted for approximately 30 percent¹⁴ of the liabilities of the banking system, they became the strong anchors of the entire interest rate structure. The fact that short-sales were not permitted and interest rates on priority-sector loans and small loans were tightly capped further exacerbated the situation. In return for being permitted to offer savings and checking facilities, commercial banks continued to be required as a part of their statutory liquidity ratio (SLR) to maintain a high level of investment in government securities (GSecs)¹⁵ in India and a substantial cash reserve ratio (CRR).¹⁶ On the other hand, an additional measure that had a very negative impact on the DFIs was the removal of the SLR status of bonds issued by the DFIs, in 1991.¹⁷

Post-1991 Reforms: Developments in the Indian Economy and Their Impact on the Banking System

In the period since the 1991 reforms, the Indian economy and the financial system witnessed many changes. It is not clear if all of these changes

¹³Current accounts were permitted only to businesses and had to offer a zero rate of interest. Savings accounts were permitted only to individuals and had to offer a 3.5 percent rate of interest. (Figure 1.6 shows the savings account rate over the past decade.) A lower rate was effectively given to active account holders because of the methods used in computing the principal amount to which this rate could be applied.

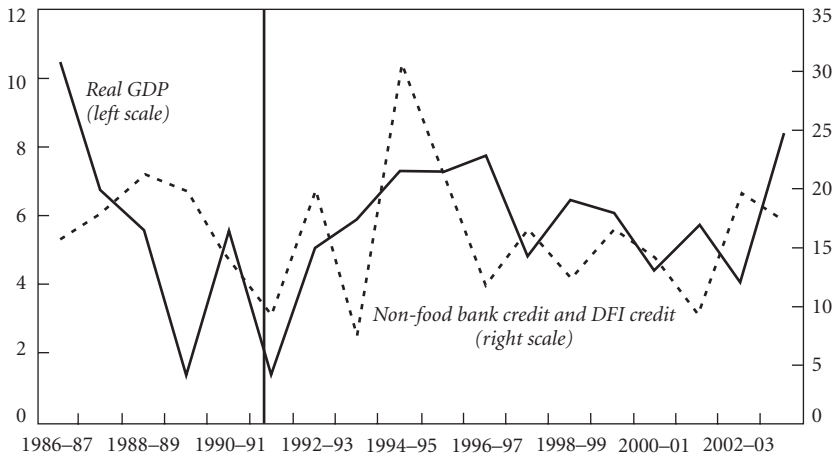
¹⁴Calculated from RBI, Annual Accounts Data on Scheduled Commercial Banks, 1990-93.

¹⁵It is not clear if this was really a penal measure because almost all the government-owned commercial banks maintained a significantly higher than required proportion in these securities. These investments had a very high duration for almost all the banks, in large part as a direct consequence of the issuance of these securities by the government of India with long maturities combined with high durations. (Very little floating rate debt has to date been issued by the government of India.)

¹⁶This high degree of preemption may have acted as a kind of "credit risk protection" by limiting the freedom of the commercial banks to participate in the lending business.

¹⁷The SLR status effectively ensured that commercial banks (CBs) treated these bonds almost on par with government of India securities. A case can be made that the DFIs lost relative competitive strength when compared with CBs as the effective systemic subsidy provided to the CBs through strong interest rate controls on savings and current accounts remained high. This led to (1) a strong resistance on the part of the CBs to further interest rate deregulation and (2) an equally strong desire on the part of the DFIs for conversion to a CB despite the fact that the onerous SLR and CRR obligations would have to be met upon conversion to a bank.

Figure 1.1. Growth in GDP and Credit
(In percent)



Sources: Central Statistical Organization; and Reserve Bank of India (RBI).

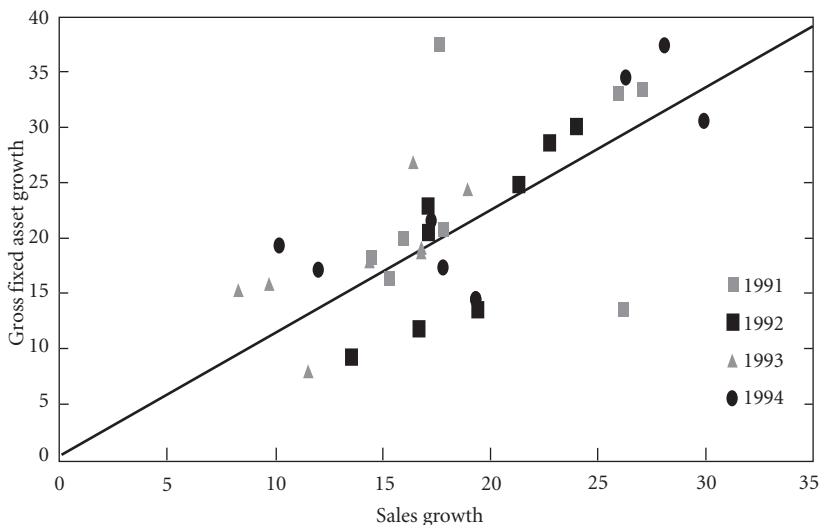
Note: Development Financial Institutions include Industrial Development Bank of India, Industrial Finance Corporation of India, Industrial Credit and Investment Corporation of India, Small Industries Development Bank of India, and Industrial Investment Bank of India.

were directly related to the reforms, but we address a few of the changes and explore whether the reform process could have had any bearing on them.

Acceleration of Growth Rates

After the 1991 reforms, acceleration of growth in all sectors of the Indian economy was the most visible consequence of the reforms. The break in the growth trend during 1992 is clearly discernible from Figure 1.1. However, if one looked more carefully at the sources of growth, one would possibly discover that very high, largely finance-led capacity accounted for the rapid growth rates, and that the lowering of growth rates in subsequent years was therefore not entirely an unsurprising consequence. Credit grew rapidly in the early 1990s and declined in the later years. In addition, studies suggest that the growth during the 1990s was unaccompanied by any growth in total factor productivity (TFP). Goldar (2003) finds a decline in the productivity growth rate in the 1990s relative to 1980s; although TFP growth accounted for 7 percent of the manufacturing growth during the 1980s, it accounted for almost nothing of the manufacturing growth during the 1990s.

Figure 1.2. Excess Capacity in Industries After Reforms
(In percent)



Source: Prowess Database, Centre for Monitoring Indian Economy.

Note: Industries covered: textiles, food and beverages, chemicals, machinery, metal and metal products, nonmetallic mineral products, transport equipment, and miscellaneous manufacturing.

