

India's Financial System: The Challenges of Reform

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A. Introduction.

India stands on the cusp of the millennium, having largely completed a first phase of financial sector reforms and in need of a second phase to meet some remaining and new challenges. The first phase — liberalization of interest rate and directed credit — began in the early 1990s, hand-in-hand with real sector deregulation. With prices in the real economy reflecting economic costs more closely and with greater reliance on the private sector, it naturally became important to move from a financial system that was largely an arm of public finance carrying out centralized, directed credit allocations to a system where financial institutions played a much greater role in allocating resources based on their evaluation of risk and return. Cross-country evidence suggests that the new approach should contribute to faster overall development. (See Levine for a review of the importance of the financial sector in development.)

Giving financial sector institutions a greater role in credit allocations entails many changes — not just freeing interest rates and credit allocations but giving more attention to legal, regulatory and supervisory issues and to incentives, an area that often has been neglected. The changes involve not only individual institutions and sectors of the financial system, but also intersectoral issues, such as meshing the roles of banks, development banks and the capital market.

The sooner these changes occur, the sooner India will reap the benefits of a financial system appropriate to its development and to the changes that are taking place globally. At the same time, concern also exists that the pace and direction of change should minimize the risk of financial distress and macro-instability that has hit many countries (Caprio). This concern is particularly relevant in light of the recent East Asian crisis.

This paper is organized as follows: the next section discusses the importance of incentives and legal, regulatory and supervisory issues in reform. The following section provides a brief history of India's shift from financial repression to financial liberalization. The last section, the bulk of the paper, lays out seven interrelated challenges that India faces in its second wave of financial sector reforms:

1. reducing the fiscal deficit, to reduce the risk of macroeconomic instability and to increase the availability of finance to the private sector;
2. improving the legal, regulatory and supervisory frameworks, in order to improve banks' credit and risk management;
3. improving systems for dealing with weak banks;
4. developing capital markets further,
5. developing pensions and insurance to increase finance for long term investments, including infrastructure;
6. improving financial services to improve the welfare of customers and meet the challenge of globalization of financial services; and
7. managing links to external capital markets;

and possible approaches to meeting these challenges.

B. The importance of incentives and the legal, regulatory and supervisory framework.

Building a sound incentive framework, that encourages individuals and institutions to provide, gather and prudently use information to make sound decisions, with appropriate rewards for success and penalties for failure and malfeasance, is a key element in financial reform. Poor availability and use of information on users of funds is a major factor in bad credit and risk management, and responsible for many weak banks. Lack of information on borrowers reduces their incentives to service debt and leads to higher average borrowing costs, because lenders cannot distinguish between good and bad borrowers. Information problems have played an important role in many systemic financial crises, along with macroeconomic instability, excesses of directed credit to favored borrowers and unproductive projects, and poor regulation and supervision (Caprio). Of course, improved availability and use of information will not eliminate losses on loans, bonds and stocks. Some losses will always occur — investment decisions depend on outcomes in an uncertain, unknowable future and are inherently

risky. The issue is to reduce these losses and avoid their reaching an aggregate size that generates macroeconomic instability.

Information in financial markets is well-recognized as inherently asymmetric — those raising funds inherently know more about the situation, than those providing the funds (Stiglitz and Weiss). It also is important to recognize that information is always changing and needs to be updated. And, it also needs to be recognized that although information may not be perfect, it can be gathered and applied with greater or lesser effect. Hence, the modern theory of banking emphasizes the role of banks and other financial intermediaries as “agents” that gather information in order to allocate credit to the highest (risk adjusted) return (Bernanke); mutual funds can play the same role in capital markets.¹ Bearing these points in mind, the evaluation of a financial system’s performance and its incentive framework may need to go beyond the standard static, Pareto-optimality criteria, and apply a more Austrian approach that gives more emphasis on whether incentives appropriately reward good decision-making, including the gathering, updating, and application of the necessary information, and penalize bad decision-making.

The issue of incentives is especially important in India’s financial reforms, particularly given the current importance of public sector financial institutions. India has all the standard problems of the financial sector that result from information asymmetry and “agency” issues. Moral hazard exists because depositors and lenders count on explicit and implicit Government guarantees. Best practice suggests that any guarantees should be very limited, to reduce the disincentives to prudent behavior from moral hazard, as well as to reduce the risk of macroeconomic instability arising from bailouts. Similarly, best practice suggests that any “bailouts” should involve substantial costs to bank owners, depositors and lenders, to avoid giving the wrong incentives.² More generally, there is an issue of whether of “fixed” or managed exchange rates also represent an implicit Government guarantee, which can generate destabilizing variability in international capital inflows (Bhalla; Hanson, 1994).

¹ Banks and mutual funds also benefit individual savers, and the economy, by diversifying risks and reducing transactions costs.

² See Caprio, Dziobek and Pazarbasioglu, Rojas-Suarez and Weisbrod, and Sheng. In this regard, India’s decision not to provide deposit insurance, ex post, to non-bank financial intermediaries was commendable.

Lack of appropriate incentives in public sector financial firms add to these problems. The Indian financial system is still dominated by the public sector: public sector banks have 80% of commercial bank assets and are heavily involved in other financial institutions; development banks, among the largest institutions, are either government-owned or have much of their equity owned by public sector banks; the publicly owned Unit Trust of India (UTI) and the public banks' mutual funds are the largest players in the stock market; insurance was a government monopoly until recently. Worldwide experience suggest that in the case of public sector institutions, the owner — the Government — typically lacks both the incentive and the means to ensure an adequate return on its investment. Political decisions, as opposed to rate of return calculations, are often important in determining resource allocation. Pressures to collect debt service may be low, relative to private financial firms that are longer lasting than most Governments. Indeed, in many countries, political pressures have generated decisions that led to macroeconomic instability. Managers and staff in public firms have little incentive to gather and use information to make investment decisions that maximize the risk adjusted rate of return. Competition to improve services and cut costs is limited within and between sectors. Lenders, investors and depositors in public banks and mutual funds have little incentive to worry about the use of their funds; de facto there is a public guarantee that taxpayers will make good the promised returns.³ All these problems suggest that resolving the issue of incentives will be critical to the success of the second phase of India's financial reforms.

Improvements in the legal, regulatory and supervisory framework are a second key to financial reform. The legal and judicial system, the prudential regulations and the supervision of the regulations are, of course, a major factor in the incentive system. For example, the quality of the legal and judicial framework affects the incentives to service debt promptly. The rules on minimum capital, risk weighting, exposure, arms-length lending, lender of last resort and deposit insurance affect the size and portfolio

³ Illustrating that behavior is the worldwide tendency, in times of financial crisis, for depositors and lenders to “flee” from private banks to public banks, despite the likelihood that the public banks have worse balance sheets.

composition of institutions.^{4,5} Good quality supervision ensures the rules are followed and that weak institutions are either strengthened promptly or are sold-off or closed.

