K C Chakrabarty: Banking and finance in India – developments, issues and prospects

Inaugural address by Dr K C Chakrabarty, Deputy Governor of the Reserve Bank of India, at the 62nd International Banking Summer School (IBSS), jointly organized by the Indian Institute of Banking & Finance and Indian Banks' Association, New Delhi, 31 August 2009.

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Mr. M.V. Nair, Chairman IBA and Chairman and Managing Director of Union Bank of India; Mr. Bhaskaran, Chief Executive Officer, Indian Institute of Banking and Finance; Representatives from EBTN, Distinguished participants from different parts of the Globe, invited guests, Ladies and Gentlemen:

I am delighted to be here amidst all of you at the 62nd International Banking Summer School (IBSS) being organised by the Indian Institute of Banking and Finance (IIBF) jointly with the Indian Banks' Association (IBA). I am thankful to the organisers and sponsors for providing me an opportunity to share my views and interact with you at a forum which I personally rate very high. Central bankers talk among themselves in various fora, it is high time that the bankers talk with each other.

The School, open to senior bankers and financial professionals, as we are aware is a 10 days' brisk academic exercise that provides a platform for the practitioners of banking and finance to learn and share the latest developments in the banking and finance field, best practices and products available in today's fiercely competitive global banking arena. In the present situation of global turmoil that we have been going through in the last two years, this forum will provide opportunities to the bankers and finance professionals for understanding each other better. The exchange of views and the ideas which are going to be generated here during the next ten days will certainly throw useful insights and better understanding on how to overcome such problems in future which will be of great relevance in shaping the banking operations in future. I am saying so, as I am sure, in times to come, many of you are going to occupy high positions in banks and Financial Institutions including positions of Chief Executive Officers (CEOs). The takeaway from the School is, therefore, of great importance.

Considering the theme of IBSS this year and more focus on managing banks in the era of turbulence, I think it would be appropriate if I share my views on a topic of contextual relevance, that is, *"Banking and Finance in India: Developments, Issues and Prospects"* in the backdrop of the global financial crisis.

A recent BIS report has stated that it is useful to think of the financial system as the economy's plumbing. And like the plumbing in a house, the modern economic system depends on a reliable flow of financing through intermediaries. Modern life requires the smooth operation of banks, insurance companies, securities firms, mutual funds, finance companies, pension funds and governments. These institutions channel resources from those who save to those who invest, and they are supposed to transfer risk from those who can't afford it to those who are willing and able to bear it (BIS, 2009). In India too, we have a well-diversified financial system which is still dominated by bank intermediation, though the size of the capital market has expanded significantly with financial liberalization in the early 1990s. Important components of the financial sector in India broadly fall into categories namely; commercial banks, urban co-operative banks (UCBs), rural financial institutions, non-banking financial companies (NBFCs), housing finance companies (HFCs), financial institutions (FIs), mutual funds and the insurance sector. Commercial banks together with co-operative banks account for nearly 70 per cent of the total assets of Indian financial institutions.

Global banking trends and the crisis

Before I dwell on the developments in the Indian banking and financial arena let me first touch upon briefly the global banking trends in view of the present crisis. The current global crisis, as is well known by now, has its genesis in the imprudent practices of banks and non-bank institutions worldwide, especially in the US. The fact that more than 80 banks have failed in the US alone is a pointer to how deep and widespread the malaise was. Looking at the past few years, it may be useful to divide the causes of the current crisis into two broad categories: macroeconomic and microeconomic. The macro-economic causes fall into two groups: problems associated with the build-up of imbalances in international claims and difficulties created by the long period of low real interest rates. The microeconomic causes fall into three areas: incentives, risk measurement and regulation (BIS, 2009).

The crisis is best regarded as the steep downside of an extraordinary global financial cycle that was amplified by structural weaknesses. The financial imbalances that had built up slowly but inexorably during the boom, on the back of aggressive risk-taking and leveraging, had finally started to unwind. As elaborated in the BIS Annual Report (2009), financial cycles are exacerbated by inherent difficulties in measuring risk and by distortions in incentives. Episodic financial strains cannot be eradicated entirely; the market is not fully self-correcting. But they can be mitigated or magnified by policy.

