भारतीय रिज़र्व बैंक

RESERVE BANK OF INDIA

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RBI/2015-16/85

DBR.No.BP.BC.4./21.06.001/2015-16 July 1, 2015

All Commercial Banks
(Excluding Local Area Banks and Regional Rural Banks)

Madam/Sir,

Master Circular - Prudential Guidelines on Capital Adequacy and Market Discipline-New Capital Adequacy Framework (NCAF)

Please refer to the Master Circular DBOD.BP.BC.5/21.06.001/2014-15 dated July 1, 2014, consolidating therein the guidelines issued to banks till that date on NCAF.

2. This Master Circular consolidates instructions on the above matters issued up to June 30, 2015.

3. It may be noted that this Master Circular does not cover the guidelines on Basel III capital regulations which are consolidated in the Master Circular DBR.No.BP.BC.1./21.06.201/2015-16 dated July 1, 2015 on “Basel III Capital Regulations”.

4. The guidelines in this Master Circular have limited relevance only for the purpose of transitional arrangements provided for regulatory adjustments/deductions up to March 31, 2017 as stated in the Master Circular on “Basel III Capital Regulations” referred to in paragraph 3 above. It is emphasized that capital adequacy has to be maintained in terms of the Master Circular on “Basel III Capital Regulations” only.

Yours faithfully,

(Sudha Damodar)
Chief General Manager

Encl: As above

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Master Circular on Prudential Guidelines on Capital Adequacy and Market Discipline– New Capital Adequacy Framework (NCAF)

Part A: Guidelines on Minimum Capital Requirement

1. Introduction

1.1 With a view to adopting the Basel Committee on Banking Supervision (BCBS) framework on capital adequacy which takes into account the elements of credit risk in various types of assets in the balance sheet as well as off-balance sheet business and also to strengthen the capital base of banks, Reserve Bank of India decided in April 1992 to introduce a risk asset ratio system for banks (including foreign banks) in India as a capital adequacy measure. Essentially, under the above system, the balance sheet assets, non-funded items and other off-balance sheet exposures are assigned prescribed risk weights and banks have to maintain unimpaired minimum capital funds equivalent to the prescribed ratio on the aggregate of the risk weighted assets and other exposures on an ongoing basis. Reserve Bank has issued guidelines to banks in June 2004 on maintenance of capital charge for market risks on the lines of 'Amendment to the Capital Accord to incorporate market risks' issued by the BCBS in 1996.

1.2 The BCBS released the "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" on June 26, 2004. The Revised Framework was updated in November 2005 to include trading activities and the treatment of double default effects and a comprehensive version of the framework was issued in June 2006 incorporating the constituents of capital and the 1996 amendment to the Capital Accord to incorporate Market Risk. The Revised Framework seeks to arrive at significantly more risk-sensitive approaches to capital requirements. The Revised Framework provides a range of options for determining the capital requirements for credit risk and operational risk to allow banks and supervisors to select approaches that are most appropriate for their operations and financial markets.

2. Approach to Implementation, Effective date and Parallel run

2.1 The Revised Framework consists of three-mutually reinforcing Pillars, viz. minimum capital requirements, supervisory review of capital adequacy, and market discipline. Under Pillar 1, the Framework offers three distinct options for computing capital requirement for credit risk and three other options for computing capital requirement for operational risk. These options for credit and operational risks are based on increasing risk sensitivity and allow banks to select an approach that is most appropriate to the stage of development of bank's operations. The options available for computing capital for credit risk are

Standardised Approach, Foundation Internal Rating Based Approach and Advanced Internal Rating Based Approach. The options available for computing capital for operational risk are Basic Indicator Approach (BIA), The Standardised Approach (TSA) and Advanced Measurement Approach (AMA).

2.2 Keeping in view Reserve Bank's goal to have consistency and harmony with international standards, it has been decided that all commercial banks in India (excluding Local Area Banks and Regional Rural Banks) shall adopt Standardised Approach for credit risk and Basic Indicator Approach for operational risk. Banks shall continue to apply the Standardised Duration Approach (SDA) for computing capital requirement for market risks.

2.3 **Effective Date:** Foreign banks operating in India and Indian banks having operational presence outside India migrated to the above selected approaches under the Revised Framework with effect from March 31, 2008. All other commercial banks (except Local Area Banks and Regional Rural Banks) migrated to these approaches under the Revised Framework by March 31, 2009.

2.4 **Parallel Run:** With a view to ensuring smooth transition to the Revised Framework and with a view to providing opportunity to banks to streamline their systems and strategies, banks were advised to have a parallel run of the revised Framework. In December 2010, the banks were advised to continue with the parallel run for a period of three years, till March 31, 2013.They were also advised to ensure that their Basel II minimum capital requirement continues to be higher than the prudential floor of 80 per cent of the minimum capital requirement computed as per Basel I framework for credit and market risks. On a review, the parallel run and prudential floor for implementation of Basel II vis-à-vis Basel I framework has been discontinued[1]. Consequently, banks are not required to furnish a copy of parallel run report to Reserve Bank of India in the reporting format prescribed.

2.5 **Migration to other approaches under the Revised Framework**: Having regard to the necessary upgradation of risk management framework as also capital efficiency likely to

[1]Please refer to the circular DBOD.BP.BC.No.95/21.06.001/2012-13 dated May 27, 2013 on Prudential Guidelines on Capital Adequacy and Market Discipline New Capital Adequacy Framework (NCAF) - Parallel Run and Prudential Floor.

accrue to the banks by adoption of the advanced approaches envisaged under the Basel II Framework and the emerging international trend in this regard, in July 2009 it was considered desirable to lay down a timeframe for implementation of the advanced approaches in India[2].This would enable banks to plan and prepare for their migration to the advanced approaches for credit risk and operational risk, as also for the Internal Models Approach (IMA) for market risk.

3. Scope of Application

The revised capital adequacy norms shall be applicable uniformly to all Commercial Banks (except Local Area Banks and Regional Rural Banks), both at the solo level (global position) as well as at the consolidated level. A Consolidated bank is defined as a group of entities where a licensed bank is the controlling entity. A consolidated bank will include all group entities under its control, except the exempted entities. In terms of guidelines on preparation of consolidated prudential reports issued vide circular DBOD. No.BP.BC.72/21.04.018/ 2001-02 dated February 25, 2003; a consolidated bank may exclude group companies which are engaged in insurance business and businesses not pertaining to financial services. A consolidated bank should maintain a minimum Capital to Risk-weighted Assets Ratio (CRAR) as applicable to a bank on an ongoing basis.

4. Capital funds

4.1 General

4.1.1 Banks are required to maintain a minimum Capital to Risk-weighted Assets Ratio (CRAR) of 9 percent on an ongoing basis. The Reserve Bank will take into account the relevant risk factors and the internal capital adequacy assessments of each bank to ensure that the capital held by a bank is commensurate with the bank's overall risk profile. This would include, among others, the effectiveness of the 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. Accordingly, the Reserve Bank will consider prescribing a higher level of minimum capital ratio for each bank under the Pillar 2 framework on the basis of their respective risk profiles and their risk management systems. Further, in terms of the Pillar 2 requirements of the New Capital Adequacy Framework, banks are expected to operate at a level well above the minimum

[2] Please refer to the circular DBOD.BP.BC.No.23/21.06.001/2009-10 dated July 7, 2009.

requirement.

4.1.2 Banks are encouraged to maintain, at both solo and consolidated level, a Tier I CRAR of at least 6 per cent. Banks which are below this level must achieve this ratio on or before March 31, 2010.

4.1.3 A bank should compute its Tier I CRAR and Total CRAR in the following manner:

$$\text{Tier I CRAR} = \frac{\text{Eligible Tier I capital funds}^{3}}{\text{Credit Risk RWA* + Market Risk RWA + Operational Risk RWA}}.$$

* RWA = Risk weighted Assets

$$\text{Total CRAR} = \frac{\text{Eligible total capital funds}^{4}}{\text{Credit Risk RWA + Market Risk RWA + Operational Risk RWA}}.$$

4.1.4 Capital funds are broadly classified as Tier I and Tier II capital. Elements of Tier II capital will be reckoned as capital funds up to a maximum of 100 per cent of Tier I capital, after making the deductions/ adjustments referred to in paragraph 4.4.

4.2 **Elements of Tier I capital**

4.2.1 For Indian banks, Tier I capital would include the following elements:

i) Paid-up equity capital, statutory reserves, and other disclosed free reserves, if any;

ii) Capital reserves representing surplus arising out of sale proceeds of assets;

iii) Innovative perpetual debt instruments eligible for inclusion in Tier I capital, which comply with the regulatory requirements as specified in **Annex - 1**;

iv) Perpetual Non-Cumulative Preference Shares (PNCPS), which comply with the regulatory requirements as specified in **Annex – 2**; and

v) Any other type of instrument generally notified by the Reserve Bank from time to time for inclusion in Tier I capital.

4.2.2 Foreign currency translation reserve arising consequent upon application of Accounting Standard 11 (revised 2003): 'The effects of changes in foreign exchange rates';

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[3] Total Tier I capital funds, subject to prudential limits for Innovative Perpetual Debt Instruments *minus* deductions from Tier I capital.

[4] Total of eligible Tier I capital funds and eligible Tier II capital funds, subject to prudential limits for Innovative Tier I instruments, Upper Tier II instruments and subordinated debt instruments *minus* deductions from Tier I and Tier II capital.

shall not be an eligible item of capital funds.

4.2.3 For foreign banks in India, Tier I capital would include the following elements:

(i) Interest-free funds from Head Office kept in a separate account in Indian books specifically for the purpose of meeting the capital adequacy norms.

(ii) Statutory reserves kept in Indian books.

(iii) Remittable surplus retained in Indian books which is not repatriable so long as the bank functions in India.

(iv) Capital reserve representing surplus arising out of sale of assets in India held in a separate account and which is not eligible for repatriation so long as the bank functions in India.

(v) Interest-free funds remitted from abroad for the purpose of acquisition of property and held in a separate account in Indian books.

(vi) Head Office borrowings in foreign currency by foreign banks operating in India for inclusion in Tier I capital which comply with the regulatory requirements as specified in **Annex- 1** and

(vii) Any other item specifically allowed by the Reserve Bank from time to time for inclusion in Tier I capital.

Notes

(i) Foreign banks are required to furnish to Reserve Bank, an undertaking to the effect that the bank will not remit abroad the 'capital reserve' and ‘remittable surplus retained in India’ as long as they function in India to be eligible for including this item under Tier I capital.

(ii) These funds may be retained in a separate account titled as 'Amount Retained in India for Meeting Capital to Risk-weighted Asset Ratio (CRAR) Requirements' under 'Capital Funds'.

(iii) An auditor's certificate to the effect that these funds represent surplus remittable to Head Office once tax assessments are completed or tax appeals are decided and do not include funds in the nature of provisions towards tax or for any other contingency may also be furnished to Reserve Bank.

(iv) The net credit balance, if any, in the inter-office account with Head Office / overseas branches will not be reckoned as capital funds. However, if net overseas placements with Head Office / other overseas branches / other group entities (Placement minus borrowings, excluding Head Office

borrowings for Tier I and II capital purposes) exceed 10% of the bank's minimum CRAR requirement, the amount in excess of this limit would be deducted from Tier I capital. For the purpose of the above prudential cap, the net overseas placement would be the higher of the overseas placements as on date and the average daily outstanding over year to date. The overall cap on such placements/investments will continue to be guided by the present regulatory and statutory restrictions, i.e. net open position limit and the gap limits approved by the Reserve Bank of India, and Section 25 of the Banking Regulation Act, 1949.[5]

(v) Banks may include quarterly/half yearly profits for computation of Tier I capital only if the quarterly/half yearly results are audited by statutory auditors and **not** when the results are subjected to limited review.