The role of regulation and supervision goes beyond incentives however, to encompass the reduction of systemic risk and possible macroeconomic instability. Privately owned institutions may wish to invest in high return but risky projects and the failure of these activities can generate payments crises that cause system-wide problems/externalities, i.e. systemic risk. For this reason, as well as because of Governments' guarantor role in even private-sector dominated financial systems (through explicit or implicit deposit insurance), the Government needs to supervise financial intermediaries' risk management and risk taking and to ensure private parties have substantial capital at risk. It also needs to limit lending to related parties and lending concentration, which otherwise could be an element of excessive risk taking that could require a Government bailout. Recent cross country work suggests that a sound legal, regulatory and judicial system is a factor in limiting financial sector crises (Demirguc-Kunt and Detragiache, Barth, Caprio and Levine).

Regulation and supervision also provide market infrastructure of a "public good" nature. A sound legal framework for collateral and loan recovery is perhaps the most important. The prompt enforcement of contracts is critical to sound, intertemporal market activities. Such a framework is a critical part of the Government's regulatory apparatus to minimize risks of financial and macroeconomic instability. Regulation and supervision also can encourage competition in the sector. A natural role for the Government is encouraging production and dissemination of information, and ensuring that information is correct and timely. For example, the Government has an important role to play in auditing and accounting standards. Government can also regulate payments and provide

⁴ Regulations also could substitute, imperfectly, for incentives in decisions on credit allocation, for example by defining to whom to lend, how much to lend, at what prices, etc. But, such an approach is a carryover from the centralized, directed credit approach to the financial system and the substitution is very imperfect. The asymmetry of information gathering and use between government allocators/regulators and the users of funds/the regulated is even greater than between private users and allocators of funds. Government employees have less incentive to find out and use the information than private agents. Hence, regulation and supervision cannot do what good credit managers do.

⁵ Regulators and supervisors must realize the regulated respond by trying to avoid or take advantage of the regulations (Kane), and take such behavior into account in framing, enforcing, and adjusting regulation.

the physical infrastructure for carrying out payments, which has certain characteristics of a public good, though the private sector can also carry out these activities.

C. India's Recent Financial Development, From Financial Repression to Financial Liberalization

The Pre-Reform Era⁶ From the mid-1960s to the early 1990s, India's Governments in effect treated the financial system as an instrument of public finance. A complex web of regulations fixed the details of deposit and lending rates and loan amounts, channeling credit to the government and priority sectors at below-market rates. Public institutions dominated the financial system; competition was limited, between banks and between the banking sector the banking sector, the capital market and international financial markets. When problems and irregularities occurred, regulations were changed to prevent similar outbreaks, without much attention to their impact on the financial system as a whole.

Despite the restrictions on deposit rates, India had a relatively "deep" financial system for a low income country. For example, in 1980 the ratio of broad money to GDP was 36%, as high as many middle income countries (World Bank, 1989, p. 188). The stock market was also large in terms of number of listings and market capitalization. In 1985, capitalization (as a percent of GDP) was similar to Brazil, and Korea, countries with much higher GDP per capita (World Bank, 1989, p. 39).

India's financial depth in this period partly reflected the avoidance of Latin American style inflation and setting of bank deposit rates that roughly matched inflation. For example, the one year rate on term deposits was kept around the rate of inflation, particularly from 1982-1989. Financial depth also reflected the geographic spread of bank offices,⁷ stock markets and the reach of salesmen from the Unit Trust of India (UTI, the public sector-run "mutual fund"). In 1983 over 20% of shares were held outside the 12 major cities (Sen and Vaidya, p. 85). Capital markets grew by providing a (limited)

⁶ For further discussion see Sen and Vaidya, 1997, Chapter 1 and Hanson, forthcoming, for example.

⁷ See Fry for some empirical results linking the spread of bank offices to the ratio of deposits to GDP.

escape valve from financial repression for the larger companies, in terms higher allowable rates of return, and tax advantages.⁸

On the lending side, financial repression was greater than on the deposit side. Substantial and increasing volumes of credit were channeled to the government at below-market rates through high and increasing cash reserve requirements (CRR) and statutory liquidity requirements (SLR), in order to fund a large and increasing government deficit at relatively low cost (See Sen and Vaidya, Hanson, forthcoming). By 1989, these requirements represented 53.5% of deposits. In addition, 40% of advances were to be lent to priority sectors, mainly agriculture and small-scale industry. An additional 10% went to export credit. And credit to fund food procurement averaged about 10% of advances during the 1980s. Thus, over 80% of portfolio allocations were fixed by sector. Moreover, interest rates and credit volumes on individual loans were regulated in minute detail. The public sector, through the CRR and the statutory liquidity requirement, and agriculture received the largest average cross subsidies (Hanson, forthcoming).

India's reforms of the early 1990s began in response to the balance of payments crisis of 1991-92, a response that also included a stabilization program. The reforms specifically included financial reform (Ahluwalia 1999). The financial reforms sought to improve resource mobilization and allocate credit to its most efficient uses. The first Narasimham Committee Report (1991) provided a blueprint, particularly in the banking sector. Broadly speaking, its recommendations were largely carried out.

Beginning in 1992, India gradually liberalized interest rates (except savings deposit rates). Deposit rates were liberalized by first setting an overall ceiling for term deposit rates. This ceiling rate was adjusted according to the macroeconomic situation during the period April 1992-October 1995. Rates on individual types of deposits were then gradually freed, starting with the longer maturities, during the period October 1995-October 1997 (See Table 1).

⁸ See Joseph, et al. Trading of stocks and bonds was, however, relatively low. Also, the size of the debt market is difficult to measure. Although large volumes of government debt were bought, the buyers were largely the banks, which bought debt and held it to maturity to satisfy the statutory liquidity requirement, which at one points was 38.5% of deposits. Regulations kept the interest rates on public sector debt low.

**Table 1. India: Indicators of Financial Liberalization 1990-1997:
Interest Rates and Cash Reserve and Statutory Liquidity Requirements**

Year	Deposit Rate (1 year) (% per annum)	Loan Minimum Rate ^a (% per annum)	Cash Res. Req. (% of deposits)	Statut. Liq. Req. (% of deposits)
1990	9	16.0	15	38.5, ^b Sept.
1991	10, July; 12, Oct.	19.0 Apr.	15	38.5 ^b
1992	<13 ^d , Apr.; <12 ^d , Oct.	19.0	15	30
1993	<11 ^d , Mar.; <10 ^d , Sept.	17.0 Mar.	14 May	25, ^c Sept.
1994	<10 ^d	14.0, Mar.; Free, Oct.	15 Aug.	25 ^c
1995	<11 ^d , Feb.; <12 ^d , Apr.	Free	14 Dec.	25 ^c
1996	Freed, July	Free	13, May, 11, Nov.	25 ^c
1997	Free	Free	10 Jan.	25 ^c

Notes: Months refer to dates after which policies took effect.

^a Effective October 1988, the ceiling loan rate was abolished and a minimum rate imposed on non-priority loans.

