bank branch, designated as the base branch. It was advised that the distance between the place of business of a BC and the base branch, should not exceed 15 kms in rural/semi-urban/urban areas and 5 kms in metropolitan centres. If need arose to relax the distance criterion, the matter could be referred to the District Consultative Committee (DCC) of the district concerned for approval. For relaxations covering adjoining districts and for metropolitan areas, the respective SLBC would be the clearing agency. DCCs/SLBCs would consider the requests on merit in respect of under-banked areas or where the population was scattered over large area where the need to provide banking services was imperative, but having a branch was not viable.

2.71 Furthermore, on August 27, 2008, SCBs, including RRBs and local area banks were advised that they could engage companies registered under Section 25 of the Companies Act, 1956, as BCs provided those companies were stand-alone entities or not more than 10 per cent of their equity was held by NBFCs, banks, telecom companies and other corporate entities or their holding companies. For engaging Section 25 companies as BCs, banks had to strictly adhere to the distance criterion of 15 kms/5 kms, as applicable, between the place of business of the BC and the branch. The controlling authorities of banks should closely monitor the functioning of business facilitators (BFs)/BCs during their periodic visits to the branches. Banks were also advised to put in place an institutionalised system for periodically reviewing the implementation of the BF/BC model at the board level.

Working Groups on Improvement of Banking Services in Different States/Union Territories

2.72 The Reserve Bank had in the recent past constituted Working Groups to suggest measures for improving the outreach of banks and their services, and promoting financial inclusion in certain less developed States/ Union Territories, such as Bihar, Uttarakhand, Chattisgarh, Himachal Pradesh, Jharkhand, Lakshadweep and those in the North-Eastern Region, and for supporting the development plans of these State Governments. These Groups made specific recommendations for strengthening of financial institutions (FIs), improving currency and payment systems and for revitalisation of the RRBs and UCBs in the respective regions. The Special Task Force on North-Eastern Region (Chairperson: Smt. Usha Thorat), constituted in May 2008 to give a fresh impetus for setting up of banking facilities in the regions where perceived necessary as per public policy, was entrusted with, *inter alia*, suggesting a mechanism for cost sharing among banks, State Governments and the Reserve Bank for opening of branches/ currency chests and extension of foreign exchange/Government business facilities at centres which were found to be commercially unviable by banks. The Task Force picked up Meghalaya as the first State for implementation of its decisions. The State Government has agreed to the proposal of providing premises and necessary security arrangements for the new branches. Similar mechanisms for other States, where requests have been received, are under consideration.

Financial Inclusion Fund (FIF) and Financial Inclusion Technology Fund (FITF)

2.73 In June 2006, the Government constituted the "Committee on Financial Inclusion" (Chairman: Dr. C. Rangarajan). The Interim Report of the Committee had recommended the establishment of two funds – the FIF for meeting the cost of developmental and promotional interventions for ensuring financial inclusion and the FITF to meet the cost of technology adoption. The Union Budget

for 2007-08, announced the constitution of the FIF and the FITF, with an overall corpus of Rs.500 crore each with NABARD. For the year 2007-08, the Government fixed an initial contribution of Rs.25 crore each in the two funds by the Central Government, the Reserve Bank and NABARD in the ratio 40:40:20.

Financial Literacy

2.74 Recognising lack of awareness about financial services as a major factor for financial exclusion, the Reserve Bank has taken a number of measures towards financial literacy. The Reserve Bank started "Project Financial Literacy" with the objective of disseminating information regarding the central bank and general banking concepts to various target groups such as school and college going children, women, rural and urban poor, defence personnel and senior citizens. The target audience is reached through banks, local government machinery and schools/colleges through the use of pamphlets, brochures, films and also the Reserve Bank's website. The 'For the Common Person' link on the Reserve Bank's website facilitates access to information in Hindi, English and 11 regional languages.

2.75 A 'Financial Education' link, aimed at teaching basics of banking, finance and central banking to children in different age groups, was placed on the Reserve Bank's website on November 14, 2007. The concepts are explained in a simple and interesting way using comic book formats. The site has films on security features of currency notes of different denominations and an educative film to dissuade citizens from stapling notes. The site also has a games section which aims at educating children through entertainment.

Credit Counselling Centres

2.76 The Working Group (Chairman: Professor S.S. Johl) constituted by the Reserve Bank to suggest measures for assisting distressed farmers had recommended financial and livelihood counselling as important for increasing the viability of credit. Further, the Working Group constituted to examine procedures and processes for agricultural loans (Chairman: Shri C.P. Swarnkar) had also recommended that banks should actively consider opening of counselling centres, either individually or with pooled resources, for credit and technical counselling with a view to giving special thrust for credit delivery in the relatively under-developed regions. In the light of the recommendations of these two Groups, in May 2007, convenor banks of SLBCs were advised to set up a financial literacy-*cum*-counselling centre in any one district on a pilot basis and extend it to all other districts in due course, based on the experience gained. As reported by SLBC convenor banks, as on July 31, 2008, 109 credit counselling centres had been set up/proposed to be set up in 19 States, on a pilot basis. In accordance with the announcement made in the Mid-term Review for 2007-08, the Reserve Bank placed on its website a concept paper on 'Financial Literacy and Credit Counselling Centres' on April 3, 2008. Based on the feedback received, a model Scheme for Financial Literacy and Credit Counselling Centres is being conceptualised.

Lead Bank Scheme

2.77 The Lead Bank Scheme, introduced in 1969, was aimed at coordinating the activities of banks and other development agencies for achieving the overall objectives of enhancing the flow of bank finance to the priority sector and promoting banks' role in the overall development of the rural sector. Under the scheme, each district had been assigned to SCBs to enable them to act as consortium leader to coordinate the efforts of banks in the districts, particularly in matters such as branch expansion and credit planning. During

2007-08 (July-June), the nine newly formed districts in six States were assigned to various SCBs, *viz.,* (i) Ramanagara and Chikballapur in Karnataka to Canara Bank and Corporation Bank, respectively; (ii) Ariyalur in Tamil Nadu to State Bank of India (SBI); (iii) Tapi in Gujarat to Bank of Baroda; (iv) Pratapgarh in Rajasthan to Bank of Baroda; (v) Ramgarh and Khunti in Jharkhand to Bank of India; and (vi) Alirajpur and Singrauli in Madhya Pradesh to Bank of Baroda and Union Bank of India, respectively. The total number of districts covered under Lead Bank Scheme, thus, went up to 617, as on June 30, 2008.

2.78 Pursuant to the announcement made in the Mid-term Review for 2007-08, a High Level Committee (Chairperson: Smt. Usha Thorat) was constituted to review the Lead Bank Scheme and improve its effectiveness, with a focus on financial inclusion and recent developments in the banking sector. The Committee conducted ten meetings up to June 30, 2008, with select banks, senior officers of certain State Governments, representatives of micro finance institutions (MFIs)/non-government organisations (NGOs), academicians of reputed educational institutions and others. A questionnaire covering various aspects of the Lead Bank Scheme was forwarded to all the State Governments and major banks. The Committee is expected to submit its report by December 2008.

Government Sponsored Schemes

2.79 As the Government of India had decided to merge the Prime Minister's *Rozgar Yojana* (PMRY) with the Rural Employment Generation Programme (REGP) to form a new scheme, all implementing banks were requested on March 5, 2008, to take necessary steps to achieve all programme targets for 2007-08 and also 2006-07 (if any) and forward their final subsidy requirement for 2007-08 (if any), latest by March 31, 2008. The Government announced the creation of Prime Minister's Employment Generation Programme, by merger of PMRY and REGP, on August 15, 2008.

2.80 In the 11th Meeting of Central Level Coordination Committee (CLCC) of SGSY held on February 8, 2008, the representatives of the commercial banks and State Governments agreed that training institutes such as the Rural Development and Self-Employed Training Institutes (RUDSETIs) needed to be established for assisting the beneficiaries of SGSY in capacity building and skill upgradation to ensure the sustainability of the benefits of the scheme to the rural poor. Accordingly, all SLBC/UTLBC convenor banks were advised in April 2008 to set up one RUDSETI in all districts under their jurisdiction. It was decided in the twelfth meeting of the CLCC of SGSY to prepare separate guidelines for establishment of RUDSETI type institutions. The draft guidelines have since been framed by the Ministry of Rural Development and are being finalised in consultation with the Reserve Bank.

Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS)

2.81 The National Scheme for Liberation and Rehabilitation of Scavengers (NSLRS) was introduced in 1993 to liberate all scavengers and their dependents from their hereditary and obnoxious occupation and engage them in alternative and dignified occupations within a period of five years. In place of the NSLRS, the Government of India approved a new and improved scheme named "Self Employment Scheme for Rehabilitation of Manual Scavengers" (SRMS), aimed at rehabilitating the remaining scavengers and their dependents by March 2009. Accordingly, public sector banks were advised on April 15, 2008 to implement the new scheme as the Government had stopped funding the NSLRS

from 2005-06. The approved scheme contained provisions for capital subsidy, concessional loans and capacity building for rehabilitation of manual scavengers in alternative occupations. The scheme covered projects costing up to Rs.5 lakh; the loan amount would be the remaining portion of the project cost, after deducting the admissible capital subsidy. No margin money/promoter's contribution was required to be provided under the scheme. Both, term loan (up to a maximum cost of Rs.5 lakh) and micro financing (up to a maximum of Rs.25,000) would be admissible under the scheme. Micro financing would also be done through SHGs and reputed NGOs. The rate of interest chargeable from the beneficiaries would be: (a) 5.0 per cent per annum for projects up to Rs.25,000 (4.0 per cent for women beneficiaries); and (b) 6.0 per cent per annum for projects above Rs.25,000. The period of repayment of loan would be three years for projects up to Rs.25,000 and five years for projects above Rs.25,000. The moratorium period to start the repayment of loan would be six months. Credit linked capital subsidy would be provided upfront to the beneficiaries in a scaled manner.