4.2.4 Limits on eligible Tier I Capital

(i) The Innovative Perpetual Debt Instruments, eligible to be reckoned as Tier I capital, will be limited to 15 percent of total Tier I capital as on March 31 of the previous financial year. The above limit will be based on the amount of Tier I capital as on March 31 of the previous financial year, after deduction of goodwill, DTA and other intangible assets but before the deduction of investments, as required in paragraph 4.4.

(ii) The outstanding amount of Tier I preference shares i.e. Perpetual Non-Cumulative Preference Shares along with Innovative Tier I instruments shall not exceed 40 per cent of total Tier I capital at any point of time. The above limit will be based on the amount of Tier I capital after deduction of goodwill and other intangible assets but before the deduction of investments as per para 4.4.6 below. Tier I preference shares issued in excess of the overall ceiling of 40 per cent, shall be eligible for inclusion under Upper Tier II capital, subject to limits prescribed for Tier II capital. However, investors' rights and obligations would remain unchanged.

(iii) Innovative instruments / PNCPS, in excess of the limit shall be eligible for inclusion under Tier II, subject to limits prescribed for Tier II capital.

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[5] Please refer to the circular DBOD.No.BP.BC.28/21.06.001/2012-13 dated July 9, 2012 on 'Prudential Guidelines on Capital Adequacy - Treatment of Head Office Debit Balance - Foreign Banks'.

4.3 **Elements of Tier II Capital**

4.3.1 Revaluation Reserves

These reserves often serve as a cushion against unexpected losses, but they are less permanent in nature and cannot be considered as 'Core Capital'. Revaluation reserves arise from revaluation of assets that are undervalued on the bank's books, typically bank premises. The extent to which the revaluation reserves can be relied upon as a cushion for unexpected losses depends mainly upon the level of certainty that can be placed on estimates of the market values of the relevant assets, the subsequent deterioration in values under difficult market conditions or in a forced sale, potential for actual liquidation at those values, tax consequences of revaluation, etc. Therefore, it would be prudent to consider revaluation reserves at a discount of 55 percent while determining their value for inclusion in Tier II capital. Such reserves will have to be reflected on the face of the Balance Sheet as revaluation reserves.

4.3.2 General Provisions and Loss Reserves

Such reserves, if they are not attributable to the actual diminution in value or identifiable potential loss in any specific asset and are available to meet unexpected losses, can be included in Tier II capital. Adequate care must be taken to see that sufficient provisions have been made to meet all known losses and foreseeable potential losses before considering general provisions and loss reserves to be part of Tier II capital. Banks are allowed to include the General Provisions on Standard Assets, Floating Provisions[6], Provisions held for Country Exposures, Investment Reserve Account and excess provisions which arise on account of sale of NPAs in Tier II capital. However, these five items will be admitted as Tier II capital up to a maximum of 1.25 per cent of the total risk-weighted assets.

4.3.3 Hybrid Debt Capital Instruments

In this category, fall a number of debt capital instruments, which combine certain characteristics of equity and certain characteristics of debt. Each has a particular feature, which can be considered to affect its quality as capital. Where these instruments have close similarities to equity, in particular when they are able to support losses on an ongoing basis without triggering liquidation, they may be included in Tier II capital. Banks in India are allowed to recognise funds raised through debt capital instrument which has a combination of characteristics of both equity and debt, as Upper Tier II capital provided the instrument

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[6] Banks will continue to have the option to net off such provisions from Gross NPAs to arrive at Net NPA or reckoning it as part of their Tier II capital as per circular DBOD. NO. BP.BC 33/21.04.048/2009-10 dated August 27, 2009.

complies with the regulatory requirements specified in **Annex - 3.** Indian Banks are also allowed to issue Perpetual Cumulative Preference Shares (PCPS), Redeemable Non-Cumulative Preference Shares (RNCPS) and Redeemable Cumulative Preference Shares (RCPS), as Upper Tier II Capital, subject to extant legal provisions as per guidelines contained in **Annex - 4.**

4.3.4 Subordinated Debt

To be eligible for inclusion in Tier II capital, the instrument should be fully paid-up, unsecured, subordinated to the claims of other creditors, free of restrictive clauses, and should not be redeemable at the initiative of the holder or without the consent of the Reserve Bank of India. They often carry a fixed maturity, and as they approach maturity, they should be subjected to progressive discount, for inclusion in Tier II capital. Instruments with an initial maturity of less than 5 years or with a remaining maturity of one year should not be included as part of Tier II capital. Subordinated debt instruments eligible to be reckoned as Tier II capital shall comply with the regulatory requirements specified in **Annex- 5**.

4.3.5 Innovative Perpetual Debt Instruments (IPDI) and Perpetual Non-Cumulative Preference Shares (PNCPS)

IPDI in excess of 15 per cent of Tier I capital {cf. **Annex -1**, Para 1(ii)} may be included in Tier II, and PNCPS in excess of the overall ceiling of 40 per cent ceiling prescribed vide paragraph 4.2.5 {cf. **Annex - 2**. Para 1.1} may be included under Upper Tier II capital, subject to the limits prescribed for Tier II capital.

4.3.6 Any other type of instrument generally notified by the Reserve Bank from time to time for inclusion in Tier II capital.

4.3.7 Limits on Tier II Capital

Upper Tier II instruments along with other components of Tier II capital shall not exceed 100 per cent of Tier I capital. The above limit will be based on the amount of Tier I after deduction of goodwill, DTA and other intangible assets but before deduction of investments.

4.3.8 Subordinated debt instruments eligible for inclusion in Lower Tier II capital will be limited to 50 percent of Tier I capital after all deductions.

4.4 **Deductions from Capital**

4.4.1 Intangible assets and losses in the current period and those brought forward from previous periods should be deducted from Tier I capital.

4.4.2 The DTA computed as under should be deducted from Tier I capital:

i) DTA associated with accumulated losses; **and**

ii) The DTA (excluding DTA associated with accumulated losses), net of DTL. Where the DTL is in excess of the DTA (excluding DTA associated with accumulated losses), the excess shall neither be adjusted against item (i) nor added to Tier I capital.

4.4.3 Any **gain-on-sale** arising at the time of securitisation of standard assets, as defined in paragraph 5.16.1, **if recognised**, should be deducted entirely from Tier I capital. In terms of guidelines on securitisation of standard assets, banks are allowed to amortise the profit over the period of the securities issued by the SPV. The amount of profits thus recognised in the profit and loss account through the amortisation process need not be deducted.

4.4.4 Banks should not recognise minority interests that arise from consolidation of less than wholly owned banks, securities or other financial entities in consolidated capital to the extent specified below:

i) The extent of minority interest in the capital of a less than wholly owned subsidiary which is in excess of the regulatory minimum for that entity.

ii) In case the concerned subsidiary does not have a regulatory capital requirement, the deemed minimum capital requirement for that entity may be taken as 9 per cent of the risk weighted assets of that entity.

4.4.5 Securitisation exposures, as specified in paragraph 5.16.2, shall be deducted from regulatory capital and the deduction must be made 50 per cent from Tier I and 50 per cent from Tier II, except where expressly provided otherwise. Deductions from capital may be calculated net of any specific provisions maintained against the relevant securitisation exposures.

4.4.6 In the case of investment in financial subsidiaries and associates, the treatment will be as under for the purpose of capital adequacy:

(i) The entire investments in the paid up equity of the financial entities (including insurance entities), which are not consolidated for capital purposes with the bank, where such investment exceeds 30% of the paid up equity of such financial entities and entire investments in other instruments eligible for regulatory capital status in those entities shall be deducted, at 50 per cent from Tier I and 50 per cent from Tier II capital. (For investments less than 30 per cent, please see para 5.13.7)

(ii) Banks should ensure that majority owned financial entities that are not consolidated for capital purposes and for which the investment in equity and other instruments eligible for regulatory capital status is deducted, meet their respective regulatory capital requirements. In case of any shortfall in the

regulatory capital requirements in the de-consolidated entity, the shortfall shall be fully deducted at 50 per cent from Tier I capital and 50 per cent from Tier II capital.

4.4.7 An indicative list of institutions which may be deemed to be financial institutions for capital adequacy purposes is as under:

- Banks,
- Mutual funds,
- Insurance companies,
- Non-banking financial companies,
- Housing finance companies,
- Merchant banking companies,
- Primary dealers.

4.4.8 A bank's/FI's aggregate investment in all types of instruments, eligible for capital status of investee banks / FIs / NBFCs / PDs as listed in paragraph 4.4.9 below, excluding those deducted in terms of paragraph 4.4.6, should not exceed 10 per cent of the investing bank's capital funds (Tier I plus Tier II, after adjustments). Any investment in excess of this limit shall be deducted at 50 per cent from Tier I and 50 per cent from Tier II capital. Investments in equity or instruments eligible for capital status issued by FIs / NBFCs / Primary Dealers which are, within the aforesaid ceiling of 10 per cent and thus, are not deducted from capital funds, will attract a risk weight of 100 per cent or the risk weight as applicable to the ratings assigned to the relevant instruments, whichever is higher. As regards the treatment of investments in equity and other capital-eligible instruments of scheduled banks, within the aforesaid ceiling of 10 per cent, will be risk weighted as per paragraph 5.6.1. Further, in the case of non-scheduled banks, where CRAR has become negative, the investments in the capital-eligible instruments even within the aforesaid 10 per cent limit shall be fully deducted at 50 per cent from Tier I and 50 per cent from Tier II capital, as per paragraph 5.6.1.

4.4.9 Banks' investment in the following instruments will be included in the prudential limit of 10 per cent referred to at paragraph 4.4.8 above.

a) Equity shares;
b) Perpetual Non-Cumulative Preference Shares
c) Innovative Perpetual Debt Instruments
d) Upper Tier II Bonds
e) Upper Tier II Preference Shares (PCPS/RNCPS/RCPS)
f) Subordinated debt instruments; and
g) Any other instrument approved by the RBI as in the nature of capital.

4.4.10 Subject to the ceilings on banks' aggregate investment in capital instruments issued by other banks and financial institutions as detailed in para 4.4.8, Banks / FIs should not acquire any fresh stake in a bank's equity shares, if by such acquisition, the investing bank's / FI's holding exceeds 5 per cent of the investee bank's equity capital. Banks / FIs which currently exceed the specified limits, may apply to the Reserve Bank along with a definite roadmap for reduction of the exposure within prudential limits.

4.4.11 The investments made by a banking subsidiary/associate in the equity or non equity regulatory-capital instruments issued by its parent bank, should be deducted from such subsidiary's regulatory capital at 50 per cent each from Tier I and Tier II capital, in its capital adequacy assessment on a solo basis. The regulatory treatment of investment by the non-banking financial subsidiaries / associates in the parent bank's regulatory capital would, however, be governed by the applicable regulatory capital norms of the respective regulators of such subsidiaries / associates.

4.4.12 It has come to our notice that certain investors such as Employee Pension Funds have subscribed to regulatory capital issues of commercial banks concerned. These funds enjoy the counter guarantee by the bank concerned in respect of returns. When returns of the investors of the capital issues are counter guaranteed by the bank, such investments will not be considered as Tier I/II regulatory capital for the purpose of capital adequacy.

5. Capital Charge for Credit Risk

5.1 General

Under the Standardised Approach, the rating assigned by the eligible external credit rating agencies will largely support the measure of credit risk. The Reserve Bank has identified the external credit rating agencies that meet the eligibility criteria specified under the revised Framework. Banks may rely upon the ratings assigned by the external credit rating agencies chosen by the Reserve Bank for assigning risk weights for capital adequacy purposes as per the mapping furnished in these guidelines.

