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Risk Governance at Financial Institutions: Life after the Subprime Crisis

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1. Introduction

The speed and severity with which the subprime crisis spread across financial markets and institutions, transcending national boundaries, caught market participants, policymakers, and researchers by surprise. The causes and consequences have been extensively documented with a broad consensus on the factors that triggered the crisis, and the channels through which it spread across the global economy (Robertson, 2008; Bailey, et al. 2008). The debate has now turned to policy interventions seeking to address the root causes of the crisis, and the measures that can be initiated to minimise damage inflicted by future crises.

The poor performance of sophisticated quantitative models and the inability of bank management and regulators to identify the latent fragility in the financial system led to attention being focused on the links between corporate governance and risk management. A commission established by the Institute of International Finance (IIF) noted that "Failures in risk management policies, procedures, and techniques were evident at a number of firms. In particular, the lack of a comprehensive approach to firm-wide risk management often meant that key risks were not identified or effectively managed." (IIF, 2008, p. 10). Following an examination of decision-making within financial institutions, the commission stated unequivocally that it was "critical for governance to embed a firm-wide focus on risk. The recent market turbulence has provided clear evidence that effective cultivation of a consistent 'risk culture' throughout firms is the main enabling tool in risk management" (IIF, 2008, p. 11).

The impact on India's financial sector—especially banks—was limited. However as the economy continues to liberalise and integrate with the global economy, there are important lessons to be learned. The crisis underscored the need for effective monitoring of risk within financial institutions. There is much to be learned from the experiences of regulatory systems and institutions in developed as well as emerging market economies that were successful in escaping the ill-effects of the crisis. As India embarks upon the next generation of reforms, it would be useful to be cognizant of the new and evolving risks the economy could face as it integrates with global financial markets.

This paper assesses the experiences of the Indian banking sector during the global financial crisis of 2007. The focus is on the links between corporate governance and risk management. The complex nature of the governance of banks requires an approach going beyond the confines of the traditional constructs of corporate governance that concentrate on the role of senior management and the board of directors. Bank governance should encompass the design and effective implementation of risk management policies, compliance with regulatory policies and supervisory norms, and cross-border regulatory issues necessary to ensure stability. The approach to governance in this paper thus encompasses public governance—defined here as including bank regulation, the design of the institutional infrastructure within the bank that facilitates risk management, as well as corporate governance. The embedded assumption is that significant regulatory changes are necessary to improve standards of corporate governance, and principles-based standards of conduct alone are inadequate given the complex nature of banking. An explanation of the rationale of this approach is provided below.

We start with an overview of the literature on the governance of financial institutions, with a focus on risk management. This provides the context for the paper and helps locate it within the broader debate on governance, risk management, and performance of financial institutions. As recent experience has shown, this has implications for the performance and stability of the domestic financial system. In an era of globalisation it has ramifications for systemic stability and resilience to external shocks, especially of the type experienced during the subprime crisis. This is followed by a brief account of the global financial crisis. We describe the response of the monetary and regulatory authorities, and then focus on issues germane to the governance and risk management of financial institutions. An account of the channels of transmission of the financial crisis is followed by an analysis of how effects of the crisis were mediated by the structural and institutional characteristics of the Indian banking system. The concluding section provides some policy prescriptions that can be gleaned from the experiences over the past two years.

2. Corporate governance and risk management in banking

Failures in governance, regulatory oversight, and risk management are acknowledged to be central to an understanding of the crisis (IIF, 2008; IMF, 2009; Kirkpatrick, 2009). Governance failures occurred in developed economies with the most sophisticated financial institutions. The ongoing debate on reforms is considering comprehensive changes in the way financial institutions are regulated and governed—reforms that may constitute a paradigm change in the nature of governance of the financial sector.

Sound corporate governance "encompasses institutions and practices designed to ensure that those running companies serve the interests of those who own them" (Litan et al., 2002, p. 2). Corporate governance encompasses institutions, regulatory structures, establishment of incentive structures, and adherence to codes of conduct and fair business practices. While corporate governance has received a great deal of attention in the media and in research, the governance of banks has been curiously neglected (Caprio et al., 2007; Barth et al., 2004, 2008) While this may appear puzzling, an examination of the issues and challenges surrounding governance of financial institutions sheds light on this issue.

Banks are complex institutions; three characteristics distinguish them from other firms. Banks are extremely opaque, highly leveraged, and they are extensively regulated. Each of these traits has a bearing on the governance of banks. Further, through their operations and the resultant impact on the economy, banks engender strong externalities.

Opaque portfolios

The value of a bank portfolio is extremely difficult to gauge. Share prices are generally reliable indicators of the health of non-financial firms, however in the case of financial institutions capital markets have often failed to detect (let alone predict) incipient problems. The Asian Financial crisis of 1997–98, the repeated crises in Latin America through the eighties and the nineties, the crisis in the Scandinavian banking system in the early nineties, the subprime crisis of 2007, are all instances where capital markets did not provide any indication of the problems brewing within banking systems. It is challenging to assess the strength of a bank's balance sheets with a degree of accuracy comparable to that which can be achieved for non-financial firms. The quality of loans—the main assets for most banks—is not easily observable and can be kept hidden for extended periods of time. A widely used stratagem is the process of ever-greening of loans, whereby banks extend new loans to cover missed interest payments, subsequently reporting the loans as new assets. Banks can also rapidly alter the risk composition of their assets through market trades. Money-centred banks often tend to engage in such behaviour using short-term borrowings. As recent experience with securitisation of loans demonstrated, banks can take on risks, and transfer them through repackaging securities, on to other participants in the financial system (or financial markets). Thus the opaqueness of bank portfolios makes it difficult for outsiders to monitor bank's financial health.

High Leverage

Bank fragility is heightened on account of the high degree of leverage they carry. Their liabilities are primarily in the form of deposits and (in the case of larger banks) interbank loans or borrowings in money markets.

Securitisation of loans has enabled banks to further increase leverage. During periods of uncertainty these loans can dry up abruptly; banks also face the risk of runs on deposits. The high degree of leverage compounds a bank's vulnerability to external shocks; liquidity problems can quickly turn into solvency problems, threatening the very existence of banks. Poor credit decisions lead to misallocation of capital, thus hampering prospects for growth. Guaranteeing of bank deposits with what are effectively public funds further necessitates public oversight. Monetary authorities justify deposit insurance on the grounds that it precludes incentives for runs on banks deposits.

Regulation

Problems in the banking sector can generate strong externalities that permeate the economy. The consequences of the failure of a large bank are very different from the effects, for instance, of the failure of a large steel plant or an airline of the same size. Bank failures result in drying up of liquidity. This can result in non-financial firms find themselves unable to access credit—the lifeline for the corporate sector. Small or medium sized firms that hold very limited cash reserves and are unable to access liquidity through other channels are especially vulnerable to changing credit market conditions. This was vividly evident in the severe impact of the credit crunch on the SME sector in the affected economies. For non-financial firms the inability to obtain funding from banks during the crisis created serious liquidity problems, leading to potential solvency problems.