Differential Rate of Interest (DRI) Scheme

2.82 The Union Budget for 2007-08 proposed to raise the limit of the loans under the DRI scheme from Rs.6,500 to Rs.15,000 and the limit of housing loans under the scheme from Rs.5,000 to Rs.20,000 per beneficiary. The Reserve Bank issued instructions to the effect in June 2007. Furthermore, the Union Budget for 2008-09 proposed to raise the borrower's eligibility criteria for availing loans under the DRI Scheme. Accordingly, the Reserve Bank advised banks in April 2008 that borrowers with annual family income of Rs.18,000 in rural areas and Rs.24,000 in urban areas would be eligible to avail of the facility as against the earlier annual income criteria of Rs.6,400 in rural areas and Rs.7,200 in urban areas. The target for lending under the DRI scheme was maintained at 1.0 per cent of the previous year's total advances.

5. Prudential Regulation

2.83 The focus of the Reserve Bank's regulatory initiatives during 2007-08 continued to be on adopting international best practices to the Indian conditions to ensure financial stability. Measures were initiated that paved the way for smooth adoption of the Basel II framework in India. Guidelines pertaining to the New Capital Adequacy Framework (or the Revised Framework) were released and based on clarifications sought by banks during the parallel run of the Revised Framework, a few amendments were made to it. Guidelines for the Supervisory Review Process (SRP) or Pillar 2 of the framework were also issued. The Reserve Bank broadened the means for banks to raise capital to meet their regulatory requirements. In view of the turmoil in the international financial markets, prudential regulation for off-balance sheet exposure of banks was strengthened. Guidelines were also issued for a more dynamic management of liquidity risk by banks, while the frequency of supervisory reporting to the Reserve Bank was increased from monthly to fortnightly. Other major initiatives taken during the year included the tightening of prudential norms in relation to financing of projects by banks and issuance of letters of comfort (LoCs) by them, modifications in the corporate governance norms relating to nationalised banks and associate banks of the SBI and issuance of exhaustive guidelines for enhancing the efficacy of the anti-money laundering (AML) and combating financing of terrorism (CFT) initiatives.

2.84 A view has been expressed in certain quarters that the Indian regulatory framework

should migrate to principles-based regulation from the current rules-based approach. The merits of a principles-based approach are that in a dynamic market context the principles-based approach to regulation provides a more enduring regulatory option since the underlying principles would not change with every new product whereas the detailed rules may have to be constantly modified to address the unique features of market/product developments. The approach, however, has its demerits as it places greater reliance on the discretion/ judgment of the supervisors and regulators in interpreting the broad principles (Box II.7).

Capital Adequacy

Basel II - Implementation

2.85 Guidelines on the Revised Framework, based on the Basel Committee on Banking Supervision (BCBS) document "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" (June 2006), were issued on April 27, 2007. During 2007-08, significant progress was made towards implementation of the Basel II as foreign banks operating in India and Indian banks having operational presence outside India migrated to the Revised Framework with effect from March 31, 2008, while all other commercial banks, except RRBs and local area banks, are required to migrate to these approaches not later than March 31, 2009. Banks are required to maintain a minimum capital to risk-weighted assets ratio (CRAR) of 9.0 per cent on an ongoing basis.

Pillar 2 Guidelines

2.86 The 'International Convergence of Capital Measurement and Capital Standards', commonly known as the Basel II Framework, has three components or Pillars. Pillar 1 pertains to minimum capital requirements, Pillar 2 is the SRP and Pillar 3 relates to market discipline. While the guidelines on Pillar 1 and Pillar 3 were issued by the Reserve Bank in April 2007, the guidelines in regard to Pillar 2, which comprises the SRP and the internal capital adequacy assessment process (ICAAP), were issued in March 2008. In fact, it is Pillar 2 that makes the Basel II framework more comprehensive in covering the various risks to which banks are exposed *vis-à-vis* Basel I which addressed only the credit and market risks.

2.87 Pillar 2 requires banks to implement an internal process, *viz*., the ICAAP, for assessing their capital adequacy in relation to their risk profiles as well as a strategy for maintaining their capital levels. Pillar 2 also requires the supervisory authorities to subject all banks to an evaluation process and to initiate such supervisory measures on that basis, as might be considered necessary. The main focus of Pillar 2 is on the establishment of suitable risk management systems in banks and their review by the supervisory authority.

2.88 The Reserve Bank will take into account the relevant risk factors and the internal capital adequacy assessment of each bank to ensure that the capital held by a bank is commensurate with the bank's overall risk profile, because it is important for a bank to maintain enough capital for all risks, as and when envisaged (Box II.8). This would include, among others, the effectiveness of a bank's risk management systems in identifying, assessing/measuring, monitoring and managing various risks including interest rate risk in the banking book, liquidity risk, concentration risk and residual risk.

2.89 Holding additional capital becomes necessary for banks, on account of both – the

Box II.7: Rules-based *versus* Principles-based Regulation

Principles-based regulation (PBR) implies moving away, wherever possible, from dictating, through detailed prescriptive rules and supervisory actions, how firms should operate their business. Under PBR, the regulated firms are entrusted with the responsibility of deciding how best to align their business objectives and processes with the regulatory outcomes specified by the regulators. This would imply increasingly shifting the balance of the activities towards laying down desirable regulatory outcomes in principles and outcome-focussed rules, enabling the regulators to engage with the firms' senior management in pursuit of these outcomes. PBR was originally conceived at the Bank of England prior to the 1997 reforms. The Financial Services Authority (FSA) of the UK, which is one of the forerunners in adoption of PBR, has eleven principles of business relating to integrity; skill, care and diligence; management and control; financial prudence; market conduct; customers' interests; communication with clients; conflicts of interest; relationships of trust with customers; clients' assets and relations with regulators. These principles are a general statement of the fundamental obligations of firms under the regulation system.

The implementation of PBR requires clearly articulated outcomes that regulators want to achieve and against which their performance can be measured. The Report draws attention to the enabling conditions for introduction of PBR which include building-up of adequate infrastructure, identifying the market activities that are amenable to regulation using high-level statements of principles, a change in culture for regulatory bodies as well as the firms as PBR has significant implications for the way in which regulators work with firms on a day-to-day basis.

In the Indian context, an ownership and size neutral regulation (in terms of various provisions of the Banking Regulation Act and the RBI Act) is adopted, which is uniformly applicable to all banks. Over a period of time, there has been a gradual, well-sequenced, calibrated movement from structured regulation to prudential regulation and these regulatory practices are equally applicable to big and small banks.

Despite the stated superiority of the principles-based approach, the FSA of the UK is perhaps the only regulator to have adopted the model in a big-bang or comprehensive manner, though with a multitude of rules associated with it. In fact, the experience of the countries ostensibly shifting to PBR underscores the fact that it is more of drift rather than dominance. PBR does not necessarily require that principles have legal force – principles could have the status of guidance that informs the supervision of forms and/or enforcement policy. Thus, routine supervisory monitoring will rest on principles coupled with explanatory rules, evidential provisions and guidance, rather than on principles alone.

Thus, in any regulatory regime, complete reliance on a principles-based approach would rarely be a feasible option since the high-level principles would need to be underpinned by detailed rules at the operational level, to achieve the regulatory objectives. Illustratively, it might be easy to enunciate the principle, "treat your customer fairly" but ensuring it at the ground level would invariably require specific rules and prescriptions to achieve the objective underlying the principle.

Besides, as the PBR approach requires the regulator to identify and monitor risks for the overall industry and the regulated entities to understand the spirit of the principles while implementing them at the operational level, it necessitates significant skill upgradation on the part of the regulator as well as the regulated entities. Furthermore, in any jurisdiction, there could be certain areas of regulation which would be more amenable to a PBR approach, while other areas might inevitably require detailed prescriptive rules. Thus, the rules-based and principles-based approaches to regulation are not mutually exclusive options but could very well co-exist and complement each other. To illustrate, Pillar 1 of the Basel II framework is essentially rules-based prescription while Pillar 2 is more oriented towards principles-based regime. Both rules-based and principles-based regulations have their advantages and disadvantages. While the rules provide legal certainty, they are inflexible. In contrast, the PBR would be more adaptable, but would require active participation of management and the regulators for its successful implementation. In the ultimate analysis, the issue is to arrive at the optimal mix of rules and principles for a country desiring to transit from rules to principles, given the country-specific conditions including the size and complexity of the economy in general and the banking sector in particular, maturity of the market participants, importance of self-regulatory organisations and the culture of self-regulation and regulatory architecture. The Reserve Bank has been in the process of exploring the feasibility of adopting a more principles-based approach to banking regulation in a gradual and non-disruptive manner.