5.2 Claims on Domestic Sovereigns

5.2.1 Both fund based and non-fund based claims on the central government will attract a zero risk weight. Central Government guaranteed claims will attract a zero risk weight.

5.2.2 The Direct loan / credit / overdraft exposure, if any, of banks to the State Governments and the investment in State Government securities will attract zero risk weight.

State Government guaranteed claims will attract 20 per cent risk weight'.

5.2.3 The risk weight applicable to claims on central government exposures will also apply to the claims on the Reserve Bank of India, DICGC, Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) and Credit Risk Guarantee Fund Trust for Low Income Housing (CRGFTLIH)[7]. The claims on ECGC will attract a risk weight of 20 per cent.

5.2.4 The above risk weights for both direct claims and guarantee claims will be applicable as long as they are classified as 'standard'/ performing assets. Where these sovereign exposures are classified as non-performing, they would attract risk weights as applicable to NPAs, which are detailed in Paragraph 5.12.

5.2.5 The amount outstanding in the account styled as 'Amount receivable from Government of India under Agricultural Debt Waiver Scheme, 2008' shall be treated as a claim on the Government of India and would attract zero risk weight for the purpose of capital adequacy norms. However, the amount outstanding in the accounts covered by the Debt Relief Scheme shall be treated as a claim on the borrower and risk weighted as per the extant norms.

5.3 Claims on Foreign Sovereigns

5.3.1 Claims on foreign sovereigns will attract risk weights as per the rating assigned[8] to those sovereigns / sovereign claims by international rating agencies as follows:

Table 2: Claims on Foreign Sovereigns – Risk Weights

S & P*/ FITCH ratings	**AAA to AA**	**A**	**BBB**	**BB to B**	**Below B**	**Unrated**
Moody's ratings	**Aaa to Aa**	**A**	**Baa**	**Ba to B**	**Below B**	**Unrated**
Risk weight (%)	0	20	50	100	150	100

* Standard & Poor's

5.3.2 Claims denominated in domestic currency of the foreign sovereign met out of the resources in the same currency raised in the jurisdiction[9] of that sovereign will, however,

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[7] Please refer to the circular DBOD.No.BP.BC-90/21.04.048/2012-13 dated April 16, 2013 on Advances Guaranteed by 'Credit Risk Guarantee Fund Trust forLow Income Housing (CRGFTLIH) - Risk Weights and Provisioning'.

[8] For example: The risk weight assigned to an investment in US Treasury Bills by SBI branch in Paris, irrespective of the currency of funding, will be determined by the rating assigned to the Treasury Bills, as indicated in Table 2.

[9] For example: The risk weight assigned to an investment in US Treasury Bills by SBI branch in New York will

attract a risk weight of zero percent.

5.3.3 However, in case a Host Supervisor requires a more conservative treatment to such claims in the books of the foreign branches of the Indian banks, they should adopt the requirements prescribed by the Host Country supervisors for computing capital adequacy.

5.4 Claims on PublicSector Entities (PSEs)

5.4.1 Claims on domestic public sector entities will be risk weighted in a manner similar to claims on Corporates.

5.4.2 Claims on foreign PSEs will be risk weighted as per the rating assigned by the international rating agencies as under:

Table 3: Claims on Foreign PSEs – Risk Weights

S&P/ Fitch Ratings	**AAA To AA**	**A**	**BBB to BB**	**Below BB**	**Unrated**
Moody's ratings	**Aaa to Aa**	**A**	**Baa to Ba**	**Below Ba**	**Unrated**
RW (%)	20	50	100	150	100

5.5 Claims on MDBs, BIS and IMF

Claims on the Bank for International Settlements (BIS), the International Monetary Fund (IMF) and the following eligible Multilateral Development Banks (MDBs) evaluated by the BCBS will be treated similar to claims on scheduled banks meeting the minimum capital adequacy requirements and assigned a uniform twenty percent risk weight:

a) World Bank Group: IBRD and IFC,
b) Asian Development Bank,
c) African Development Bank,
d) European Bank for Reconstruction & Development,
e) Inter-American Development Bank,
f) European Investment Bank,
g) European Investment Fund,
h) Nordic Investment Bank,
i) Caribbean Development Bank,
j) Islamic Development Bank and
k) Council of Europe Development Bank.

Similarly, claims on the International Finance Facility for Immunization (IFFIm) will also attract a twenty per cent risk weight.

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attract a zero per cent risk weight, irrespective of the rating of the claim, if the investment is funded from out of the USD denominated resources of SBI, New York. In case the SBI, New York, did not have any USD denominated resources, the risk weight will be determined by the rating assigned to the Treasury Bills, as indicated in Table 2 above.

5.6 Claims on Banks

5.6.1 The claims on banks incorporated in India and the branches of foreign banks in India, *other than those deducted in terms of paragraph 4.4.6, 4.4.8 and 4.4.10 above,*will be risk weighted as under:

Table 4: Claims on Banks incorporated in India and Foreign Bank Branches in India

Level of CRAR (in%) of the investee bank (where available)	Risk Weights			
	All Scheduled Banks (Commercial, Regional Rural Banks, Local Area Banks and Co-operative Banks)		All Non-Scheduled Banks (Commercial, Regional Rural Banks, Local Area Banks and Co-operative Banks)	
	Investments within 10 % limit referred to in paragraph 4.4.8 above (in per cent)	All other claims (in per cent)	Investments within 10 per cent limit referred to in paragraph 4.4.8 above (in per cent)	All Other Claims (in per cent)
1	2	3	4	5
9 and above	Higher of 100 % or the risk weight as per the rating of the instrument or counterparty, whichever is higher	20	Higher of 100 % or the risk weight as per the rating of the instrument or counterparty, whichever is higher	100
6 to < 9	150	50	250	150
3 to < 6	250	100	350	250
0 to < 3	350	150	625	350
Negative	625	625	Full deduction*	625

* The deduction should be made @ 50% each, from Tier I and Tier II capital.

Notes:

i) In the case of banks where no capital adequacy norms have been prescribed by the RBI, the lending / investing bank may calculate the CRAR of the cooperative bank concerned, notionally, by obtaining necessary information from the investee bank, using the capital adequacy norms as applicable to the commercial banks. In case, it is not found feasible to compute CRAR on such notional basis, the risk weight of 350 or 625 per cent, as per the risk perception of the investing bank, should be applied uniformly to the investing bank's entire exposure.

ii) In case of banks where capital adequacy norms are not applicable at present, the matter of investments in their capital-eligible instruments would not arise for now. However, column No. 2 and 4 of the Table above will become applicable to them, if in future they issue any capital instruments where other banks are eligible to invest.

5.6.2 The claims on foreign banks will be risk weighted as under as per the ratings assigned by international rating agencies.

Table 5: Claims on Foreign Banks – Risk Weights

S &P / FITCH ratings	AAA to AA	A	BBB	BB to B	Below B	Unrated
Moody's ratings	Aaa to Aa	A	Baa	Ba to B	Below B	Unrated
Risk weight (%)	20	50	50	100	150	50

The exposures of the Indian branches of foreign banks, guaranteed / counter-guaranteed by the overseas Head Offices or the bank's branch in another country would amount to a claim on the parent foreign bank and would also attract the risk weights as per Table 5 above.

5.6.3 However, the claims on a bank which are denominated in 'domestic[10]' foreign currency met out of the resources in the same currency raised in that jurisdiction will be risk weighted at 20 per cent provided the bank complies with the minimum CRAR prescribed by the concerned bank regulator(s).

5.6.4 However, in case a Host Supervisor requires a more conservative treatment for such claims in the books of the foreign branches of the Indian banks, they should adopt the requirements prescribed by the Host supervisor for computing capital adequacy.

5.7 Claims on Primary Dealers

Claims on Primary Dealers shall be risk weighted in a manner similar to claims on corporates.

5.8 Claims on Corporates, AFCs and NBCF-IFCs

5.8.1 Claims on corporates[11], exposures on Asset Finance Companies (AFCs) and Non-Banking Finance Companies-Infrastructure Finance Companies (NBFC-IFC)[12],shall be risk weighted as per the ratings assigned by the rating agencies registered with the SEBI and accredited by the Reserve Bank of India. The following table indicates the risk weight applicable to claims on corporates, AFCs and NBFC-IFCs.

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[10] For example: A Euro denominated claim of SBI branch in Paris on BNP Paribas, Paris which is funded from out of the Euro denominated deposits of SBI, Paris will attract a 20 per cent risk weight irrespective of the rating of the claim, provided BNP Paribas complies with the minimum CRAR stipulated by its regulator/supervisor in France. If BNP Paribas were breaching the minimum CRAR, the risk weight will be as indicated in Table 4 above.

[11] Claims on corporates will include all fund based and non-fund based exposures other than those which qualify for inclusion under 'sovereign', 'bank', 'regulatory retail', 'residential mortgage', 'non performing assets', specified category addressed separately in these guidelines.

[12] Circular DBOD.No.BP.BC.74/21.06.001/2009-10 dated February 12, 2010

Table 6: Part A – Long term Claims on Corporates – Risk Weights

Domestic rating agencies	AAA	AA	A	BBB	BB & below	Unrated
Risk weight (%)	20	30	50	100	150	100

Table 6 : Part B - Short Term Claims on Corporates - Risk Weights

CARE	CRISIL	India Ratings and Research Private Limited (India Ratings)	ICRA	Brickwork	SMERA Ratings Ltd. (SMERA)[13]	(%)
CARE A1+	CRISIL A1+	IND A1+	ICRA A1+	Brickwork A1+	SMERA A1+	20
CARE A1	CRISIL A1	IND A1	ICRA A1	Brickwork A1	SMERA A1	30
CARE A2	CRISIL A2	IND A2	ICRA A2	Brickwork A2	SMERA A2	50
CARE A3	CRISIL A3	IND A3	ICRA A3	Brickwork A3	SMERA A3	100
CARE A4 & D	CRISIL A4 & D	IND A4 & D	ICRA A4 & D	Brickwork A4 & D	SMERA A4 & D	150
Unrated	Unrated	Unrated	Unrated	Unrated	Unrated	100

Note:

Risk weight on claims on AFCs would continue to be governed by credit rating of the AFCs, except that claims that attract a risk weight of 150 per cent under NCAF shall be reduced to a level of 100 per cent.

No claim on an unrated corporate may be given a risk weight preferential to that assigned to its sovereign of incorporation.

5.8.2 The Reserve Bank may increase the standard risk weight for unrated claims where a higher risk weight is warranted by the overall default experience. As part of the supervisory review process, the Reserve Bank would also consider whether the credit quality of unrated corporate claims held by individual banks should warrant a standard risk weight higher than 100 per cent.

5.8.3 With a view to reflecting a higher element of inherent risk which may be latent in entities whose obligations have been subjected to re-structuring / re-scheduling either by banks on their own or along with other bankers / creditors, the unrated standard / performing claims on these entities should be assigned a higher risk weight until satisfactory performance under the revised payment schedule has been established for one year from the date when the first payment of interest / principal falls due under the revised schedule.

[13] Please refer to the circular DBOD.No.BP.BC. 41/21.06.009/2012-13 dated September 13, 2012 on Prudential Guidelines on Capital Adequacy and Market Discipline – New capital Adequacy Framework (NCAF) – Eligible credit rating agencies – SME Rating Agency of India Ltd. (SMERA).

The applicable risk weights will be 125 per cent.

5.8.4 The claims on non-resident corporates will be risk weighted as under as per the ratings assigned by international rating agencies.