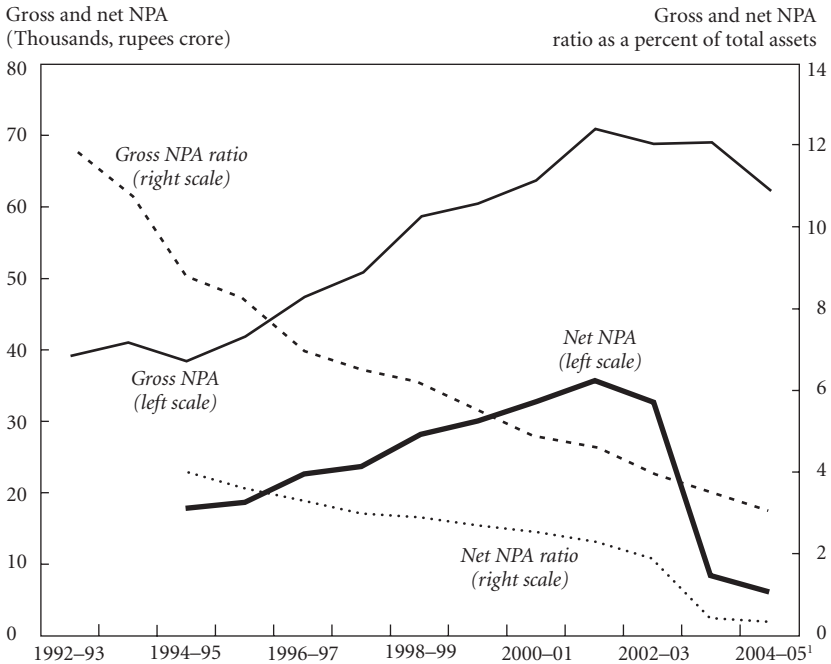
Very High Levels of Capacity Creation in Almost Every Industry

In part led by the consortium financing system, but largely because neither industrialists nor bankers had any experience operating in liberalized environments, almost every project that was submitted for financing was accepted. As a consequence, the system created capacity (which is quite possibly what showed up as growth numbers) in industry after industry—steel, man-made fiber, paper, cement, textiles, hotels, and automobiles received a major share of the large loans given principally by the DFIs and partly by the CBs. Figure 1.2 shows excess capacities created in the manufacturing sector, particularly textiles, chemicals, food and beverages, and metals industries, which is reflected by the excess of growth of fixed assets over growth of sales in these industries.

High Buildup of Gross Nonperforming Assets in the Banking System

As can be seen from Figure 1.3, there was a rapid buildup of nonperforming assets (NPAs) in the banking system. These mounting NPAs, together with excess capacity, suggest a strong possibility that these two

Figure 1.3. Gross and Net Nonperforming Assets (NPAs) of Commercial Banks, End-March

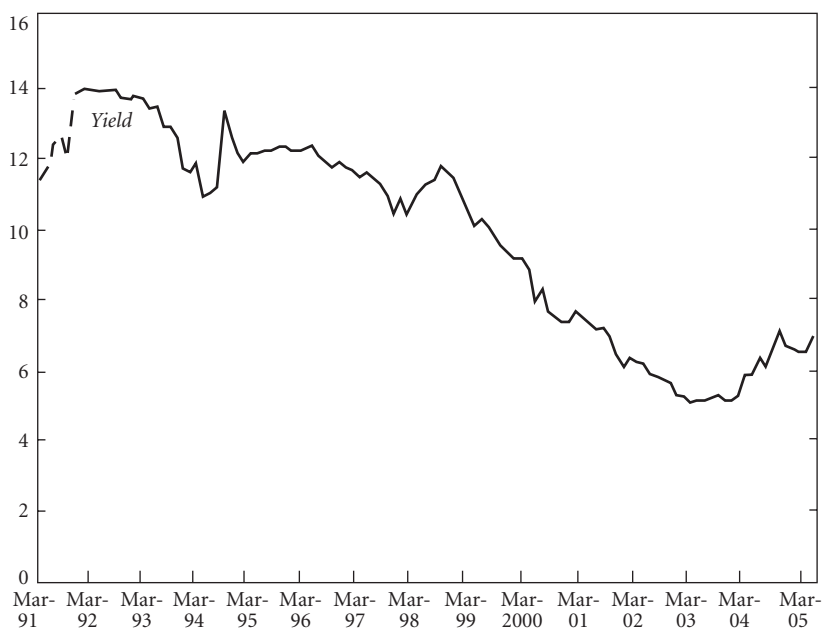


Sources: RBI, Report on Trend and Progress of Banking in India, Handbook of Statistics on Indian Economy; and Centre for Monitoring Indian Economy.

¹Data for 2003-04 and 2004-05 pertain to Centre for Monitoring Indian Economy sample.

developments were linked to each other in a causal fashion. Almost four in five projects experienced large delays in implementation, and a few celebrated cases could not complete financial closure because of the collapse of equity markets. Three of the five major financial institutions—Unit Trust of India, IFCI, and IDBI—had to be given large infusions of capital by the government of India. One major institution, ICICI, entered the retail finance business and between itself and its subsidiary, ICICI Bank, raised about US\$2 billion from international and domestic sources. Despite staying largely out of the project finance business, the CBs also experienced a great deal of stress, with the net worth of three government-owned CBs turning negative. All industrial investment largely came to a halt with all players experiencing a “knee-jerk” reaction to these developments in the financial system. The Appendix presents a case study of the steel industry, which gives a more detailed insight into how these capaci-

Figure 1.4. Trends in Yield on 10-Year Government Securities (GSecs)
(In percent)



Sources: Various publications of RBI; Bloomberg; and ICICI Bank Research.

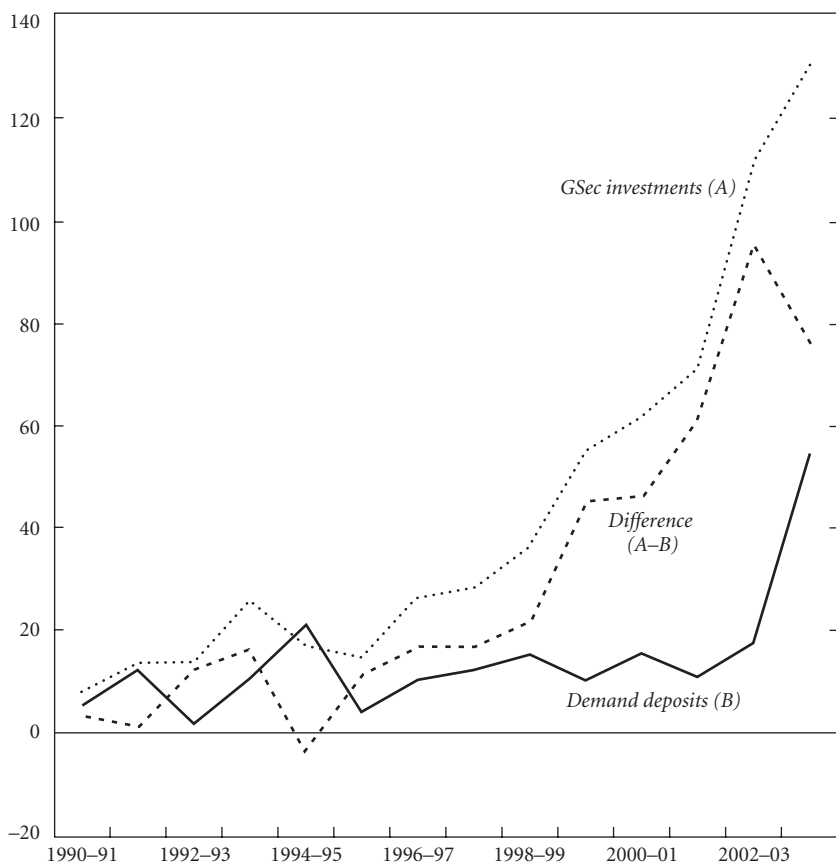
Note: Year: (a) Mar-91 to Mar-96—Approximate yearly average 10-year GSec yield; (b) Mar-97 to Mar-05—Monthly 10-year GSec yield series.