The externalities generated by a bank's operations, especially in the event of a banking crisis, necessitate extensive regulation. Bank stability can thus be seen as a public good. Banks play a pivotal role in the execution of monetary policy; their lending decisions determine the type of investment projects that are undertaken in an economy. Thus banks have a powerful impact not only on financial stability, but also on growth prospects in an economy. Banks are, and in the foreseeable future will continue to be, among the most extensively and intensively regulated entities. This is reflected in the power accorded to regulatory agencies, the emergence of international accords such as Basel I and Basel II, and state ownership of banks.

The opaqueness of bank portfolios coupled with the high degree of leverage underscores the need for regulation and close supervision of bank activities. The recent financial crisis has revealed the vulnerability of banks to developments in the macro economy, elsewhere in the financial sector, and indeed, in the global economy.

Unique challenges in governing bank behaviour

The negative externalities that result from bank failures necessitate higher standards of governance than required in the case of non-financial firms. Problems at banks almost inevitably arise on account of flaws or lapses in risk management. This could be due to poor assessment of credit risk (as witnessed during the Asian Financial Crisis of 1997–98), or unhedged exposure to derivatives (Allied Irish Bank), poor foreign exchange risk management, or plain fraud, neglect of credit risk and systemic risk (the subprime crisis of 2007), or inadequate liquidity risk management (the subprime crisis again). Prudential regulation and supervision, and the role of market discipline in bank monitoring and governance inextricably links risk management with corporate governance and regulation.

Corporate governance of banks entails challenges that are substantially different from the governance of non-financial firms (Demirguc-Kunt et al., 2004; Erkens et al., 2009; Laeven & Levine, 2008). The traditional focus on shareholder value or on conflicts between shareholders and debt holders offers an incomplete picture of governance problems at banks. The presence of safety nets in the form of deposit insurance or an implicit guarantee in the case of state-owned banks, as well as the 'too big to fail' approach to dealing with potential bank failures distinguish banks from other firms. The indirect costs of a bank failure are borne by the economy, manifest in a reduced supply of credit and a slowdown in investment and loans to finance consumption expenditures. The direct costs in the form of payments to depositors, or government assuming control over failing banks or capital injections fall upon the exchequer.

Stakeholders in banks are different from stakeholders in other corporate entities. Aside from shareholders and bondholders; depositors, regulators, the government, and the broader public all have a direct interest in ensuring the viability and stable functioning of banks. Banks generate profits by intermediating funds and taking risks. Profits from bank investments are directly related to the level of risks taken. Incentive structures for bankers lead them to take on risks with the benefits from risky investment strategies accruing to bank management, and the losses being borne by the broader economy. As an influential commentator put it, "this is the only sector where the gains are private, and the losses are socialised" (Wolf, 2008). These deposits are insured, invariably by a government-owned institution. As current and past crises have demonstrated, in episodes where bank deposits were not explicitly insured, a financial crisis or looming bankruptcy would inevitably result in the government stepping in to provide guarantees to depositors in order to ward off a run on deposits. The presence of deposit insurance creates moral hazard problems, inducing banks to take on excessive risk secure in the belief that a positive outcome would yield substantial profits, while the costs of a severe loss —even one jeopardising bank solvency—would be borne by the government, either through deposit insurance or through a bailout of the failing bank. Thus sound internal controls and effective corporate governance complemented by external supervision and regulation are vital for the effective governance of banks.

Link between bank governance and risk management in banks

This paper takes the stand that effective governance of financial institutions requires a coordinated approach between corporate governance and public governance, the latter being manifest in the nature of the regulatory regime. Experience shows that sound risk management in banks is an extension of effective governance. This is clearly evident from Basel II and the banking reforms that have been proposed in the aftermath of the subprime crisis. An examination of the governance of banks necessarily has to be located in the broader context of risk management and public governance. The unique characteristics of banks—opaque portfolios, high leverage and extensive regulation—and the manifestations of systemic effects in the event of a banking crisis suggest that bank governance requires a unique approach, encompassing both public as well as corporate governance. In our approach, public governance is reflected in the design of regulation and the effectiveness of regulatory authorities. The subprime crisis has graphically demonstrated how risk management is central to governance of banks. Effective risk management entails not only monitoring of a bank's operations but also ensuring adherence to regulatory norms and principles of supervision prescribed by the monetary authorities. This is important since in the recent crisis banks were vulnerable to systemic and liquidity risks that developed on account of aggregate activities in the financial system, well beyond the purview of individual banks. The last two years have demonstrated how failures in regulatory oversight shaped the response of banking systems to the subprime crisis.

Three points provide the rationale for our approach. (1) Research on the subprime crisis (including Stulz, 2009, among others) reveals that national regulatory regimes rather than bank-specific characteristics had a stronger impact on bank performance and the stability of the banking system. Economies such as Canada and Australia, though deeply integrated with the global economy, escaped the worst of the crisis. This was largely due to the regulatory restrictions governing the levels of leverage, and limits on the exposure to off balance sheet activities. (2) Studies conducted at the IMF (2009), the World Bank (Stephanou, 2010), and by other researchers on the experiences with financial crises since the early eighties, show that a crisis spreads rapidly across banks within a country, given the strong linkages across banks via the interbank market, money markets, and depositor behaviour. During times of financial stress, bank level differences were quickly subsumed by the systemic nature of the crisis. The effectiveness of domestic regulation and structural characteristics—in particular the business model adopted by the bank—determined the severity of the impact of the crisis. (3) Extant research shows that the effectiveness of bank level governance is defined by the prevailing supervisory regime, and the extent to which regulation and prudential supervision are executed by the monetary and regulatory authorities (Barth et al., 2004, 2006). Given the nature of banking, this has an important bearing on the stability of the banking system, and thereby on the financial system and the economy.

Thus the starting premise for this paper is that corporate governance of financial institutions is inextricably tied up with broader issues of regulation (public governance in the context of the financial sector), and together they have a profound impact on risk management in financial institutions.

Banks are affected by developments and risks such as liquidity and systemic risk, that are external to the bank and beyond its scope and capabilities to monitor or regulate. The identification and management of these risks require regulatory intervention. This creates a need to redefine the role of governance of banks. The traditional banking model—where the bank is a stand-alone entity—is clearly inadequate for the existing realities of financial markets and institutions. The development of the 'shadow banking system' through which risks were transferred from banks to financial institutions and capital markets further reinforces the need for an approach that integrates corporate governance with public governance (regulation).

3. Global Financial Crisis

The origins of the 2007 crisis lay in subprime mortgages extended by banks in the United States. These loans accounted for nearly 80% of the mortgages extended by financial institutions. A large proportion of the mortgages that were based on adjustable rates started defaulting when interest rates began to increase in early 2007. The default rates accelerated as the initial discounted terms expired and repayments were subject to higher prevailing market rates.