Table 7: Claims on Non-Resident Corporates – Risk Weights

S&P/ Fitch Ratings	**AAA to AA**	**A**	**BBB to BB**	**Below BB**	**Unrated**
Moody's ratings	**Aaa to Aa**	**A**	**Baa to Ba**	**Below Ba**	**Unrated**
RW (%)	20	50	100	150	100

5.9 Claims included in the Regulatory Retail Portfolios

5.9.1 Claims (including both fund-based and non-fund based) that meet all the four criteria listed below in paragraph 5.9.3 may be considered as retail claims for regulatory capital purposes and included in a regulatory retail portfolio. Claims included in this portfolio shall be assigned a risk-weight of 75 per cent, except as provided in paragraph 5.12 below for non performing assets.

5.9.2 The following claims, both fund based and non-fund based, shall be excluded from the regulatory retail portfolio:

(a) Exposures by way of investments in securities (such as bonds and equities), whether listed or not;

(b) Mortgage Loans to the extent that they qualify for treatment as claims secured by residential property[14] or claims secured by commercial real estate[15];

(c) Loans and Advances to bank's own staff which are fully covered by superannuation benefits and / or mortgage of flat/ house;

(d) Consumer Credit, including Personal Loans and credit card receivables;

(e) Capital Market Exposures;

(f) Venture Capital Funds.

5.9.3 Qualifying Criteria

(i) *Orientation Criterion*- The exposure (both fund-based and non fund-based) is to an individual person or persons or to a small business; Person under this clause would mean any legal person capable of entering into contracts and would include but not be restricted to individual, HUF, partnership firm, trust, private limited companies, public limited companies, co-operative societies etc. Small business is one where the total average annual turnover is less than ₹ 50 crore. The turnover criterion will be linked to

[14] Mortgage loans qualifying for treatment as 'claims secured by residential property' are defined inparagraph 5.10.

[15] As defined in paragraph 5.11.1.

the average of the last three years in the case of existing entities; projected turnover in the case of new entities; and both actual and projected turnover for entities which are yet to complete three years.

(ii) *Product Criterion* - The exposure (both fund-based and non-fund-based) takes the form of any of the following: revolving credits and lines of credit (including overdrafts), term loans and leases (e.g. installment loans and leases, student and educational loans) and small business facilities and commitments.

(iii) *Granularity Criterion*- Banks must ensure that the regulatory retail portfolio is sufficiently diversified to a degree that reduces the risks in the portfolio, warranting the 75 per cent risk weight. One way of achieving this is that no aggregate exposure to one counterpart should exceed 0.2 per cent of the overall regulatory retail portfolio. '***Aggregate exposure'*** means gross amount (i.e. not taking any benefit for credit risk mitigation into account) of all forms of debt exposures (e.g. loans or commitments) that individually satisfy the three other criteria. In addition, '*one counterpart*' means one or several entities that may be considered as a single beneficiary (e.g. in the case of a small business that is affiliated to another small business, the limit would apply to the bank's aggregated exposure on both businesses). While banks may appropriately use the group exposure concept for computing aggregate exposures, they should evolve adequate systems to ensure strict adherence with this criterion. NPAs under retail loans are to be excluded from the overall regulatory retail portfolio when assessing the granularity criterion for risk-weighting purposes.

(iv) *Low value of individual exposures* - The maximum aggregated retail exposure to one counterpart should not exceed the absolute threshold limit of ₹ 5 crore.

5.9.4 For the purpose of ascertaining compliance with the absolute threshold, exposure would mean sanctioned limit or the actual outstanding, whichever is higher, for all fund based and non-fund based facilities, including all forms of off-balance sheet exposures. In the case of term loans and EMI based facilities, where there is no scope for redrawing any portion of the sanctioned amounts, exposure shall mean the actual outstanding.

5.9.5 The RBI would evaluate at periodic intervals the risk weight assigned to the retail portfolio with reference to the default experience for these exposures. As part of the supervisory review process, the RBI would also consider whether the credit quality of regulatory retail claims held by individual banks should warrant a standard risk weight higher than 75 per cent.

5.10 Claims secured by Residential Property

5.10.1 Lending to individuals meant for acquiring residential property which are fully secured by mortgages on the residential property that is or will be occupied by the borrower, or that is rented, shall be risk weighted as indicated as per Table 7Abelow, based on Board approved valuation policy. LTV ratio should be computed as a percentage with total outstanding in the account (viz. "principal + accrued interest + other charges pertaining to the loan" without any netting) in the numerator and the realisable value of the residential property mortgaged to the bank in the denominator.

Table 7A- Claims Secured by Residential Property – Risk Weights

Category of Loan	LTV Ratio[16] (%)	Risk Weight (%)
(a) Individual Housing Loans		
(i) Up to ₹ 20 lakh	90	50
(ii) Above ₹ 20 lakh and up to ₹ 75 lakh	80	50
(iii) Above ₹75 lakh	75	75
(b) Commercial Real Estate – Residential Housing (CRE-RH)	N A	75
(c) Commercial Real Estate (CRE)	N A	100

Note:

1 - The LTV ratio should not exceed the prescribed ceiling in all fresh cases of sanction. In case the LTV ratio is currently above the ceiling prescribed for any reasons, efforts shall be made to bring it within limits.

2 - Banks' exposures to third dwelling unit onwards to an individual will also be treated as CRE exposures, as indicated in paragraph 2 in Appendix 2 of Circular DBOD.BP.BC.No.42 /08.12.015/2009-10 dated September 9, 2009 on 'Guidelines on Classification of Exposures as Commercial Real Estate (CRE) Exposures'.

5.10.2 All other claims secured by residential property would attract the higher of the risk weight applicable to the counterparty or to the purpose for which the bank has extended finance.

5.10.3 Restructured housing loans should be risk weighted with an additional risk weight of 25 per cent to the risk weights prescribed above.

5.10.4 Loans / exposures to intermediaries for on-lending will not be eligible for inclusion under claims secured by residential property but will be treated as claims on corporates or claims included in the regulatory retail portfolio as the case may be.

[16]Please also refer to the circular DBOD.BP.BC.No. 104/08.12.015/2012-13 dated June 21, 2013 on Housing Sector – New Sub-sector CRE-RH within CRE and Rationalisation of Provisioning, Risk weights and LTV Ratios.

5.10.5 Investments in mortgage backed securities (MBS) backed by exposures as at paragraph 5.10.1 above will be governed by the guidelines pertaining to securitisation exposures (c.f. paragraph 5.16 below).

5.11 Claims classified as Commercial Real Estate Exposure

5.11.1 Commercial Real Estate exposure is defined as per the guidelines issued vide our circular DBOD.No.BP.BC.42/08.12.015/2009-10 dated September 9, 2009.

5.11.2 Claims mentioned above will attract a risk weight of 100 per cent as indicated in Table 7A.

5.11.3 As loans to the residential housing projects under the Commercial Real Estate (CRE) Sector exhibit lesser risk and volatility than the CRE Sector taken as a whole, a separate sub-sector called Commercial Real Estate – Residential Housing (CRE-RH) has been carved out from the CRE Sector. CRE-RH would consist of loans to builders/developers for residential housing projects (except for captive consumption) under CRE segment. Such projects should ordinarily not include non-residential commercial real estate. However, integrated housing projects comprising of some commercial space (e.g. shopping complex, school, etc.) can also be classified under CRE-RH provided that the commercial area in the residential housing project does not exceed 10 per cent of the total Floor Space Index (FSI) of the project. In case the FSI of the commercial area in the predominantly residential housing complex exceeds the ceiling of 10 per cent, the project loans should be classified as CRE and not CRE-RH.

5.11.4 Claims on CRE-RH will attract a risk weight of 100 per cent, as mentioned above in Table 7A.

5.11.5 Investments in mortgage backed securities (MBS) backed by exposures as at paragraph 5.11.1 above will be governed by the guidelines pertaining to securitisation exposures c.f. paragraph 5.16 below.

5.12 Non-performing Assets (NPAs)

5.12.1 The unsecured portion of NPA (other than a qualifying residential mortgage loan which is addressed in paragraph 5.12.6), net of specific provisions (including partial write-offs), will be risk-weighted as follows:

(i) 150 per cent risk weight when specific provisions are less than 20 per cent of the outstanding amount of the NPA ;

(ii) 100 per cent risk weight when specific provisions are at least 20 per cent of the outstanding amount of the NPA ;

(iii) 50 per cent risk weight when specific provisions are at least 50 per cent of the outstanding amount of the NPA

5.12.2 For the purpose of computing the level of specific provisions in NPAs for deciding the risk-weighting, all funded NPA exposures of a single counterparty (without netting the value of the eligible collateral) should be reckoned in the denominator.

5.12.3 For the purpose of defining the secured portion of the NPA, eligible collateral will be the same as recognised for credit risk mitigation purposes (paragraphs 7.3.5). Hence, other forms of collateral like land, buildings, plant, machinery, current assets, etc. will not be reckoned while computing the secured portion of NPAs for capital adequacy purposes.

5.12.4 In addition to the above, where a NPA is fully secured by the following forms of collateral that are not recognised for credit risk mitigation purposes, either independently or along with other eligible collateral a 100 per cent risk weight may apply, net of specific provisions, when provisions reach 15 per cent of the outstanding amount:

(i) Land and building which are valued by an expert valuer and where the valuation is not more than three years old, and

(ii) Plant and machinery in good working condition at a value not higher than the depreciated value as reflected in the audited balance sheet of the borrower, which is not older than eighteen months.

5.12.5 The above collaterals (mentioned in paragraph 5.12.4) will be recognized only where the bank is having clear title to realize the sale proceeds thereof and can appropriate the same towards the amounts due to the bank. The bank’s title to the collateral should be well documented. These forms of collaterals are not recognised anywhere else under the standardised approach.

5.12.6 Claims secured by residential property, as defined in paragraph 5.10.1, which are NPA will be risk weighted at 100 per cent net of specific provisions. If the specific provisions in such loans are at least 20 per cent but less than 50 per cent of the outstanding amount, the risk weight applicable to the loan net of specific provisions will be 75 per cent. If the specific provisions are 50 per cent or more the applicable risk weight will be 50 per cent.

5.13 Specified Categories

5.13.1 Fund based and non-fund based claims on Venture Capital Funds, which are considered as high risk exposures, will attract a higher risk weight of 150 per cent:

5.13.2 Reserve Bank may, in due course, decide to apply a 150 per cent or higher risk weight reflecting the higher risks associated with any other claim that may be identified as a high risk exposure.

5.13.3 Consumer credit, including personal loans and credit card receivables but excluding educational loans, will attract a higher risk weight of 125 per cent or higher, 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 will be worked out under the comprehensive approach as per paragraph 7.3.4. The 'exposure value after risk mitigation' shall attract the risk weight of 125 per cent.

5.13.4 'Capital market exposures' will attract a 125 per cent risk weight or risk weight warranted by external rating (or lack of it) of the counterparty, **whichever is higher.**

5.13.5 The claims on rated as well as unrated 'Non-Deposit-taking Systemically Important Non-Banking Financial Companies (NBFC-ND-SI), other than AFCs and NBFC-IFCs, regardless of the amount of claim, shall be uniformly risk weighted at 100 per cent. (For risk weighting claims on AFCs and NBFC-IFCs[17], please refer to paragraph 5.8.1)

5.13.6 All investments in the paid up equity of non-financial entities, which are not consolidated for capital purposes with the bank, shall be assigned a 125 per cent risk weight.

5.13.7 All Investments in the paid up equity of financial entities (other than banks, which are covered under paragraph 5.6), which are not consolidated for capital purposes with the bank, where such investment is upto 30 per cent of the equity of the investee entity, shall be assigned a 125 per cent risk weight or a risk weight warranted by the external rating (or the lack of it) of the counterparty, whichever is higher. The investment in paid up equity of financial entities, which are specifically exempted from 'capital market exposure' norms, shall also be assigned a 125 percent risk weight (i.e. 11.25 per cent of capital charge on gross equity position) or as per the risk weight warranted by external rating (or lack of it) of the

[17] Circular DBOD.No.BP.BC.74/21.06.001/2009-10 dated February 12, 2010

counterparty, whichever is higher.