ties, NPAs, restructured assets, and high levels of provisioning came about for one major industry in India. RBI for the first time issued guidelines, in 1994, for the classification of assets and recognition and provisioning of non-performing assets using exclusively a days-overdue criterion and allowed a great deal of time before even unsecured defaulting loans had to be fully provided for. To date, this very heavily lagging indicator, remains the sole benchmark of asset quality.

Secular Decline in Interest Rates From 1996 to 2004

The yield on 10-year government of India securities fell from 13.93 percent in April 1996 to a low of 5.15 percent in April 2004 (Figure 1.4). Banks continued to invest heavily in GSecs during this entire period, with the proportion of incremental deposits invested in these securities rising to as high as 100 percent for some banks. Figure 1.5 shows that the differential between annual increments in GSec holding and demand

Figure 1.5. Yearly Change in Demand Deposits and Government of India Security (GSec) Holding of Commercial Banks
(In thousands of rupees crore)

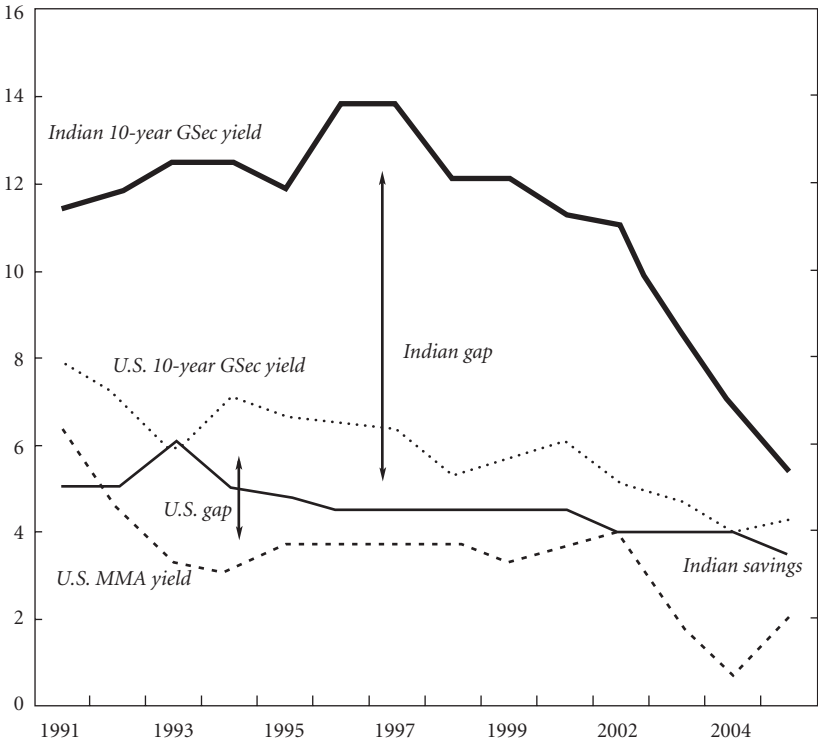


Source: RBI, Handbook of Statistics.

deposits was positive (except in 1994–95) during the 1990s, and that the gap continued to widen towards the end of that decade. And even though interest rates on these securities fell steadily (because interest rates on savings accounts and current accounts were tightly regulated and kept well below the “risk-free” rate, as can be seen from Figure 1.6),¹⁸ they

¹⁸Unavailability of sufficient data does not permit precise comparisons in Figure 1.6; however, it does reflect to some extent the argument made here about the higher Indian gap (Indian 10-year GSec yield vis-à-vis savings rate) as compared to the U.S. gap).

Figure 1.6. Deposit Rate vis-à-vis 10-Year Government of India Security (GSec) Yield in India and the United States
(In percent)



Sources: RBI; Federal Board of Governors; Janney Montgomery Scott; Bankrate.com; and ICICI Bank Research.

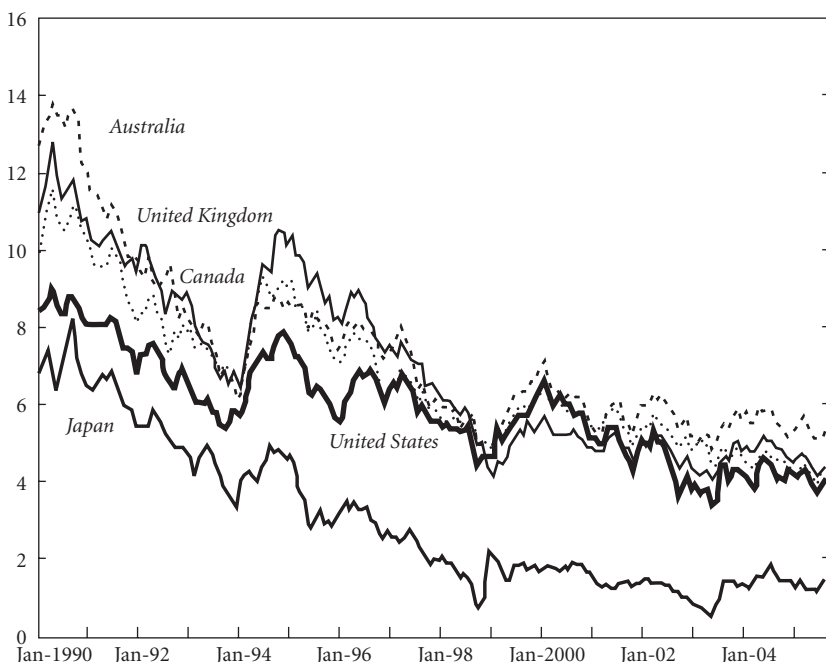
Note: Indian GSec yields and savings rate pertain to the fiscal year. U.S. GSec yields pertain to the calendar years.

MMA: 1991–2000: approximate MMA rate of a sample bank in Janney Montgomery Scott's Asset/Liability Report plots yields for the month of March for that year. 2001–04: approximate MMA national averages sourced from Bankrate.com plots yields for the month of March for that year.

imposed a substantial implied tax on depositors. Commercial banks were permitted to retain the entire benefit of this implied tax, which in effect amounted to a large-scale recapitalization of the banks.¹⁹ Although it is possible that the interest rate developments were entirely the consequence

¹⁹The government largely owned these banks, which presents an interesting conundrum when examining the fiscal deficit of the government of India.