^b Legal maximum

^c Legal minimum

^d Maximum rate all types of deposits

Regarding rates on loans, the ceiling rate on non-priority sector loans had been switched to a floor rate in 1988, allowing rates on “free” lending to be more market determined. After 1992, rates on priority lending were also gradually allowed to be set more freely, and the number of categories (and small differentials) were reduced sharply. In October 1994, rates on loans of more than Rs. 200,000 were freed. In April 1998, rates on priority loans under Rs. 200,000 were freed, provided they not exceed the prime rate that the bank was now allowed to set. Finally, interest rates on Government debt were increasingly determined in auctions. However, the rules of the auction effectively allowed RBI to set the rate. And, government debt probably carries a lower rate than what would occur in a completely free market because of the Statutory Liquidity Requirement, the low risk and the low capital requirement associated with government debt, and the possibility of investigation of public sector banks’ lending outside the public sector. Nonetheless, by in mid-1998, the only controlled rates were on savings deposits, small savings (postal savings) schemes, Non-Resident Indians’ deposits in foreign currency, and loans under Rs. 200,000.

Additional measures liberalized credit allocation, improved regulation and supervision, liberalized the capital account, and introduced more competition over the post-1992 period.⁹ These additional measures included:

- Reduced Cash Reserve and Statutory Liquidity Requirements (See Table 1):

⁹ For more detail, see the second Narasimham Committee report, Reddy and the annual discussions in the Reserve Bank of India’s *Annual Report*.

- The 40% priority sector lending requirement remained but its burden was eased by freeing rates on loans over Rps. 200,000, raising rates on small loans and making additional types of credit eligible. The requirement was increased to 32% for foreign banks in 1993, much of it in export credits.
- Tightening of Prudential Norms and Improvement of Banking Supervision:
 - Imposed an 8% capital requirement on risk weighted assets by 1995 for Indian banks with foreign branches (by 1996 for other India banks), i.e. over 3 (4) years; raised to 9% in 1998 with government securities given a 2.5% risk weight to begin reflecting interest rate risk and with foreign exchange positions also requiring separate capital allocations.
 - Recognition of non-performing assets gradually tightened, so that by March 1995 most loans with past due interest of more than two quarters (plus an almost automatic 30 days) would be considered non-performing.
 - Imposed a 10% provision on substandard assets, 20-100% on doubtful assets (depending on the collateral) and 100% on loss assets.
 - CAMEL and CACS ratings introduced; by 1998, Basle Core Principles of Supervision fully met on 33 of the 46 principle parts, partially met on 11 of the principle parts (many of which are under consideration by an expert group or within RBI) and did not meet 2 principle parts —country risk and consolidated reporting.
- Liberalization of the capital account by:
 - Easing restrictions on foreign direct investment
 - Allowing Foreign Institutional Investors to invest in securities (1992) and repatriate capital and earnings; gradually they were allowed to invest in Government and corporate debt.
 - Unifying the exchange rate (1993)
 - Allowing approved companies to issue bonds and GDRs offshore.
 - Capital outflows remained restricted, however, and tight control remained on private off-shore borrowing especially short term debt; private long term debt rose from \$1.2 billion in 1992 to \$7.3 billion in 1996, but short term debt remained roughly constant at about \$6 bill.
- Increasing competition

- Entry of 9 new private and 22 new foreign banks and easing of restrictions of foreign banks.
 - Phase out of mandatory consortium lending led by development banks and replacing it by syndications
 - Phasing out of restrictions on borrowers' switching banks.
- Non-bank financial corporations were allowed to grow under a regime of less directed credit requirements (lower cash reserve and statutory liquidity requirements, no priority lending requirement) and limited regulation and supervision.

After reform, the growth of bank deposits, relative to GDP, resumed, albeit somewhat more slowly than in the 1980s.¹⁰ Deposits in non-bank financial intermediaries (NBFCs), grew rapidly, by over 40% p.a. between end-1991-92 and end-1996-97. However, a crisis in one of the NBFCs in 1997 led to runs against many of them. The Government appropriately refused to extend deposit insurance to them ex post. The weakest NBFCs are now being wound up and the remaining institutions are being more tightly regulated (See RBI 1999a).

The reforms strengthened banking regulation and supervision, as noted above. Basle capital adequacy standards have been more than met generally; by 1998-99, 25 of 27 public banks and 95% of all banks exceeded the Government's new guideline of 9%. Of course this capital strengthening reflected substantial injections of Government funds into the public banks, which averaged over 0.2% of GDP annually between 1993-94 and 1997-98. Regarding non-performing assets, the tighter regulations led to recognition of the large volume of existing non-performing assets (NPAs). However, by 1998-99 the ratio of banks' NPAs to total assets had fallen to about 6%, equivalent to about 3% of assets net of provisions.¹¹

Signs of increased competition include the new banks' rising share of the banking market, although public banks still account for 80% of commercial bank credit. There has been increased competition between banks and NBFCs, DFIs, and, especially the

¹⁰ In a closed economy, monetary policy can control the money base, thereby limiting nominal growth of deposits. However, this control is imperfect to the extent that the financial system uses the base more "effectively", i.e., the money multiplier varies. In India, the rapid growth of NBFCs, with lower CRRS and SLRs than banks, effectively increasing the broadest "money multiplier" of the base.

capital market. Larger firms now raise most of their funding through the capital market or private placements. Of course banks still provide much of these funds, but under more competitive conditions that have depressed margins. Non-traditional types of lending, such as construction and consumer finance, have grown, first as NBFCS grew, then as banks began to take an interest in these areas. The increased competition has been a factor in the decline in banks' interest rate spreads and profit rates over the last few years.

D. Meeting the Challenges to the Second Round of Reform.

Reducing the fiscal deficit. The still-large fiscal deficit raises the risk of macroeconomic instability, increases risk premia internationally, and crowds out credit to the private sector (World Bank 2000). A slower growth of public sector liabilities would increase the availability of credit to the private sector, one of the original intents of the financial reform. Despite the reform, banks' holdings of Government debt in banks' portfolio remain 36-40% of deposits, about the same as in the late 1980s-early 1990s when the SLR was much higher (World Bank, 1998, World Bank 2000). (The share of non-Government debt eligible for the SLR has declined, however, since new non-Government borrowings were excluded from the SLR in 1994).

The basic reason for the continued large share of Government liabilities in banks' portfolios is the history and continuation of large Government deficits. Over the 1980s the fiscal deficit rose, so that by 1990-91 the Central Government deficit reached 6.6% of GDP and the General Government deficit 9.2% of GDP. The stabilization program reduced these deficits to about 5% and 7% of GDP by 1992-93, respectively. The downward tendency in the deficits continued slowly until 1998-99, when Central and State Government finances deteriorated to nearly the rates of the early 1990s.¹² The consequence of this fiscal history is a large stock and a large flow of public sector debt that continues to have to be held by the financial system. Until the public sector deficit is

¹¹ Growth played a major role in the decline in NPA: asset ratio. The absolute volume of NPAs rose after the initial tightening of regulations, then fell, but then rose again after 1994-95, roughly as fast as assets.