5.13.8 Bank's investments in the non-equity capital eligible instruments of other banks should be risk weighted as prescribed in paragraph 5.6.1.

5.13.9 Unhedged Foreign Currency Exposure[18]

The extent of unhedged foreign currency exposures of the entities[19] continues to be significant and this can increase the probability of default in times of high currency volatility. It was, therefore, decided to introduce incremental capital requirements for bank exposures to entities with unhedged foreign currency exposures (i.e. over and above the present capital requirements) as per the instructions contained in circulars DBOD.No.BP.BC.85/21.06.200/2013-14 and DBOD.No.BP.BC.116/ 21.06.200/2013-14 dated January 15, 2014 and June 3, 2014, respectively, as under:

Likely Loss/EBID (%)	Incremental Capital Requirement
Up to 75 per cent	0
More than 75 per cent	25 per cent increase in the risk weight

5.14 Other Assets

5.14.1 Loans and advances to bank's own staff which are fully covered by superannuation benefits and/or mortgage of flat/ house will attract a 20 per cent risk weight. Since flat / house is not an eligible collateral and since banks normally recover the dues by adjusting the superannuation benefits only at the time of cessation from service, the concessional risk weight shall be applied without any adjustment of the outstanding amount. In case a bank is holding eligible collateral in respect of amounts due from a staff member, the outstanding amount in respect of that staff member may be adjusted to the extent permissible, as indicated in paragraph 7 below.

5.14.2 Other loans and advances to bank's own staff will be eligible for inclusion under regulatory retail portfolio and will therefore attract a 75 per cent risk weight.

[18] Please refer to the circulars DBOD.No.BP.BC.85/21.06.200/2013-14 and DBOD.No.BP.BC.116/ 21.06.200/2013-14 dated January 15, 2014 and June 3, 2014, respectively

[19] In this context, 'entities' means those entities which have borrowed from banks including borrowing in INR and other currencies

5.14.3 The deposits kept by banks with the CCPs[20] will attract risk weights appropriate to the nature of the CCPs. In the case of Clearing Corporation of India Limited (CCIL), the risk weight will be 20 per cent and for other CCPs, it will be according to the ratings assigned to these entities.

5.14.4 All other assets will attract a uniform risk weight of 100 per cent.

5.15 Off-Balance Sheet Items

5.15.1 General

i) The total risk weighted off-balance sheet credit exposure is calculated as the sum of the risk-weighted amount of the market related and non-market related off-balance sheet items. The risk-weighted amount of an off-balance sheet item that gives rise to credit exposure is generally calculated by means of a two-step process:

(a) the notional amount of the transaction is converted into a credit equivalent amount, by multiplying the amount by the specified credit conversion factor or by applying the current exposure method, and

(b) the resulting credit equivalent amount is multiplied by the risk weight applicable to the counterparty or to the purpose for which the bank has extended finance or the type of asset, whichever is higher.

ii) Where the off-balance sheet item is secured by eligible collateral or guarantee, the credit risk mitigation guidelines detailed in paragraph 7 may be applied.

5.15.2 Non-market-related Off-Balance Sheet Items

i) The credit equivalent amount in relation to a non-market related off-balance sheet item like, direct credit substitutes, trade and performance related contingent items and commitments with certain drawdown, other commitments, etc. will be determined by multiplying the contracted amount of that particular transaction by the relevant credit conversion factor (CCF).

ii) Where the non-market related off-balance sheet item is an undrawn or partially undrawn fund-based facility[21], the amount of undrawn commitment to be included in

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[20] Please refer to circular DBOD.No.BP.BC.28/21.06.201/2013-14 dated July 2, 2013 for Capital Requirements for Banks' Exposures to Central Counterparties for computing capital under Basel III Capital Regulations

[21] For example: (a) In the case of a cash credit facility for ₹100 lakh (which is not unconditionally cancellable) where the drawn portion is ₹ 60 lakh, the undrawn portion of ₹ 40 lakh will attract a CCF of 20 per cent (since the CC facility is subject to review / renewal normally once a year). The credit equivalent amount of ₹ 8 lakh (20 % of

calculating the off-balance sheet non-market related credit exposures is the maximum unused portion of the commitment that could be drawn during the remaining period to maturity. Any drawn portion of a commitment forms a part of bank's on-balance sheet credit exposure.

iii) In the case of irrevocable commitments to provide off-balance sheet facilities, the original maturity will be measured from the commencement of the commitment until the time the associated facility expires. For example an irrevocable commitment with an original maturity of 12 months, to issue a 6 month documentary letter of credit, is deemed to have an original maturity of 18 months. Irrevocable commitments to provide off-balance sheet facilities should be assigned the lower of the two applicable credit conversion factors. For example, an irrevocable commitment with an original maturity of 15 months (50 per cent - CCF) to issue a six month documentary letter of credit (20 per cent - CCF) would attract the lower of the CCF i.e., the CCF applicable to the documentary letter of credit viz. 20 per cent.

iv) The credit conversion factors for non-market related off-balance sheet transactions are as under:

Table 8: Credit Conversion Factors – Non-market relatedOff-Balance Sheet Items

Sr. No.	Instruments	Credit Conversion Factor (%)
1.	Direct credit substitutes e.g. general guarantees of indebtedness (including standby L/Cs serving as financial guarantees for loans and securities, credit enhancements, liquidity facilities for securitisation transactions), and acceptances (including endorsements with the character of acceptance). (i.e., the risk of loss depends on the credit worthiness of the counterparty or the party against whom a potential claim is acquired)	100
2.	Certain transaction-related contingent items (e.g. performance bonds, bid bonds, warranties, indemnities and standby letters of credit related to particular transaction).	50
3.	Short-term self-liquidating trade letters of credit arising from the movement of goods (e.g. documentary credits collateralised by the underlying shipment) for both issuing bank and confirming bank.	20

Rs.40 lakh) will be assigned the appropriate risk weight as applicable to the counterparty / rating to arrive at the risk weighted asset for the undrawn portion. The drawn portion (₹ 60 lakh) will attract a risk weight as applicable to the counterparty / rating.

(b) A TL of ₹ 700 cr is sanctioned for a large project which can be drawn down in stages over a three year period. The terms of sanction allow draw down in three stages – ₹ 150 cr in Stage I, ₹ 200 cr in Stage II and ₹ 350 cr in Stage III, where the borrower needs the bank's explicit approval for draw down under Stages II and III after completion of certain formalities. If the borrower has drawn already ₹ 50 cr under Stage I, then the undrawn portion would be computed with reference to Stage I alone i.e., it will be ₹100 cr. If Stage I is scheduled to be completed within one year, the CCF will be 20% and if it is more than one year then the applicable CCF will be 50 per cent.

Sr. No.	Instruments	Credit Conversion Factor (%)
4.	Sale and repurchase agreement and asset sales with recourse, where the credit risk remains with the bank. (These items are to be risk weighted according to the type of asset and not according to the type of counterparty with whom the transaction has been entered into.)	100
5.	Forward asset purchases, forward deposits and partly paid shares and securities, which represent commitments with certain drawdown. (These items are to be risk weighted according to the type of asset and not according to the type of counterparty with whom the transaction has been entered into.)	100
6	Lending of banks' securities or posting of securities as collateral by banks, including instances where these arise out of repo style transactions (i.e., repurchase / reverse repurchase and securities lending / securities borrowing transactions)	100
7.	Note issuance facilities and revolving / **non-revolving** underwriting facilities.	50
8	Commitments with certain drawdown	100
9.	Other commitments (e.g., formal standby facilities and credit lines) with an original maturity of a) up to one year b) over one year Similar commitments that are unconditionally cancellable at any time by the bank without prior notice or that effectively provide for automatic cancellation due to deterioration in a borrower's credit worthiness	 20 50 0
10.	Take-out Finance in the books of taking-over institution	
	(i) Unconditional take-out finance	100
	(ii) Conditional take-out finance	50

v) In regard to non-market related off-balance sheet items, the following transactions with non-bank counterparties will be treated as claims on banks:

- Guarantees issued by banks against the counter guarantees of other banks.
- Rediscounting of documentary bills discounted by other banks and bills discounted by banks which have been accepted by another bank will be treated as a funded claim on a bank.

In all the above cases banks should be fully satisfied that the risk exposure is in fact on the other bank. If they are satisfied that the exposure is on the other bank they may assign these exposures the risk weight applicable to banks as detailed in paragraph 5.6.

vi) Issue of Irrevocable Payment Commitment by banks to various Stock Exchanges on behalf of Mutual Funds and FIIs is a financial guarantee with a Credit Conversion Factor (CCF) of 100. However, capital will have to be maintained only on exposure which is reckoned as CME, i.e. 50% of the amount, because the rest of the exposure is deemed to have been covered by cash/securities which are admissible risk

mitigants as per Basel II. Thus, capital is to be maintained on the amount taken for CME and the risk weight would be 125% thereon.

vii) For classification of banks guarantees[22] viz. direct credit substitutes and transaction-related contingent items etc. (Sr. No. 1 and 2 of Table 8 above), the following principles should be kept in view for the application of CCFs:

(a) Financial guarantees are direct credit substitutes wherein a bank irrevocably undertakes to guarantee the repayment of a contractual financial obligation. Financial guarantees essentially carry the same credit risk as a direct extension of credit i.e., the risk of loss is directly linked to the creditworthiness of the counterparty against whom a potential claim is acquired. An indicative list of financial guarantees, attracting a CCF of 100 per cent is as under:

i. Guarantees for credit facilities;
ii. Guarantees in lieu of repayment of financial securities;
iii. Guarantees in lieu of margin requirements of exchanges;
iv. Guarantees for mobilisation advance, advance money before the commencement of a project and for money to be received in various stages of project implementation;
v. Guarantees towards revenue dues, taxes, duties, levies etc. in favour of Tax/ Customs / Port / Excise Authorities and for disputed liabilities for litigation pending at courts;
vi. Credit Enhancements;
vii. Liquidity facilities for securitisation transactions;
viii. Acceptances (including endorsements with the character of acceptance);
ix. Deferred payment guarantees.

(b) Performance guarantees are essentially transaction-related contingencies that involve an irrevocable undertaking to pay a third party in the event the counterparty fails to fulfil or perform a contractual non-financial obligation. In such transactions, the risk of loss depends on the event which need not necessarily be related to the creditworthiness of the counterparty involved. An indicative list of performance guarantees, attracting a CCF of 50 per cent is as under:

(i) Bid bonds;
(ii) Performance bonds and export performance guarantees;
(iii) Guarantees in lieu of security deposits / earnest money deposits (EMD) for participating in tenders;
(iv) Retention money guarantees;
(v) Warranties, indemnities and standby letters of credit related to particular transaction.