The crisis events can be traced to evidence of serious trouble emerging from when banks became less willing to lend to each other, because they were no longer sure how to value the assets held and the promises made – both their own and those of potential borrowers. For a time, central bank lending was able to fill the gap. But from August 2007 the stress in the financial system increased in waves. By March 2008, we are all aware, the crisis deepened and Bear Stearns had to be rescued from failure; six months later, on September 15, Lehman Brothers went bankrupt; and by the end of September, 2008 the global financial system itself was on the verge of collapse.

Global crisis: US, Europe and emerging market economies

In the United States, the crisis was shaped by particular characteristics of the US financial system such as a complex mortgage financing value chain with opaque securitization structures, a large "shadow financial system" involving various poorly regulated intermediaries (investment banks, hedge funds, structured investment vehicles – SIVs) and instruments (credit default swaps), the important role played by government-sponsored enterprises (Fannie Mae and Freddie Mac), as well as a fragmented supervisory architecture.

The US financial system is in many aspects unique due to the high share of capital market intermediaries and instruments. "Deposit money banks" account for a relatively low share of financial system assets; the stocks of market instruments are significantly larger (including private bonds), and the ratio of claims on the private sector to deposits is much higher. Overall, these indicators reflect the much greater role played by large investment banks, institutional investors, and other financial institutions, as well the extensive use of securitization.

While financial institutions in the US are at the heart of the problem, European banks face similar problems which shows how deeply interconnected national financial systems have become. European banks have been hit nearly as strongly as their American peers by losses from subprime mortgage investments, leveraged loans, failed financial hedges and a surge in conventional credit losses. As per one study of June 2009, banks on both sides of the Atlantic had to cope with combined write-downs of more than USD 1 trillion in this crisis – and they may have to take USD 1.3 trillion more. Governments around the globe have had to intervene to prevent a wholesale collapse of the financial system. They have injected more than USD 200 billion in fresh capital into the top 20 banks alone; besides there are much larger asset and debt guarantees.

Emerging countries have not developed the same complex financing structures as those in the US, but several countries have already suffered from severe external imbalances, caused by fiscal imbalances and/ or over-extended banking systems. These countries have become particularly vulnerable, as the crisis is transmitted through financial and trade channels. However, the specific channels of transmission may differ significantly across countries. The basic structure of the financial system is, however, not expected to change significantly, as banks still play a dominant role and capital markets are generally less developed.

Hard-hit by the global financial crisis, the worldwide banking industry's future development has now been sharply drawn into focus. Bankers and government officials will have to grapple with important issues such as the best corporate governance model for the future of an industry in which a number of banks have benefitted from government bailouts. Equally important concerns such as the return of morality to the market, the definition of financial risk and the tradeoff among innovation, self-discipline and regulation require the banking industry to think outside the box. It has changed the face of Wall Street with lots of investment banks changing their business models. What will the future holds for these financial institutions is a subject being widely debated internationally to probe the future of the banking industry world over. I am sure this school will devote some time for such discussions.

Role of banking/financial system in economy

In the analytical and empirical literature on the subject of finance and growth, there is a consensus among economists that development of the financial system contributes to economic growth (Rajan and Zingales, 2003). Financial development creates enabling conditions for growth through either a supply-leading (financial development spurs growth) or a demand-following (growth generates demand for financial products) channel. Empirical evidence consistently emphasises the nexus between finance and growth, though the issue of direction of causality is more difficult to determine. At the cross-country level, evidence indicates that various measures of financial development (including assets of the financial intermediaries, liquid liabilities of financial institutions, domestic credit to private sector, stock and bond market capitalisation) are robustly and positively related to economic growth (King and Levine, 1993; Levine and Zervos, 1998).

Financial deepening in India

In the Indian case, healthy growth of the assets of commercial banks in the recent period, driven primarily by credit growth and sharp rise in credit-GDP, deposit-GDP and M3-GDP ratios are reflective of significant financial deepening in India. For example, during the period since 1980s, while bank assets-GDP ratio has tripled moving up from 31.4 per cent in the 1980s to 93.3 per cent in 2008-09, credit-GDP ratio has increased from 19.3 per cent to 52.2 per cent, deposits-GDP ratio has increased from 29.8 per cent to 72.0 per cent and M3-GDP ratio has increased from 39.0 per cent to 89.5 per cent (Statistical Annex SA 1).