Figure 1.7. Yield on 10-Year Government Securities of Select Nations
(In percent)

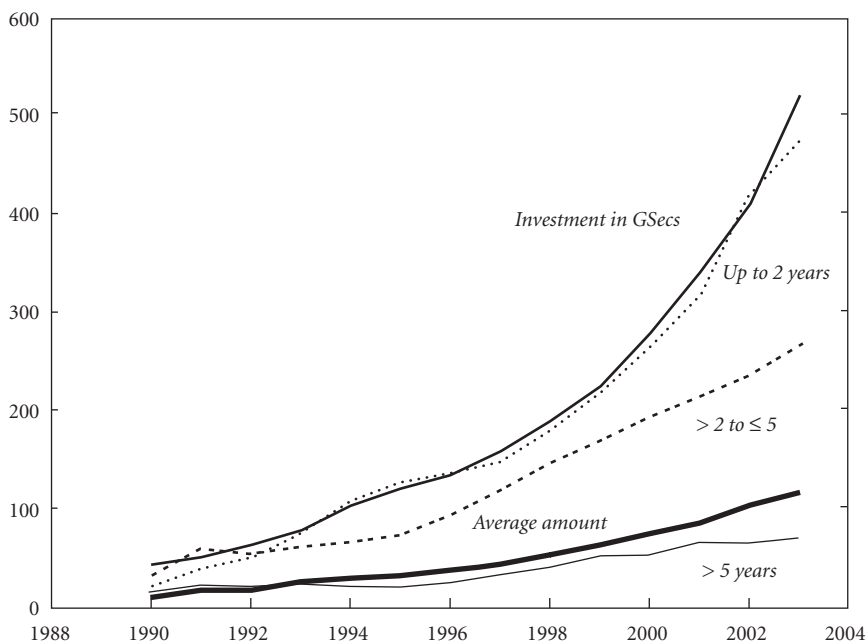


Source: Bloomberg.

of similar trends elsewhere in the world (Figure 1.7), these developments are important because in our view, they are the most important reasons the system remains broadly solvent.

This is because banks maintained a very high level of investment in government of India securities (Patnaik and Shah, 2002), not only in terms of the total quantum invested but also relative to the maturity profile of their deposits (Figure 1.8). These high levels of investments mismatched in amounts and in maturity profile were the direct consequence of the very same poor understanding of risk management within the system that produced excess capacity, outlined above. In addition, the banks' net income from these sources relative to other sources of income become a dominant part of their income streams. These two factors alone produced a net transfer from the government and the depositor to the banking system of an average of approximately Rs. 106 billion a year between 1990–91 and 1999–2000.

Figure 1.8. Investment in Government of India Security vis-à-vis Maturity Pattern of Term Deposits, End-March
(In thousands of rupees crore)

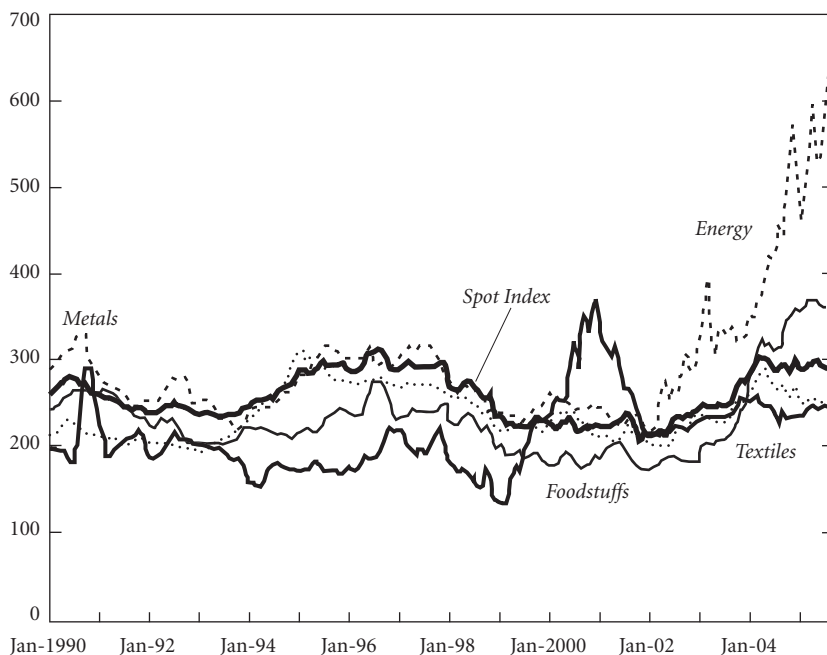


Source: RBI, Handbook of Statistics.

To summarize, four factors are therefore principally responsible for the current “healthy” state of the banking system. Three of these produced incremental profits and capital that was used toward very high levels of incremental provisioning.

1. The implied government guarantee ensured that the public never lost confidence in the banks. For instance, despite the fact that Indian Bank’s net worth turned negative in 1995–96, the bank has continued to maintain an average growth in deposits of more than 10 percent (1995–96 to 2003–04).²⁰

²⁰This is one of the key risks of “premature” privatization. If the process of privatization precedes an improvement in the manner in which these banks are run and managed, the recurrence of such an event could lead to a large run on these banks and/or a sharp increase in their cost of funds.

Figure 1.9. Commodity Price Index (1967 = 100)

Sources: Commodity Research Bureau and Reuters.

Note: Spot Index for 22 main commodities.

2. The large and persistent difference between the cost of demand deposits (current and savings) and the rate of return on the government of India securities (risk-free rate) helped banks to post some profit.
3. The secular fall in the interest rates on government of India securities, the very long-duration issuance and purchase by public sector banks, and the very high level of duration mismatch between assets and liabilities of banks allowed banks to book profits in their trading books at will by simply selling the older bonds and buying newly issued ones.
4. High levels of explicit capital injection into DFIs and banks helped these banks to remain liquid.

In the above sections, we have tried to argue that the removal of the two key safeguards in the economy (industrial licensing and full control of interest rates), when combined with poor regulation of and competency in risk management, government ownership, and fresh injections of capital in a few cases, produced effects that served to cancel each other out as interest rates declined rapidly.

There have been some additional developments from the late 1990s to the present that have allowed imbalances in the financial system to persist without revealing the true extent of the underlying problems. Some of these are mentioned below.

Rapid Buildup of Retail Finance Since 1996

There has been a very strong upsurge in demand for retail loans. Unlike corporate loans—where the focus is principally on the quality of analysis and on a multistage review process that sometimes goes all the way to the chair and managing director of the bank, which (presumably) ensures that all of the talent of the bank is brought to bear on the exposure—retail loans, given their inherently small value but very high volume, need to be dealt with differently. Unless very tight process disciplines are maintained and a fair degree of centralized control is exercised through the use of technology and formalized protocols, underlying risk levels, in part linked to a rising incidence of fraud, can quickly start to produce very high levels of nonperforming assets.