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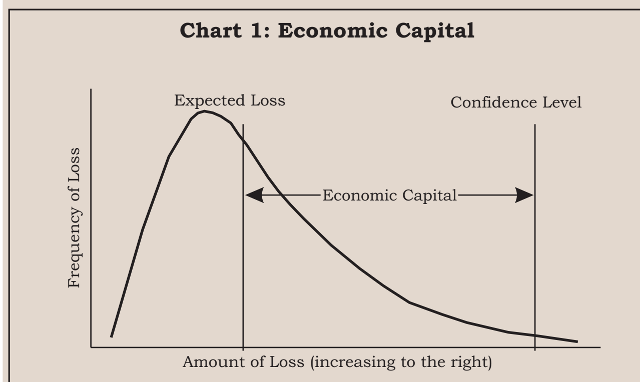
possibility of some underestimation of risks under Pillar 1 and the actual risk exposure of a bank *vis-à-vis* the quality of its risk management architecture. Pillar 2, therefore, includes: (a) the risks that are not fully captured by the minimum capital ratio prescribed under Pillar 1 (for example, credit concentration risk); (b) the risks that are not at all taken into account by Pillar 1 (for example, interest rate risk in the banking book); and

Box II.8: Economic Capital in Assessment of Capital Adequacy

Economic capital is the amount of capital considered necessary by a bank to absorb potential losses associated with all the risks, *viz.*, credit, market, operational and other risks. This is typically arrived at by using mathematical or statistical techniques designed to assess the likelihood of potential adverse outcomes. Economic capital is distinct from accounting and regulatory capital measures as it is based on a probabilistic assessment of potential future losses and is, therefore, a potentially more forward-looking measure of capital adequacy than traditional accounting measures. The economic capital framework provides a system for consistent firm-wide risk/return evaluations. The model which a bank uses to generate its target amount of economic capital is known as its Economic Capital Model (ECM). In recent years, many banks have adopted advanced modeling techniques that incorporate the internal allocation of economic capital considered necessary to support risks associated with individual lines of business, portfolios or transactions within the bank. A bank might also use economic scenario generators to model stochastically its business forecasts and risks.

Economic capital is typically defined as the difference between some given percentile of a loss distribution and the expected loss. It can be expressed as protection against unexpected future losses at a selected confidence level (Chart 1).

Chart 1: Economic Capital



The confidence level is established by the bank management – the higher the confidence level selected, the lower the probability of insolvency and higher the economic capital. Typically, a confidence level of 99.9 per cent is used as a prudent measure for capital in the case of credit and operational risks. A minimum confidence level of 99 per cent has been prescribed by the Basel Committee for market risk capital charge computation. However, the holding period used for market risk capital charge is 10 days, whereas it is one year in the case of capital for credit and operational risk under Basel II. Maintaining economic capital at 99.9 per cent confidence level denotes that the capital is adequate to cover all but one worst possible risk loss level out of 1,000 possible risk scenarios, for a given time horizon. Thus, economic capital captures most of the unexpected loss[3] events with the exception of catastrophic events. It is this possibility for unexpected losses to occur that necessitates the holding of capital protection. ECMs are important to banks adopting the Revised Framework.

The Basel Committee now recognises that capital adequacy in relation to economic risk is a necessary condition for long-term soundness of banks. Thus, in addition to complying with the established minimum regulatory capital requirements, banks should critically assess their internal capital adequacy and future capital needs on the basis of risks assumed. As part of the SRP, supervisors need to improve their understanding of the nature and limitations of economic capital methodologies and how they are being used by banks. This would support the supervisory evaluation of the strength of a bank's management processes and its capital position. Supervisors should keep in mind that while economic capital approaches may provide an additional and useful tool to banks to make risk-related decisions, they should not be seen as a substitute for strong corporate governance and risk management capabilities.

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(c) the factors external to the bank (for example, business cycle effects). Another important aspect of Pillar 2 is the assessment of compliance with the minimum standards and disclosure requirements of the more advanced approaches available under Pillar 1, as and when these are permitted in a particular jurisdiction, so as to ensure that these requirements are met, both as qualifying criteria and on a continuing basis.

2.90 Over the last decade, a number of banks have invested resources in modeling

[3] Unexpected loss is the potential for actual loss to exceed the expected loss and is a measure of the uncertainty inherent in the loss estimate. Expected loss is the anticipated average loss over a defined period of time. Expected losses represent a cost of doing business and are generally expected to be absorbed by operating income.

the credit risk arising from their significant business operations with a view to assisting them in quantifying, aggregating and managing credit risk across geographic and product lines. Risk management has become a more complex practice with the evolution of credit risk models that provide decision makers with insight or knowledge that would not otherwise be readily available, thus giving them a competitive edge. The output of these models also plays an increasingly important role in banks' risk management and performance measurement processes, customer profitability analysis, risk-based pricing, active portfolio management and capital structure decisions (Box II.9).

Amendments to the New Capital Adequacy Framework

2.91 With a view to ensuring smooth transition to the Revised Framework and providing an opportunity to streamline their systems and strategies, banks in India were advised by the Reserve Bank in May 2006, to undertake a parallel run of the Revised Framework. In the light of clarifications sought by banks during the course of implementation of the parallel run, the guidelines were reviewed and the following amendments, *inter alia*, were introduced on March 31, 2008:

(i) Innovative Perpetual Debt Instruments (IPDI) in excess of 15 per cent of Tier 1 capital were allowed to be included in Tier 2 capital.

(ii) A bank's aggregate investment in all types of instruments, eligible for capital status of investee banks/FIs/NBFCs/primary dealers (PDs) should not exceed 10 per cent of the investing bank's capital funds (Tier 1 plus Tier 2, after adjustments). Any investment in excess of this limit should be deducted at 50 per cent from Tier 1 and 50 per cent from Tier 2 capital.

(iii) The direct loan/credit/overdraft exposure, if any, of banks to the State Governments and the investment in State Government securities would attract zero risk weight, while State Government guaranteed claims would attract 20 per cent risk weight.

(iv) Consumer credit, including personal loans and credit card receivables but excluding education loans, would attract a higher risk weight of 125 per cent or more, if warranted by the external rating (or, the lack of it) of the counterparty. As gold and gold jewellery are eligible financial collateral, the counterparty exposure in respect of personal loans secured by gold and gold jewellery would be worked out under the comprehensive approach. The 'exposure value after risk mitigation' would attract a risk weight of 125 per cent.

(v) In respect of credit transactions, haircut[4] would apply only to the eligible collateral but not to the credit exposure of the bank. On the other hand, exposures of banks, arising out of repo-style transactions would attract haircut.

(vi) In the case of loans collateralised by a bank's own deposits, even if the tenure of such deposits was less than three months or deposits had maturity mismatch *vis-à-vis* the tenure of the loan, the provisions regarding de-recognition

[4] In the comprehensive approach, while taking collateral, banks will need to calculate their adjusted exposure to a counterparty for capital adequacy purposes in order to take account of the effects of that collateral. Banks are required to adjust both the amount of the exposure to the counterparty and the value of any collateral received in support of that counterparty to take account of possible future fluctuations in the value of either, occasioned by market movements. These adjustments are referred to as 'haircuts'.

Box II.9: Advanced Approaches – Credit Risk Models

The literature on quantitative risk modeling is mainly based on two different approaches to credit risk measurement, *viz.*, default models and mark-to-market models. While the default models consider losses resulting exclusively from obligor defaults, mark-to-market models also consider losses resulting from a change of value of the loans due to credit quality deterioration. Default models have led to the development of statistical approach (analysis of historical data) that tries to rate the firms on a discrete or continuous scale. Mark-to-market models capture distribution of the firm's asset-value over a period of time on the basis of the expected default frequency (EDF)[5] model.

In recent years, important advances have been made in modeling credit risk in lending portfolios. The new models are designed to quantify credit risk on a portfolio basis, and thus are applied at the time of diversification as well as portfolio-based pricing. These models estimate the loss distribution associated with the portfolio and identify the risky components by assessing the risk contribution of each individual asset in the portfolio. CreditMetrics is a portfolio model for evaluating credit risk which enables consolidation of credit risk across the entire organisation and provides a statement of value-at-risk due to credit upgrades, downgrades and defaults. Credit risk models can also be classified as conditional or unconditional. While unconditional models take into account relatively limited borrower or facility-specific information, conditional models also attempt to incorporate information on the state of the economy, such as levels and trends in domestic and international employment, inflation, stock prices, interest rates and even indicators of financial health of particular sectors.

While banks may adopt any credit risk model depending on their size, complexity, risk bearing capacity and risk appetite, among others, the credit risk models followed by them should, at a minimum, be able to: (a) differentiate the degree of credit risk in different credit exposures of a bank; (b) identify concentration in the portfolios; (c) identify problem credits before they become non-performing; (d) identify adequacy or inadequacy of loan provisions; (e) help in pricing of credit; (f) recognise variations in macroeconomic factors and a possible impact under alternative scenarios; and (g) determine the impact on profitability of transactions and relationship.

Sufficient human judgment and oversight is necessary to ensure that all relevant information is taken into consideration and that the model is used appropriately. The burden is on the bank to satisfy its supervisor that a model or procedure has good predictive power and that the regulatory capital requirements will not be distorted as a result of its use. Banks must have in place a process for vetting data inputs into a statistical default or loss prediction model which includes an assessment of the accuracy, completeness and appropriateness of the data specific to the assignment of an approved rating. As credit risk models involve extensive judgment, effective model validation procedures are crucial. Banks should periodically employ stress testing and back testing in evaluating the quality of their credit risk assessment models and establish internal tolerance limits for differences between expected and actual outcomes and processes for updating limits as conditions warrant. However, data limitations pose significant difficulties in designing and validating credit risk models. Unlike fixed income instruments and other investments in the trading book, most credit instruments are not marked-to-market. The scarcity of the data required to estimate credit risk models also stems from the longer-term time horizons used in measuring credit risk. Where market risk models typically employ a horizon of a few days, credit risk models generally rely on a time-frame of one year or more. Hence, in specifying model parameters, credit risk models require the use of simplifying assumptions and proxy data. The longer holding period, coupled with the higher confidence intervals used in credit risk models, makes it difficult for model-builders to assess the accuracy of their models. Use of credit risk models by banks under the internal ratings based approaches of Basel II framework would, therefore, pose a challenge to the regulators in ensuring that a bank's internal model accurately represents the level of risk inherent in the portfolio and the regulatory capital maintained, based on the model, is adequate.

