Appendix 1

Major Banking Sector Reforms

Prudential Measures

• Introduction and phased implementation of international best practices and norms on risk weighted capita adequacy requirement, accounting, income recognitions, provisioning and exposure.

• Measures to strengthen risk management through recognition of different components of risk, assignments of risk-weights to various asset classes, norms on connected lending, risk concentration, application of marked-to-market principal of investment portfolio and limits on deployment of fund in sensitive activities.

Competition Enhancing Measures

• Granting of operational autonomy to PSBs, reduction of public ownership in PSBs by allowing them to raise capital from equity market by 49% of paid capital.

• Transparent norms for entry of Indian private sector, foreign and joint-venture banks and insurance companies, permission for foreign investments in the financial sector in the form of Foreign Direct Investment (FDI) as well as portfolio investment, permission to banks to diversify product portfolio and business activities.

Measures Enhancing Role of Market Forces

• Sharp reduction in Pre-emption through reserve requirement, market determined pricing from government securities, disbanding of administered interest rates with a few exceptions and enhances transparency and disclosure norms to facilitate market discipline.
• Introduction of pure inter-bank call money market, auction-based repos-reverse repos for short term liquidity management facilitation of improved payments and settlements mechanism.

Institutional and Legal Measures
• Setting up of Lok Adalats, debt recovery tribunals, asset reconstruction companies, settlement advisory committee, corporate debt reconstruction mechanism etc. for quicker recovery/restructuring. Promulgation of Securitization and Reconstruction of Financial Assets and Enforcements of Security Interest (SARFAESI). Act and its subsequent amendment to ensure creditors right.
• Setting up of Credit Information Bureau for information sharing on defaulter as also other borrowers.
• Setting up of Clearing Corporation of India (CCIL) to act as central counter party for facilitating payments and settlement system relating to fixed income securities and money market instruments.

Supervisory Measures
• Establishment of the Board for Financial Supervision as the apex supervisory authority for commercial banks, financial institutions and non banking financial companies.
• Introduction of CAMELS supervisory rating system, move towards risk based supervision, consolidated supervision of financial conglomerates, strengthening of off-site surveillance through control returns.
• Recasting the role of statutory auditors, increased internal control through strengthening of internal audit.
• Strengthening corporate governance, enhanced due diligence on important shareholders, fit and proper tests for directors
Technology Related Measures

Setting up of INFINET as the communication backbone for the financial sector, introduction of Negotiated Dealing System (NDS) for screen based trading in government securities and Real Time Gross Settlement (RTGS) system.

Recent initiatives

(i) Supervision of financial conglomerates

Financial Conglomerates (FC) pose certain risks to the financial system which could be detrimental to the overall financial stability. These risks relate to the moral hazard associated with the “Too-Big-To-Fail” position of many financial conglomerates, the fact that financial difficulties in one subsidiary in a segment could have contagion or reputation effects on another subsidiary in a different segment on account of the “holding out” phenomenon, especially when using the same brand name, and the concerns about regulatory arbitrage, non-arm’s length dealings, etc. arising out of Intra-group Transactions & Exposures (ITEs) – both financial and non-financial. The financial sector in India has undergone significant liberalisation in all the four segments – banking, non-banking finance, securities and insurance and each of these sectors has grown significantly accompanied by a process of restructuring among the market intermediaries. The financial landscape is increasingly witnessing (i) entry of some of the bigger banks into other financial segments like merchant banking, insurance, etc. which has made them financial “conglomerates”; (ii) emergence of several new players with diversified presence across major segments and (iii) possibility of some of the non-banking institutions in the financial sector acquiring large enough proportions to have a systemic impact. In view of the above, a Working Group had gone into all the issues and had laid down criteria for a group being identified
as a financial conglomerate. Accordingly a system has been put in place for all the identified financial conglomerates whereby a designated entity within the conglomerate reports to its Lead Regulator. In order to monitor the intra group transactions and exposures, information from the designated entities of each FC is obtained by the principal regulators and a system for exchange of information among the regulators has been put in place. In addition, periodical discussions are held with the CEO of the designated entity in the FC by the Lead Regulator, along with other regulators, on the basis of available information for review and addressing concerns, if any. It is also necessary to back-test the efficacy of the reporting format in capturing the meaningful intra-group transactions/ exposures and other “material” information and also enhance the regulatory understanding of the affairs of the conglomerates. Further work is being undertaken in this direction in consultation with other regulators.