In a cross-country perspective, when measured by the ratio of bank assets to GDP, financial depth in India was among the lowest in the world (Barth, Caprio and Levine, 2001). Comparable cross-country data indicated that in 2001, this ratio, at 48 per cent for India, was lower than those prevalent in Asian economies such as Indonesia (101 per cent), Korea (98 per cent), Philippines (91 per cent), Malaysia (166 per cent) and much lower than developed economies, such as UK (311 per cent), France (147 per cent) and Germany (313 per cent). In India, while the ratio of bank assets to GDP has increased significantly to a shade over 93 per cent in 2008-09 – a result of high credit growth in recent years – it is still lower than other emerging countries. Financial deepening, hence, has been taking place on an accelerated pace on a macro basis in recent years and banking productivity has improved significantly.

As per the data from India's national accounts, over the period since 1980s, banking and insurance sector has witnessed a growth which is in excess of the overall GDP consistently over the years. In the 1980s, the growth of banking and insurance sector was 10.6 per cent vis-à-vis the GDP growth of 5.6 per cent – this increased to 15.4 per cent in 2007-08 vis-à-vis the GDP growth of 9.0 per cent (Statistical Annex SA 2).

Another noteworthy feature discernible in Indian context is that the rise in indicators of financial deepening takes place along with a noticeable rise in the domestic savings rate. The rate of domestic savings has specially picked up in the recent period during 2003-04 to 2007-08 against the backdrop of financial sectors reforms, rise in total factor productivity and investment boom, which had led to acceleration in the growth performance, while in the developed countries like the US and Japan the rise in financial deepening has had a limited effect on the savings rates of the economies. The results may seem contrasting; however, the country specific reason such as the level of social security measures on welfare of people, wealth effect in the period of rising assets prices and most significantly the demographic profile which explain the Life Cycle Hypothesis (LCH) may have dampened the savings propensity in a country.

A *cautionary remark*, however, I would like to make here. In the context of the macro-economic trend of high services sector growth which includes the banking sector growth, I feel that the services growth needs to be well supported by growth from the real sectors of the economy. Financial leverage cannot bring perpetual prosperity. Banks need to keep this in mind, and I am telling this as a banker, as well as a central banker.

Indian banking trends

As you are aware, there is significant transformation of the Indian banking sector. The financial sector reforms in the country were initiated in the beginning of the 1990s. The reforms have brought about a sea change in the profile of the banking sector. Our implementation of the reforms process has had several unique features. Our financial sector reforms were undertaken early in the reform cycle. Notably, the reforms process was not driven by any banking crisis, nor was it the outcome of any external support package. Besides, the design of the reforms was crafted through domestic expertise, taking on board the international experiences in this respect. The reforms were carefully sequenced with respect to the instruments to be used and the objectives to be achieved. Thus, prudential norms and supervisory strengthening were introduced early in the reform cycle, followed by interest-rate deregulation and a gradual lowering of statutory pre-emptions. The more complex aspects of legal and accounting measures were ushered in subsequently when the basic tenets of the reforms were already in place.

Though public sector banks (PSBs) account for around 70 per cent of commercial banking assets and 72.7 per cent of the aggregate advances of the Scheduled commercial banking system (as on March 31, 2008), competition in the banking sector has increased in recent years with the emergence of private players as also with greater private shareholding of PSBs. Listing of PSBs on stock exchanges and increased private shareholding have also added to competition. The new private banks which accounted for 2.6 per cent of the commercial banking sector in March 1997 have developed rapidly and accounted for nearly 17 per cent of the commercial banking assets by end March 2008.