While the BCBS stops short of allowing the results of credit risk models to be used for regulatory capital purposes under Basel II, it recognises the importance of continued active dialogue regarding both the performance of such models and their comparability across banks. BCBS is of the view that a successful implementation of the Revised Framework will provide banks and supervisors with critical experience necessary to address such challenges.

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[5] EDF calculation is based on a company's current asset value, volatility of asset returns and the market value of its equity.

of collateral would not be attracted provided an explicit consent was obtained from the depositor (*i.e.*, borrower) for adjusting the maturity proceeds of such deposits against the outstanding loan or for renewal of such deposits till the full repayment of the underlying loan.

(vii) The capital charge for equities would apply on their current market value in a bank's trading book.

(viii) The claims on non-scheduled banks, which were deducted from capital, would be risk weighted from 100 per cent to 625 per cent, depending on the CRAR of the institution concerned, with higher risk weights prescribed for banks with lower CRAR. In the case of banks where no capital adequacy norms were prescribed by the Reserve Bank, the CRAR was to be notionally calculated, by obtaining the necessary information from the investee banks, using the capital adequacy norms as applicable to commercial banks.

(ix) In view of excess volatility in the stock markets across the world, equity was removed from the list of eligible financial collaterals.

(x) Standard supervisory haircut provided for exposures and collaterals, which were obligations of foreign central sovereigns/ corporates.

(xi) Capital adequacy framework applicable for repo/reverse-repo style transactions was specified.

(xii) Detailed guidelines were incorporated for measuring the capital charge for interest rate risk (specific risk) in debt securities and other interest rate related instruments in the available for sale (AFS) and held for trading (HFT) categories.

Enhancement of Banks' Capital Raising Options

2.92 In order to give a wider choice of instruments for raising Tier 1 and Upper Tier 2 capital, the Reserve Bank, in October 2007, enhanced banks' capital raising options for meeting the capital adequacy requirements by issuing guidelines pertaining to issue of preference shares as part of the regulatory capital. Indian banks could issue preference shares in Indian Rupees, subject to extant legal provisions. While perpetual non-cumulative preference shares (PNCPS) would constitute Tier 1 capital, perpetual cumulative preference shares (PCPS), redeemable non-cumulative preference shares (RNCPS) and redeemable cumulative preference shares (RCPS) were allowed as Upper Tier 2 capital.

Exposure Norms and Risk Weights

2.93 The exposure norms and risk weights for a few classes of loans extended by banks were reviewed by the Reserve Bank during 2007-08. While risk weights and norms for certain sectors such as education and housing were relaxed, money lent by banks to mutual funds (MFs) was brought within the purview of limits imposed on the capital market exposure of banks. Besides being a method of checking concentration of credit, the exposure norms also help in channelising credit to the desired sectors (Box II.10). The Reserve Bank also strengthened prudential regulations for off-balance sheet exposure of banks in the wake of the international financial turmoil.

Loans Extended by Banks to MFs and Issue of Irrevocable Payment Commitments (IPCs)

2.94 As per the extant guidelines, the aggregate capital market exposure of a bank in all forms, both fund based and non-fund based, should not exceed 40 per cent of its net worth, as on March 31 of the previous year. There were, however, no explicit guidelines for

Box II.10: Use of Regulatory Tools in Sectoral Deployment of Credit

Banking regulators worldwide generally use regulatory tools to strengthen the financial health of individual institutions, while monetary tools such as interest rates and reserve requirements are mainly useful in influencing the overall liquidity in the system. In view of the complex developments in the financial sector in recent times, it is no longer optimal to confine the use of tools to the original silos where they belonged. Accordingly, an attempt has been made in several countries to make use of regulatory tools for directing credit to desired channels and moderating the flow of credit to certain sectors.

In India, since April 2005, the Reserve Bank has been expressing concern about the strong credit growth, the significantly overdrawn state of the banking system to sustain the credit disbursement, mismatches between sources and uses of funds and implications for interest rates, liquidity conditions and credit quality. Several monetary and prudential measures were initiated during this period. Two of the most commonly used regulatory tools were the risk weights used for calculating minimum regulatory capital and the provisioning requirements applicable to the standard assets. Generally, risk weights are dependent upon historic probability of default. However, unusually high credit growth in a sensitive sector can be seen as a precursor to higher default rates in future necessitating application of higher risk weights without waiting for the relative portfolio to show weaknesses.

Certain sensitive sectors such as consumer credit, capital market exposure and commercial real estate exposure are constantly reviewed to identify any perceptible change in growth, warranting revision of the risk weights and provisioning norms for standard assets. A higher risk weight of 125 per cent was introduced in 2004, as a temporary counter cyclical measure, for consumer credit including personal loans and credit cards receivables exhibiting strong growth. The increased risk weight was regularly reviewed and retained at the same level. Similarly, the continued rapid expansion in credit to the capital market prompted the Reserve Bank to increase the risk weight on banks' exposure to the capital market to 125 per cent in July 2005. The risk weight on commercial real estate exposure was increased from 100 per cent to 125 per cent in July 2005 and subsequently to 150 per cent in May 2006. The real estate loans showed deceleration thereafter, though in absolute terms there has been substantial increase. Thus, the higher risk weight applicable to this sector has been found to be an effective tool for moderating credit growth, besides serving prudential purpose.

The general provisioning requirement on standard advances in certain sectors, *viz.,* capital market exposure, residential housing loans beyond Rs.20 lakh and commercial real estate loans was raised from 0.4 per cent to 1.0 per cent in May 2006, in order to ensure that asset quality was maintained in the face of high credit growth. As continued high credit growth in the real estate and capital market sectors emerged as a matter of concern, it was decided to increase the provisioning requirement in respect of standard assets for these loans and advances from 1.0 per cent to 2.0 per cent in January 2007. In view of the macroeconomic, monetary and credit conditions prevailing in November 2008, consistent with the practice of dynamic provisioning, the provisioning requirement for all types of standard assets was reduced to a uniform level of 0.4 per cent, except in case of direct advances to the agricultural and SME sectors, provisioning for which was retained at 0.25 per cent.

The risk weight measure has also been used to enhance credit flow to socially important sectors such as housing finance, education loans and investments in mortgage-backed securities of HFCs. Education loans, which were earlier classified as consumer credit, have been classified as non-consumer credit for the purpose of capital adequacy norms since January 2008 and their risk weight has been reduced.

The use of regulatory tools has helped in containing the growth of lending of SCBs to sensitive sectors. For instance, the growth of banks' lending to the real estate sector decelerated from 80 per cent at end-March 2006 to 42.3 per cent at end-March 2007 and further to 19.8 per cent at end-March 2008. Thus, there has been some rebalancing and overall correction in credit growth in response to policy initiatives.

extending loans and advances to MFs. The Annual Financial Inspection reports of certain banks and an analysis of the consolidated prudential return of some banks revealed that they had extended large loans to various MFs and had also issued IPCs to the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) on behalf of MFs/foreign institutional investors (FIIs). These exposures had, however, not been included by the banks for computation of their capital market exposure. Accordingly, in December 2007, the Reserve Bank advised banks to be judicious in extending loans to MFs and also ensure that these loans were utilised for meeting only temporary liquidity needs of the MFs. Furthermore, these loans should not exceed 20 per cent of the net asset of the scheme and

their tenure should not exceed six months. If such finance was extended to equity-oriented MFs, it would be included in the capital market exposure of the bank. Also, IPCs extended by banks would be included in computation of their capital market exposure as they were in the nature of non-fund based credit facility for purchase of shares. Banks were advised that entities such as FIIs were not permitted to avail of fund or non-fund based facilities such as IPCs. Banks have been given a transition period of one year (up to December 13, 2008) to comply with the above requirements.

Off-Balance Sheet Exposures of Banks

2.95 The Reserve Bank has initiated several steps in the recent past to strengthen the prudential framework in respect of on-balance sheet exposures of banks. Such measures included additional risk weights and provisioning requirements for exposures to specific sectors. In view of the recent developments in the global financial markets, it was felt necessary to review the current stipulations regarding conversion factors, additional risk weights and provisioning requirements for specific off-balance sheet exposures of banks and prescribe prudential requirements as appropriate. Accordingly, in May 2008, the draft guidelines incorporating the required modifications were put up on the Reserve Bank's website for comments from the public. Based on the feedback received, guidelines were issued in August 2008. These, among others, included the following:

(i) For the purpose of exposure norms and capital adequacy, banks shall compute their credit exposures and credit equivalent amounts, respectively, arising on account of interest rate and foreign exchange derivative transactions and gold using the current exposure method (CEM).

(ii) The credit conversion factors (CCFs) for market related off-balance sheet items applicable to these transactions will be as under:

Residual Maturity	Credit Conversion Factors	
	Interest Rate Contracts	Exchange Rate Contracts and Gold
One year or less	0.5 per cent	2.0 per cent
Between one year and five years	1.0 per cent	10.0 per cent
More than five years	3.0 per cent	15.0 per cent

(iii) Credit exposures computed as per the current marked-to-market value of the contract arising on account of interest rate and foreign exchange derivative transactions and gold shall also attract provisioning requirement as applicable to loan assets in standard category.