The inter-regulatory forum has also observed a need for the principal regulator to engage in dialogue with the principal auditors of the group. This could provide useful information on the impact of changes in the accounting standards and practices on the core earnings of the conglomerates and the likely trend in the future. The modalities for this purpose are being worked out in consultation with other regulators.

(ii) New capital instruments

In Jan 2006, RBI allowed Indian banks to augment their capital funds by issue of innovative perpetual debt instruments eligible for inclusion as Tier I capital; debt capital instruments eligible for inclusion as Upper Tier II capital; perpetual non-cumulative preference shares eligible for inclusion as Tier I capital and redeemable cumulative preference shares eligible for inclusion as Tier II capital. A number of banks have issued these instruments both in India and overseas to shore up capital
(iii) Procyclical prudential provisioning

Traditionally, banks’ loans and advances portfolio is pro-cyclical and tends to grow faster during an expansionary phase and grows slowly during a recessionary phase. During times of expansion and accelerated credit growth, there is a tendency to underestimate the level of inherent risk and the converse holds well during times of recession. This tendency is not effectively addressed by the above mentioned prudential specific provisioning requirements since they capture risk ex post but not ex ante. The various options available for reducing the element of pro-cyclicality include, among others, adoption of objective methodologies for dynamic provisioning requirements, as is being done by a few countries, by estimating the requirements over a business cycle rather than a year on the basis of the riskiness of the assets, establishment of a linkage between the prudential capital requirements and through-the-cycle ratings instead of point-in-time ratings and establishment of a flexible Loan-to-Value (LTV) ratio requirements where the LTV ratio would be directly related to the movement of asset values.

The above aspect was first taken on board in the Monetary Policy announcement in October 2005 and since then, various measures have been announced.

In order to ensure that asset quality is maintained in the light of high credit growth, the general provisioning requirement on standard advances in certain specific sensitive sectors have been increased as also the risk weights. For instance the risk weight on personal loans (including credit card receivables) is 125% and the general provision is 2 percent. Similarly the general provision for real estate loans is 2 percent and the risk weight 150 percent. The objective is to build cushions or buffers in upswings without taking a view on the future evolution of asset quality in these asset classes.
(iv) Credit information companies

An efficient credit information system enhances the quality of credit decisions and improves the asset quality of banks, apart from facilitating faster credit delivery. Accordingly, a scheme for disclosure of information regarding defaulting borrowers of banks and financial institutions was introduced. In order to facilitate sharing of information related to credit matters, a Credit Information Bureau (India) Limited (CIBIL) was set up in 2000. With a view to strengthening the legal mechanism and facilitating credit information bureaus to collect process and share credit information on borrowers of banks and FIs, the Credit Information Act was passed in May 2005. The rules and regulations have also been notified. The RBI is now framing detailed guidelines on the basis of which it would consider applications from Credit Information companies. This will facilitate setting up of a few more credit information companies in India.