The rapid proliferation of these mortgages was facilitated by low interest rates complemented by lax lending criteria. A steady flow of liquidity was provided by the sustained, increasing inflows of funds from overseas. This is a corollary of what is commonly referred to as a 'global imbalance' - a substantial and widening US trade and budget deficit financed by overseas purchases of US treasury securities. The availability of easy cash and low interest rates, reinforced by growth in the real economy, fuelled a housing bubble. The bubble burst when interest rates rose towards the end of 2006 and early 2007. The number of foreclosures accelerated rapidly. The problem was compounded by the development of a shadow banking system in which investment banks and hedge funds played a vital role in adding fragility to the financial system. These non-bank finance institutions provided funds to the housing market by underwriting and buying the securitised products. They were unregulated, and unlike banks were not subject to stringent capital adequacy and disclosure requirements. Further subprime loans, by their very nature were high credit risks. The shadow banking system did not have the resilience to withstand loan defaults that could not be detected until it was too late. This substantially compounded fragility in the financial system.

The risks to the broader economy, including institutions outside the United States stemmed from investments in derivative products arising out of subprime mortgages. Most transactions outside the banking system fell beyond the purview of regulatory oversight. Investments in these products by major multinational banks around the globe, and the underwriting of credit default swaps by insurance companies, resulted in growing systemic risk. Moral hazard problems within the banking system and the shadow banks underlay much of what transpired in the financial system, as lending fuelled by easy cash and complete neglect of prudential norms led to the growing housing bubble. The communiqué issued by theG20 leaders pointed towards severe lapses in governance and risk management, as well as policy errors earlier in the decade as the core causes of the crisis. (G20 Communiqué, 2009).

The Global Financial Stability Report published by IMF in early 2009 (IMF, 2009) estimated total losses on account of the crisis at over $4 trillion. As bond and equity prices fell and the interbank market dried up, panic spread among investors and financial institutions. The rapid increase in redemptions at mutual funds and hedge funds led to abrupt outflows from emerging markets, triggering sharp falls in equity markets around the world. Liquidity dried up as banks and other financial institutions scrambled to meet their obligations, resulting in nervousness in financial markets and rapidly increasing interbank rates. Panic about the credit worthiness of even blue chip borrowers led to a virtual freeze in money markets. The impact on emerging markets including India was sharp and swift. Deleveraging resulted in sharp cutbacks in the flow of funds to emerging market economies.

In emerging market economies including India, the initial belief was that Asia had 'decoupled' from the West, reflected in a negligible economic spillover. However during the latter half of 2008, the collapse of Lehman Brothers accentuated the impact of the crisis. It was soon felt in emerging market economies through increasing interest rates, tightening credit market conditions, and cutbacks in exports (Dooley & Hutchison, 2009). Dooley and Hutchison's sample of fourteen emerging markets did not include India; however the response of Indian markets coincides closely with that of the other emerging markets. The results suggest that the emerging markets had decoupled till the collapse of Lehman Brothers; subsequently, the study shows strong linkages between developments in the US market and the cluster of emerging markets in the sample. The links manifested themselves initially through credit markets, and following the economic slowdown, soon after were transmitted onto the real sector.

4. Impact on India

Notwithstanding the effects of the recession in developed economies and the global liquidity crisis, India was relatively unaffected by the global financial crisis. Whether this was due to the policy interventions or regulatory oversight, structural factors, or plain luck merits scrutiny.

Over the past two decades India has gradually integrated into the global economy. Trade barriers have been substantially lowered, though compared to the economies of East and Southeast Asia, India still remains relatively closed. The dependence on trade as an engine of growth is low. Trade as a percentage of GDP has grown from 13% of GDP in 1991 to 30% of GDP in 2008. The current account measured by current receipts and payments rose from 19% to 53%, and the capital account rose from 12% to 64% over the same period. Compared to the neighbouring economies of Southeast Asia, Latin America, or the European economies, the Indian economy may be deemed partially open with growth tied to domestic demand. While full capital account convertibility may still take some time, the current account is open. Foreign direct investment has been growing steadily over the past several years. The restraints on capital account convertibility and the relatively small proportion of trade as a proportion of GDP helped the economy survive the worst effects of the subprime crisis.

Indian banks with very little exposure to subprime mortgages or products derived from these mortgages were relatively unaffected by the subprime crisis. The two largest banks which also happen to have relatively significant operations in overseas markets—ICICI and the State Bank of India (the largest state-owned bank)—had total exposure to credit derivatives amounting to $2.5 billion. Table 1 provides details of the subprime exposure of some of the major Indian banks; the data was compiled from publicly available media reports. The losses were on account of marking to market. As the credit crunch persisted, firms found it increasingly difficult to obtain bank loans. In order to augment the supply of liquidity, stimulate lending, and strengthen the capital reserves of banks, the Government of India negotiated a $4.3 billion loan from the World Bank in the last quarter of 2009, of which $2 billion was earmarked for bolstering the capital bases of state-owned banks.

Table 1: Subprime exposure

Subprime Exposure			
	Exposure*		**Provisioning ** (Rs crore)**
	$	Rs crore	
ICICI Bank	1.5 billion	6,000	100
SBI	1 billion	4,000	NA
Bank of India	300 million	1,200	5-6
Bank of Baroda	150 million	600	60

* Exposure to credit derivatives (estimated)—the mark-to-market losses on these portfolios could range from 5 to 10%.

** Provisioning for quarter ended September, 2007.

A study by the Reserve bank of India (RBI, 2010) revealed that aside from the few large banks mentioned earlier, none of the other Indian banks had exposure to subprime loans. In the case of the large banks, the losses were due to investments in collateralised debt obligations (CDOs) issued by institutions with subprime exposures. The losses among Indian banks came to the fore when marking to market. Subsequent to the collapse of Lehman Brothers, banks were advised to report their exposure. Out of 77 banks, 14 reported exposure to Lehman or related entities, most of which were not covered by the Chapter 11 filings by Lehman Brothers. The relative insulation of the banking sector also precluded the contagion effect that was manifest much more strongly in East and Southeast Asian banks.

RBI has pursued a conservative, gradual and calibrated approach to financial liberalisation. The capital account is partially open. The main source of fragility emerged through portfolio investment flows, also known as “hot money”. Indian companies had borrowed heavily in international debt markets in the form of “external commercial borrowings”. The substantial volume of foreign exchange reserves built up over the past decade has provided a cushion and buffer against sudden capital flows.

The initial impact was felt through financial markets as foreign institutional investors rapidly withdrew in response to redemptions and accelerating deleveraging by investors in mutual funds and hedge funds. After the collapse of Lehman Brothers, and the resultant tightening in money markets, the impact was quickly transmitted through money markets resulting in tighter conditions in credit markets.

As indicated in Table 2, the sharp reversal in capital flows was instrumental in transmitting the effects of the subprime crisis to India. This also posed additional challenges to the RBI’s is efforts to maintain stability in currency markets. As shown in Table 2, total capital outflows were to the tune of $13b in 2008. This was the first time since 1997 that there was a net outflow of funds by Foreign Institutional Investors. This resulted in pressures on the domestic credit markets as well, and the interbank rate rose to 20%. It wasn’t until the RBI intervened by cutting both the statutory liquidity ratio (SLR) and the cash reserve ratio (CRR) that pressures on the credit markets eased. Larger firms experienced serious challenges in raising funds in international markets. This was evident even for a highly rated group such as the Tatas, which eventually had to seek recourse to expensive debt in the domestic market. A sizable buffer of foreign exchange reserves and healthy domestic economy thwarted any concerns about debt servicing, a reflection of how far the economy had come since the crisis in 1991.