¹² The deficit figures in this paragraph reflect the 1998-99 definition of the Central Government budget deficit that treats the State Governments' share of the small saving program as part of their deficit, rather than as a loan from the Central Government, and the 2000 revisions of GDP data.

brought down, it will be hard to reduce the large share of public sector debt in the system, and correspondingly, increase the availability of funds for private projects.¹³

It is true that Indian banks' holdings of Government debt are larger than required. This reflects the attractiveness of the Government debt to the banks: the rate of return on public sector debt has risen since it was sold by auction, it has a low risk weight (2.5%) under the capital adequacy requirements and no priority sector lending requirements. In addition, as Venkitaramanan notes, the public banks' credit norms and threat of criminal action by the Central Bureau of Investigation create incentives favoring credit to the public sector. However, the attractiveness of Government debt reflects the conditions on which it is held by the banks. There remains the macroeconomic constraint the someone must hold the Government debt, if the banks did not, then the public and other institutions would have to hold it and, correspondingly, bank deposits and other institutions credits to the private sector would be less. Thus, one way or another the large stock and flow of Government debt would mean less credit for the private sector.

Improving credit quality and risk management. The current 3% ratio of net NPAs to total assets in banks reflects the large volume of government debt in the banks' portfolios, as well as large provisions against non-performing assets.¹⁴ A more accurate reflection of the poor quality of credit is the ratio of NPAs to lending (advances), about 15%, 7% net of provisions. Loan quality is even worse in the three long-term development banks, where net NPAs are about 12% of assets. Although much of the NPAs reflect pre-reform lending that is in court cases (see below), the ratio of NPAs to advances has remained roughly constant for the last three years, indicating that new NPAs are rising about as fast as credit.¹⁵ Fears also exist that the quality of loans is even worse than reported, but is being hidden by rolling-over bad loans ("evergreening") and loan restructuring agreements. Priority lending accounts for roughly half of the NPAs, but this

¹³ Easterly et al., 1994, provides some evidence on this phenomenon across developing countries. When government borrowing is market-based, then the crowding-out occurs by raising interest rates above what they otherwise would be. When credit is allocated by fiat, for example as occurred with the high CRR and SLR that existed in India prior to the financial sector reforms, the crowding-out occurs by forcing banks to hold low interest, public sector debt, and correspondingly generating a high spread between rates on "free" lending and deposits, in order to make up for the low interest rates on public sector debt.

¹⁴ Indian laws and politics make write-offs of loans by public banks, even fully provisioned loans, difficult. Hence, NPAs tend to remain on the books for some time and provisions are used to offset them.

implies that the NPA ratio for non-priority loans is also above 10%, not good by international standards. India's NPAs are consistent with worldwide experience with public banks, which suggests that public banks find it difficult to lend without generating large non-performing assets. India's private and foreign banks have lower NPAs than the public banks, although their NPAs are also high by international standards. The need to provision for the likelihood of non-performance tends to raise average interest rates on loans substantially.

Best practice suggests that a multi-pillared approach of a better legal and informational framework, better regulation and supervision and better incentives can limit the growth of NPAs while encouraging efficient allocation of resources and faster development.

Regarding the legal system, while Indian law strongly supports property rights, the log-jam in the courts means that it takes 10-15 years to reach a judgement against a loan defaulter, and even then collateral may not be executed (RBI 1999b). Firms can escape debt service obligations while they are "sick" and under the Bureau of Industrial Reconstruction and Finance (BIRF) proceedings; of the roughly 4000 firms that have entered these proceedings since 1987, only 6% have been brought back to health and another 13% were judged to have been healthy when they entered and have been released. Debt tribunals were authorized in 1993 to by-pass the judicial log jams and speed-up debt recovery. However, their opening was delayed by legal challenges and administrative problems. Once underway they still lacked of funding and staff, problems that also plague the BIRF. Although the additional tribunals set up after the last two budgets have increased the numbers to 12 tribunals and to 4 appeals tribunals, the potential case load is overwhelming 1.4 million pending cases, implying an average of over 100,000 new cases per year. The tribunals also still suffer from lack of funding, to computerize and to hire officers to enforce judgements. Procedures remain complex, delays are common, and enforcement of judgements weak, all of which means the tribunal system will soon resemble the courts. Recent changes in the laws may, however, improve the execution of collateral somewhat.

¹⁵ Partly this reflects the decline in industrial growth, to trend rates, after the 1994-95 to 1995-96 boom.

The process clearly needs further improvement, beginning with clear directives from the government to collect debt service from defaulters without exception. Penalties have to be improved for willful default and delay. The point is, of course, not to execute collateral of borrowers unable to pay, but to change the incentives now favoring willful default, the ease of which raises the costs to all borrowers. This will reduce the number of cases quickly as debtors settle with banks rather than go to court (see below).

A second framework improvement would be to increase information about performance in servicing debts. One approach would be to set up a credit bureau that would all cover debtors to all financial institutions (Vasudevan). Such a bureau would not only provide lenders with records about good borrowers, it would increase borrowers' incentive to service debts.

Improved regulation is needed to limit the riskiness of activities and non-arms length lending, particularly important as the system is privatized, as discussed above. For example, exposure limits are high, activities of groups and even the banks' and the development bank subsidiaries are not consolidated in accounting. Income recognition standards and provisioning are low by international standards, particularly in the development banks. Better supervision is needed to ensure that the regulations are followed, capital is maintained, and activities are considered in a consolidated fashion.¹⁶ Moreover, modern approaches to supervision suggest a need to evaluate the whole risk management approach of the banks, not just whether their assets are performing or not, an approach that will entail a major upgrading of India's supervisory capacity (Tarapore, Venkitaramanan). The RBI has required marking to market and has recently set up an asset-liability management program for the public sector banks; it remains to be seen how it will work. However, the issue is not so much managing term transformation — India's long deposit maturities and the short term bank lending limit term transformation — it is credit risk. Finally regulatory forbearance is an issue; both public and private banks have been allowed to continue for some time with less than required capital.

Better credit management, and the incentives to encourage it, are also of major importance in limiting NPAs. Supervision and regulation cannot substitute for good

credit management, it can only try to uncover and limit bad credit and risk management, about which the banks being supervised inherently know much more (Venkitaramanan). Owners need the incentive of something at risk, so capital needs to be high and linked to the riskiness of activities. As noted above, owners, managers, staff, lenders, and depositors all should suffer some loss if NPAs increase too much, in order to provide incentives for prudent behavior.

Unfortunately, many of the incentive pillars of the multi-pillar approach are inherently weak in India's largely public sector banking system, as noted above. As noted above, the owner is the Government, which has difficulty in insisting on a sound rate of return on its capital. Indeed, a real issue is whether higher capital ratios in public banks will simply lead the Government to provide more funds to them that can be used to expand low-cost loans. Political pressures abound to lend to favored clients and in day-to-day decisions and to meet credit targets in programs (Ahluwalia, 1997). The managers and staff are civil service employees whose salaries are not linked to profit or performance, although selection for higher level positions may be affected by responsiveness to political pressures. Indeed, the public sector banks' performance in even loan documentation has proved to be a problem in court cases. Rapid turnover of management (making assignment of responsibility difficult), strong unions and the limits in control imposed by the large branch network, a complicated administrative network and poor communications (all mentioned by the first Narasimham Committee) exacerbate the problems of public financial institutions. And, as noted above, depositors in and lenders to India's public banks are even less likely to suffer losses than those in private banks with deposit insurance, as is the case worldwide. Hence, the market discipline of public banks is likely to be limited.