5.15.3 Market related Off-Balance Sheet Items

i) In calculating the risk weighted off-balance sheet credit exposures arising from market related off-balance sheet items for capital adequacy purposes, the bank

[22] Please refer to the circular DBOD.No.BP.BC.89/21.04.009 /2012-13 dated April 02, 2013 on 'New Capital Adequacy Framework- Non-market related Off Balance Sheet Items- Bank Guarantees'.

should include all its market related transactions held in the banking and trading book which give rise to off-balance sheet credit risk.

ii) The credit risk on market related off-balance sheet items is the cost to a bank of replacing the cash flow specified by the contract in the event of counterparty default. This would depend, among other things, upon the maturity of the contract and on the volatility of rates underlying the type of instrument.

iii) Market related off-balance sheet items would include:

a) interest rate contracts – including single currency interest rate swaps, basis swaps, forward rate agreements, and interest rate futures;

b) foreign exchange contracts, including contracts involving gold, – includes cross currency swaps (including cross currency interest rate swaps), forward foreign exchange contracts, currency futures, currency options;

c) any other market related contracts specifically allowed by the Reserve Bank which give rise to credit risk.

iv) Exemption from capital requirements is permitted for

a) foreign exchange (except gold) contracts which have an original maturity of 14 calendar days or less; and

b) instruments traded on futures and options exchanges which are subject to daily mark-to-market and margin payments.

v) The exposures to Central Counter Parties (CCPs)[23], on account of derivatives trading and securities financing transactions (e.g.Collateralised Borrowing and Lending Obligations- CBLOs, Repos) outstanding against them will be assigned zero exposure value for counterparty credit risk, as it is presumed that the CCPs' exposures to their counterparties are fully collateralised on a daily basis, thereby providing protection for the CCP's credit risk exposures.

vi) A CCF of 100 per cent will be applied to the banks' securities posted as collaterals with CCPs and the resultant off-balance sheet exposure will be assigned risk weights appropriate to the nature of the CCPs. In the case of Clearing Corporation of India Limited (CCIL), the risk weight will be 20 per cent and for other CCPs, it will be according to the ratings assigned to these entities.

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[23]Please refer to circular DBOD.No.BP.BC.81/21.06.201/2013-14 dated December 31, 2013 for capital requirements for banks' exposures to central counter parties for computing capital under Basel III Capital Regulations

(vii) The credit equivalent amount of a market related off-balance sheet item, whether held in the banking book or trading book must be determined by the current exposure method.

5.15.4 Current Exposure Method

(i) The credit equivalent amount of a market related off-balance sheet transaction calculated using the current exposure method is the sum of current credit exposure and potential future credit exposure of these contracts. While computing the credit exposure banks may exclude 'sold options', provided the entire premium / fee or any other form of income is received / realised.

(ii) Current credit exposure is defined as the sum of the positive mark-to-market value of these contracts. The Current Exposure Method requires periodical calculation of the current credit exposure by marking these contracts to market**,** thus capturing the current credit exposure.

(iii) Potential future credit exposure is determined by multiplying the notional principal amount of each of these contracts irrespective of whether the contract has a zero, positive or negative mark-to-market value by the relevant add-on factor indicated below according to the nature and residual maturity of the instrument.

Table 9: Credit Conversion Factors for Market-Related Off-Balance Sheet Items

	Credit Conversion Factors (%)	
	Interest Rate Contracts	**Exchange Rate Contracts & Gold**
One year or less	0.50	2.00
Over one year to five years	1.00	10.00
Over five years	3.00	15.00

(iv) For contracts with multiple exchanges of principal, the add-on factors are to be multiplied by the number of remaining payments in the contract.

(v) For contracts that are structured to settle outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the residual maturity would be set equal to the time until the next reset date. However, in the case of interest rate contracts which have residual maturities of more than one year and meet the above criteria, the CCF or add-on factor is subject to a floor of 1.0 per cent.

(vi) No potential future credit exposure would be calculated for single currency floating / floating interest rate swaps; the credit exposure on these contracts would be evaluated solely on the basis of their mark-to-market value.

(vii) Potential future exposures should be based on ‘effective’ rather than ’apparent notional amounts’. In the event that the ‘stated notional amount’ is leveraged or enhanced by the structure of the transaction, banks must use the ‘effective notional amount’ when determining potential future exposure. For example, a stated notional amount of USD 1 million with payments based on an internal rate of two times the BPLR would have an effective notional amount of USD 2 million.

(viii) Since the legal position regarding bilateral nettingof counterparty credit exposures in derivative contracts is not unambiguously clear, bilateral netting of mark-to-market (MTM) values arising on account of such derivative contracts cannot be permitted. Accordingly, banks should count their gross positive MTM value of such contracts for the purpose of capital adequacy.

5.15.5 Failed Transactions

i) With regard to unsettled securities and foreign exchange transactions, banks are exposed to counterparty credit risk from trade date, irrespective of the booking or the accounting of the transaction. Banks are encouraged to develop, implement and improve systems for tracking and monitoring the credit risk exposure arising from unsettled transactions as appropriate for producing management information that facilitates action on a timely basis.

ii) Banks must closely monitor securities and foreign exchange transactions that have failed, starting from the day they fail for producing management information that facilitates action on a timely basis. Failed transactions give rise to risk of delayed settlement or delivery.

iii) Failure of transactions settled through a delivery-versus-payment system (DvP), providing simultaneous exchanges of securities for cash, expose banks to a risk of loss on the difference between the transaction valued at the agreed settlement price and the transaction valued at current market price (i.e. positive current exposure). Failed transactions where cash is paid without receipt of the corresponding receivable (securities, foreign currencies, or gold,) or, conversely, deliverables were delivered without receipt of the corresponding cash payment (non-DvP, or free-delivery) expose banks to a risk of loss on the full amount of cash paid or deliverables delivered. Therefore, a capital charge is required for failed transactions and must be calculated as under. The following capital treatment is applicable to all failed transactions, including transactions through recognised clearing houses. Repurchase and reverse-repurchase agreements as well as securities lending and borrowing that have failed to settle are excluded from this capital treatment.

iv) For DvP Transactions – If the payments have not yet taken place five business days after the settlement date, banks are required to calculate a **capital charge** by multiplying the positive current exposure of the transaction by the appropriate factor as under. In order to capture the information, banks will need to upgrade their information systems in order to track the number of days after the agreed settlement date and calculate the corresponding capital charge.

Number of working days after the agreed settlement date	Corresponding risk multiplier (in per cent)
From 5 to 15	9
From 16 to 30	50
From 31 to 45	75
46 or more	100

v) For non-DvP Transactions (free deliveries) after the first contractual payment / delivery leg, the bank that has made the payment will treat its exposure as a loan if the second leg has not been received by the end of the business day. If the dates when two payment legs are made are the same according to the time zones where each payment is made, it is deemed that they are settled on the same day. For example, if a bank in Tokyo transfers Yen on day X (Japan Standard Time) and receives corresponding US Dollar via CHIPS on day X (US Eastern Standard Time), the settlement is deemed to take place on the same value date. Banks shall compute the capital requirement using the counterparty risk weights prescribed in these guidelines. However, if five business days after the second contractual payment / delivery date the second leg has not yet effectively taken place, the bank that has made the first payment leg will deduct from capital the full amount of the value transferred plus replacement cost, if any. This treatment will apply until the second payment / delivery leg is effectively made.

5.16 **Securitisation Exposures**

5.16.1 General

i) A securitisation transaction, which meets the minimum requirements, as stipulated in circular DBOD.No.BP.BC.60/21.04.048/2005-06 dated February 1, 2006 on 'Guidelines on Securitisation of Standard Assets', circular DBOD.No.BP.BC.103/21.04.177/2011-12 dated May 07, 2012 on 'Revision to the Guidelines on Securitisation Transactions' and circular DBOD.No.BP.BC-25/21.04.177/2013-14 dated July 1, 2013 on 'Revision to the Guidelines on Securitisation Transactions-Reset of Credit Enhancement', would qualify for the

following prudential treatment of securitisation exposures for capital adequacy purposes. Banks' exposures to a securitisation transaction, referred to as securitisation exposures, can include, but are not restricted to the following: as investor, as credit enhancer, as liquidity provider, as underwriter, as provider of credit risk mitigants. Cash collaterals provided as credit enhancements shall also be treated as securitisation exposures. The terms used in this section with regard to securitisation shall be as defined in the above guidelines. Further, the following definitions shall be applicable:

a) A 'credit enhancing interest only strip (I/Os)' – an on-balance sheet exposure that is recorded by the originator, which (i) represents a valuation of cash flows related to future margin income to be derived from the underlying exposures, and (ii) is subordinated to the claims of other parties to the transaction in terms of priority of repayment.

b) 'Implicit support' – the support provided by a bank to a securitisation in excess of its predetermined contractual obligation.

c) A 'gain-on-sale' – any profit realised at the time of sale of the securitised assets to SPV.

ii) Banks are required to hold regulatory capital against all of their securitisation exposures, including those arising from the provision of credit risk mitigants to a securitisation transaction, investments in asset-backed securities, retention of a subordinated tranche, and extension of a liquidity facility or credit enhancement, as set forth in the following paragraphs. Repurchased securitisation exposures must be treated as retained securitisation exposures.

iii) An originator in a securitisation transaction which does not meet the minimum requirements prescribed in the guidelines dated February 01, 2006, May 07, 2012and July 1, 2013 and therefore does not qualify for de-recognition shall hold capital against all of the exposures associated with the securitisation transaction as if they had not been securitised[24]. Additionally, the originator shall deduct any 'gain on sale' on such transaction from Tier I capital. This capital would be in addition to the capital which the bank is required to maintain on its other existing exposures to the securitization transaction.

[24] For example: If in a securitisation transaction of Rs.100, the pool consists of 80 per cent of AAA securities, 10 per cent of BB securities and 10 per cent of unrated securities and the transaction does not meet the true sale criterion, then the originator will be deemed to be holding all the exposures in that transaction. Consequently, the AAA rated securities will attract a risk weight of 20 per cent and the face value of the BB rated securities and the unrated securities will be deducted. Thus the consequent impact on the capital will be Rs.21.44 (16*9 % + 20).

iv) *Operational Criteria for Credit Analysis*[25]

In addition to the conditions specified in the RBI Guidelines dated February 1, 2006 ,May 7, 2012 and July 1, 2013 on Securitisation of standard assets in order to qualify for de-recognition of assets securitised, the bank must have the information specified in paragraphs (a) through (c) below:

a) As a general rule, a bank must, on an ongoing basis, have a comprehensive understanding of the risk characteristics of its individual securitisation exposures, whether on balance sheet or off balance sheet, as well as the risk characteristics of the pools underlying its securitisation exposures.

b) Banks must be able to access performance information on the underlying pools on an on-going basis in a timely manner. Such information may include, as appropriate: exposure type; percentage of loans 30, 60 and 90 days past due; default rates; prepayment rates; loans in foreclosure; property type; occupancy; average credit score or other measures of creditworthiness; average loan-to-value ratio; and industry and geographic diversification.

c) A bank must have a thorough understanding of all structural features of a securitisation transaction that would materially impact the performance of the bank's exposures to the transaction, such as the contractual waterfall and waterfall-related triggers, credit enhancements, liquidity enhancements, market value triggers, and deal-specific definitions of default.

5.16.2 Deduction of Securitisation Exposures from Capital funds[26]

i) When a bank is required to deduct a securitisation exposure from regulatory capital, the deduction must be made 50 per cent from Tier I and 50 per cent from Tier II, except where expressly provided otherwise. Deductions from capital may be calculated net of any specific provisions maintained against the relevant securitisation exposures.

ii) Credit enhancements, including credit enhancing I/Os (net of the gain-on-sale that shall be deducted from Tier I as specified below) and cash collaterals, which are required to be deducted must be deducted 50 per cent from Tier I and 50 per cent from Tier II.

iii) Banks shall deduct from Tier I capital any "gain-on-sale", if permitted to be

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[25] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

[26] Para 12 and 13 of RBI's Guidelines dated February 1, 2006 have been replaced by para 5.16.2 of this circular

recognised. However, in terms of guidelines on securitisation of standard assets, banks are allowed to amortise the profit over the period of the securities issued by the SPV. The amount of profit thus recognised in the P & L Account through amortisation, need not be deducted.

iv) Any rated securitisation exposure with a long term rating of 'B+ and below' when not held by an originator, and a long term rating of 'BB+ and below' when held by the originator shall be deducted 50 per cent from Tier I and 50 per cent from Tier II capital.

v) Any unrated securitisation exposure, except an eligible liquidity facility as specified in paragraph 5.16.8 should be deducted 50 per cent from Tier I and 50 per cent from Tier II capital. In an unrated and ineligible liquidity facility, both the drawn and undrawn portions shall be deducted 50 per cent from Tier I and 50 per cent from Tier II capital.