Table 2: Trends in capital flows (in $ million)

Component	Period	2007-08	2008-09
Foreign Direct Investment to India	April–August	8,536	16,733
FIIs (net)	April–Sept 26	15,508	-6,421
External commercial borrowings (net)	April–June	6,990	1,559
Short-term trade credits (net)	April–June	1,804	2,173
Memo			
ECB approvals	April–August	13,375	8,127
Foreign Exchange Reserves (variation)	April–September 26	48,583	-17,904
Foreign Exchange Reserves (end-period)	September 26, 2008	247,762	291,819

The data on FIIs presented in this table represent inflows into the country and may differ from data relating to net investment in stock exchanges by FIIs.

The impact on the real sector was felt through three channels—trade, finance, and confidence in broader market conditions. Trade was reflected in falling exports and demand for IT outsourcing. Low confidence in market conditions was reflected in falling asset prices, as well as a migration of funds from private banks to state-owned banks, triggered by the belief that government banks were safer. The overall effect on the Indian economy was muted as growth in India had been more dependent on domestic demand and investment financed through domestic savings.

In the real sector, the abrupt slowdown in the West led to sharp falls in exports and outsourcing—the mainstay for the Indian software industry. The problem was briefly compounded by fraud and governance related issues at Satyam Computers.

The government and the monetary authorities were quick to respond. The authorities sought to increase liquidity and provide easier access to the sizable currency reserves. This was complemented by a substantial fiscal stimulus. RBI intervened by lowering the cash reserve ratio and the statutory liquidity ratios so as to inject liquidity into the economy, and to increase the supply of loanable funds. RBI also intervened through open market operations to bolster liquidity. The liquidity adjustment facility (LAF) and the market stabilisation scheme (MSS) were deployed to mobilise funds. Notwithstanding the ongoing turmoil in the global financial system, it is noteworthy that the authorities declared their intent to continue liberalising the capital account and implementing further reforms in the financial sector.

Prudent loan loss recognition norms had already helped lower the proportion of non-performing loans. By mid-2008, when the full impact of the crisis was felt in India, banks were well capitalised, with average Tier 1 ratios exceeding the Basel accord requirement of 8%. The government was quick to step in with refinancing facilities and credit guarantees to maintain the vital flow of credit to the SME sector as well as other enterprises.

The government also introduced a fiscal stimulus, in the form of tax cuts, enhanced investment in infrastructure, and a broad based increase in government spending. Three rounds of fiscal stimuli were initiated between December 2008 and March 2009.

5. Analysis of developments in India

Why was India relatively unaffected by the crisis?

Public Governance

The overarching objective of monetary authorities in India has been financial stability. The fact that a large proportion of the population lies below or close to the poverty line renders economic well-being and stability extremely sensitive to inflation. Price stability is considered vital for economic and political stability, and for creating an environment conducive to investment. The underlying belief that informs policy formulation is that the health of the financial sector is contingent upon prospects in the real sector. This perspective has resulted in a cautious gradualist approach to financial liberalisation.

Indian banks continue to remain well capitalised. By March 2009, common equity accounted for 7% of risk capital against the norm of 3–4% for most international banks. Tier 1 capital reserves were 13.75% against 9.4% for large multinational banks. The leverage ratio was at a judicious level of 17%. With high capital reserves, Indian banks were well equipped to deal with the initial losses as some borrowers started to default on loans. In spite of the early problems at ICICI bank and the State Bank of India, the banking system remained well capitalised at levels significantly above those mandated by the Basel accord. Increased provisioning against nonperforming loans that had been implemented earlier helped to sustain confidence in the banking system,

Approximately 70% of banking in India continues to remain under state ownership. Though the market has opened up to new private sector banks, foreign banks are allowed only on a case by case basis. Existing foreign banks have been allowed to expand operations, and licenses extended to new entrants. The Indian rupee is fully convertible on the current account, and partially convertible on the capital account; however full capital account convertibility is unlikely to take place in the near future. Thus a major channel of transmission of financial instability does not exist. The convertibility restrictions keep the debt markets relatively insulated from global financial markets thereby limiting contagion effects and moderating the adverse effects of the global crisis.

Indian banks have traditionally followed conservative strategies in international markets as well as in the domestic arena. Limited levels of off balance sheet activities and the small market for complex derivatives coupled with low leverage ratios kept the risk profiles of banks at modest levels, compared to larger multinational banks. The limited market for securitisation also precluded opportunities for banks to generate loans without exercising due diligence. RBI maintains strict controls on sectoral exposures, especially on lending to the volatile real estate sector.

Regulatory authorities have been cautious in allowing development of speculative markets that could undermine financial stability.

The fragmented state of Indian banking, or rather the absence of very large banks, resulted in a situation where most banks lacked the resources to enter into complex derivative transactions in international markets. The lack of commensurate expertise in international operations induced banks to focus primarily on domestic operations. Thus the smaller average size of Indian banks (relative to banks in China for instance) limited opportunities for engaging in risky transactions in international markets.

RBI has been pursuing a pre-emptive counter-cyclical monetary policy which helped mitigate the effects of the business cycle. This has translated into raising risk weights and tightening the provisions against loans to sectors with rapid credit growth, thereby pre-empting mispricing of risk. This has been true of lending to the real estate sector, and investments in mutual funds by banks. Monetary policy has also been well supported by macro-prudential measures.

An important lesson from the subprime crisis is that the national regulatory structures had a much stronger impact in mitigating the effects of the crisis than a bank's governance structure. Banks with international operations, especially those in the private sector were affected more by the crisis on account of their investments in mortgage derivatives, reflecting an inability on the part of a bank's governance structure to rein in risky investments.

Lessons to be learned from the subprime crisis

The crisis has revealed systemic failures in risk governance, in regulatory oversight and in the design of risk management systems and compensation systems for executives in the financial sector. "Risk management systems failed in many cases due to corporate governance procedures rather than the inadequacy of computer models alone: information about exposures in a number of cases did not reach the board or even senior levels of management, while risk management was often activity rather than enterprise-based" (Kirkpatrick, 2009, p. 2).

Shortcomings in regulation

An analysis of the gaps in regulatory oversight, and more importantly of the scope and design of regulation is central to an understanding of the causes of the crisis. The multiplicity of regulatory authorities complicated issues of jurisdiction in the United States. Conversely, in the UK the single regulator—the Financial Services Authority—didn't fare much better in identifying latent risks. Managing market developments—including the identification of risks associated with the widespread diffusion of derivative products based on subprime mortgages—seemed beyond the capabilities of the regulatory authorities. Existing risk management models or the models seeking to capture macroeconomic risks were unable to endogenise systemic risk or liquidity risk.