(iv) In respect of derivative transactions, any amount due to a bank, which remains unpaid in cash for a period of 90 days from the specified due date for payment, would be classified as a NPA as per the 'prudential norms on income recognition, asset classification and provisioning pertaining to advances portfolio'.

2.96 The issues regarding asset classification status of overdue payments in respect of derivative transactions and restructuring of derivative contracts were again examined in October 2008 and banks were advised to treat any receivables representing positive mark-to-market value of a derivative contract, remaining overdue for a period of 90 days or more, as NPA. They were required to extend the principle of borrower-wise asset classification for all other funded facilities granted to the client, and classify them also as NPA, as per the existing asset classification norms. However, the principle of borrower-wise classification needs to be confined only to the overdues arising from forward contracts, plain vanilla swaps and options.

Risk Weight on Education and Housing Loan

2.97 In order to meet the regulatory requirements as per the Revised Framework, 'education loans' were classified as a part of 'consumer credit' for the purpose of capital adequacy, and accordingly attracted a risk weight of 125 per cent. Following a review of the risk weight for education loans, in January 2008, it was decided that education loans need not be classified as consumer credit for the purpose of capital adequacy norms. Accordingly, the risk weight applicable to education loans was stipulated at 100 per cent for banks under Basel I framework. Under Basel II framework, such loans would be treated as a component of the regulatory retail portfolio and would attract a risk weight of 75 per cent.

2.98 For the purpose of applying concessional risk weights for meeting capital adequacy requirements under both Basel I and Basel II frameworks, in May 2008, the limit of bank loans for housing was enhanced to Rs.30 lakh from Rs.20 lakh. Accordingly, where the loan-to-value (LTV) ratio was less than 75 per cent, loans up to Rs.30 lakh would carry a risk weight of 50 per cent, whereas loans of higher amount would attract a risk weight of 75 per cent. The risk weight in the case of other loans, *i.e.*, loans with LTV ratio of above 75 per cent, irrespective of the size, would continue to be 100 per cent.

Para-Banking Activities

2.99 The Reserve Bank has from time to time modified the framework of rules/ regulations/instructions to the SCBs for allowing them to undertake certain financial services or para-banking activities. Adequate safeguards have been put in place to ensure that the financial services or para-banking activities undertaken by banks are run on sound and prudent lines. In June 2007, guidelines were issued for banks to act as pension fund managers (Box II.11).

Box II.11: Pension Fund Management by Banks

The Government of India issued a notification on May 24, 2007 {under clause (o) of sub-section (1) of Section 6 of the Banking Regulation Act, 1949} specifying Pension Fund Management (PFM) as a lawful business for a banking company to engage in. Accordingly, banks were advised that they could undertake PFM through their subsidiaries, set up for the purpose, subject to their satisfying the eligibility criteria prescribed by the Pension Fund Regulatory and Development Authority (PFRDA) for pension fund managers. Banks were also advised that they should obtain prior approval of the Reserve Bank before engaging in the business of PFM subject to certain guidelines.

Banks are allowed to undertake PFM through their subsidiaries only and should not be undertaken departmentally. Banks have been permitted to lend their names/abbreviations to their subsidiaries formed for PFM, for leveraging their brand names and associated benefits thereto, subject to maintaining an "arm's length" relationship with the subsidiary. In order to provide adequate safeguards against associated risks and ensure that only strong and credible banks enter into the business of PFM, the banks complying with the following eligibility criteria (as also the solvency margin prescribed by the PFRDA) can approach the Reserve Bank for necessary permission to enter the PFM business: (i) net worth of the bank should be not less than Rs.500 crore; (ii) CRAR should be not less than 11.0 per cent during the last three years; (iii) bank should have made net profit for the last three consecutive years; (iv) return on assets should be at least 0.6 per cent or more; (v) level of net NPAs should be less than 3.0 per cent; (vi) performance of the bank's subsidiary/ies, if any, should be satisfactory; (vii) management of the bank's investment portfolio should be good as per the Annual Financial Inspection Report of the Reserve Bank and there should not be any adverse remark/s in the Report involving supervisory concerns.

The PFRDA had sought expressions of interest from only public sector entities with sufficient experience and financial strength for sponsoring pension funds for Government employees under the New Pension System. Three public sector entities, *viz.*, SBI, UTI Asset Management Company Private Ltd. and Life Insurance Corporation of India were recommended for appointment as sponsors of pension funds under the New Pension System by an independent selection committee constituted by the PFRDA. The SBI has since been accorded an 'in-principle' approval for setting up a subsidiary to act as a pension fund manager subject to certain conditions.

Risk Management

2.100 Risk management is a crucial element of the banking business and it has assumed added significance in the context of the recent global financial markets crisis. In view of the importance of risk management, the Reserve Bank has from time to time issued various guidelines including those on asset-liability management (ALM). While these serve as benchmarks for establishing integrated risk management systems, banks have been given the freedom to develop their own systems taking into account their type, size of operations and risk perceptions. Several initiatives were taken during the year to strengthen risk management systems in banks such as modification in the ALM guidelines. Banks were also advised to avoid equity funding of projects. Comprehensive guidelines were issued to banks to do a proper risk assessment and accounting for the LoCs issued by them.

Role of Credit Rating Agencies (CRAs)

2.101 CRAs, specialising in analysing and evaluating the credit-worthiness of corporate and sovereign issuers of debt securities, play a key role in financial markets by helping to reduce the information asymmetry between lenders and investors on the one side, and issuers on the other, about the credit-worthiness of companies/countries. The global financial turmoil brought into sharp focus the role of CRAs in better risk assessment and measurement.

2.102 The Reserve Bank has undertaken a detailed process of identifying the eligible CRAs whose ratings may be used by banks for assigning risk weights for credit risk. However, this accreditation process is neither a regulatory prescription nor a supervisory requirement. It has the limited purpose of using ratings for assigning risk weights within the framework of Basel II. So far, four rating agencies (Credit Analysis and Research, CRISIL, Fitch India and ICRA) have been granted accreditation on the basis of six parameters *viz.*, objectivity, independence, international access, transparency, disclosure credibility and resources. Banks have to use the chosen CRAs and their ratings consistently for each type of claim, for both risk weighting and risk management purposes. Banks are not allowed to 'cherry pick' the assessments provided by different CRAs. Banks must disclose the names of the CRAs that they use for the risk weighting of their assets, the risk weights associated with the particular rating grades as determined by the Reserve Bank through the mapping process for each eligible CRA as well as the aggregated risk weighted assets as required. Further, in India, complex structures like synthetic securitisations have not been permitted so far. As and when such products are to be introduced, the Reserve Bank would put in place the necessary enabling regulatory framework including calibrating the role of the rating agencies.

Liquidity Management – Modification of ALM Guidelines

2.103 Guidelines on ALM system issued in February 1999, covered, *inter alia*, interest rate risk and liquidity risk measurement/ reporting framework and prudential limits. Liquidity was tracked through traditional maturity or cash flow mismatches under the extant guidelines. As a measure of liquidity management, banks were required to monitor their cumulative mismatches across all time buckets in their statement of structural liquidity by establishing internal prudential limits with the approval of their boards/ management committees. As per the guidelines, in the normal course, the mismatches (negative gap) in the time buckets of 1-14 days and 15-28 days were not to exceed 20 per cent of the cash outflows in the respective time buckets.

2.104 During the period under review, the Reserve Bank fine-tuned the guidelines for ALM in order to make liquidity management by banks more dynamic. Taking into consideration the international practices in this regard, the level of sophistication of banks and the need for a sharper assessment and better liquidity management, it was decided that the 1-14 days time bucket be made more granular by splitting it into three time bands, *viz.*, day 1 (*i.e.*, next day), 2-7 days and 8-14 days. Accordingly, in October 2007, banks were advised that the net cumulative negative mismatches during the next day, 2-7 days, 8-14 days and 15-28 days should not exceed 5 per cent, 10 per cent, 15 per cent and 20 per cent of the cumulative outflows, respectively, in order to recognise the cumulative impact on liquidity. Banks were also advised to undertake dynamic liquidity management and prepare the statement of structural liquidity on a daily basis. In the absence of a fully networked environment, banks were allowed to compile the statement on best available data coverage initially but were advised to make conscious efforts to attain 100 per cent data coverage in a timely manner.

2.105 The statement of structural liquidity was to be reported to the Reserve Bank, once a month, as on the third Wednesday of every month. The frequency of supervisory reporting of the structural liquidity position was increased to fortnightly, with effect from April 1, 2008. Banks are now required to submit the statement of structural liquidity as on the first and third Wednesday of every month to the Reserve Bank. The due date of the submission of the statement is the seventh day from the reporting date.

Project Finance Portfolio of Banks

2.106 At the time of financing projects, banks generally adopt one of the following methodologies for determining the level of promoters' equity: (i) promoters bring their entire contribution upfront before the bank starts disbursing its commitment; (ii) promoters bring certain percentage of their equity (40-50 per cent) upfront and the balance is brought in stages; and (iii) promoters agree, *ab initio*, that they would bring in equity funds proportionately as the banks finance the debt portion. It was observed that the last method had greater equity funding risk. Accordingly, to contain this risk, the Reserve Bank advised banks in November 2007 to have a clear policy regarding the debt-equity ratio (DER) and to ensure that infusion of equity/fund by the promoters is such that the stipulated level of DER is maintained at all times. Furthermore, banks were asked to adopt funding sequences so that the possibility of equity funding by them was obviated.