Financial health of the banking system

The implementation of reforms has had an all-round salutary impact on the financial health of the banking system, as evidenced by the significant improvements in a number of prudential parameters. Let me briefly highlight the improvements in a few salient financial indicators of the banking system (Statistical annex SA 3 & 4). The average **capital adequacy** ratio for the scheduled commercial banks, which was around 10.4 per cent in 1997, had increased to

13.08 per cent as on March 31, 2008. In regard to the **asset quality** also, the gross NPAs of the scheduled commercial banks, which were as high as 15.7 per cent at end-March 1997, declined significantly to 2.3 per cent as at end-March 2008. The net NPAs of these banks during the same period declined from 8.1 per cent to 1.08 per cent. The reform measures have also resulted in an improvement in the **profitability** of banks. The Return on Assets (RoA) of scheduled commercial banks increased from 0.4 per cent in the year 1991-92 to 0.99 per cent in 2007-08. The Indian banks are well placed in this regard too vis-à-vis the broad range of RoA for the international banks. The banking sector reforms also emphasised the need to improve **productivity** of the banks through appropriate rationalisation measures so as to reduce the operating cost and improve the profitability. A variety of initiatives were taken by the banks, including adoption of modern technology, which has resulted in improved productivity.

One area that needs to be watched continuously due to recent crisis is the off-balance sheet (OBS) exposure of the banks. The spurt in OBS exposure is mainly on account of derivatives whose share averaged around 80 per cent. The derivatives portfolio has also undergone change with single currency Interest Rate Swaps (IRS) comprising 57 per cent of total portfolio at end-March 2008 from less than 15 per cent at end-March 2002.

With regard to the assessment of the banking system in India we appear to be in a comfortable position, as confirmed by the Committee on Financial Sector Assessment (CFSA):

(i) Commercial banks have shown a healthy growth rate and an improvement in performance as is evident from *capital adequacy*, *asset quality*, *earnings and efficiency indicators*. In spite of some reversals during the financial year 2008-09, the key financial indicators of the banking system do not throw up any major concern or *vulnerability* and the system remains *resilient*; and

(ii) The single-factor stress tests carried for the commercial banking sector covering *credit risk*, *market / interest rate risk* and *liquidity risk* have revealed that the *banking system can withstand significant shocks* arising from large *potential changes in credit quality*, and *liquidity conditions*.

Lessons from India

The fact that India has not gone through any financial crisis as a result of financial deregulation is not only remarkable, but a testimony to the correctness of the judgment that *reforms to global standards need to be adjusted to local conditions (Mohan, 2007)*. The need of the hour is to have financial sector reforms in a recalibrated manner to address the issues in light of the crisis. India has so far remained relatively insulated from the crisis that global banking system has experienced in the course of the 1990s. Our exposure to troubled sub-prime assets and related derivatives is negligible in comparison to many other economies. *The fact that, so far financial sector reforms have been calibrated with a progressive integration into the world economy has paid us rich dividends. A key consideration in the choice of pace and sequencing has been the management of volatility in financial markets and implications for the conduct of monetary operations*. The nuanced approach to financial sector reform has served us well with an accent on conscious gradualism in the implementation of coordinated and sequenced moves on several fronts. What have been ensured are appropriate safeguards to ensure stability, while taking account of the prevailing governance standards, risk management systems and incentive frameworks in financial institutions in the country. *Overall, these progressive but cautious policies have contributed to efficiency of the financial system while sustaining the growth momentum in an environment of macroeconomic and financial stability*. The policy challenge is, to continue to ensure financial stability in India during this period of international financial turbulence, while achieving high growth with price stability.

Some of the reasons for India's insulation as highlighted by Dr. Y.V. Reddy, the former Governor of the Reserve Bank of India are: (1) The nascent stage of development of the credit derivatives market; (2) Regulatory guidelines on securitisation do not permit immediate profit recognition; (3) Perseverance of prudential policies which prevent institutions from excessive risk taking and financial markets from becoming extremely volatile and turbulent; and (4) Close co-ordination between supervision of banks and their regulation.

Future challenges to banking from the regulatory perspective

I would like to bring to the fore four issues that I consider very important for the future regulatory reform process not only in Indian context but in the context of many emerging markets as we move ahead. First is the issue related to "Know Your Customer (KYC)" in banks; Second, from a central banker's perspective whether the banks are according "*Fair Treatment' to their Customers"* (FTC); Third, is the issue of "Risk Management" and its proper understanding and Fourth is the Leveraging Technology for greater Financial Inclusion. Let us discuss these four important issues in some detail now.