In an environment characterised by a surfeit of liquidity, an extended bull market run, low interest rates, and a search for returns by investors, asset prices underpriced risk, leading to positions that were much riskier than warranted by market conditions. In the United States, neither the Federal Reserve in the case of commercial banks, nor the Securities Exchange Commission (SEC), in the case of rating agencies and investment banks and brokerage houses, were able to effectively identify, let alone monitor, risk taking. The absence of a clear division of responsibilities across the different authorities allowed market players to generate and repackage risky products, and off load them from the balance sheet. The conduct of credit rating agencies in the years prior to the crisis revealed serious conflicts of interest. The extremely lax standards in rating structured products are well documented (BIS, 2008; SEC, 2008). The models deployed by rating agencies were deemed flawed, and the ratings business was often subject to severe conflicts of interest leading to inflated ratings for highly risky securities. The absence of clear accounting standards and disclosure for off balance sheet products complicated the challenge for market participants to establish fair value for traded products.

Corporate governance

The unique nature of banking necessitates a broader role for the board of directors. The mandate for a bank's board of directors should include the review and guidance of corporate strategy; risk management, including the establishment of systems of controls; the guarantee of the integrity of the corporation's accounting and reporting systems; and the alignment of key remuneration with the long term interests of the company and its shareholders. Each of these objectives has a bearing on the risk management function.

The boards of directors of banks lacked the expertise and information necessary to guide bank behaviour. Bank boards were generally unaware of the implications of the growth of a shadow banking system. A sustained flow of profits from new mortgages without an observable change in the bank's risk profile helped sustain an air of complacency. Few boards were active in guiding or monitoring the development of a business model. In the larger money centred banks, the trading desks took on risks without adequate guidance from the board, often without a clear mandate, and seldom with input from the risk management department.

Risk management

At a broader level, research conducted by multilateral agencies and supervisory groups into the causes of the crisis uncovered several fault lines. The risk management function was often delegated to the back office through the growth period of the nineties and the early part of the current decade when bank earnings rose steadily. The function was decentralised without clear lines of communication across divisions, e.g. between commercial banking and the trading desk, or between commercial and investment banking in the same bank. The outcome was a compartmentalised approach to risk management with divisions focusing exclusively on risks germane to their own departments. Boards were remiss in creating an environment that would facilitate a broader perspective on risk management within the organisation. Financial firms persisted with a compartmentalised "silo" approach to risk management, neglecting the linkages between different risks. As a result, credit risk was assessed independent of operational risk. Market risk would need to be assessed at the institution level, while default risk would be the mandate for individual divisions. Underlying this was the prevailing culture wherein risk management was deemed important only during periods of volatility. In a bullish market the pursuit of profits pushed cautionary voices to the background, with risk managers lacking the authority or voice to effectively communicate their concerns within the organisation. Risk managers seldom had access to the top management, let alone an effective voice in setting direction or placing constraints on risk strategies.

The silo approach also resulted in an over reliance on purely quantitative models based on a restricted set of assumptions. These models drew on the historical behaviour of asset prices and volatility indices, which resulted in the inability to spot outliers or "black swan" events. The prevailing focus on purely quantitative models continued in the absence of oversight of the risk management function at the board level. Structural changes in the financial system, such as the expanding flow of funds across national boundaries and between financial institutions and financial markets through securitisation, and the growth of the fund management industry warrant a macro level assessment of newly evolving risks. The problems were compound by the compartmentalised approach that prevailed in most financial institutions and the absence of guidelines or direction by regulatory authorities who were best placed to identify evolving systemic risk. Regulatory authorities and risk managers were unable to identify systemic liquidity problems that could crop up in the event of rising defaults. The fact that risk management systems failed in some of the most sophisticated financial institutions reflects failures in governance as well as oversight of the risk management function itself.

While enterprise risk management (ERM) has been a widely advocated approach to risk management, few banks have actually implemented it. ERM requires an explicit statement of objectives, and more crucially mechanisms for information dissemination and risk assessment that would facilitate identification of different risks, and create the ability to consolidate and identify the interaction between different types of risks.

Inadequate disclosure

Within banks, the transmission of information on risk has been poor. A survey of risk management practices at banks conducted by the consulting firm KPMG (2008) revealed that many banks were lax in establishing a clear protocol for reporting the consolidated risk positions for the bank. The Senior Supervisor Group's Report (2009) revealed serious shortcomings in the identification of exposure to derivative securities. Bank's boards had limited understanding of the dynamics of growth of the bank's balance sheets and the associated risks and liquidity needs. Few boards seem to have taken note of the warnings on a build up of systemic risk that were documented in reports by the Financial Stability Forum (2008), Financial Services Authority (2009), the Bank of England's Financial Stability Report (2009), and in various BIS publications.

The complex nature of bank transactions and the business model followed by the larger money-centred banks complicated the collation of information across the firm, especially an assessment of latent risks. The fragmentation of risk functions across divisional lines also prevented an assessment of the overall risk parameters in the firm.

Proactive risk managers often found it difficult to articulate their concerns and to convince senior management and the board of disquieting results revealed by stress tests and associated scenario analyses. This was a reflection of the broader attitude at large banks—generating profits was the primary objective, and banks found strength in numbers as long as other banks were taking on similar risks.

Alignment of remuneration with bank's longer term interests

The most serious governance shortcoming to emerge from the crisis has arguably been the inability to align a bank's long term interests with the senior management's remuneration packages. Compensation packages created incentives for risk-taking whereby management would benefit in the event of favourable outcomes, while shareholders, and in the worst case scenario the taxpayer, bore the losses.

Incentives are distorted not only at the senior management level but also at the trading desks. Financial targets are seldom measured against underlying risk, thus underestimating and endangering bank capital. Basel II was intended to remedy this to some extent; however it may have compounded the problem by allowing banks to use their own risk models to calibrate the level of capital they were required to hold. As was evident from the crisis, the internal risk models significantly underestimated the risk exposure of their positions. The Basel accord ignored aggregate leverage ratios, a simple yet, in hindsight, effective measure of overall risk.

The problem is compounded by the short-term nature of incentive structures, especially those designed for the trading desks and structured products. The high proportion of variable pay, e.g. as bonuses, relative to fixed pay, creates incentives for short –term high risk strategies. Managers are rewarded for taking 'alpha' (non-systematic) risks (Rajan, 2008). For instance, by repackaging securities and counting on continuing low interest rates, bankers were able to generate high returns. This strategy however entailed ignoring hidden tail risks, which could, and indeed did, result in highly negative returns.

Why India should not be complacent

Areas of vulnerability

As noted earlier, the subprime crisis had a relatively limited impact on the Indian economy. This was partly due to RBI's sound and prudent policies, and in part due to the conservative nature of Indian banking. However as the economy continues on the trajectory of deregulation and greater integration with the global economy, a number of challenges are likely to emerge. The subprime crisis is certainly not the last financial crisis to occur. Vulnerability to changes elsewhere in the global economy is only likely to be heightened in the near future as financial markets become more integrated, enhancing vulnerability to external shocks and to greater competition and financial innovation within the economy. There is much that can be learned from the experience of other countries during the subprime crisis as well as from the past experience of economies at a level of development similar to where India is today.

As the economy and the financial sector grow, banking in India will experience major structural changes. Banks will encounter new kinds of risks—structural, geographic, counter-party, etc. Basel II places a great deal of emphasis on internal monitoring. For this to work, substantially improved disclosure and capabilities to assess risk are imperative. The new private sector banks are on a rapid growth trajectory, which is likely to accelerate not only through organic growth, but also through domestic and overseas acquisitions.