5.16.3 Implicit Support

i) The originator shall not provide any implicit support to investors in a securitisation transaction.

ii) When a bank is deemed to have provided implicit support to a securitisation:

a) It must, at a minimum, hold capital against all of the exposures associated with the securitisation transaction as if they had not been securitised.

b) Additionally, the bank would need to deduct any gain-on-sale, as defined above, from Tier I capital.

c) Furthermore, in respect of securitisation transactions where the bank is deemed to have provided implicit support it is required to disclose publicly that (a) it has provided non-contractual support (b) the details of the implicit support and (c) the impact of the implicit support on the bank's regulatory capital.

iii) Where a securitisation transaction contains a clean up call and the clean up call can be exercised by the originator in circumstances where exercise of the clean up call effectively provides credit enhancement, the clean up call shall be treated as implicit support and the concerned securitisation transaction will attract the above prescriptions.

5.16.4 Application of External Ratings

The following operational criteria concerning the use of external credit assessments apply:

i) A bank must apply external credit assessments from eligible external credit rating agencies consistently across a given type of securitisation exposure. Furthermore, a bank cannot use the credit assessments issued by one external credit rating agency for one or more tranches and those of another external credit rating agency for other

positions (whether retained or purchased) within the same securitisation structure that may or may not be rated by the first external credit rating agency. Where two or more eligible external credit rating agencies can be used and these assess the credit risk of the same securitisation exposure differently, paragraphs 6.7 will apply.

ii) If the CRM provider is not recognised as an eligible guarantor as defined in paragraph 7.5.6, the covered securitisation exposures should be treated as unrated.

iii) In the situation where a credit risk mitigant is not obtained by the SPV but rather applied to a specific securitisation exposure within a given structure (e.g. ABS tranche), the bank must treat the exposure as if it is unrated and then use the CRM treatment outlined in paragraph 7.

iv) The other aspects of application of external credit assessments will be as per guidelines given in paragraph 6.

v) A bank is not permitted to use any external credit assessment for risk weighting purposes where the assessment is at least partly based on unfunded support provided by the bank. For example, if a bank buys an ABS/MBS where it provides an unfunded securitisation exposure extended to the securitization programme (eg. liquidity facility or credit enhancement), and that exposure plays a role in determining the credit assessment on the securitised assets/various tranches of the ABS/MBS, the bank must treat the securitised assets/various tranches of the ABS/MBS as if these were not rated. The bank must continue to hold capital against the other securitisation exposures it provides (e.g. against the liquidity facility and/or credit enhancement).[27]

5.16.5 Risk Weighted Securitisation Exposures

i) Banks shall calculate the risk weighted amount of an on-balance sheet securitisation exposure by multiplying the principal amount (after deduction of specific provisions) of the exposures by the applicable risk weight.

ii) The risk-weighted asset amount of a securitisation exposure is computed by multiplying the amount of the exposure by the appropriate risk weight determined in accordance with issue specific rating assigned to those exposures by the chosen external credit rating agencies as indicated in the following tables:

[27] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

Table 10: Securitisation Exposures – Risk Weight Mapping to Long-Term Ratings

Domestic rating agencies	AAA	AA	A	BBB	BB	B and below or unrated
Risk weight for banks other than originators (%)	20	30	50	100	350	Deduction*
Risk weight for originator (%)	20	30	50	100	Deduction*	

* governed by the provisions of paragraph 5.16.2

iii) The risk-weighted asset amount of a securitisation exposure in respect of MBS backed by commercial real estate exposure, as defined in paragraph 5.11 above, is computed by multiplying the amount of the exposure by the appropriate risk weight determined in accordance with issue specific rating assigned to those exposures by the chosen external credit rating agencies as indicated in the following tables:

Table 10-A: Commercial Real Estate Securitisation Exposures – Risk Weight mapping to long-term ratings

Domestic Rating Agencies	AAA	AA	A	BBB	BB	B and below or unrated
Risk weight for banks other than originators (%)	100	100	100	150	400	Deduction*
Risk weight for originator (%)	100	100	100	150	Deduction*	

*governed by the provisions of paragraph 5.16.2

iv) Banks are not permitted to invest in unrated securities issued by an SPV as a part of the securitisation transaction. However, securitisation exposures assumed by banks which may become unrated or may be deemed to be unrated, would be deducted for capital adequacy purposes in accordance with the provisions of paragraph 5.16.2.

v) Under the Basel II requirements, there should be transfer of a significant credit risk associated with the securitised exposures to the third parties for recognition of risk transfer. In view of this, the total exposure of banks to the loans securitised in the following forms should not exceed 20% of the total securitised instruments issued :

- Investments in equity / subordinate / senior tranches of securities issued by the SPV including through underwriting commitments
- Credit enhancements including cash and other forms of collaterals including over-collateralisation, but excluding the credit enhancing interest only strip
- Liquidity support.

If a bank exceeds the above limit, the excess amount would be risk weighted at 1111 per cent[28]. Credit exposure on account of interest rate swaps/ currency swaps

[28] As per Basel III, the maximum risk weight for securitization exposures, consistent with minimum 8 per cent

entered into with the SPV will be excluded from the limit of 20 per cent as this would not be within the control of the bank.

vi) If an originating bank fails to meet the requirement laid down in the paragraphs 1.1 to 1.7 of Section A / paragraphs 1.1 to 1.6 of Section B of the circular DBOD.No.BP.BC. 103/21.04.177/2011-12 dated May 7, 2012 on 'Revision to the Guidelines on Securitisation Transactions', it will have to maintain capital for the securitized assets/ assets sold as if these were not securitized/ sold. This capital would be in addition to the capital which the bank is required to maintain on its other existing exposures to the securitisation transaction.

vii) The investing banks will assign a risk weight of 1111 per cent to the exposures relating to securitization/ or assignment where the requirements in the paragraphs 2.1 to 2.3 of Section A/ or paragraphs 2.1 to 2.8 of Section B, respectively, of the circular DBOD.No.BP.BC.103/21.04.177/ 2011-12 dated May 07, 2012 on 'Revision to the Guidelines on Securitisation Transactions' are not met. The higher risk weight of 1111 per cent will be applicable with effect from October 01, 2012.

viii) Under the transactions involving transfer of assets through direct assignment of cash flows and the underlying securities, the capital adequacy treatment for direct purchase of corporate loans will be as per the rules applicable to corporate loans directly originated by the banks. Similarly, the capital adequacy treatment for direct purchase of retail loans, will be as per the rules applicable to retail portfolios directly originated by banks except in cases where the individual accounts have been classified as NPA, in which case usual capital adequacy norms as applicable to retail NPAs will apply. No benefit in terms of reduced risk weights will be available to purchased retail loans portfolios based on rating because this is not envisaged under the Basel II Standardized Approach for credit risk.

5.16.6 Off-Balance Sheet Securitisation Exposures

i) Banks shall calculate the risk weighted amount of a rated off-balance sheet securitisation exposure by multiplying the credit equivalent amount of the exposure by the applicable risk weight. The credit equivalent amount should be arrived at by multiplying the principal amount of the exposure (after deduction of specific provisions) with a 100 per cent CCF, unless otherwise specified.

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capital requirement, is 1250 per cent. Since in India minimum capital requirement is 9 per cent, the risk weight has been capped at 1111 per cent (100/9) so as to ensure that capital charge does not exceed the exposure value.

ii) If the off-balance sheet exposure is not rated, it must be deducted from capital, except an unrated eligible liquidity facility for which the treatment has been specified separately in paragraph 5.16.8.

5.16.7 Recognition of Credit Risk Mitigants (CRMs)

i) The treatment below applies to a bank that has obtained a credit risk mitigant on a securitisation exposure. Credit risk mitigant include guarantees and eligible collateral as specified in these guidelines. Collateral in this context refers to that used to hedge the credit risk of a securitisation exposure rather than for hedging the credit risk of the underlying exposures of the securitisation transaction.

ii) When a bank other than the originator provides credit protection to a securitisation exposure, it must calculate a capital requirement on the covered exposure as if it were an investor in that securitisation. If a bank provides protection to an unrated credit enhancement, it must treat the credit protection provided as if it were directly holding the unrated credit enhancement.

iii) Capital requirements for the guaranteed / protected portion will be calculated according to CRM methodology for the standardised approach as specified in paragraph 7 below. Eligible collateral is limited to that recognised under these guidelines in paragraph 7.3.5. For the purpose of setting regulatory capital against a maturity mismatch between the CRM and the exposure, the capital requirement will be determined in accordance with paragraphs 7.6. When the exposures being hedged have different maturities, the longest maturity must be used applying the methodology prescribed in paragraphs 7.6.3 & 7.6.4.

5.16.8 Liquidity Facilities

i) A liquidity facility will be considered as an 'eligible' facility only if it satisfies all minimum requirements prescribed in the guidelines issued on February 1, 2006. The rated liquidity facilities will be risk weighted or deducted as per the appropriate risk weight determined in accordance with the specific rating assigned to those exposures by the chosen External Credit Assessment Institutions (ECAIs) as indicated in the tables presented above.

ii) The unrated eligible liquidity facilities will be exempted from deductions and treated as follows.

a) The drawn and undrawn portions of an unrated eligible liquidity facility would attract a risk weight equal to the highest risk weight assigned to any of the underlying individual exposures covered by this facility.

b) The undrawn portion of an unrated eligible liquidity facility will attract a

credit conversion factor of 50%.[29]

5.16.9 Re-Securitisation Exposures/ Synthetic Securitisations/ Securitisation with Revolving Structures (with or without early amortization features)

At present, banks in India including their overseas branches, are not permitted to assume exposures relating to re-securitisation/ Synthetic Securitisations/ Securitisations with Revolving Structures (with or without early amortization features), as defined in DBOD.No.BP.BC.103/21.04.177/2011-12 dated May 07, 2012 on 'Revision to the Guidelines on Securitisation Transactions'. However, some of the Indian banks have invested in CDOs and other similar securitization exposures through their overseas branches before issuance of circular RBI/2008-09/302.DBOD.No.BP.BC.89/21.04.141/2008-09 dated December 1, 2008. Some of these exposures may be in the nature of re-securitisation. For such exposures, the risk weights would be assigned as under:

Table 11: Re-securitisation Exposures – Risk Weight Mapping to Long-Term Ratings

Domestic rating agencies	AAA	AA	A	BBB	BB	B and below or unrated
Risk weight for banks other than originators (%)	40	60	100	200	650	Deduction*
Risk weight for originator (%)	40	60	100	200	Deduction*	

*governed by the provisions of paragraph 5.16.2

Table 11A: Commercial Real Estate Re-Securitisation Exposures – Risk Weight Mapping to Long-Term Ratings

Domestic rating agencies	AAA	AA	A	BBB	BB and below or unrated
Risk weight for banks other than originators (%)	200	200	200	400	Deduction*
Risk weight for originator (%)	200	200	200	400	Deduction*

*governed by the provisions of paragraph 5.16.2

All other regulatory norms would be applicable as prescribed above in this paragraph (para 5.16).