(v) Financial inclusion

Recognising the concerns with regard to the banking practices that tend to exclude rather than attract vast sections of population, the Reserve Bank has urged banks to review their existing practices with a view to aligning them with the objective of financial inclusion. All banks were advised in November 2005 to make available a basic banking “no-frills” account either with “nil” or very low minimum balances as well as charges that would make such accounts accessible to vast sections of population. With a view to encourage financial inclusion the Know Your Customer (KYC) procedure for opening small accounts were simplified. Banks are allowed to use the services of NGOs/SHGs, MFIs and CSOs as intermediaries in providing financial and banking services through the use of business facilitator and correspondents.
(vi) Draft guidelines on accounting aspects

Recognising the importance of a robust accounting framework in the banking sector, the Reserve Bank had undertaken an exercise a few years back (in 2001) to assess the gaps in compliance by banks with the accounting standards issued by the Institute of Chartered Accountants of India. With the issue of relevant guidelines thereafter, the audited financial statements of banks are found to be in compliance with the relevant accounting standards. With a view to take things further in this direction, the Reserve Bank has taken the initiative to introduce the various elements of IAS 39 into the guidelines for accounting of the investment portfolio and the derivative portfolios of banks. We do not have a corresponding accounting standard to IAS 39 in India as yet. The ICAI is presently engaged in the process of issue of this standard and that process is likely to take some more time, hence the initiative from the Reserve Bank of India. The Reserve Bank has issued draft guidelines on the above two aspects, which are in the process of finalisation on the basis of the feedback received from banks and other market players.

(vii) Derivatives – comprehensive guidelines

Derivatives play a critical role in shaping the overall risk profile of banks. Over the years, banks have been increasingly using derivatives for managing risks and have also been offering these products to corporate. The Reserve Bank has issued several guidelines to banks from time to time on various derivative instruments. In view of the growing complexity, diversity and volume of derivatives used by banks, an Internal Group has been constituted by the Reserve Bank to review the existing guidelines on derivatives and formulate comprehensive guidelines on derivatives for banks. These guidelines are intended to cover broad generic principles for undertaking derivative transactions, management of risk and sound corporate governance requirements. The draft
guidelines were placed on the Reserve Bank's website in December, 2006. The feedback received on the guidelines is being examined by the Internal Group and the draft guidelines are in the process of finalisation.

(viii) Draft guidelines on stress testing

Risk management practices in banks in India have undergone considerable improvement over the past few years with the introduction of the financial sector liberalization process in the mid nineties. The process gained momentum with the issue of regulatory guidelines and guidance notes on asset liability management and management of credit risk, market risk and operational risk by the Reserve Bank since 1999. Further, the announcement of implementation of the revised capital adequacy framework in India with effect from March 31, 2007 has brought the risk management capabilities of banks into greater focus.

Globally, banks are increasingly relying on statistical models to measure and manage the financial risks to which they are exposed. These models are gaining credibility because they provide a framework for identifying, analyzing, measuring, communicating and managing these risks. Since models cannot incorporate all possible risk outcomes and generally are not capable of capturing “event risks” and sudden / dramatic changes, banks need to supplement models with “stress tests”. Internationally, stress testing has become an integral part of banks’ risk management systems and is used to evaluate the potential vulnerability to certain unlikely but plausible events or movements in financial variables. There are broadly two categories of stress tests used in banks viz. sensitivity tests and scenario tests. These may be used either separately or in conjunction with each other.

Banks in India are beginning to use statistical models to measure and manage risks. Further, the supervisory review process under Pillar 2 of Basel II
framework is intended not only to ensure that banks have adequate capital to support all the risks in their business, but also to encourage banks to develop and use better risk management techniques in monitoring and managing their risks. Banks must demonstrate, under the internal capital adequacy assessment process prescribed by Pillar 2, that they have enough capital to not only meet the minimum capital requirements but also to withstand a range of severe but plausible shocks. In the above background, the need for banks in India to adopt “stress tests” as a risk management tool is being emphasised by RBI.

**Basel I and II accords**

In 1988 the Base committee on banking supervision introduced the Basel I accord or the risk-based capital requirements to deal with the weaknesses in the leverage ratio (capital asset ratio) as a measure for solvency. The 1988 Accord requires internationally active banks in the G10 countries to hold capital equal to at least 8% of a basket of assets measured in different ways according to their riskiness. The definition of capital is set (broadly) in two tiers, Tier 1 being shareholder’s equity and retained earnings and Tier 2 being additional internal and external resources available to the bank. The bank has to hold at least half of its measured capital in Tier 1 form.