A natural approach to resolving these problems is privatization — a reduction in the minimum public sector participation below 51%. However, unless private management also takes over, i.e., a managing group of private investors holds more of the bank's equity than the Government or is given control, the Government would still control banks' management and operations. Moreover, privatization is not a panacea. It

¹⁶ For example, in the US, banks are now sold or closed by regulators well before capital is exhausted, if

would require a major improvement in regulation and supervision in India, as discussed above, and clear, low limits on deposit insurance. Privatization also faces political and union opposition. Thus far, 9 Indian public sector banks have sold equity shares. However, legal arrangements are not in place for elected directors by the minority shareholders, so ownership functions remain firmly with the Government. The Government recently announced its intention to reduce its equity holdings in the banks to 33% (as recommended by the second Narasimham report), but it also clarified that the banks would retain their public sector character.

Weak public sector banks. A few banks have much higher levels of non-performing assets than the average, and low capital, in the case of two public banks despite large Government injections of funds. In India's increasingly competitive financial environment, it is unlikely that weak banks will be able to grow out of their problems. Indeed, attempts to do so, by investing in high return, risky projects, could worsen their situation. To support weak public sector banks, the government has already injected a substantial amount of capital over the last 5 years. Unless the issue of weak banks can be resolved the need to provide capital will continue to add to the deficit.¹⁷

A fundamental question of whether weak public banks should be kept open, and not closed (Tarapore). Modern banking theory raises one possible answer: that banks are the repository of information on clients and closing them obliterates this information (see for example, Benarke). But, the issue is whether Indian public sector banks really have substantial information on clients, given their large holdings of public sector debt, long history of priority lending, and rapid turnover of top management. Another possibility is that a government-owned bank shouldn't go bankrupt. However, this doesn't mean that the management and staff should not be pushed to improve collections. If they fail, then there is no logical reason not to follow global best practice to the extent possible: replace the management, and if necessary merge the weak bank with a sound bank or privatize it, after the government downsizes the operation, pays off any public sector loans that are

owners are unwilling to inject new funds, in order to reduce losses to the deposit insurance agency.

¹⁷ The Government injections of capital took the form of new government debt in exchange for equity, which under Indian budgetary conventions does not add to government spending, nor the deficit. However, the interest on this debt is, of course, part of government spending, and does add to the deficit.

not performing well, and replaces the lost capital as the bank's owner. As discussed above, it is likely also that supervision and regulation, and laws related to debt recovery also would need improvement. To do otherwise could easily weaken the incentives that do exist to prudent lending and loan payment and, ultimately, raise costs to the Government. Moreover, it is possible that India is over-banked. In that context, resuscitating weak banks runs the risk of bringing the problems of India's sick industry policy into the banking system — saving the weakest firms in an industry at the cost of jeopardizing the next weakest tier of firms, a concern raised by the recommendations of the recent report on weak banks (Verma).

Another option, raised by Tarapore in the Indian context, is to convert weak banks into so-called “narrow banks”, which hold only government paper, and gradually allowing these banks to wither away. Indian banks already are fairly “narrow”, with almost 50% of deposits held in the form of public sector liabilities. And, recent replacements of capital have taken the form of more government liabilities. Hence, turning weak banks into narrow banks is not as radical a change as it might appear. Although such an approach might imply some annual losses because of the wage bill, it would eliminate any losses from further NPAs. And, wage costs could be cut over time by attrition and reduction of branches. Finally, such an approach could provide an incentive to better performance by other banks' management and staff.

An alternative approach to weak banks is an “Asset Reconstruction Fund”, that would take bad loans off the banks' books and try to collect. However, such an approach would still require the Government to put funds into banking, either immediately and directly if the Fund buys the assets at or below their provisioned value, or over time and indirectly if the Fund buys the NPAs at par, to cover the Fund's losses. A Fund also reduce the pressures to change the management and staff who made the bad loans. Other issues are whether a Fund might actually reduce the collections of existing bad loans in the Indian context because of a) the possibility of legal challenges to the transfer of loans and associated collateral, and the possibility of losses due to errors in the transfer process(as noted loan documentation by the public banks has been a problem in the suits to recovery debt service); b) the removal of the most experienced collection personnel

from the banks, and c) the likely reduction in incentives for borrowers to pay and banks to collect, especially since, in the Indian context, such a fund is likely to be long-lived. The appropriate comparison here is whether such a fund would improve collections more than improving procedures for settlement, although these would be complicated by the public sector nature of the banks.¹⁸ Another question is whether access to the Fund would be limited to the weakest banks, which would put their closest competitors at a disadvantage, or would be system-wide. If system-wide, there may be risks, given the worldwide experience with system-wide Recapitalization Funds (Caprio), of undermining investor confidence in India's banking sector and macroeconomic stability in general. Finally, it is worth noting that such funds have generally not been very successful in recoveries, without a sound legal framework and strong political support for debt recovery (Klingebiel).

Capital Markets. Substantial progress has been made in meeting the fourth challenge, developing capital markets. Capital markets were relatively large in India at the end of the 1980s, as noted above. This reflected the markets' rapid growth during the 1980s as a source of finance for the larger corporations, especially the debenture market (Joseph et al). During this period the capital markets served as something of an escape valve for the larger corporations from the repressed banking system. Despite the capital markets' size, they suffered from numerous problems (Nayak, Shah and Thomas). Information and transparency were limited, reflecting the individual, dealer-based trading system (without market makers), and the associated difficulty in determining the actual price traded, or even highs and lows during the day. Moreover the Controller of Capital Market Issues' regulations on pricing initial public offerings (IPOs) and the time between application and issue kept the IPOs from reflecting the market — limited price discovery. Capital markets were thus ineffective in fulfilling their normal function of providing even basic (price) information, not to speak of the limitations on accounting standards that made it difficult to determine a firm's profitability.

¹⁸ To protect management, limits would have to be spelled out for settlement, that would become public knowledge. Private sector banks can negotiate without such limits. Currently, private and foreign banks are much more likely to settle and write off loans than public sector banks.

Trading in the capital markets also was costly, reflecting the lack of competition due to the Bombay Stock Exchange's dominance,¹⁹ the limited number of dealers and the high costs for accessing the market through a system of sub-brokers.²⁰ Shah and Thomas estimate direct costs of a small, one-way, retail transaction were about 5%. In addition, execution/settlement of trades was unreliable, with orders difficult to execute on a given day; delivery unsure and slow, particularly outside Bombay; and counterfeit shares a problem. Occasionally, dealers went bankrupt, preventing completion of transactions and, in some cases, leading to a paralysis of payments for the whole market. Not surprisingly, retail trading was low.