Norms Relating to Issuance of LoCs

2.107 It was observed that banks in India were issuing LoCs to meet the requirements of overseas regulators while seeking their approval for establishing subsidiaries/ opening branches in their countries as also to support certain activities of their subsidiaries in India. Such LoCs were intended to provide comfort to: (i) the overseas and the domestic regulators that the parent bank would support its foreign/domestic subsidiaries in case they face any financial problem in future; and (ii) the rating agencies in India, which might be rating the issuances/ products of the bank's Indian subsidiaries, in regard to availability of the parental support to the subsidiary. However, such LoCs entailed an element of contingent liability on the part of the issuing banks which was not adequately captured under the extant regulatory dispensation. Accordingly, the matter relating to issuance of LoCs on behalf of a bank's subsidiaries and in favour of

overseas regulators was examined by the Reserve Bank and the following prudential norms were laid down in this regard in March 2008. One, every issuance of a LoC should be subject to prior approval by the board of directors of the bank. The bank should lay down a well defined policy for issuance of LoCs, including the indicative cumulative ceilings up to which LoCs could be issued for various purposes. The policy must, *inter alia*, provide that the bank would obtain and keep on record legal opinion in regard to the legally binding nature of the LoC issued. An appropriate system for keeping a record of all the LoCs issued should also be put in place. Two, the bank should make an assessment, at least once a year, of the likely financial impact that might arise from the LoCs issued by it and outstanding, in case it is called upon to support its subsidiary in India or abroad, as per the obligations assumed under the LoCs issued. Such an assessment should be made qualitatively on a judgmental basis and the amount so assessed should be reported to the board, at least once a year. As a first time exercise, such an assessment should be undertaken in respect of all the outstanding LoCs issued and outstanding as on March 31, 2008 and the results placed before the board in the ensuing meeting. Such an assessment should also form a part of the bank's liquidity planning exercise. Three, any LoC that is assessed to be a contingent liability of the bank by a rating agency/auditors (internal or external)/internal inspectors/the Reserve Bank inspection team, should be treated, for all prudential regulatory purposes, on the same footing as a financial guarantee issued by the bank. Four, the bank should disclose full particulars of all the LoCs issued by it during the year, including their assessed financial impact, as also their assessed cumulative financial obligations under the LoCs issued by it in the past and outstanding, in its published financial statements, as part of the 'notes to accounts'.

Income Recognition, Asset Classification and Provisioning

2.108 Over the years, the prudential norms for provisioning have been revised to bring them in conformity with the global best practices. In view of time overruns in infrastructure projects, the Reserve Bank has fine-tuned asset classification norms for infrastructure projects that are under implementation and involve time overrun. In May 2008, the Reserve Bank modified the prudential norms on asset classification in respect of infrastructure projects under implementation and which have been delayed on account of legal and other extraneous reasons. Accordingly, it was decided that in the case of infrastructure projects financed by banks post May 28, 2002, the date of completion of the project should be clearly spelt out at the time of financial closure of the project and if the date of commencement of commercial production extends beyond a period of two years (as against the earlier norm of one year) after the date of completion of the project, as originally envisaged, the account should be treated as sub-standard. The revised instructions came into force with effect from March 31, 2008.

NPA Management by Banks

2.109 The availability of information on a prospective borrower's capacity to repay a loan and past track-record are key variables in risk analysis and the decision by a FI to grant credit. The availability of information on credit history facilitates risk evaluation and thereby limits credit rationing practised by lenders. An efficient system of credit information on borrowers is, thus, an important first step in improving the credit risk management (Box II.12).

2.110 In India, the regulations under the Credit Information Companies (Regulation) Act, 2005 were notified in December 2006. In

Box II.12: Credit Information Companies – A Perspective

The need for an adequate, comprehensive and reliable information system on the borrowers through an efficient database system has been strongly felt by regulators, policy makers as well as credit institutions. CICs, also known as credit bureaus, fulfil the need of credit information resulting in several benefits to credit institutions and borrowers:

- The exchange of information on borrowers decreases default rates and reduces average interest rates, thus, leading to increased lending. The maintenance of historical credit data on borrowers by CICs incentivises the borrowers to maintain clean repayment history, which, in turn, enables reduction of NPAs, augmentation of portfolio quality and availability of more funds with credit institutions for lending. A growing body of empirical evidence suggests that the mechanism of credit information sharing is associated with the deepening of the credit markets.
- CICs facilitate objective and transparent scrutiny/processing of credit and make the process fast and less expensive.

Credit bureau information can also be important for macroeconomic intelligence. For instance, an increase in the movement of loans to lower grades in a particular sector or region may highlight particular economic problems and risks in that area or sector. This information may be invaluable for a central bank to understand the transmission of monetary policy and to guide monetary policy decisions. Credit bureau information can also be used by the tax authorities to improve fiscal control and to analyse the effect of different tax policies on credit flows.

Information Sharing Mechanism – Public and Private Sector Conundrum

The possibility of increasing returns to scale in the credit information industry could lead to market power concentration, less than optimal service provision and higher than competitive pricing. As a result, the form and design of CICs – public, private or public-private participation assumes importance.

In many countries such as France, public credit registries (PCRs), are operated by a central bank or bank supervisor. Alternatively, some have chosen to leave credit reporting service solely to private firms, for instance, the US. The Italian model, on the other hand, reflects the integration of the private and public sectors while retaining a significant measure of government control. Italy's credit reporting system is considered one of the most complete and accurate registries in Europe. This illustrates that PCRs and private credit bureaus complement and not substitute each other.

Credit Scoring and CICs

The most important innovation in commercial credit scoring in recent years has been the ability to combine all the different data sources to provide the modeling capability to assess companies' likely behaviour accurately and to provide a single score for credit-worthiness. The information required to make an accurate and informed decision is delivered through the one source, the credit reference agency, in the form of a credit scorecard, with scores in the range of 0 to 100, indicating the likelihood of business failure. Further, small businesses are typically much more informationally opaque than large corporations because they often do not have certified audited financial statements to yield creditable financial information on a regular basis. Small Business Credit Scoring involves analysing consumer data about the owner of the firm and combining it with relatively limited data about the firm itself using statistical methods to predict future credit performance.

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April 2007, the Reserve Bank invited applications from companies interested in continuing/commencing the business of credit information. The last date for submission of the applications was July 31, 2007 and 13 applications were received. An external High Level Advisory Committee (Chairman: Dr. R.H. Patil) was set up by the Reserve Bank for screening the applications and recommending the names of the companies to which certificates of registration could be granted. After the announcement of the foreign direct investment (FDI) policy for credit information companies (CICs) in March 2008, the processing of applications has been taken up. Thus, soon new CICs will be authorised to commence business which is expected to reduce information asymmetry and facilitate efficient credit allocation and pricing while fostering a better credit culture.

2.111 In order to increase the options available to banks for resolving their NPAs and

to develop a healthy secondary market for NPAs, the Reserve Bank had issued guidelines for purchase/sale of NPAs among banks in July 2005. In terms of these guidelines, banks' boards were required to lay down policies covering, among others, valuation procedure to be followed to ensure that the economic value of financial assets was reasonably estimated based on the assessed cash flows arising out of repayment and recovery prospects. However, it was brought to the Reserve Bank's notice that in some cases, NPAs were sold for much less than the value of available securities and no justification was given for sale below the economic value. Accordingly, in October 2007, the Reserve Bank issued guidelines in terms of which banks should work out the net present value (NPV) of the estimated cash flow associated with the realisable value of the available securities net of the cost of realisation, while selling NPAs. The sale price should generally not be lower than the NPV arrived at in the manner described above. The same principle should be used in the case of compromise settlements also. As the payment of the compromise amount may be in instalments, the NPV of the settlement amount should be calculated and this amount should generally not be less than the NPV of securities.

2.112 Further, in November 2007, banks were advised to invariably ensure that once a case was filed before a court/debt recovery tribunal (DRT)/Board for Industrial and Financial Reconstruction (BIFR), any settlement arrived at with the borrower was subject to obtaining a consent decree from the court /DRT/BIFR concerned.

Corporate Governance

2.113 Corporate governance is recognised as a crucial element for maintaining the stability and soundness of the financial system. The Reserve Bank had prescribed the 'fit and proper' criteria for the elected directors of the boards of nationalised banks and associate banks of the SBI in November 2007. This was in keeping with the 'fit and proper' criteria that were prescribed for directors of private banks in June 2004. In view of the vital role that banks can play in promoting the cause of sustainable development (SD), the Reserve Bank, in December 2007, advised banks on corporate social responsibility (CSR) and SD.

'Fit and Proper' Criteria for Elected Directors

2.114 The 'fit and proper' criteria for elected directors on the boards of nationalised banks and associate banks of the SBI were brought into effect through two different notifications in November 2007. According to the criteria laid down, the banks are required to constitute a 'nomination committee' comprising a minimum of three directors (all independent directors/non-executive directors) from amongst the board of directors, one of whom is to be nominated as the chairman of the committee. The board is also to decide the tenure of the nomination committee. The nomination committee should determine the 'fit and proper' status of the existing elected directors/proposed candidates based on broad criteria such as educational qualification, experience, field of expertise, track record and integrity. Moreover, candidates with adverse notice of any authority/regulatory agency or insolvency or default of any loan from any bank or FI would be rendered unfit and improper to be a director on the board of a bank. It is desirable that the board ensures that the elected directors execute the deed of covenants as recommended by the Dr.Ganguly Group, after the election and also every year as on 31st March. It is also mandatory that all the elected directors furnish a simple declaration every year as on 31st March that the information already provided by them has not undergone

any change and where there is a change, requisite details are furnished by the directors forthwith. If there is any significant change, the nomination committee should undertake the due diligence exercise afresh and examine the 'fit and proper' status of the director.