Know Your Customer (KYC) in all its manifestations

First is the issue of KYC in banks and its importance in the overall enhancement in the functioning of the banks. Sound KYC policies and procedures not only contribute to a bank's overall safety and soundness, they also protect the integrity of the banking system by reducing the likelihood of banks becoming vehicles for money laundering, terrorist financing and other unlawful activities. There are three components here. "Knowing their customers" is not enough for banks, they should also know the "business" of their customers; (KYBC) and if the banks know the business of their customers, the banks must understand and assess the risks associated with each of their customers' businesses (KYCBR). The banks should realize that these parts of Know Your Customer in all their manifestations, viz. *Know Your Customer* (KYC), *Know Your Customers' Business* (KYCB) and *Know Your Customers' Business Risk* (KYCBR) is not only an integral part of elementary Risk Management Process but it also makes a good business sense. Regulatory intervention in this area is going to increase in future.

Fair Treatment to Customers (FTC)

Second issue is with regard to affording Fair Treatment to Customers (FTC) by banks. This requirement is key to the operation of an efficient retail market for financial services. FTC is also central to consumers having confidence in the financial services industry. This principle must be adopted and supported by the leadership of financial firms, and embedded throughout a firm's operations and within its culture. Another important aspect related to FTC is from the Regulator's perspective. One may ask why the regulator should at all be concerned about customers not being treated fairly by banks. In this connection, it is important to note that not all financial entities are accorded the status of the "Banks". The banks raise deposits many times more than the capital resources they have and hence they have a special responsibility to customers for providing fair treatment. Banks need to respond to the challenge of restoring consumer confidence in the financial services industry and ensuring that they treat their customers fairly.

In addition, in a competitive marketplace, FTC should be an important element (alongside service levels, pricing and customer satisfaction) in determining the success of a bank in acquiring and maintaining market share. However, in many markets for retail financial products and services the incentive structure for firms to treat their customers fairly has not always been robust enough to deter all firms from inadvertently or deliberately taking advantage of the relative weakness of the financial services consumer.

There should be a blend of regulatory and market-based solutions to delivering fairness to customers. The key issue is the balance between these two. The issue of addressing the fair treatment of customers throughout the product life-cycle comprises:

- Product design and governance;
- Identifying target markets;
- Marketing and promoting the product;
- Sales and advice processes;
- After-sales information; and
- Complaint handling.

These issues will create challenges for banks. They may have to adapt the management, reward and operating systems they currently use and enhance the controls they have in place to monitor whether they are meeting the FTC requirement.

Thus, there is a need to develop a better, and common, understanding of what FTC means in practice. Banks need to examine what most effectively constitutes fair treatment of customers. Banks' senior management needs to assess their current performance against the requirement to treat customers fairly, identify possible areas for improvement and ensure that the principle of fairness is embedded in their work-culture.

Risk management

The Third issue which has assumed critical significance now is "Risk Management" and its proper understanding. We cannot view banks' risks at individual level in isolation all the time. It has also been argued that the emphasis on micro-prudential regulation may have contributed to the buildup of some macro risks. Collectively, the systemic risk is becoming more and more prominent with the increasing complexities and the associated risk factors in the banking activities. The banks have to have a proper understanding of all the risk factors and at the same time they have to ensure that their customers also understand and appreciate the associated risk. In the event of such banking activities leading to the emergence of systemic risks, the central bank may intervene which might result in stricter regulation and supervision.

The most critical issue is of *liquidity risk management* in the banks in the wake of the crisis. We may have a situation where the liquidity may dry up and the banks and the financial institutions would face severe liquidity crunch due to adverse market conditions. In this scenario, the liquidity crunch might completely wipe out the capital of the bank as well leading to its failure. Another case might be a scenario where plenty of liquidity in the market may fuel inflation. Therefore, we have to be vigilant and monitor the market conditions more vigorously.