Increase in Commodity Prices Since 2000

Thanks largely to Chinese demand and the domestic retail financing boom, prices in several key sectors are at all-time highs (Figure 1.9). As a consequence, except in a few cases, after some deep restructuring most of the NPAs have now started to generate an adequate level of cash to service their obligations.

Impact of SARFESI, DRTs, CDR, and ARCIL

Facilitative regulation and the development of asset reconstruction companies have made it somewhat easier to recover at least some money from bad loans.

Likely Developments in the Economy After 2005 and the Impact on the Banking System

Enhanced Levels of Volatility in Financial Asset Prices

Commercial banks (which now include even the former DFIs—ICICI and IDBI—that have converted themselves into banks) continue to have on their books very long-duration government of India securities, with some

holding as much as 45 percent of their assets in these securities (Patnaik and Shah, 2004). Interest rates have started to rise, with 10-year government of India securities increasing from 5.11 percent in October 2003 to 6.99 percent in April 2005 (and trading at 7.19 percent on May 16, 2005). Although there is clearly a strong desire to hold high-quality assets, given the virtually complete absence of transfer pricing methodologies in operation, there is no link between the cost of funds and the rates that are offered on loans.²¹

Enhanced Levels of Volatility in Commodity Prices Accompanied by Fundamental Shifts in Sector Shares

As the economies become more globally integrated, it becomes harder to keep them insulated from global shocks. Increasing volatility has more pronounced adverse effects, especially on developing economies, which rely on undiversified export baskets or the risk of unfavorable terms of trade. Because it is neither feasible nor sustainable for the government to interfere in market mechanisms to overcome global price volatilities accompanied in some cases by sectoral shifts, it is imperative for the key players to develop tools and capabilities to mitigate such risks by factoring them in early in business proposals.

Increased Demand for Credit from Manufacturing, Infrastructure, and Agriculture

A strong demand for project finance is emerging. Given the complete absence of risk quantification and capital attribution methodologies²² actually being used by banks, it is not clear if the banks and DFIs will be able to correctly assess the risks inherent in these projects and meet the required demand in a manner that is substantially different from their behavior in the early 1990s.

Enhanced Levels of Competition from Insurance Companies and Asset Management Companies for Bank Deposits

Historically, banks have acted as prime intermediaries by channeling financial flows from the surplus to the deficit sectors. However, opening

²¹It is very difficult to find any direct relationship between rates of interest that are charged by the banks and the credit risk or market risk that these rates imply.

²²Although many banks will claim that they have these in place, even if they do have a formal risk department and risk policy in place, it would be important to see what the relationship between the pricing of specific loans is relative to the underlying rating, capital attribution, and the bank's target return on equity numbers.

up the mutual fund and insurance sectors to private players in 1993 and 2001, respectively, has freed up avenues for such flows across the economy. This ongoing relaxation has put pressure on bank-assured sources of funds.

Suggestions for the Reform Process

The earlier sections attempted to make the argument that even though a number of changes have been made to the manner in which banks are regulated, the basic philosophical underpinnings of regulation have not changed.

It is our view that there is a need to fundamentally shift the focus of regulation from adherence to procedures for each bank to banking outcomes for the banking system as a whole.²³ It is our belief that privatization of banks is neither a necessary nor a sufficient condition for these reforms to take root and show results. In fact, “premature” transfer of ownership to an overly activist management or, worse, a corrupt management, in the absence of these changes runs the risk of serious bank failure and loss of confidence in the banking system.²⁴ The above-mentioned shift in focus and some additional reform suggestions are discussed in greater detail below.

Shift from a Focus on Detailed Processes that Banks Use to a Monitoring of Outcomes

This constitutes a shift at the most fundamental level in the basic philosophy with which banks are regulated. In practical terms this means that the banking regulator will not specify procedures that banks must follow, but will allow each bank to design them internally²⁵ and will specify only the desired outcomes in the broadest possible terms. The focus of regula-

²³Perhaps an outcome-oriented mission statement for the regulator for which it is responsible, such as universal access to financial services and increased depth of financial markets, may be useful to explore as well.

²⁴It is important to remember that even if the capital base supporting a bank is supplied by the private sector, even under very conservative capital adequacy regimes no more than 6 to 8 percent of Tier 1 capital is required (compared with close to 25 to 30 percent even in the most leveraged industries). It is not very difficult to erode that level of capital (and under current regulation, without even being aware that this has happened) unless the bank is managed very tightly.

²⁵The most recently issued technical paper on banking correspondents is a good example of what needs to stop.

tion will then shift from assessing adherence to standardized procedures²⁶ to qualitatively assessing the basic competencies of bank managements to develop and execute consistent strategies and business models.

For this to work, however, the outcomes will need to be specified and measured very carefully, and then will have to be publicly²⁷ disclosed with reasonably high frequency. Thus, such meaningful disclosures will result in (1) market disciplining of the bank by altering the availability and price of capital, (2) signaling potential weaknesses to both customers and regulators, (3) allowing the regulator to focus on issues relating to the accuracy and timeliness of disclosures rather than on processes, and (4) focusing of regulation on outcomes (both systemic and institution specific) rather than on processes. One of the most important outcomes and one that has been the basis of much of the work in the Basel Accord of 2004 (commonly referred to as Basel II) is the manner in which the capital base of the bank is linked to the risks that the bank takes and the returns that it earns on them. Fortunately, even though there is not a complete consensus on the models that should be used to compute capital consumption for each risk class, there is a sense that most modern models (even those completely internally developed by a bank), if adequately tested historically and applied consistently going forward, have the power to provide a reasonably accurate estimate of actual capital usage. Clearly the most important piece of disclosure for a bank would be to report and for the auditor to certify, at least once every quarter, (1) a detailed analysis of the consumption of capital at an aggregate level²⁸ and by each

²⁶A “regulation-by-circular” approach runs the very real risk of attempting to develop mechanical processes to try to manage the complexity that is faced at every level in a bank. This is not only an impossible task within a bank but also an enhancement to the systemic risks faced by the banking system because every single bank takes an identical approach to each problem.

²⁷Even a partial listing in the stock market (even as low as 1 percent) with an active minority shareholder base and suitable securities regulation that supports class action suits, for example, would render this a very effective tool. High frequency of public disclosure of outcomes is the principal reason the asset management industry continues to perform in an orderly manner, despite the largest asset manager being owned directly by the government of India and several others by very activist private sector managements.