A portfolio approach was taken to the measure of risk, with assets classified into four buckets (0%, 20%, 50% and 100%) according to the debtor category. This means that some assets (essentially bank holdings of government assets such as Treasury Bills and bonds) have no capital requirement, while claims on banks have a 20% weight, which translates into a capital charge of 1.6% of the value of the claim. However, virtually all claims on the non-bank private sector receive the standard 8% capital requirement. According to the Basel accord the risk-based capital ratio can be measured as:

\[ \text{Risk-based capital ratio} = \frac{\text{Capital}}{\text{Risk-weighted assets}} \]

(ix)
The 1988 Accord has been supplemented a number of times, with most changes dealing with the treatment of off-balance-sheet activities. A significant amendment was enacted in 1996, when the Committee introduced a measure whereby trading positions in bonds, equities, foreign exchange and commodities were removed from the credit risk framework and given explicit capital charges related to the bank’s open position in each instrument Bank of International Settlement (BIS) (2001). Over time the accord has become internationally accepted with more than 100 countries applying the Basel framework to their banking system.

After ten years of implementation and taking into consideration the rapid technological, financial, and institutional changes happened during this period, many weaknesses appear in the Basel I accord. Because of a flat 8% charge for claims on the private sector, banks have an incentive to move high quality assets off the balance sheet (capital arbitrage) through securitization. Thus, reducing the average quality of bank loan portfolios. In addition to that the 1988 accord do not take into consideration the operational risk of banks, which become increasingly important with the increase in the complexity of bank activities. Also, the 1988 Accord does not sufficiently recognize credit risk mitigation techniques, such as collateral and guarantees. Because of that the Basel Committee decided to propose a more risk-sensitive framework in June 1999. The Objectives of the new accord (Basel II) – as outlined by Basel committee – are:
• Promote safety and soundness in the financial system;
• Enhance competitive equality;
• Constitute a more comprehensive approach to addressing risks;
• Develop approaches to capital adequacy that are appropriately sensitive to the degree of risk involved in a banks’ positions and activities; and
• Focus on internationally active banks and at the same time keep the underlying principles suitable for application to banks of varying levels of complexity and sophistication.

To achieve these objectives the new accord measures the risk-based capital ratio according to the following relation:

\[
Risk \text{ Based Capital Ratio} = \frac{Capital}{Credit \text{ Risk} + Market \text{ Risk} + Operational \text{ Risk}}
\]

with different ways to measure each kind of risks. The way the new accord is structured concentrate more in measuring risks face the bank and assessing the probability of insolvency. Basel I Accord set a capital requirement simply in terms of credit risk (the principal risk for banks), though the overall capital requirement (i.e., the 8% minimum ratio) was intended to cover other risks as well. To introduce greater risk sensitivity, Basel II introduces capital charge for operational risk (for example, the risk of loss from computer failures, poor documentation or fraud). Many major banks now allocate 20% or more of their internal capital to operational risk. Under Basel I individual risk weights depend on a board category of borrower. Under Basel II the risk weights are to be refined by reference to a rating provided by an external credit assessment institution (such as a rating agency) that meets strict standards or by relying on internal rating based (IRB) approaches where the banks provide the inputs for the risk weights. Both the external credit risk assessment and the internal rating
approaches require credit information and minimum requirement the banks have to fulfill it.

In addition to the differences between Basel I and Basel II in terms of defining and measuring risks, Basel II introduces two new pillars the supervisory review process and the market discipline.

The new accord (Basel II) consists of three pillars:
1. Minimum capital requirement.
2. Supervisory review process.

1 Minimum capital requirement

The definition of capital in Basel II will not modify and that the minimum ratios of capital to risk-weighted assets including operational and market risks will remain 8% for total capital. Tier 2 capital will continue to be limited to 100% of Tier 1 capital. The main changes will come from the inclusion of the operational risk and the approaches to measure the different kinds of risks. The following diagram summarizes these approaches.