Mutual funds can help retail investors improve their access to information and reduce transactions costs, but in India mutual funds were limited until the late 1980s. The Government-run UTI had a legal monopoly in the mutual fund market until 1987-88, and then faced only competition from public sector banks until 1993-94. Even from 1988-89 to 1993-94 its resource mobilization still averaged over 80% of the funds put into mutual funds annually (Nayak). Moreover, the UTI's resource mobilization was similar to the size of new issues during much of this period, making it a dominant player in the market.

Capital market reforms began in 1992, reflecting two factors, the general climate of reform and a Government response to the "scam of 1992" (Nayak; Basu and Dalal, 1993). The reforms almost wholly affected the equity market. The bond market, though surprisingly large for a country of India's per capita GDP (See World Bank, 1995), still reflects many of the pre-1993 problems (Nayak) and would benefit from reforms similar to those that have occurred in the equity market. Nonetheless it should be noted that the largest companies are raising most of their funding through the debt market currently.

The equity market reforms took four approaches: (a) the Securities and Exchange Board of India (SEBI) was given regulatory powers in 1992²¹, including regulation of new issues; (b) a new exchange, the National Stock Exchange (NSE), was created in 1992 and began operation in 1994, competing with the Bombay Stock Exchange; (c) new

¹⁹ Arbitrage between the exchanges was weak, reflecting both the limited information associated with the dealer system and the poor telecommunications.

²⁰ It was illegal for one stock exchange to set up a sub-local in another city.

²¹ It had been constituted in 1988.

mutual fund operators were allowed in 1993-94; and (d) development of a share depository. In addition, foreign institutional investors (FIIs) were allowed, beginning in 1992; and Indian firms were allowed to issue global depository rights (GDRs) offshore. These additional resources provided finance for India's private sector-led growth in the mid-1990s, and contributed to a stock market boom.

SEBI took over regulation and liberalized the regulation of new issues. It also has increased information requirements for listed shares. It has gradually built up a corpus of regulations. The NSE rapidly attained a much greater volume than the Bombay market, an unprecedented success for a new exchange. The competition from the NSE contributed to a substantial reduction in transactions costs, to the point where they are now among the lowest in the world (Shah and Thomas), and to a substantial increase in transparency and liquidity. This reflected the NSE's computer-based, order-matching, which is accessed through a system of satellite-linked terminals throughout the country, a system that the Bombay exchange also is now using.²² Finally, the depository has eased concerns about counterfeit shares and will contribute to improved settlement. Stocks accounting for almost all the trading volume are now fully traded through the depository. Reflecting these developments, plus the inflows from and trading by foreign institutional investors and the unprecedented economic growth, the stock market boomed in the mid-1990s, with large number of new issues.

Although progress has been great, improvements could still be made in what Nayak calls market "microstructure". There is of course a need to upgrade information, through better auditing and accounting. In the primary market, despite improvements, the new issue process is still limited in its potential use of market information (price discovery) by the length of the process and regulations on underwriting, listings on multiple exchanges and sales to retail investors.²³ Other methods of pricing new issues, discussed in Shah and Thomas and Nayak, may lead to better results.

²² To some extent, the Bombay Exchange's failure to embrace modern technology can be attributed to regulations that did not permit a "city" exchange to expand into another area, and to the poor quality of telecommunications services. At the same time, one can also argue that lack of competition was a major factor in the failure of the Bombay Exchange to expand nationally.

²³ Some research, cited in Shah and Thomas and Nayak, that suggests new issues were under-priced (as measured by their later performance compared to the market) in the first half of the 1990s. However, that

Many of the new issues that were sold during the boom have become inactive and many of the firms have failed to fulfill the information requirements to maintain their listing. Some observers attribute the lack of new issues to investors' disgruntlement with the previous outpouring of new issues. These problems suggest that, in the future, the equity market may not provide much finance for smaller companies. Correspondingly, the number of IPOs is likely to be much smaller than in the past. Venture capital firms may be a more suitable source for financing small companies. In this context, a reexamination of the regulatory framework for venture capital may be helpful.

In the secondary market, the depository will make it possible to improve the settlement process — moving to a fixed, shorter, rolling settlement (daily netting, with final settlement at T+5, then T+3, which the “Group of Thirty” suggested should be the norm), and reducing counterparty risk. The current, lengthy settlement arrangements leave the market subject to what is effectively futures trades with no margins.

This problem was exacerbated by “badla”, a deal between traders that allowed a carry-over of positions into another settlement period for a negotiated fee.²⁴ Allowing such activity may have provided some additional liquidity and trading. However, the corresponding possibility of highly leveraged trading left the market vulnerable to bankruptcies and may have been a factor in the Indian markets' periodic payments crises, such as occurred in April 1995 and in early 1998. In 2000, SEBI once again eliminated badla.²⁵ Moving to rolling settlement, with separate futures and spot markets that have to settle on a defined date, will reduce such problems of bankruptcy and foster a more sustained growth of liquidity

Moving toward rolling settlements, with strict margin requirements, and greater use of the depository will also help to resolve another problem of settlement — counterparty risk. Failure of one party to a trade to meet its payments obligations can cascade

result may relate to the period studied and seems to have been more prevalent in smaller issues, where concerns of market manipulation exist (Nayak). More generally, a market test — the large number of new issues in this period — suggests that the issuers did not consider the shares undervalued. Studies of US initial offerings also suggest underpricing, but that it is quickly eliminated (Ibbotson, et. al., 1989).

²⁴ “Badla” is effectively a futures contract with an uncertain expiration date with unregulated margins (except by the exchanges, which do not appear to be able to do it). This makes it hard to determine/quote a “cash” market price. It also is a well known result that undated futures contracts contribute to “speculative bubbles” (Shah and Thomas).

into generalized problems for the whole market. Besides requiring substantial capital and limiting margin strictly (which also entails fairly continuous marking to market), counterparty risk can be reduced by setting up a clearing corporation that is counterparty to trades (Shah and Thomas, Nayak). The fund's capital would presumably be provided by exchange members.²⁶ However, until the settlement process is shortened and margins and marking-to-market are better regulated, such an approach would face excessive risks.

A final issue in capital markets is the impact of public "mutual funds", including UTI's large size, on incentives and the market. Generally speaking, well organized capital markets reduce many of the "agency" and incentive problems of banking, including the problems associated with explicit or implicit guarantees of bank liabilities. However, the latter potential benefit is negated to the extent that public institutions, such as UTI and the public banks' mutual funds, offer market-based instruments bearing guaranteed returns. In this case, the investor in the instrument loses the incentive to pay attention to the mutual funds' investment strategy, because the Government guarantees a return. No private firm can offer such a guarantee, so the regulatory "playing field" is not level.²⁷ Finally, such a the guarantee represents an implicit Government liability which, if called, could add to macroeconomic instability. In 1999, concerns developed over UTI's net asset value (which is not published) and its ability to cover its guaranteed return. To support UTI, the Government provided Rs. 32 billion, in exchange for some of UTI's holdings of public sector equity and debt, more would have been needed except that the stock market improved as a result of tax reductions on shareholding in the 1999-2000 budget.