In recent times increase in the banks' dependence on bulk deposits to fund credit growth has assumed significance as this could have liquidity and profitability implications. An increase in growth in housing loans, real estate exposure as also infrastructure has resulted in elongation of the maturity profile of bank assets. There is growing dependence on purchased liquidity and also an increase in the illiquid component in banks' balance sheets with greater reliance on volatile liabilities, like bulk deposits to fund asset growth. Simultaneously, there has been a shortening of residual maturities, leading to a higher asset-liability mismatch. There is a need to *strengthen liquidity management* in this context as also to shore up the core deposit base and to keep an adequate cushion of liquid assets to meet unforeseen contingencies. What needs to be borne in mind is that while at an individual customer level, retail deposits may be volatile, but for the bank and the banking system as a collective lot, it provides solid foundation for the banks to fund their long term assets like infrastructure and similar business activities. How do we cultivate this aspect in our business model and Risk Management Process is a great challenge.

Inclusive growth: financial inclusion through leveraging technology

Coming to Fourth issue, let me remind that, in the history of human civilization it has always been the technology which has led to mass availability of products and services. Same is the case for banking services. We are in the midst of the most exciting period of human civilization when two billion of population is expected to move "up" from below poverty line to above poverty line (BPL). Majority of these will be in this sub-continent and banks will have an opportunity to participate in this process, which will bring sustainable peace and prosperity to the mankind.

For achieving the goal of Financial Inclusion, experts have recommended the Business Correspondent/Facilitator (BC/BF) model. However, some recent studies have pointed out that the BC model at the initial stage, may not be commercially viable due to a high transaction cost for the banks and customers. Here, the appropriate use of technology can help in reducing the transaction cost. The need of the hour is to develop and implement scalable platform independent technology solutions which, if implemented on a larger scale, will bring down the high cost of operation. *Technology, thus, really holds the key for financial inclusion to take place on an accelerated scale*.

The need of the hour is leveraging technology in Indian banking for providing affordable and cost-effective banking services to the masses through multi-delivery channels. All of us know that apart from traditional business, banks nowadays provide a wide range of services to satisfy the financial and non-financial needs of all types of customers from the smallest account holder to the largest company and in some cases of non customers. The range of services offered differs from bank to bank depending mainly on the type and size of the bank. The key enabling factor has been the adoption of technology. Banking industry is fast growing with the use of technology in the form of ATMs, on-line banking, Telephone banking, Mobile banking etc., plastic card is one of the banking products that cater to the needs of retail segment has seen its number grow in geometric progression in recent years. The internet banking is changing the banking industry and is having the major effects on banking relationship. Retail banking in India is maturing with time; several products, which further could be customized are in the retails segments of housing loan, personal loan, education loan, vehicle loan, etc.

Being convinced that technology is the key for improving in productivity, the Reserve Bank took several initiatives to popularize usage of technology by banks in India. Periodically, almost once in five years since the early 1980s, the Reserve Bank appointed Committees and Working Groups to deliberate on and recommend the appropriate use of technology by banks given the circumstances and the need.

Even as global financials face growth and asset-quality issues, Indian banks continue to *offer a healthy growth trajectory with minimal balance-sheet risks*. Despite the high growth rate of the past decade, penetration for most financial products/services in India remains low. Indian banks can sustain their structural high growth trajectory, driven by an under-penetrated financial-services sector, a conducive economic environment and a supportive regulatory regime. Financial penetration holds the key to financial inclusion and inclusive growth. Favorable demographics would be a facilitating factor. Way forward, financial penetration is expected to rise as banks expand into new areas, focus on building their retail business and strengthen their risk-management system.

Conclusion

To sum up, while global banking developments have offered innumerable perspectives, important perceptions are emerging from the Indian banking developments. Given the long term objective of achieving 9.0 per cent of GDP growth, we need to understand that there are significant challenges for Indian banking. Of these, the major challenge would be to achieve financial inclusion through improved financial penetration in hitherto uncovered areas, which in turn would enable inclusive and sustainable growth for the economy. We all have to put our minds together and continually strive towards achieving this in the days ahead.