While there were no changes in the approaches to measure the market risk there were fundamental changes in the approaches to measure the credit risk, which we will discuss in section 3. Regarding the operational risk it is introduced for the first time in this accord.

In the standardized approach to credit risk, exposures to various types of counter parties, e.g. sovereigns, banks and corporate, will be assigned risk weights based on assessments by external credit assessment institutions. To make the approach more risk sensitive an additional risk bucket (50%) for corporate exposures will be included. Further, certain categories of assets have been identified for the higher risk bucket (150%).

The “foundation” approach to internal ratings incorporates in the capital calculation the banks’ own estimates of the probability of default associated
with the obligor, subject to adherence to rigorous minimum supervisory requirements. Estimates of additional risk factors to calculate the risk weights would be derived through the application of standardized supervisory rules. In the “advance” IRB approach, banks that meet even more rigorous minimum requirements will be able to use a broader set of internal risk measures for individual exposures.

2 Supervisory Review Process

In Basel I the risk weight were fixed and the implementation of the accord was straightforward. In Basel II the bank can choose from a menu of approaches to measure the credit, market and operational risks. This process of choosing the approach requires the review of the availability of the minimum requirements to implement the approach. In addition to that, in IRB approaches the risk weight is computed from inputs from the bank (like the probability of default). It is necessary in this case to make sure that the bank inputs are measured or estimated in an accurate and robust manner. Basel committee suggests four principles to govern the review process:

Principle 1: Banks should have a process for assessing their overall capital in relation to their risk profile and a strategy for maintaining their capital levels.

Principle 2: Supervisors should review and evaluate banks’ internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the results of this process.

Principle 3: Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

Principle 4: Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk.
characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.

3) Market Discipline

The third pillar in Basel II aims to bolster market discipline through enhanced disclosure by banks. Effective disclosure is essential to ensure that market participants can better understand banks’ risk profiles and the adequacy of their capital positions. The new framework sets out disclosure requirements and recommendations in several areas, including the way a bank calculates its capital adequacy and its risk assessment methods. The core set of disclosure recommendations applies to all banks, with more detailed requirements for supervisory recognition of internal methodologies for credit risk, mitigation techniques and asset securitization.

The RBI and the Indian commercial banks have been preparing to implement Basel II. The RBI had earlier intended in June 2005 that by March 31, 2007 all commercial banks would comply with Basel II. However, taking into account the state of preparedness of the banking system, it was decided in October 2006 to provide banks some more time to put in place appropriate systems so as to ensure full compliance with Basel II. According to the new schedule, foreign banks operating in India and Indian banks having presence outside India are to migrate to the standardised approach for credit risk and the basic indicator approach for operational risk under Basel II with effect from March 31, 2008. All other scheduled commercial banks are encouraged to migrate to these approaches under Basel II in alignment with them but in any case not later than March 31, 2009.

The Basel Committee on Banking Supervision (BCBS) had undertaken the Fifth Quantitative Impact Study (QIS-5) to assess the impact of adoption of the revised Framework. Eleven Indian banks, accounting for about 50 per cent of market share (by assets), participated in the QIS-5 exercise. An empirical
analysis indicates that the combined capital adequacy ratio of these banks is expected to come down by about 100 basis points when these banks apply Basel II norms for standardised approach for credit risk and basic indicator approach for operational risk. Although none of the banks which participated in the exercise would be breaching the minimum capital adequacy ratio under the new framework, the net impact reflects a wide range. The draft guidelines on Basel II implementation has been placed in public domain but meanwhile RBI has asked the banks to undertake parallel calculation of the CRAR based on the Standardised Approach on a quarterly basis from December 2006 and report it to RBI. These would enable RBI to assess the impact of the revised guidelines and enable banks to also assess /calibrate the capital requirements.