Banks are likely to expand operations overseas, with greater diversity in portfolio holdings, a rise in the share of fee income, and greater use of derivatives. Deepening links with capital markets, especially through securitisation and increasing bank investments in mutual funds will enhance the volume and volatility of the movement of funds between banks and financial markets. As capital markets develop and banks turn to off-balance sheet activities and fund management, trading activities will assume greater importance. This adds to the riskiness of bank portfolios.

With firms raising funds through new channels and in overseas markets, there will be a commensurate increase in risks. The trend towards disintermediation and growing portfolios of non-bank financial companies (NBFC) will raise systemic risk in the financial system. Bank management as well as bank's board of directors need to be at the forefront of these changes.

The emphasis on financial inclusion results in a need for innovative financing methods and processes. This may inevitably call for greater volume of lending to 'subprime' borrowers, and some form of securitisation—at the very least, increased interaction with financial markets.

Sustained real sector growth will lead to greater competition for funds, narrower interest margins, and increased recourse to short-term funding. These structural changes are likely to result in tighter margins and a trend towards riskier positions and increased leverage. Periods of growth in emerging market economies are also accompanied by rapid increases in asset prices in equity markets and the real estate sector, increased leverage ratios, recourse to short-term funds, increased lending to high growth sectors characterised by high leverage ratios, all of which add to financial fragility.

As with other industries, the banking sector in particular suffers from a paucity of skills at the level of the board. The trend towards increasing liability on the part of directors for acts of malfeasance has led to an inherent reluctance on the part of many qualified professionals to join bank boards.

The next section attempts to collate the experiences of other economies during the subprime crisis in order to glean some insights for an emerging market economy, such as India.

Measures required for securing a stable future

As observed earlier, the level of integration with the global economy, especially in the domain of finance, is only likely to grow in the future. This will inevitably increase exposure and vulnerability to trends in global financial markets. The subprime crisis provided a useful wake-up call and an opportunity to plan for the future. There are several sources of vulnerability that need to be addressed—the role of other market monitors, including credit rating agencies, investor associations, the regulatory agencies, minority investors, depositors and outside shareholders are some of them. The first unequivocal lesson from the subprime crisis (and other past financial crises) is that regulation is an essential concomitant of corporate governance, and effective governance per se is integral to maintaining an efficient stable financial system. Table 3 provides a synopsis of proposed reforms and initiatives that could be meaningful for India in the years ahead.

Table 3: Charter for risk governance initiatives

	Regulators (Reserve Bank of India; SEBI, MCA)	**Corporate Governance**
Risk governance	• Address weaknesses in Pillars I & III of Basel Accord • Demarcate role and responsibilities of board in establishing risk targets and monitoring mechanisms • Prescribe guidelines • Grant explicit authority to CRO for overseeing risk and reporting and participating in board meetings	• Clearly assign of responsibilities for risk management across the organisation • Ensure clear understanding on part of boards regarding their role in establishing risk targets and risk management strategies
Risk management	• Articulate and adapt Basle II provisions based on experiences with subprime crisis • Establish independent board monitoring systemic risk • Establish framework for monitoring systemic liquidity risk • Prescribe risk management guidelines • Ensure that CRO reports to the board and is an active participant in board meetings; reportage on risk to be made part of mandatory guidelines	• Mechanisms for implementing Enterprise Risk Management approach • Risk management organisational silos (focusing on specific risks such as credit, market, liquidity risk etc.) to coordinate and synthesise their activities so as to encompass all lines of business and linkages therein • Risk management should be a front office function • Senior management (with board input and approval) to set the direction and articulate the firm's risk appetite • Roles and responsibilities to be articulated in written policies.
Compensation and oversight of remuneration packages	• Prescribe detailed guidelines for compensation aligning managerial incentives with long-term interests	• Oversee design of compensation packages, including split between fixed and variable components. • Monitor indirect compensation that aims to avoid direct controls • Ensure incentive structures at trading and sales desk are aligned with longer-term interests of bank
Disclosure	• Prescribe disclosure guidelines • Mandate, monitor and enforce disclosure • Embed special provisions relevant to financial institutions disclosure requirements in Clause 49 • Prescribe guidelines for financial and nonfinancial disclosure • Ensure adherence to international accounting standards	• Oversee implementation of disclosure guidelines • Develop comprehensive statement on governance

	Regulators (Reserve Bank of India; SEBI, MCA)	Corporate Governance
Role of board of directors	• Professional certification for directors • Separate position of Chairman and CEO • Independence of boards to be guaranteed • Board to clarify and formalise its risk management oversight role • CRO to have both implied and explicit authority and visibility for risk management. • Corporate risk committee to include finance professionals and business leaders • Risk management to be made an integral part of front office and deal-approval committees	• Activist boards demanding and obtaining holistic view of on and off balance sheet risks, and risk management strategies • Risk management division to actively participate in business and strategy discussions • Risk management division to seek guidance from and have access to the board in order to understand their objectives and perspective • Risk management division to receive guidance from the board in its oversight role

Regulation

The Reserve Bank of India, often charged with being too conservative found itself vindicated in the aftermath of the subprime crisis. Higher capital requirements, stringent portfolio restrictions, limits on securitisation, and high interest rates effectively checked many of the policies that laid the foundations of the subprime crisis.

RBI has gradually changed its regulatory approach from a one-size-fits-all to a risk-focused supervisory approach. This is a paradigm change as banks are being given greater autonomy to pursue fresh avenues of business and diversify their investment portfolio. This change puts a greater responsibility on banks to monitor their operations as earning and risk taking opportunities increase manifold. This change would also entail allowing greater leeway to market forces. Markets work efficiently if there is clarity in the information provided by the participants. Banks need to bolster their disclosure and governance standards and effectively manage their increased risk exposure. Increasing volatility and vulnerability in financial markets has reinforced the need for greater disclosure and timely and accurate monitoring of bank portfolios.

There is a need for a fundamental rethinking of the Basel II Accord. Pillar 1 which specified capital requirements following the internal rating based models developed by the banks themselves failed in its task of safeguarding bank capital. The market was unable to monitor, let alone discipline, banks that were taking on significant risks. The opaqueness of a bank's balance sheets complicates the external monitoring outlined in Pillar 3 of the Basel Accord. Drawing upon its legacy of effective stewardship of the economy over the past two decades, RBI could establish regulatory and supervisory guidelines that would help embed risk metrics in disclosure. The bottom line is the need for proactive regulation that ensures accurate and timely disclosure and provides external stakeholders with the resources to effectively monitor banks.

The crisis has reinforced the need for raising regulatory standards for governance and risk management. RBI could consider prescribing guidelines and standards for strengthening the role of the board of directors, and could create a framework for inducting proactive independent directors with experience in the financial industry, especially in risk management.

Corporate governance

As discussed earlier, corporate governance of banks is intrinsically challenging. Given the complicated and opaque nature of the business, bank governance requires specialised skills. Risk is easily diffused or transferred through trading activities, or through off balance sheet transactions. There is a serious global paucity of personnel who are qualified to be directors and are well versed in risk management. While India has a surfeit of talent in commercial and investment banking, risk management skills amongst senior management are limited. There is clearly a need for specialised training. The Institute of International Finance (IIF) and other agencies have proposed the need for skills certification courses for board members.