Revised Calendar of Reviews

2.115 With a view to reducing the burden on the boards as well as aligning the reviews to present day concerns, the items to be submitted before the boards of banks as part of the 'calendar of reviews' to be undertaken by them were revised. The calendar outlines the critical minimum requirements of review and the boards would have the discretion to prescribe additional reviews to suit their requirements.

2.116 The calendar of reviews to be placed before the board would be under the heads: (a) review of operations; and (b) review of strategy. Banks were also advised that in every board meeting, separate time slot should be allocated for taking up strategy review for business plan – targets and achievements, review of non-fund business, human resource management, training and industrial relations, new prospective business/product lines and closure of existing business/product lines. Detailed report is to be placed before the board only from the risk management committee. All other committees should place only summary reports before the board. The board would review slippages in asset classification in the borrowal accounts with outstanding of Rs.5 crore and above and review NPA accounts which had registered recoveries of Rs.1 crore and above. The revised schedule came into effect from June 1, 2008 for public sector banks and from July 1, 2008 for private sector banks.

Corporate Social Responsibility

2.117 At present, the world over, there is an increasing awareness about CSR, SD and non-financial reporting (NFR). CSR entails the integration of social and environmental concerns by companies in their business operations as also in interactions with their stakeholders. SD essentially refers to the process of maintenance of the quality of environmental and social systems in the pursuit of economic development. NFR is basically a system of reporting by organisations on their activities in this context, especially as regards the triple bottom line, *i.e.*, environmental, social and economic accounting. The contribution of FIs including banks to SD is paramount, considering the crucial role they play in financing economic and developmental activities of the world. To raise the level of awareness and focus the attention of banks in India on this issue, in December 2007, the Reserve Bank advised banks to put in place a suitable and appropriate plan of action towards helping the cause of SD, with the approval of their boards. In this context, a particular reference was drawn to the International Finance Corporation's principles on project finance (the Equator Principles) and carbon trading. Further, banks/FIs were advised to keep themselves abreast of the developments on an on-going basis and dovetail/modify their strategies/plans in the light of such developments. Banks were also advised that the progress made by them under the specified heads, could be placed in the public domain along with their annual accounts.

KYC Guidelines and Anti-Money Laundering Standards

2.118 Money laundering and terrorist financing are major threats to global financial systems and jurisdictions inasmuch as these distort financial markets, provide unfair competition (a business supported by illicit funds could compete unfairly against legitimate businesses), undermine small economies, encourage corruption in the

systems, lead to political instability and become a source of finance for sabotage and destructive activities. As these practices undermine national, social and economic interests, it is of utmost importance to safeguard banking systems against the twin threat of money-laundering and terrorist financing (Box II.13).

2.119 The Reserve Bank issued revised KYC/AML/CFT guidelines to banks in February 2008. Banks were advised that customer identification means identifying the customer and verifying his/her identity by using reliable and independent source documents, data or information to the bank's satisfaction. Banks are not to use the indicative list, as prescribed by the Reserve Bank, of the nature and type of documents/information that may be relied upon for customer identification, as an exhaustive list and cite it to deny access to banking services to sections of the public. Banks have been advised to perform a review of risk categorisation of their customers at least once in six months and periodically update the customer identification data (including photograph/s) after opening of the account. Banks are also to put in place an adequate screening mechanism as an integral part of their recruitment/hiring process of personnel. Banks were also advised to ensure that all existing account holders and name/s of potential customers do not appear or are linked to any of the entities or individuals included in the resolutions of the United Nations' Security Council.

2.120 Following the emphasis placed on the need for periodical review of risk categorisation, in May 2008, the Reserve Bank reiterated the need for banks to undertake, *inter alia,* the following:

(i) Steps to ensure electronic filing of cash transaction report (CTR) and suspicious transaction report (STR) to Financial Intelligence Unit – India (FIU-IND). In case of branches that are not fully computerised, the principal officer should, with the help of editable electronic utilities of CTR/STR made available by FIU-IND, arrange to feed the data into an electronic file.

(ii) Put in place an appropriate software application to throw alerts when transactions are inconsistent with the risk categorisation and updated profile of the customers as it may help in effective identification and reporting of suspicious transactions.

(iii) For all cash transactions where forged or counterfeit Indian currency notes have been used as genuine, a reporting mechanism has been put in place to generate counterfeit currency reports.

(iv) While banks are required to be guided by the definition of 'suspicious transactions' as contained in Rule 2(g) of rules notified under Prevention of Money Laundering Act in July 2005 (instructions in this regard were issued by the Reserve Bank in February 2006), banks should make an STR, if they have reasonable grounds to believe that the transactions involve proceeds of crime irrespective of the amount of the transactions. It has also been clarified to banks to report attempted transactions in STRs, *i.e.* transactions that are abandoned/aborted by customers on being asked to furnish some details.

Committee on Financial Sector Assessment

2.121 The FSAP is a joint IMF-World Bank initiative to provide member countries with a comprehensive evaluation of their financial systems. The programme was launched in 1999, partly in response to the Asian crisis and calls by the international community for intensified co-operative efforts to monitor financial systems. The FSAP aims at alerting

Box II.13: Anti-Money Laundering and Combating Financing of Terrorism

Many countries have drafted their AML laws on the basis of the United Nations (UN) model law of 2003. The law was developed by the UN Office on Drugs and Crime for use in countries whose fundamental legal systems were substantially based on the common law tradition. Money laundering (ML), broadly defined, is the process of conversion or transfer of property by any person knowingly or with reasonable ground of suspicion for having known that such property is the proceed of crime, for the purpose of concealing or disguising the illicit origin of such property or of assisting any person who is involved in the commission of the predicate offence under the relevant laws of the jurisdiction. Generally, the act of conversion and concealment is considered crucial to the laundering process. Knowledge, intent or purpose of the person involved are also considered as constituent elements of the offence and are as important as commission of the actual crime. A subsequent dimension that has been added to the crime of ML is financing of terrorism, which is an act by any person who by any means, directly or indirectly, willfully, provides or collects funds, or attempts to do so, with the intention that they should be used or in the knowledge that they are to be used in full or in part to carry out a terrorist act.

There are two UN-sponsored treaties concerning AML, namely (i) the UN Convention Against the Illicit Traffic in Narcotics Drugs and Psychotropic Substances (the Vienna Convention); and (ii) the UN Convention Against Transnational Organized Crime (the Palermo Convention). These focus primarily on legal/criminal enforcement matters, addressing the matter of international cooperation in particular. As part of a programme in technical assistance, the UN Global Programme Against ML has promulgated model laws that address both financial/supervision and legal/criminal enforcement matters in greater detail. The global programme closely follows developments in the UN member states with a view to identifying areas of need for AML technical assistance. The UN Security Council continues its fight against money laundering and terrorist financing (TF) by publishing a negative list of individuals/entities for the reference of and implementation by member countries through its resolutions proclaiming offenders related to terrorism

FATF Standards and Recommendations

A number of UN-based initiatives, such as the Vienna Convention, led to the inception of the Financial Action Task Force (FATF) in 1989. The core work of the FATF is to combat ML (40 recommendations), and since 2001, TF (9 recommendations). The FATF continues to revise and clarify its (40+9) standards/recommendations. In 1996, the FATF included all types of offences as predicate offences for ML which till then were limited only to drug trafficking, while eight special recommendations for CFT were introduced as a response to the terrorist strikes in the US on September 11, 2001. The ninth special recommendation on 'cash couriers' was added to bolster the fight against financing of terrorism. Currently, FATF has 34 members, two observer countries (India and Korea), five associate members including the Asia Pacific Group on ML, 22 observer organisations/bodies such as the Asian Development Bank, the World Bank and the International Monetary Fund (IMF).

One of the fundamental goals of the FATF is full and effective roll out of its recommendations in all countries. Members are assessed through a mutual evaluation process which is an essential and long standing core activity of the FATF. This peer review process has now been extended through the FATF-Style Regional Body network to more than 170 countries. FATF also undertakes appropriate follow-up action from mutual evaluations to ensure that members correct, as quickly as possible, the deficiencies identified. In 2006, the FATF adopted a new surveillance process – the International Co-operation Review Group – to identify, examine and engage with vulnerable jurisdictions that are failing to implement effective AML/CFT systems.

In July 2008, the FATF issued a new best practices paper on trade based ML and TF to raise awareness and improve the ability of government authorities to detect and investigate ML and TF through international trade. Misuse of the trade system is one of the main methods by which criminal organisations and terrorist financiers move money for the purpose of disguising its origin and integrating it into the formal economy. 'Guidance on the Risk-Based Approach', issued in August 2008, formulated in consultation with accountants, outlines the principles involved in effective application of the risk-based approach to combating ML and TF. In the same month, the FATF published 'Typologies of Proliferation Financing Report', which analyses the threat of proliferation of financing of weapons of mass destruction and the methodologies used by the proliferators and facilitators, and provides options to strengthen safeguards against this activity. The FATF has also initiated studies on the ML and TF risks in the securities sector and ML through sporting clubs.

Efforts of Other International Agencies in Combating ML and TF

The BCBS brought out a detailed paper on 'Customer Due Diligence' in 2001 that outlined the salient features of KYC norms to be followed by financial institutions across the globe. The paper had exhaustive recommendations on key areas like customer identification, maintenance/preservation of records, internal control systems/audit procedures and sharing of information by supervisors.