Moreover, UTI's large size, relative to the markets, means that its activities influence the market. This makes it difficult for UTI to change its position, without influencing prices.²⁸ Moreover, its public ownership leaves open the risk that it will operate for political as well as economic goals. These problems suggest that it might be

²⁵ SEBI banned "badla" in December 1993 but allowed it to resume in late 1997.

²⁶ The NSE has a settlement guarantee fund, the BSE has a guarantee fund if a dealer goes bankrupt.

²⁷ The availability or unavailability of derivatives does not change this point. A derivative guaranteeing a high return would cost a lot, making it impossible to guarantee a high return once the cost of the derivative is taken into account.

worth exploring ways to maintain UTI's excellent resource mobilization facilities, but split up and privatize the investment side of the business into smaller units.

Pension and insurance reform. India's pension system is still in its infancy (Dave). A shift toward a more fully-funded, transferable pension system would provide more long-term, investible resources for the capital markets and good incomes for retirees. Perhaps the largest gains would come from a shift of the public sector's pension system from its current, pay-as-you-go approach to a more fully-funded system. However, the public sector's payment of both its existing pension obligations and its contributions to a fully-funded system for the future retirees, not to speak of any extension of coverage, would add significantly to the already-large public sector deficit. Hence concerns of macroeconomic stability suggest the need to reduce the current high fiscal deficit as pension reform is undertaken.

The liberalization of the insurance industry is likely to provide more resources for the long-term capital market. Cuts in the liquidity requirements on insurance would mean additional resources for private investment, provided, of course, that a reduced fiscal deficit reduces the Government's funding needs. The liberalization of entry into insurance, including a minority position for foreign firms, will increase competition and thereby improve services, products and prices facing buyers of insurance. As a result demand for insurance would increase, increasing the resources mobilized by the insurance industry.

Improving financial services in banking and capital markets would yield substantial benefits for Indian firms and households and meet the challenges of the on-going globalization of financial services. As noted above, India has done well in making financial services available. Its 67,000 bank offices and its widespread links to capital markets have provided much broader access to the financial system than would be expected in a country with India's size, per capita income and poor telecommunications. And, costs of intermediation in India's banking and stock markets are reasonable by international standards.

²⁸ Again, the issue is not one of the unavailability of derivatives, the size of UTI means it would have difficulty finding a credible counterparty at a reasonable price, if it wished to carry out a trade.

Now, however, quality improvements are needed. As in the real sector, it is no longer sufficient just to supply low quality services at low cost. National efficiency and competitiveness demand better, more varied services. For example, improvements are needed in inter-branch and inter-bank linkages, and in payments, which are lagging behind the need for better customer service and transfers and the desired speed-up in settlements of stock transactions. Although public banks' costs are not particularly high by international standards, this reflects India's low labor costs. Overstaffing is the rule, even compared to private banks in India, and service quality is low by international standards. Strong unions have imposed stringent work rules and limited computerization, ATMs, etc. (Sarkar, Narasimham II), to the detriment of users and development. Without a major upgrade in service and payments systems, as well as reductions in political interference, directed credits and unprofitable branches, it is hard to see how Indian public banks could compete internationally without subsidies or protection. As noted above, improvements in settlement arrangements are still needed in capital markets.

Increased competition in the financial system, in particular allowing greater international competition, would provide an impetus to improved the quality and lower the costs of financial services, while helping to help make the system more robust by encouraging the spread of best practices and standards, the growth of financial information and the ownership by investors with more diversified portfolios who are less subject to single country risk (Claessens and Glaessner). India lags the East Asian and the Latin American countries in opening-up financial services to foreign competition. (Claessens and Glaessner, Williamson and Mahar). A recent RBI report (Vasudevan) provides useful recommendations for the direction of computerization.

Managing links with external capital markets and opening-up the capital account. The issue of open capital accounts is a highly discussed issues since the East Asian crisis. India maintains controls on international capital movements, notably on the holding or use of foreign exchange by Indian citizens and residents. However, the financial sector reforms have liberalized Indian firms' ability to raise and hold money offshore and foreign investors' and non-resident Indians' ability to invest in India and to repatriate their investments. The 1997 Committee on Capital Account Convertibility

(Tarapore Committee) recognized the gains to capital account convertibility, in terms of increased funding for investment and risk diversification.²⁹ It recommended that India move toward capital convertibility over a 3 year horizon, at the same time as the fiscal deficit was reduced significantly, the financial system was further liberalized and strengthened, and exchange rate management was shifted to maintenance of a real exchange rate band backed by large reserves.

The Committee's Report was issued about one month before Thailand's float of the baht made the East Asian crisis obvious. The crisis' spread to countries with capital account convertibility has dampened what had been a growing international enthusiasm for opening the capital account, especially since contagion seems to have been limited in countries with more closed capital accounts, like China and India. Of course, it should also be noted the immediate impact of the crisis was also limited in Latin America, despite the Latin American countries' open capital accounts.

Although there is no doubt that openness of the capital account was one factor in the spread of the crisis, openness to flows of capital and goods also probably contributed to Indonesia's, Malaysia's and Thailand's strong development performance over the prior 30 years.³⁰ Two other major factors in the crisis were:

²⁹ See for example Hanson, 1994, for a discussion of these issues and a summary of some empirical evidence on them. Obviously, measuring risk diversification is not easy, but one can observe that two-way trade in assets has grown enormously and one explanation is risk diversification. As to the contribution of foreign finance, in industrial countries, well-known studies, e.g. Feldstein and Horioka, suggest that foreign finance plays a small role, although there is debate on the results. In developing countries, foreign funds seems to represent a larger fraction of investment (although that fraction is still limited by the unsustainability of large current account deficits) and financial intermediation (as measured, for example, by the high ratio of external debt to GDP). Bhalla finds more evidence for the impact of foreign capital flows on investment than previous studies, using data on first differences between saving and investment in the major industrial and developing countries.

³⁰ Over the period 1965-1994, GDP growth averaged 6.6% p.a. in Indonesia, 6.9% in Malaysia, and 7.8% in Thailand. Among the other countries with over 20 million population, only Korea averaged over 5% p.a. growth during this period; the next highest growth rate for this period was Turkey's 4.9% and India averaged 4.5%. Obviously many factors contributed to the East Asian economies' performance (See World Bank 1993, for an extended discussion). Indonesia, Malaysia, and Thailand achieved their high growth rates with much lower rates of investment than Korea (or China which has shown rapid growth in the last 20 years). Two notable differences between Indonesia, Malaysia, and Thailand, vis-a-vis China, Korea, and the other countries with over 20 million population, were lower levels of protection and relatively open capital accounts. These three countries had high average current account deficits since the mid-1970s, high ratios of (the present value) of external debt to GDP, and large inflows of private equity capital (as well as foreign investment), compared to other large developing countries.