²⁸Some observers may argue that under Basel II, although segment reporting is not a requirement, at an aggregate level this reporting and adherence will become mandatory. However, the guidelines give the local regulator a great deal of flexibility in interpreting and applying the rules. For example, even under the proposed Basel II norms, large asset classes (such as fully committed but undrawn cash-credit lines) are excluded from assignment of capital. In addition, market risk capital is to be examined only on the traded book, not on the entire balance sheet. Further, under the standardized approach (which many

customer segment (urban individuals, rural individuals, manufacturing companies, financial market participants, and so forth) and by each line of business (credit cards, mortgages, corporate loans, financial markets, and so forth), and (2) an analysis of the return on that capital for each of these segments. Major banks in the United States, to a fair degree of detail, report by segment. Bank of America's annual report provides a good illustration of such reporting (Table 1.1). Furthermore, the reports should also satisfy a "readability" requirement for better understanding by lay investors and depositors.²⁹ Methodologies must also be developed to evaluate the impact on the bank of important prespecified shocks, such as movements in commodity prices, interest rates, and exchange rates.³⁰

The focus of inspection can then shift to qualitative issues such as specific competencies of the bank staff and management (and boards) to measure and manage these outcomes. Mor and Maheshwari (2004) and Mor and Sharma (2002) argue that the very basic competencies that a bank needs to function effectively are (1) funds transfer pricing, (2) activity-based costing, and (3) risk quantification methodologies. It is indeed very surprising how few banks (if any) have these competencies.³¹ However, we believe that once detailed public disclosure requirements are imposed, banks will have no choice but to rapidly develop them.³²

The key to avoid the problems mentioned earlier is to ensure that bank managements have an incentive to develop the competencies required to consistently manage their day-to-day operations. Merely the requirement of full disclosure as specified above, combined with minority shareholdings, can substantially reform the current state of affairs.

Develop Essential Financial Services Infrastructure

Adequate infrastructure is indispensable for a well-functioning banking sector. The explicit government guarantee for bank deposits is one of the more obvious sources of moral hazard in the Indian banking system.

banks may choose to follow), unrated paper has 100 percent risk weight, creating a strong incentive for banks to choose this approach because lower grade ratings require higher risk weights. Such anomalies need to be addressed comprehensively.

²⁹See the U.S. Securities and Exchange Commission handbook on how to create disclosure documents, www.sec.gov/pdf/plaine.pdf.

³⁰See Mor (2005) for a listing of some of the unasked questions.

³¹Loans priced without any reference to the current interest rate environment, a quantified level of credit risk, and the implied operating cost are the norm within most private and public sector banks.

³²Methodologies to do this are well within the reach of every bank.

Table 1.1 Segment-Wise Income, SVA, and ROE: Bank of America
(In millions of U.S. dollars)

Segment	Net Income		SVA ¹		ROE ²	
	2003	2004	2003	2004	2003	2004
Global consumer and small business banking	5,706	6,548	4,367	3,390	42.25	19.89
Global business and financial services	1,471	2,833	846	884	25.01	15.34
Global capital markets and investment banking	1,794	1,950	893	891	21.35	19.46
Global wealth and investment management	1,234	1,584	854	782	33.94	20.17
All other	605	1,228	-1,339	36		
Total	10,810	14,143	5,621	5,983		

Source: Bank of America, Annual Report, 2004.

¹SVA: Shareholders' Value Added (cash basis earnings on an operating basis less a charge for the use of capital, i.e., equity).

²ROE: Return on Average Equity (net income divided by allocated equity).

If indeed large and small bank failures become a real possibility, it will become important to ensure that systems such as the Real Time Gross Settlement are universalized.³³

Lower the Cost of Intermediation

The cost of intermediation is very high in India, possibly among the highest in the world. A McKinsey study (Bekier and Nickless, 1998) shows that very heavy use of cash is responsible for this high cost of intermediation (something that is generally known to be true also for India). To gradually reduce these costs and the associated error rates (and therefore additional costs on account of these errors), there is an urgent need to increase the penetration of electronic payments on a nationwide basis by (1) immediately extending the electronic credit system to approximately 2,000 locations; (2) moving toward national settlement in payment systems with two entities, one each in physical and electronic settlement, respectively; and (3) allowing cash dispensation by debit to a credit/debit/smart card at nonbranch/non-automated teller machine locations.³⁴ If, however, cash must be used, then there is a need to strengthen cash-

³³See Mor (2005) for a discussion of some of the basic financial market infrastructure that would be needed.

³⁴This last issue is likely to be addressed with the introduction of the Banking Correspondent Regulation.

handling capabilities nationwide while simultaneously providing strong incentives for switching to card-based or electronic transactions. The national cost savings, as well as the consequent reduction in the size of the parallel economy, could more than pay for the tax loss.

Improve Access to Financial Services

In over 600,000 villages in the country (and a far larger number of hamlets), the total number of rural bank branches of scheduled commercial banks (SCBs) does not exceed 30,000. The distance from a bank branch can be many kilometers for some residents. Even the total number of banks in India (284 SCBs in 2005) is significantly lower than that of the United States (7,630 FDIC-insured commercial banks in 2004), where community banks and national banks both work (and compete) to serve communities. In India, over 500 million people do not have bank accounts—against an estimated annual demand of Rs. 45,000 (\$10 billion), the supply from the formal system is less than Rs. 2,000 (\$400 million), and SMEs are not receiving adequate funds from banks. The formal rural financial sector is deeply troubled. Both regional rural banks (RRBs) and cooperative credit institutions suffer from poor access for customers, low levels of capitalization, and high default rates. The solutions being attempted even at this stage are minor modifications of earlier solutions; they do not appear to offer any real hope of solving the problems of either access or asset quality.³⁵ The “semi-formal” institutions (such as micro-finance institutions (MFIs) that are rapidly building outreach to (previously unserved) poor households are often hampered by implicit price caps, in the case of credit. Without a regulatory framework for correspondent banking arrangements, banks are unable to leverage

³⁵There is also the added problem of specific institutional bias in favor of government-owned or -managed institutions, which urgently needs to be addressed. For example, while an RRB (RRB Act 1976, RBI Act 1934, Banking Regulation Act 1949) is able to operate as a full-service bank with only Rs. 10 million of capital, a microfinance institution is not permitted even NBFC (RBI Act 1934, Companies Act 1956) status with even Rs. 20 million of capital. A cooperative bank (Cooperative Societies Act, RBI Act 1934, BR Act 1949) can be set up with almost no capital but is permitted to deal with only apex cooperative banks and primary agricultural societies (state legislation). Short-term refinance support from National Bank for Agriculture and Rural Development is provided only to cooperative institutions and not to any other rural financial institution, no matter how much more effective and better performing it is in terms of indicators. It is also possible that the presence of this type of refinance support is delaying the creation of markets (and through that an implicit disciplining mechanism) for this class of assets.

the outreach built by MFIs to extend saving facilities. Thus, if the banking system is to scale up to meet this demand either directly or indirectly,³⁶ a lot more effort is required to put in place financial sector infrastructure and conducive regulation. This is critical if this scale-up is to happen, and if systemic risk is to be avoided as the system scales up. There is also an urgent need to build basic retail information infrastructure that comprises, among other things, (1) biometric identity cards for every adult with a unique national identity number, (2) a rural credit bureau, (3) universal Internet connectivity,³⁷ and (4) rural electronic weather stations (for index-based weather insurance).