The question currently on top of the minds of most bankers present here would be: *what will be the shape of banking in days to come? Will banks do business differently? What are the changes that are likely to take place?* The answer to these questions may come out from some serious deliberations in the next few days and before arriving at any conclusion in this regard, we certainly have to explore many options. The only thing that can be said at this juncture is that *regulation may become tighter and supervision more controlled*. Other than that, it is difficult to say whether there will be any fundamental change in the way banks work.

I am sure that the discussions, case studies, panel discussions, CEO Round Table planned during the IBSS sessions, which have been woven around topics of contemporary relevance like, *understanding the reasons for the global financial system melt down; changing contours of risk; understanding the role of IT and Risk Management system and discussion on arriving at coping strategies; new frontiers of banking; emergence of "Inclusive" banking*, etc. will bring out some useful insights and out of box creative and innovative ideas from the market players to deal with the present complex situation. This will also help in creating an enabling environment for an overall balanced economic growth of the world economy.

I wish you all the best and the 62nd IBSS deliberations a grand success.

Thank you.

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Statistical Annex

SA1: India - Indicators of Financial Deepening					
Item	**1980-81 to 1989-90**	**1990-91 to 1999-00**	**2000-01 to 2008-09**	**2007-08**	**2008-09**
1	2	3	4	5	6
M3					
Growth rate	14.7	14.8	15.3	17.9	24.4
M3/GDP (per cent)	39.0	47.5	69.9	76.5	89.5
Credit					
Growth rate	14.3	13.9	18.5	18.2	15.0
Credit/GDP (per cent)	19.3	20.6	36.6	50.1	52.2
Deposits					
Growth rate	15.3	14.6	14.2	18.3	16.6
Deposits/GDP (per cent)	29.8	37.4	57.4	67.8	72.0
Bank Assets					
Growth rate	-	15.4	16.0	20.0	12.8
Bank Assets/GDP (per cent)	31.4	34.0	64.4	91.8	93.3
Flow of Funds					
FR	0.22	0.32	0.46#	-	-
FIR	2.41	2.34	2.57#	-	-
NIR	1.42	1.29	1.60#	-	-
IR	0.71	0.82	0.61#	-	-

Note:

i) Finance Ratio = Ratio of Total Issues to National Income (Net National Product at Factor Cost at Current Prices).

ii) Financial Inter-relations Ratio = Ratio of Total Issues to Net Domestic Capital Formation

iii) New Issue Ratio = Ratio of Primary Issues to Net Domestic Capital Formation

iv) Intermediation Ratio = Ratio of Secondary Issues (i.e. issues by banks and other financial institutions) to Primary Issues.

#: Pertains to the year 2000-01.

Source: 1. RBI (Handbook of Statistics on the Indian Economy 2007-08).

2. Report of the High Level Committee on Estimation of Saving and Investment (Chairman Dr. C. Rangarajan).

3. IMF (Global Financial Stability Report, April, 2009).

SA 2: Banking and Insurance Sector in India's GDP

Item	1980s	1990s	2000 s	2006-07	2007-08
Growth					
Banking and Insurance	10.6	9.8	9.9	20.3	15.4
Services	6.3	7.1	9.0	11.3	10.8
GDP	5.6	5.7	7.3	9.7	9.0
Share					
Banking and Insurance	3.1	4.9	6.1	6.7	7.1
Services	46.3	51.5	59.6	62.0	63.0
GDP	100	100	100	100	100
Contribution to GDP					
Banking and Insurance	0.3	0.5	0.6	1.2	1.0
Services	2.9	3.6	5.3	6.9	6.7

Source: National Accounts Statistics,
Central Statistical Organisation

SA 3: Non-Performing Loans (NPL) of Scheduled Commercial Banks

(Per cent)

End-March	Gross NPL/ Gross Advances	Gross NPL/ Assets	Net NPL/ Net Advances	Net NPL/ Assets
1	**2**	**3**	**4**	**5**
1996-97	15.7	7	8.1	3.3
1997-98	14.4	6.4	7.3	3
1998-99	14.7	6.2	7.6	2.9
1999-00	12.7	5.5	6.8	2.7
2000-01	11.4	4.9	6.2	2.5
2001-02	10.4	4.6	5.5	2.3
2002-03	8.8	4	4.4	1.9
2003-04	7.2	3.3	2.8	1.2
2004-05	5.2	2.5	2	0.9
2005-06	3.1	1.8	1.2	0.7
2006-07	2.4	1.5	1	0.6
2007-08	2.3	1.3	1	0.6

Source: Reserve Bank of India (Trends and Progress of Banking in India).