In March 2004, the IMF Executive Board agreed to make AML/CFT a regular part of its work and endorsed the revised FATF 40+9 Recommendations as the standard for which the Reports on the Observance of Standards and Codes would be prepared. The IMF also carries out AML/CFT assessments of jurisdictions within its framework of the Financial Sector Assessment Program (FSAP), its joint initiative with the World Bank to increase the effectiveness of efforts to promote the soundness of financial systems in member countries.

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national authorities to likely vulnerabilities in their financial sectors and assist them in designing measures to reduce the vulnerabilities. A range of financial soundness indicators and macro/financial stress tests are used to analyse sectoral developments, risks and vulnerabilities. Given the current ongoing crisis, the importance of FSAP has increased as the programme examines the structural underpinnings of financial stability - systemic liquidity arrangements, institutional and legal framework for crisis management and loan recovery, transparency, accountability and governance structures.

2.122 India voluntarily participated as one of the earliest member countries in the FSAP in 2001 and a self-assessment of all the areas of international financial standards and codes was undertaken by a committee (Chairman: Dr. Y.V. Reddy). Drawing upon the experience gained during the 2001 FSAP and recognising the relevance and usefulness of the analytical details contained in the Handbook on Financial Sector Assessment jointly brought out by the World Bank and the IMF, in September 2005, the Government of India, in consultation with the Reserve Bank, decided to undertake a comprehensive self-assessment of the financial sector. Accordingly, in September 2006, a Committee on Financial Sector Assessment (CFSA) was constituted (Chairman: Dr. Rakesh Mohan).

2.123 The Annual Policy Statement for 2008-09 outlined the progress made by the CFSA. Since then, the reports of four Advisory Panels constituted by the Committee covering assessment of financial stability and stress testing, assessment of relevant international standards and codes as applicable to financial regulation and supervision, institutions and market structure and transparency standards were peer-reviewed by external experts in each relevant area identified for the purpose. The CFSA also held a two-day seminar in June and a one-day conference in July 2008 with the peer reviewers and Advisory Panel members to discuss the major issues/recommendations of the various Panel reports. The Panels have finalised their reports by appropriately incorporating the comments of the peer reviewers. Simultaneously, the overview report of the CFSA is also under preparation. It is expected that the four Advisory Panel Reports and the overview report of the CFSA would be released by December 2008.

6. Supervision and Supervisory Policy

2.124 With a view to providing undivided attention to supervision of financial entities under the purview of the Reserve Bank, the Board for Financial Supervision (BFS) was constituted in November 1994. The BFS meets regularly and suggests measures that enable effective handling of supervisory and regulatory issues by the Reserve Bank. Some of the major issues dealt with by the BFS during 2007-08 included review of the reports on Annual Financial Inspections of commercial banks, FIs, functioning of UCBs, RRBs, non-banking FIs and PDs, periodical reports on critical areas of functioning of banks such as reconciliation of accounts, frauds monitoring, overseas operations and financial position of banks under monthly monitoring and crucial regulatory and supervisory issues (refer Annex II.1). Effective supervision of the financial sector has assumed added importance in the wake of the developments in the international financial markets since August 2007 and the further downturn that occurred in September 2008.

Cross-border Supervision

2.125 In terms of the announcement in the Mid-term Review for 2007-08, an internal Working Group (Chairman: Shri S. Karuppasamy) was constituted in March 2008 to lay down the roadmap for adoption of a

suitable framework for cross-border supervision and supervisory co-operation with overseas regulators, consistent with the framework envisaged in the BCBS. The Working Group studied cross-country practices including the related legal issues and held discussions with select banks on cross-border supervisory issues. The Group is expected to submit its Report shortly.

Consolidated Supervision and Financial Conglomerate (FC) Monitoring Mechanism

2.126 In India, a FC Monitoring Mechanism was implemented in June 2004 based on the recommendation of the Working Group (Convenor: Smt. Shyamala Gopinath) on monitoring of systemically important financial intermediaries. A FC is defined as a cluster of entities belonging to a Group[6] which has significant presence in at least two financial market segments comprising banking, insurance, MF, and deposit-taking and non-deposit taking NBFCs. The FC monitoring framework rests on three components: (a) off-site surveillance through receipt of quarterly returns; (b) review of the FC monitoring activities by the Technical Committee which has members from the Reserve Bank, the Securities and Exchange Board of India (SEBI) and the Insurance Regulatory and Development Authority; and (c) half-yearly discussions with the chief executive officers of the major entities of the FC in association with other principal regulators. The quarterly reporting mechanism mainly focusses on monitoring of intra-group transactions and exposures (ITEs) appearing in the books of the regulated entities. The intra-group transactions are monitored with a view to tracking migration/transfer of 'losses', detecting regulatory/supervisory arbitrage cases and identifying cases of non-compliance with 'arm's length' principles. The monitoring of ITEs also helps tracking of build-up of large exposures across the group entities and to outside counterparties and various markets.

2.127 Several initiatives were taken during the course of the last year to strengthen the FC monitoring mechanism for effective supervision of FCs. Banks were advised to put in place a well-defined policy for issuance of LoCs on behalf of their subsidiaries. Banks were also advised to record the intent of making investment in the subsidiary, associate and joint ventures, including the length of time, for which such investments were intended. In the absence of a record of such intent at the time of investment by the board of the parent bank, the entity under reference would be consolidated with the parent bank. Furthermore, it was decided that the activities which a bank itself was not permitted to undertake as per the provisions of Banking Regulation Act, 1949, could not be undertaken by entities in which the bank had significant equity stakes.

2.128 Following a directive from the BFS, an Internal Group was constituted in the Reserve Bank to prepare an Approach Paper on FC Supervision. The Group has extensively studied the approaches followed for supervision of FCs by the Joint Forum[7] and the EU in general and the US, the Netherlands and the UK in particular. The Approach Paper on the supervision of FCs is likely to be finalised soon.

[6] An arrangement involving two or more entities related to each other through any of the following relationships: subsidiary - parent (defined in terms of AS 21), joint venture (defined in terms of AS 23), associate (defined in terms of AS 27), promoter-promotee, a related party (defined in terms of AS 18), common brand name, and investment in equity shares 20 per cent and above. Group entity is any entity involved in the above arrangement.

[7] The Joint Forum was established in 1996 under the aegis of the BCBS, the International Organization of Securities Commissions and the International Association of Insurance Supervisors to deal with issues common to the banking, securities and insurance sectors, including the regulation of FCs. The Joint Forum comprises an equal number of senior bank, insurance and securities supervisors representing each supervisory constituency.

SRP on Activities of the Trusts /Special Purpose Vehicles (SPVs) set up by Banks

2.129 SPVs and trusts are set up by banks to carry out a number of activities such as facilitating securitisation, asset management and investing in other entities. These entities are generally unregulated and are subject to inadequate independent board oversight. Besides, the downstream activities of these entities are normally not captured in the financial statements of the bank. As the activities of these entities could be a potential risk to the parent bank and could also pose systemic risk, the need for placing them under suitable supervisory oversight was felt. Pursuant to the announcement in the Annual Policy Statement for the year 2008-09, a Working Group (Chairman: Shri S. Sen) has been set up (with members from the Reserve Bank, commercial banks and a CRA) to study and recommend a suitable supervisory framework for activities of SPVs/trusts set up by banks.

Review of the Risk-based Supervision (RBS) Framework

2.130 RBS framework was introduced in India on a pilot basis in eight select banks in 2003-04, which was extended to 15 banks in 2004-05, 19 banks in 2005-06 and 27 banks in 2006-07 concurrently with the CAMELS (capital adequacy, asset quality, management, earnings, liquidity and systems and control) model of supervision. Based on the feedback obtained from the pilot studies under RBS, it was decided to revisit/review the framework to attune it to the latest regulatory and supervisory developments. An Internal Group of the Reserve Bank studied the practices adopted by the supervisors of various countries, *viz.*, the US, the UK, Australia, France, Hong Kong, Singapore, Thailand and Malaysia, among others. The Group is preparing an appropriate framework with a view to integrating the RBS system with the existing supervisory process and the Supervisory Review and Evaluation Process under Pillar 2 of Basel II.

Overseas Operations of Indian Banks – Review of Existing Off-site Monitoring Framework

2.131 In view of the rapid expansion of overseas operations, introduction of new products and processes, increasing off-balance sheet exposures including derivative products, the need was felt to review the reporting system for Indian banks that had presence in foreign countries. Accordingly, an inter-departmental Group was constituted to review the existing regulatory and supervisory framework for overseas operations of Indian banks and recommend appropriate changes, including off-site reporting systems. Certain Indian banks with large overseas presence were consulted by the Group for this purpose. The Group is in the process of finalising its proposals for a revised off-site surveillance mechanism.

Financial Stability Forum (FSF) Report – Status

2.132 The FSF brought out a report in April 2008 identifying the underlying causes and weaknesses in the international financial markets in the wake of the crisis emanating from the US sub-prime mortgage market. The Report, *inter alia,* contains proposals, to be implemented by the end of 2008, for strengthening prudential oversight of capital, liquidity and risk management, enhancing transparency and valuation, changing the role and uses of credit ratings, strengthening the authorities' responsiveness to risk and implementing robust arrangements for dealing with stress in the financial system. The Reserve Bank has already issued regulatory guidelines covering many of these aspects, while in regard to others, actions are being initiated.