Allow Innovative Approaches

Banks need to be provided with a great deal of leeway in terms of building outreach models (franchisee, branch, correspondent), with a focus on outcomes and not on uniform processes across banks. For instance, as opposed to the mandatory branch licensing approach in India, the banking correspondent model has been implemented to a fair degree of success in South Africa and Brazil. In Brazil, banking correspondents offer plain vanilla banking services from stand-alone kiosks and retail outlets located at superstores, drugstores, and petrol stations. These services usually include deposits and withdrawals, bill payment services, and insurance products, with formally licensed banks taking full responsibility for their correspondents' business conduct.

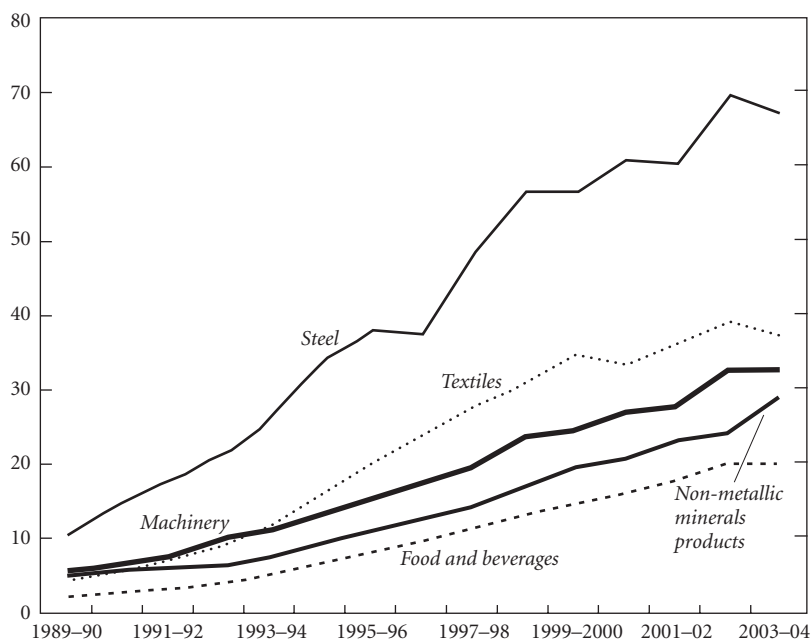
Appendix

Case Study: The Indian Steel Industry After Reforms

The Indian steel sector was one of the first core sectors to be freed from the licensing regime and the pricing and distribution controls during the reforms of the 1990s. Immediately after the reforms, the steel industry received a spate of investments. Appendix Figure 1.A.1 shows the cross-sector investment in plants and machinery since 1990. The figure clearly reveals that steel, despite having a relatively large asset base (even at the

³⁶Through banking correspondents.

³⁷See <http://www.dotindia.com/uso/usoindex.htm>. Current USO guidelines continue to emphasize voice over data.

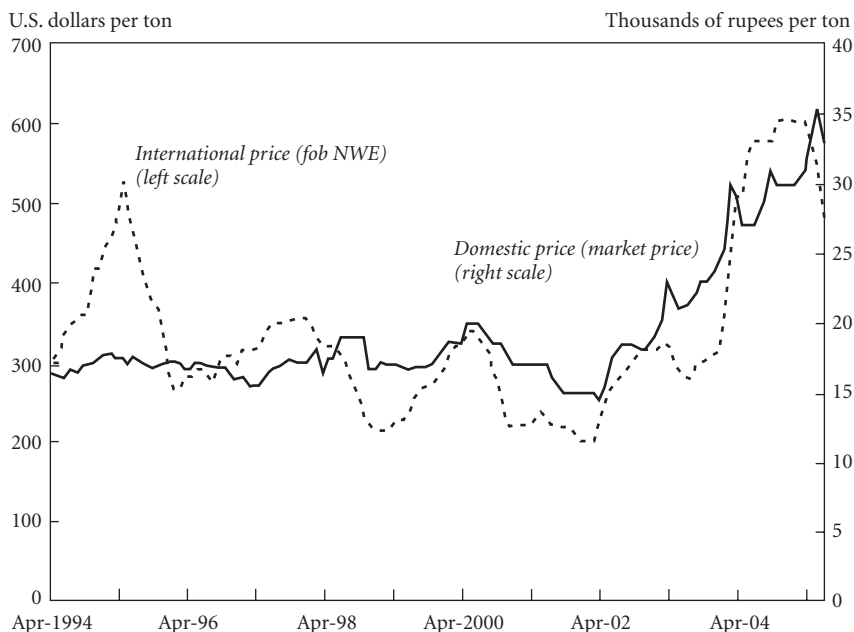
Figure 1.A.1. Investment in Plants and Machinery in Select Industries during the 1990s

Source: Prowess Database, Centre for Monitoring Indian Economy.

beginning of the decade), continued to invest in assets, so that the gap between steel and other sectors widened considerably.

These investments were made with very little systematic analysis. Steel companies anticipated a large growth in demand from user industries after de-reservation. However, the expected demand on both domestic and global fronts failed to materialize. There were many reasons. Domestically, for example, investments in infrastructure fell short of expectations. Because of this and other factors, estimates reveal that against a projected demand of 31.0 mtpa (million tons per annum) in 2001-02, only 27.0 mtpa³⁸ materialized. The domestic steel industry also lost protection from competition, which resulted in depressed steel prices. Data suggest that the customs duty on HR (hot-rolled) coils was reduced in successive phases from 40 percent in 1994-95 to 27 percent in 1997-98.

³⁸Data are from the Ministry of Steel.

Figure 1.A.2. International and Domestic Prices: Hot-Rolled Coils

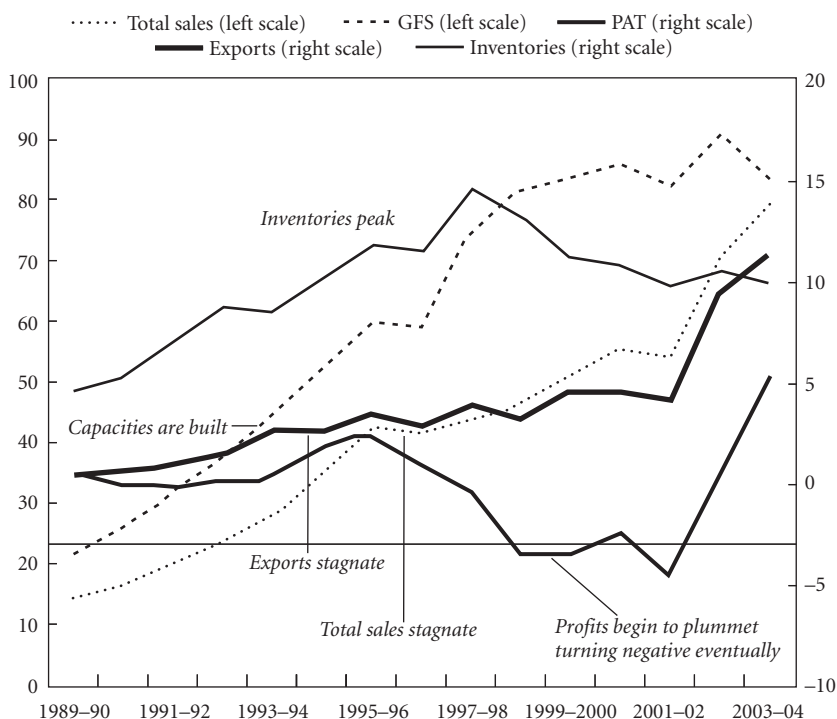
Source: CRIS INFAC Industry Information Service.