SA 4: Cross-Country Select Banking Indicators – A Comparison

(Per cent)

Country	Regulatory Capital to Risk-Weighted Assets (CRAR)				Non-performing Loans to Total Loans				Provisions to Non-performing Loans				Return on Assets (ROA)			
	2002	2006	2007	2008	2002	2006	2007	2008	2002	2006	2007	2008	2002	2006	2007	2008
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Developing Economies																
Argentina	-	-	16.9	16.8	18.1	3.4	2.7	2.5	73.8	130.2	129.6	130.9	-8.9	2	1.5	1.6
Brazil	16.6	18.9	18.7	16.6	4.5	4.1	3	2.9	155.9	152.8	181.8	170.9	2.1	2.5	2.9	2
China	-	-	8.4	8.2	26	7.5	6.7	2.5	-	-	39.2	115.3	-	0.9	1	-
India	**12**	**12.4**	**12.3**	**13**	**10.4**	**3.5**	**2.5**	**2.3**	**-**	**58.9**	**56.1**	**52.6**	**0.8**	**0.9**	**0.9**	**1**
Indonesia	20.1	21.3	19.3	16.8	24	13.1	4.1	3.5	130	99.7	87.7	98.5	1.4	2.6	2.8	2.6
Korea	11.2	12.8	12.3	10.9	2.4	0.8	0.7	1.1	89.6	175.2	199.1	155.4	0.6	1.1	1.1	-
Malaysia	13.2	13.5	13.2	12.6	15.9	8.5	6.5	5.1	38.1	50.7	77.3	86.9	1.3	1.3	1.5	1.6
Mexico	15.7	16.3	15.9	15.3	3.7	2.1	2.7	2.5	138.1	207.4	169.2	184	0.7	3.1	2.7	1.8
Philippines	16.9	-	15.7	15.5	26.5	18.6	5.8	5.2	30.1	37.4	81.5	84.1	0.8	1.3	1.3	1.1
Russia	19.1	14.9	15.5	14.5	5.6	2.6	2.5	2.5	112.5	159.3	144	140	2.6	3.2	3	1.6
South Africa	12.6	12.3	12.8	12.5	2.8	1.2	1.4	2.6	46	-	-	-	0.4	1.4	1.4	1.8
Thailand	13	13.8	14.8	15.3	15.7	7.5	7.9	6.5	62.9	79.4	86.5	-	-	2.3	0.1	-
Turkey	24.4	21.1	19	17.7	12.7	3.2	3.5	3.3	64.2	90.8	88.4	81.6	1.2	2.4	2.8	2.2
Developed Economies																
Australia	9.6	10.4	10.2	10.9	0.4	0.2	0.2	0.5	106.2	204.5	183.7	87.2	1.4	-	1	0.9
Canada	12.4	12.5	12.1	12.7	1.6	0.4	0.7	1.1	41.1	55.3	42.1	34.7	0.4	1	0.9	1.3
France	11.5	-	10.1	-	4.2	3.2	2.7	-	58.4	58.7	61.4	-	0.5	-	0.4	-
Germany	12.7	-	12.9	-	5	4	2.7	-	-	-	77.3	-	0.1	0.5	0.2	-
Italy	11.2	10.7	10.4	-	6.5	5.3	4.6	-	-	46	49.5	-	0.5	0.8	0.8	-
Japan	9.4	13.1	12.9	12.3	7.4	2.5	1.5	1.5	-	30.3	26.4	24.9	-0.7	0.4	0.2	0.3
United Kingdom	13.1	12.9	12.6	-	2.6	0.9	0.9	-	75	-	-	-	0.4	0.5	0.4	-
United States	13	13	12.8	12.5	1.4	0.8	1.4	2.3	123.7	137.2	93.1	84.7	1.3	1.3	0.8	0.3

Source: 1. Global Financial Stability Report, 2009, IMF