Compared to other emerging market economies, India has a sizable pool of skilled bankers. However in a highly regulated environment, there has not been a commensurate development in risk management skills. The institutional infrastructure for development and execution of risk management from within the firm is lacking. Risk management systems in the smaller state-owned banks and the older private sector banks remain outdated, with banks generally lacking personnel with the necessary skills. These banks also lack clearly articulated pro-active risk management frameworks.

The crisis has underlined a pressing need for fundamental changes in governance and risk management at banks. Like banks in most other economies, Indian banks have followed a silo like approach to risk management with a division focusing exclusively on credit risk or operational risk. The inextricable links between regulation and corporate governance and the rise of risks outside the banking system make it necessary for boards to ensure that regulatory norms are met, and the bank's risk management division is aware of the broader macroeconomic and systemic risk. For this to materialize, close coordination with the regulatory and supervisory authorities and a clear understanding of governance norms on the part of the board of directors is essential.

The board of directors should adopt a firm-wide focus on risk. Recent events have underscored the need for risk consciousness to permeate the bank. For this to be meaningful it is imperative that senior management (including the CEO) assume direct responsibility for risk management. At the operational level this would entail clarification of each division's role and responsibility, and the mechanisms for coordinating risk throughout the organisation. The compliance division must have access to senior management to be able to articulate concerns in a timely manner.

A recent development aimed at lending clarity to a bank's risk profile is an effort to articulate the institution's risk appetite, which would ensure that risk parameters are defined throughout the bank. The risk management department should accordingly define basic goals and strategy, and monitor performance over time. The definition of risk appetite should encompass all types of risk, including those arising from off balance sheet activities.

Role of the Chief Risk Officer

Risk management has traditionally been treated as a back office function, with the Chief Risk Officer (CRO) generally assuming an advisory role. The CRO seldom has a voice in the board room. In the current environment it has become imperative to guarantee independence and adequate funding for the risk management and auditing functions. The CRO needs to have direct access to the board, instead of communicating through functional heads. The CRO should be a senior member of the bank's staff with direct access to the board with independence from line business management, in order to have a meaningful impact on decision-making. The development of the shadow banking system points towards the need for expanding the scope of a CRO's jurisdiction to encompass control, management and oversight functions, as well as scrutiny of new product development, in addition to the traditional responsibilities of monitoring vulnerability to credit risk, credit concentrations, maturity mismatches and high leverage ratios.

Remuneration packages and incentive structures

It is essential for the board to oversee the balance between risk-taking and the longer term interests of stakeholders. Central to this is the oversight of incentive structures determining compensation systems. The board should have the expertise to define the firm's policy towards risk tolerance and to determine risk parameters over time, with periodic reviews. The bank's business model needs to be explicitly stated and monitored to facilitate the board's oversight functions.

The distorted incentive structures resulted in the remuneration systems leading to short-term high risk strategies by bankers oriented towards yielding high returns, have come under a great deal of scrutiny. The cumulative effect has been to render a bank's balance sheet positions unsustainable, and vulnerable to macroeconomic shocks. Incentive structures at the trading and sales desk have also served to enhance excessive risk-taking behaviour. The inability to measure the risk in such a situation makes it impossible to calibrate the risk adjusted cost of capital—an assumption underlying the Basel Accord.

Governance practices across Indian firms

A recent survey by the Associated Chambers of Commerce and Industry of India revealed rapid growth in the volume of non-performing assets (NPAs) held by Indian banks. On a year-to-year basis, net NPAs rose by nearly 35%. Recovery of these NPAs is crucial to the future stability of the banking system. RBI has taken pre-emptive action by establishing asset reconstruction firms; however these entities have been slow in getting off the ground. They are also crippled by the extremely slow pace of the legal system.

Corporate governance standards in India still remain weak by international standards, though there is marked heterogeneity across firms. As mentioned earlier, the onus of governance remains with the regulatory agency. Nevertheless bank boards can and, in many cases do, perform a vital role in ensuring effective governance and risk management. Indian banks are lacking in this regard.

State-owned banks account for approximately 70% of the total assets of the banking sector. The boards of these banks consist primarily of bureaucrats and other government nominees. These banks have exercised prudence in lending. Mandated priority sector lending and increasing competition with the new private sector banks and foreign banks are likely to affect their growth prospects and competitiveness. These boards are known to favour prudential policies, which was appropriate during the period when state-owned banks constituted a de facto monopoly. However in an era of increasing globalisation, proactive policies need to be factored in so as to avail of new lending and investment opportunities.

The need for improved disclosure and corporate governance is only likely to increase in the future as financial liberalisation continues. Lowering the cash reserve ratio and statutory liquidity ratio — essential if Indian banks are to enhance their competitiveness and lending within the domestic economy—will also allow for increased leverage and risk-taking. This makes improvement in governance standards imperative.

Further deregulation of interest rates is also essential for enhancing the competitiveness of banks vis-à-vis non-bank financial companies. Banks have deployed excess liquidity to lend to NBFCs and have placed funds in debt-oriented mutual funds. The movement of funds into these channels reduces the effectiveness of RBI's regulatory oversight.

While a number of official studies and committees have delved into the challenges associated with effective corporate governance in India, there has been limited discussion on the idiosyncrasies and special challenges related to the governance of banks. The government committees established to examine issues of governance (Kumara Mangalam Birla Committee, 1999; Narayana Murthy Committee, 2003; J. J. Irani Committee, 2004) have focused on traditional issues such as the composition of the board, the role of independent directors, etc. with little attention paid to specific issues related to governance of financial institutions, and even less to links between governance and risk management.

The Confederation of Indian Industries (CII) produced one of the earliest codes of best practices in corporate governance in the region in 1998. The India code of Corporate Governance was approved by the Securities Exchange Board of India (SEBI) in 2000. It led to changes in listing rules in the stock exchange, most significantly in the newly formulated Clause 49.

Clause 49 has been a notable development in the evolution of corporate governance in India. Clause 49 of the Listing Agreement enunciated by SEBI spells out the governance code for listed firms, with a special focus on the role of directors at banks. It is mandatory for corporates to comply with its provisions. It also attempts to induce banks to articulate their risk management framework, and raise awareness among all relevant employees of the bank. This clause provides a clear link between risk management and governance in financial institutions, and stipulates disclosure requirements, characteristics and composition of the board of directors, the role of the Chairman and the CEO. Clause 49 also requires management to report to the board on risk of positions and risk management strategies. The Institute of Chartered Accountants of India (ICAI), an independent body regulating the accounting and auditing profession in India has initiated revisions in India's accounting standards to ensure compatibility with International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS).

SEBI has been proactive in revising Clause 49 to ensure it incorporates global best practices and to meet the needs of an evolving market. The clause has been revised to include many of the norms prescribed in the Sarbanes-Oxley Act (2002), including issues related to independence and composition of the board of directors and the audit committee, disclosure requirements, compliance reports, reportage on corporate governance, and penalties in the event of non-compliance of certain requirements.