On the export side, the disintegration of the Soviet Union led to a glut in the markets as Commonwealth of Independent States countries began dumping steel. The lowering of customs duties and the excess supply in the global and local markets both exerted a lot of pressure on the steel prices in India (Appendix Figure 1.A.2).

Moreover, nontariff barriers imposed by major steel importing nations, particularly the United States and the European Union, also made conditions more difficult for exporters. Canada levied antidumping duties ranging from 16 to 96 percent on HR products imported from India in 2001 (Iyer and Wahi, 2004). The United States also initiated its preliminary antidumping investigations and imposed Section-201 in 2002. Other nations, worried that their markets would now be freely accessible to the steel diverted from these restricted markets, imposed a spate of similar barriers on Indian steel. The global economy also experienced the meltdown of South Asian markets in 1997–99 and the devaluation of the ruble that accompanied the 1999 Russian crisis. All these factors put tremendous pressure on steel prices worldwide (Appendix Figure 1.A.2).

Figure 1.A.3. Trends in Select Parameters of Steel Industry from the 1990s to the Present

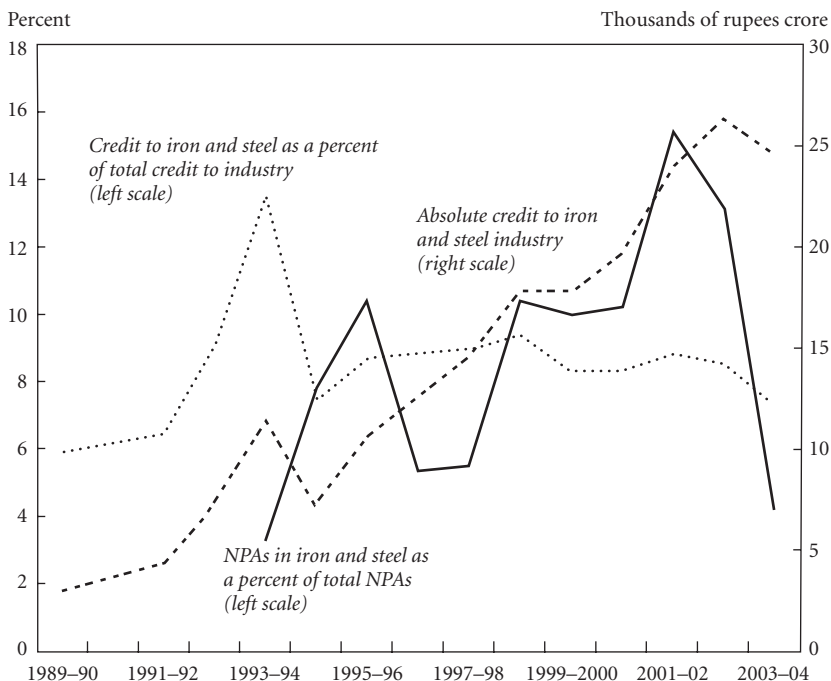
(In thousands of rupees crore)



Source: Prowess Database, Centre for Monitoring Indian Economy.

Steel players in India faced a situation wherein excess capacity creation domestically coincided with domestic and global downturns. Appendix Figure 1.A.3 shows how some of the key parameters behaved in the 1990s. It shows that after reforms, large investments in capacity creation were reflected in high gross fixed asset numbers. The events in the domestic economy and international economy, as mentioned above, created conditions during the mid-1990s in which inventories started to build, exports stagnated, and profits plummeted and eventually turned negative.

However, besides these external environmental factors, an analysis at the micro level (company by company) reveals that there were several internal factors as well that led to such a dismal performance by the steel sector. Evidence suggests that some of the promoters were first-generation entrepreneurs in

Figure 1.A.4. Credit Extended to Iron and Steel Industry

Source: Money and Banking, Centre for Monitoring Indian Economy.

Note: NPAs of one of the largest banks in India.

steelmaking who lacked the requisite experience to handle a downturn in this cyclical sector. This inexperience sometimes led to a multiplicity of objectives and business interests, and to midway modifications in project scope, a reflection of poor management skills. Poor vertical linkages and inability to grade the products also made production inflexible. In addition, most players lacked the ability to forecast the price and demand scenario. Because the import barriers came down faster than expected, the Indian steel industry was exposed to severe global competition in adverse economic conditions when both domestic and global markets were showing a downturn.

There was also a mismatch between some of the projects that were being implemented and the existing balance sheets of the companies, which were already facing inadequate internal accruals and high leverage. Companies sought to alleviate these constraints on internal resources through the capital markets. However, this solution was dif-

ficult because of high volatility in stock prices and several scandals, which shook the stock markets in the early 1990s and kept investors away. For example, a fixed income and equity market scandal in 1992 led to the crash of the stock markets in April 1992, just after the SENSEX (Bombay Stock Exchange, sensitive index) had reached its all-time high. Tax authorities froze shares of various big companies that belonged to proxy holders involved in the scandal. Similarly, owing to a ban on badla (forward) transactions, trading thinned after the Sensex had reached an all-time high in September 1994. As a consequence, the steel industry had to rely on debt as a primary means of finance during a period when interest rates were at record highs. In certain cases, projects were implemented without fully tying up the means of finance, which led to delays in project implementation as some of the anticipated sources of funds (such as capital markets) failed to deliver. Meanwhile, the interest burden continued to mount on the money that was borrowed to start the project.

The financial intermediaries who could have had a disciplining influence on all these companies and promoters were completely inexperienced themselves. The combination of inexperienced players acting in concert had a grave affect on the banking sector's level of nonperforming assets (NPAs). Appendix Figure 1.A.4 shows that there was a clear surge in credit extended to the iron and steel industry, both as a percent of total credit to the industry after the reforms of the 1990s, and in absolute terms showing a jump of 70 percent in the year 1992–93. Quite unsurprisingly, as a direct consequence of this profligacy, with a lag of a few years (because of the manner in which the NPA norms are defined) the share of NPAs of the iron and steel sector as a percentage of total NPAs of one of the largest banks in the country also shows a rising trend.

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