- a weakening of the macroeconomic stability and the rapidity of adjustment which had been important in East Asia's earlier success (World Bank. 1993), as measured by substantial increases in already-large current account deficits and large actual and potential quasi-fiscal deficits associated with the financial system;³¹
- the channeling of large volumes of external funds through weak financial systems — a recognized hazard (World Bank 1997) — or directly to firms that chose to borrow offshore rather than in the undersized and costly domestic financial market. Financial institutions were severely under-capitalized/over-levered, with large volumes of non-performing assets. Financial institutions, and non-financial firms, also relied excessively on short-term, external funds. These weaknesses made it difficult to withstand even a small shock or a reversal of creditor confidence.

According to Bhalla, the exchange regime also played an important role in the crisis and its spread — East Asia's fixed or managed exchange rates meant that sooner or later a low-cost, speculative opportunity against the currencies would develop. A further question is whether these exchange rate policies also encouraged excessive inflows, by providing an implicit exchange rate guarantee to foreign investors and local borrowers (for as long as reserves held out). Thus, inflexible exchange rates may have increased the pro-cyclical variability of capital flows (See Hanson, 1994). Bhalla argues that floating exchange rates would be desirable to reduce such problems, as well as to allow markets to play a greater role in the economy and thereby increase economic freedom, which contributes to development.

In discussing the openness of the capital account and the management of capital flows, it is useful to distinguish between regulations that level-the-playing-field between

³¹ The current account deficits in Indonesia, Korea, Thailand, and Malaysia in 1995 and 1996 were substantially higher than in any other two consecutive years in the previous ten years. Thailand's Central Bank provided roughly \$12 billion in credit to the non-bank financial system between June 1996 and June 1997, equivalent to roughly $\frac{3}{4}$ of base money in June 1996. This, plus the provision of low interest loans to stock market investors, was a monetary stance at odds with the fixed exchange rate regime. In addition, the Thai Central Bank incurred substantial losses on the forward exchange contracts it had used to defend the baht, after it devalued. In Indonesia and Malaysia, the potential cost of large volumes of non-performing assets, recognized and unrecognized, became a worry to investors once Thailand failed to resolve its problems. Korea channeled an estimated \$100 billion of short term external capital to its industrial firms, in an effort to ease the impacts of a recession, while maintaining a relatively fixed exchange rate, and eventually guaranteed a substantial part of the banks' debts; the Government at least tacitly allowed this inflow by not monitoring it effectively.

foreign and domestic funding, and those that are aimed at restricting foreign capital inflows and outflows. One lesson of the East Asian crisis is that excessive dependence on foreign funds can develop if domestic taxes, reserve requirements, and regulations raise the costs of domestic financial intermediation.³² In East Asia, these policies, and the domestic banks' need to cover their large non-performing assets, helped make domestic funds more costly than foreign funds, especially given the exchange rate's limited movement.³³ Note also that this level-playing-field argument applies not only to financial intermediaries but also suggests that firms' direct borrowings offshore should be subject to charges that approximate the costs of these explicit and implicit taxes on domestic loans or bond issues. In Chile, for instance, off-shore borrowings were subject to a "reserve requirement".³⁴ In the Indian context, this approach would mean, for example, that both financial and non-financial firms taking offshore bank loans would be subject to taxes that are equivalent to the costs of the CRR, SLR, and priority lending requirements. Such an approach would not only reduce the attractiveness of foreign funds that arises solely from domestic financial repression, it also provides greater equality in funding costs/payment of the effective taxes on domestic financial intermediation across non-financial firms.

Capital account controls go beyond leveling-the-playing-field and discriminate against foreign capital inflows. They include limits on holding foreign exchange, limits on foreign exchange exposure and/or taxes on or minimum holding periods for foreign exchange inflows. Another type of control involves requiring financial institutions to hold additional capital against foreign exchange liabilities, to reflect the systemic risk that external capital adds to the macroeconomy. The arguments for such policies range from avoiding a loss of saving, to increasing monetary policy's effectiveness under a fixed exchange rate regime (which could also be done by allowing greater exchange rate

³² Another factor in the high lending rates in East Asia was the high level of non-performing assets.

³³ It is worth noting that in East Asia even hedged foreign borrowings would have been less costly than domestic bank loans, but few borrowers hedged their exposure. Of course, hedging a substantial portion of the large foreign exchange exposure would have raised the issue of systemic risk because of possible bankruptcy of those taking the risk.

³⁴ The requirement was set-up so that the cost was greater for short-term holdings than for long-term holdings--a fraction of the inflow had to be held in "reserves" for at least one year, which means a somewhat tougher restriction on (short-term) flows.

flexibility), to reducing systemic macroeconomic risk, to curbing speculative flows. Of course, there are costs to capital controls, in terms of reduced access to funding for investment and risk diversification. In terms of public finance theory, many of these policies can be considered taxes that have differential incidence and distortionary implications, particularly in the context of domestic inflation. Finally, there are issues of the implementation and effectiveness of such policies³⁵ and their impact, if maintained for a lengthy period, including their possible stimulus to corruption. The general conclusion seems to be that capital account controls may be of some help as a short-run, crisis management tool. They also have differences between domestic and international interest rates which, in concert with other types of financial repression have reduced domestic public sector debt service payments. However, capital controls' ability to affect the composition of the capital account is less clear and attempts to maintain them over longer periods may slow needed reforms, stimulate development of mechanisms to avoid the controls, and create a constituency, in the bureaucracy and the private sector, to maintain the controls beyond the time when they are justified by national interests (On these conclusions, see, for example, Claessens, et. al., Dooley, IMF, Montiel and Reinhart)

These considerations and worldwide experience suggest that the policies for managing the links to external markets go much beyond capital account controls. For example, in addition to leveling-the-playing-field, in the case of the public firms where the Government offers an implicit guarantee to external lenders, the Government, as owner, needs to limit offshore borrowing to prudent levels. More generally, the East Asian crisis, and the earlier Latin American debt crisis of the 1980s, highlight the need to maintain macroeconomic stability and sustainable current account and fiscal deficits³⁶

³⁵ The issue is not only over- and under-invoicing to obtain foreign exchange. For example, with various forward contracts and derivatives, often off-balance sheet, it is possible to appear to satisfy holding period requirements while actually leaving the system exposed to short term outflows.

³⁶ The 1980s Latin American crisis showed the dangers of large fiscal deficits and large offshore borrowing. However, the recent crisis, as well as the experience of Chile in the 1980s, suggest that a small fiscal deficit is a necessary, but not a sufficient condition for avoiding an external payments crisis — the private sector can still borrow offshore excessively, particularly when there are excessive incentives to borrow offshore rather than domestically.

and to strengthen the financial system, particularly the incentives for prudent behavior, the regulatory and supervisory framework, and the long term capital market. A prerequisite for greater capital account convertibility, as well as, more importantly, rapid, sustainable development, is thus to meet the challenges listed in the introduction, that is to achieve a low fiscal deficit and a sound financial system.

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