ICAI recently approved the Accounting Standard 32 (AS 32), addressing "disclosure of losses and gains from investment in market-linked instruments such as derivatives, futures and options, mutual funds and government securities." This is meant to bring about greater transparency in the institution's investment activities. Apart from facilitating improved risk management, it will provide vital information to outside monitors. These changes in accounting standards will help investors assess the entities risk exposure, and incentivise firms to place more stress on risk management practices. The norms are based on international accounting standards and will require firms to mark to market.

SEBI has played a crucial role in improving corporate governance in enterprises. Its policy reform has focused on important issues like the qualifications of directors, disclosure guidelines, the role and scope of audit committees, etc. However it says little on issues of risk oversight, even though in recent industry surveys (KPMG, 2009) an overwhelming proportion of respondents point towards inadequate risk management oversight as a major constraint on effective corporate governance.

6. Conclusion

The current environment in which India has escaped the worst of the crisis and banks are well capitalised is the ideal situation for launching the next generation of financial reforms, and equally importantly, for strengthening the regulatory environment and risk management regime. Time and again crises in financial systems in emerging market economies have derailed growth, plunging economies into crises. The causes have been remarkably similar over time—high degrees of leverage, rapid growth of investments in financial assets and the real estate sector leading to asset price bubbles, and neglect of prudential supervision norms and risk management during growth periods.

Research on the crisis has yielded some clear findings. Economies that were better regulated fared better; within economies, banks with superior risk governance fared better than other banks. These are simple, obvious, and meaningful insights and they offer useful pointers for India as it continues on the path to growth. The Reserve Bank of India, building upon it impressive track record, can depart from convention and strengthen the foundations of the financial sector now. It is well over a decade since the last significant set of reforms was implemented following the first Narasimhan committee report (1998). Apart from further deregulation of interest rates, this would include the lowering of cash reserve ratio (CRR) and the statutory liquidity ratio (SLR) to release capital locked up in low yield government bonds. Coupled with interest rate deregulation, this could help banks lower interest costs as they channel funds into higher yield investments. More importantly, the crisis has highlighted the importance of sound risk governance.

Lest regulatory authorities and market observers be caught up in hubris, there are grounds for caution in the existing scenario as well as upon reflections on past crises. The proportion of non-performing assets has been growing in recent years and poses a serious threat to bank earnings, and if left unaddressed, to bank stability. With financial innovations and a sustained increase in trading and off balance sheet activities, new kinds of liquidity risks and systemic risk will enhance susceptibility to changes in market conditions. The growth of trading activities in the larger banks generates income earning opportunities for banks, but it also enhances vulnerability to changes in interest rates, and sudden shifts in asset prices. Stephanou's (2010) review of experiences during the crisis reiterates the importance of good governance for providing incentives for bank 'insiders' to exercise appropriate oversight, and to disclose adequate, timely and reliable information on performance and risk exposure. This is vital if market discipline is to work more effectively than it has over the past decade.

The Reserve Bank of India's internal assessment of conformity to the Basel II principles points towards a number of shortcomings in risk governance (Table 4). These range from the risk management process in banks (deemed 'materially non-compliant), managing risk of exposure to third parties, market risk, and liquidity risk to the lack of a clearly articulated home-host cross-border bank supervision policy. The wide heterogeneity in investment portfolios, skills base and risk profile among Indian banks, creates a compelling case for continuing with close regulation of banks that are not fully equipped to deal with risks, and to a continued shift towards risk-based supervision of banks further along the learning curve. It is encouraging that state owned banks that have issued equity demonstrate improved disclosure and better governance.

There are some characteristics that may be idiosyncratic, but as we move towards a more integrated and globalised financial system, it is worth bearing in mind that the risks encountered by banks across the globe are the same. However domestic regulation can play a significant role in guiding a bank's behaviour, and thereby the level of risk encountered by individual banks as well as the financial system as a whole. The relative insulation of Indian banks from the worst effects of the crisis was partly the outcome of fortuitous circumstances, partly due to prudence, and in part due to regulations that prevented excessive risk taking behaviour.

Table 4: RBI's assessment of conformity to the core Basel principles

Sr. No.	Principle	Status of compliance
	Objectives, autonomy and i-esources	
1.	Objective & independence, powers, transparency'and co-operation	LC
	Licensing criteria	
2.	Permissible activities	C
3.	Licensing criteria	C
4.	Transfer of significant ownership	C
5.	Major acquisitions	C
	Prudential requirements and risk management	
6.	Capital adequacy	C
7.	Risk management process	MNC
8.	Credit risk	LC
9.	Problem assets, provisions and reserves	LC
10.	Ijrge exposure limits	C
11.	Exposure to related parties	MNC
12.	Country and transfer risk	C
13.	Market, risk	MNC
14.	Liquidity risk	MNC
15.	Operational risk	LC
16.	Interest rate risk in banking book	NC
17.	Internal control and audit	LC
18.	Abuse- of financial Services Methods of ongoing supervision	LC
19.	Supervisory approach	MNC
20.	Supervisory techniques	LC
21.	Supervisory reporting Accounting and disclosure	LC
22.	Accounting and disclosure Corrective and remedial powers	LC
23.	Corrective and remedial powers of supervisors Consolidated supervision and cross-border banking	LC
24.	Consolidated supervision	LC
25.	Home-host relationship	MNC

C: Complaint; LC: Largely Complaint; MNC: Materially Non-Complaint; NC: Non-Complaint; NA: Not Applicable.

Source: RBI (2009)

Risk management systems were clearly ill-equipped to identify let alone monitor and manage risks. There is a profound need for a paradigm change in risk management and governance. The regulatory authorities need to be deeply involved in the basic task and challenge of identifying risks at the economy wide level that are beyond the purview of individual banks.

A wide range of innovative products and processes and the emergence of a shadow banking system have resulted in risk being easily transferred beyond the individual bank—through repackaging of loans, or through trading activities. Monitoring of risks necessitates looking beyond the bank, often at the financial system as whole and at cross-border financial linkages. Capital account convertibility has de facto increased volatility and posed serious challenges. This calls for a radical redefinition of bank governance, with a need to redefine the scope of governance to encompass the implementation of regulatory directives.

Bank governance in itself is complex issue— in emerging market economies governance of risk management falls below the radar, and seldom receives attention beyond platitudes on the importance of the risk management process in banks. Existing risk management and governance systems have proven to be inadequate in an increasingly globalised, sophisticated financial system with blurred boundaries between financial institutions and markets. The crisis graphically pointed out the inadequacies of bank governance structures in ensuring that the interests of the stakeholders were defended, and that management worked in the best interests of the various stakeholders.

Weak oversight and monitoring mechanisms are considered the main obstacles to sound governance. Experience over the past two years has underlined the need for regulation with mechanisms to ensure compliance with regulatory norms and supervisory principles, complemented by principles-based standards—the basic building block for a resilient financial system. The Indian banking system weathered the crisis with minimal damage, it is now time to capitalize on its latent strengths to carry the economy through the next generation of reforms.

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Notes

[1] This section draws upon IIF (2008) and the G30 Report (2009).