5.17 Capital Adequacy Requirement for Credit Default Swap (CDS) Positions in the Banking Book

5.17.1 Recognition of External / Third-party CDS Hedges

[29] Master Circular DBOD,No.BP:.BC.73 / 21.06.001/2009-10 dated Feb 8, 2010

5.17.1.1 In case of Banking Book positions hedged by bought CDS positions, no exposure will be reckoned against the reference entity / underlying asset in respect of the hedged exposure, and exposure will be deemed to have been substituted by the protection seller, if the following conditions are satisfied:

(a) Operational requirements mentioned in paragraph 4 of circular DBOD.BP.BC.No.61/21.06.203/2011-12 dated November 30, 2011 are met;

(b) The risk weight applicable to the protection seller under the Basel II Standardised Approach for credit risk is lower than that of the underlying asset; and

(c) There is no maturity mismatch between the underlying asset and the reference / deliverable obligation. If this condition is not satisfied, then the amount of credit protection to be recognised should be computed as indicated in paragraph 5.17.1.3 (ii) below.

5.17.1.2 If the conditions (a) and (b) above are not satisfied or the bank breaches any of these conditions subsequently, the bank shall reckon the exposure on the underlying asset; and the CDS position will be transferred to Trading Book where it will be subject to specific risk, counterparty credit risk and general market risk (wherever applicable) capital requirements as applicable to Trading Book.

5.17.1.3 The unprotected portion of the underlying exposure should be risk-weighted as applicable under Basel II framework. The amount of credit protection shall be adjusted if there are any mismatches between the underlying asset/ obligation and the reference / deliverable asset / obligation with regard to asset or maturity. These are dealt with in detail in the following paragraphs.

(i) ***Asset Mismatches:*** Asset mismatch will arise if the underlying asset is different from the reference asset or deliverable obligation. Protection will be reckoned as available by the protection buyer only if the mismatched assets meet the requirements that (1) the reference obligation or deliverable obligation ranks paripassu with or is junior to the underlying obligation, and (2) the underlying obligation and reference obligation or deliverable obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place..

(ii) ***Maturity Mismatches:*** The protection buyer would be eligible to reckon the amount of protection if the maturity of the credit derivative contract were to be equal or more than the maturity of the underlying asset. If, however, the maturity of the CDS contract is less than the maturity of the underlying asset, then it would be construed as a maturity mismatch. In

case of maturity mismatch the amount of protection will be determined in the following manner:

a. If the residual maturity of the credit derivative product is less than **three months** no protection will be recognized.

b. If the residual maturity of the credit derivative contract is **three months** or more protection proportional to the period for which it is available will be recognised. When there is a maturity mismatch the following adjustment will be applied.

Pa = P x (t - 0.25) ÷ (T - 0.25)

Where:
Pa = value of the credit protection adjusted for maturity mismatch
P = credit protection
t = min (T, residual maturity of the credit protection arrangement) expressed in years
T = min (5, residual maturity of the underlying exposure) expressed in years
Example: Suppose the underlying asset is a corporate bond of Face Value of Rs.100 where the residual maturity is of 5 years and the residual maturity of the CDS is 4 years. The amount of credit protection is computed as under :

100 * {(4 - 0.25) ÷ (5 - 0.25)} = 100*(3.75÷ 4.75) = 78.95

c. Once the residual maturity of the CDS contract reaches **three months**, protection ceases to be recognised.

5.17.2 **Internal Hedges**

Banks can use CDS contracts to hedge against the credit risk in their existing corporate bonds portfolios. A bank can hedge a Banking Book credit risk exposure either by an internal hedge (the protection purchased from the trading desk of the bank and held in the Trading Book) or an external hedge (protection purchased from an eligible third party protection provider). When a bank hedges a Banking Book credit risk exposure (corporate bonds) using a CDS booked in its Trading Book (i.e. using an internal hedge), the Banking Book exposure is not deemed to be hedged for capital purposes unless the bank transfers the credit risk from the Trading Book to an eligible third party protection provider through a CDS meeting the requirements of paragraph 5.17 vis-à-vis the Banking Book exposure. Where such third party protection is purchased and is recognised as a hedge of a Banking Book exposure for regulatory capital purposes, no capital is required to be maintained on internal and external CDS hedge. In such cases, the external CDS will act as indirect hedge for the Banking Book exposure and the capital adequacy in terms of paragraph 5.17, as applicable for external/ third party hedges, will be applicable.

6. External Credit Assessments

6.1 Eligible Credit Rating Agencies

6.1.1 Reserve Bank has undertaken the detailed process of identifying the eligible creditrating agencies, whose ratings may be used by banks for assigning risk weights for credit risk. In line with the provisions of the Revised Framework, where the facility provided by the bank possesses rating assigned by an eligible credit rating agency, the risk weight of the claim will be based on this rating.

6.1.2 In accordance with the principles laid down in the Revised Framework, the Reserve Bank of India has decided that banks may use the ratings of the following domestic credit rating agencies (arranged in alphabetical order) for the purposes of risk weighting their claims for capital adequacy purposes:

a) Credit Analysis and Research Limited;
b) CRISIL Limited;
c) India Ratings and Research Private Limited (India Ratings);
d) ICRA Limited;
e) Brickwork Ratings India Pvt. Limited (Brickwork); and
f) SMERA Ratings Ltd. (SMERA)

6.1.2.1 The Reserve Bank of India has decided that banks may use the ratings of the following international credit rating agencies (arranged in alphabetical order) for the purposes of risk weighting their claims for capital adequacy purposes where specified:

a. Fitch;
b. Moody's; and
c. Standard & Poor’s

6.2 **Scope of application of External Ratings**

6.2.1 Banks should use the chosen credit rating agencies and their ratings consistently for each type of claim, for both risk weighting and risk management purposes. Banks will not be allowed to “cherry pick” the assessments provided by different credit rating agencies. If a bank has decided to use the ratings of some of the chosen credit rating agencies for a given type of claim, it can use only the ratings of those credit rating agencies, despite the fact that some of these claims may be rated by other chosen credit rating agencies whose ratings the bank has decided not to use Banks shall not use one agency’s rating for one corporate bond, while using another agency’s rating for another exposure to the same counter-party, unless the respective exposures are rated by only one of the chosen credit rating agencies, whose ratings the bank has decided to use. External assessments for one entity within a corporate group cannot be used to risk weight other entities within the same group.

6.2.2 Banks must disclose the names of the credit rating agencies that they use for the risk

weighting of their assets, the risk weights associated with the particular rating grades as determined by Reserve Bank through the mapping process for each eligible credit rating agency as well as the aggregated risk weighted assets as required vide Table DF-5.

6.2.3 To be eligible for risk-weighting purposes, the external credit assessment must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all payments owed to it. For example, if a bank is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with timely repayment of both principal and interest.

6.2.4 To be eligible for risk weighting purposes, the rating should be in force and confirmed from the monthly bulletin of the concerned rating agency. The rating agency should have reviewed the rating at least once during the previous 15 months.

6.2.5 An eligible credit assessment must be publicly available. In other words, a rating must be published in an accessible form and included in the external credit rating agency's transition matrix. Consequently, ratings that are made available only to the parties to a transaction do not satisfy this requirement.

6.2.6 For assets in the bank's portfolio that have contractual maturity less than or equal to one year, short term ratings accorded by the chosen credit rating agencies would be relevant. For other assets which have a contractual maturity of more than one year, long term ratings accorded by the chosen credit rating agencies would be relevant.

6.2.7 Cash credit exposures tend to be generally rolled over and also tend to be drawn on an average for a major portion of the sanctioned limits. Hence, even though a cash credit exposure may be sanctioned for period of one year or less, these exposures should be reckoned as long term exposures and accordingly the long term ratings accorded by the chosen credit rating agencies will be relevant. Similarly, banks may use long-term ratings of a counterparty as a proxy for an unrated short- term exposure on the same counterparty subject to strict compliance with the requirements for use of multiple rating assessments and applicability of issue rating to issuer / other claims as indicated in paragraphs 6.4, 6.5, 6.7 and 6.8 below.

6.3 Mapping Process

The Revised Framework recommends development of a mapping process to assign the ratings issued by eligible credit rating agencies to the risk weights available under the Standardised risk weighting framework. The mapping process is required to result in a risk

weight assignment consistent with that of the level of credit risk. A mapping of the credit ratings awarded by the chosen domestic credit rating agencies has been furnished below in paragraphs 6.4.1 and 6.5.4, which should be used by banks in assigning risk weights to the various exposures.

6.4 Long Term Ratings

6.4.1 On the basis of the above factors as well as the data made available by the rating agencies, the ratings issued by the chosen domestic credit rating agencies have been mapped to the appropriate risk weights applicable as per the Standardised approach under the Revised Framework. The rating-risk weight mapping furnished in the Table below shall be adopted by all banks in India:

Table 12: Risk Weight Mapping of Long Term Ratings of the chosen Domestic Rating Agencies

CARE	CRISIL	India Ratings and Research Private Limited (India Ratings)	ICRA	Brickwork	SMERA Ratings Ltd. (SMERA)	Standardised approach risk weights (in per cent)
CARE AAA	CRISIL AAA	IND AAA	ICRA AAA	Brickwork AAA	SMERA AAA	20
CARE AA	CRISIL AA	IND AA	ICRA AA	Brickwork AA	SMERA AA	30
CARE A	CRISIL A	IND A	ICRA A	Brickwork A	SMERA A	50
CARE BBB	CRISIL BBB	IND BBB	ICRA BBB	Brickwork BBB	SMERA BBB	100
CARE BB, CARE B, CARE C & CARE D	CRISIL BB, CRISIL B, CRISIL C & CRISIL D	IND BB, IND B, IND C & IND D	ICRA BB, ICRA B, ICRA C & ICRA D	Brickwork BB, Brickwork B, Brickwork C & Brickwork D	SMERA BB, SMERA B, SMERA C & SMERA D	150
Unrated	Unrated	Unrated	Unrated	Unrated	Unrated	100

6.4.2 Where “+” or “-” notation is attached to the rating, the corresponding main rating category risk weight should be used. For example, A+ or A- would be considered to be in the A rating category and assigned 50 per cent risk weight.

6.4.3 If an issuer has a long-term exposure with an external long term rating that warrants a risk weight of 150 per cent, all unrated claims on the same counter-party, whether short-term or long-term, should also receive a 150 per cent risk weight, unless the bank uses recognised credit risk mitigation techniques for such claims.

6.5 Short Term Ratings

6.5.1 For risk-weighting purposes, short-term ratings are deemed to be issue-specific. They can only be used to derive risk weights for claims arising from the rated facility. They cannot be generalised to other short-term claims. In no event can a short-term rating be used to

support a risk weight for an unrated long-term claim. Short-term assessments may only be used for short-term claims against banks and corporates.

6.5.2 Notwithstanding the above restriction on using an issue specific short term rating for other short term exposures, the following broad principles will apply. The unrated short term claim on counterparty will attract a risk weight of at least one level higher than the risk weight applicable to the rated short term claim on that counter-party. If a short-term rated facility to counterparty attracts a 20 per cent or a 50 per cent risk-weight, unrated short-term claims to the same counter-party cannot attract a risk weight lower than 30 per cent or 100 per cent respectively.

6.5.3 Similarly, if an issuer has a short-term exposure with an external short term rating that warrants a risk weight of 150 per cent, all unrated claims on the same counter-party, whether long-term or short-term, should also receive a 150 per cent risk weight, unless the bank uses recognised credit risk mitigation techniques for such claims.

6.5.4 In respect of the issue specific short term ratings the following risk weight mapping shall be adopted by banks:

Table 13 : Risk Weight Mapping of Short TermRatings of the Domestic Rating Agencies

CARE	CRISIL	India Ratings and Research Private Limited (India Ratings)	ICRA	Brickwork	SMERA Ratings Ltd. (SMERA)	Standardised approach risk weights (in per cent)
CARE A1+	CRISIL A1+	IND A1+	ICRA A1+	Brickwork A1+	SMERA A1+	20
CARE A1	CRISIL A1	IND A1	ICRA A1	Brickwork A1	SMERA A1	30
CARE A2	CRISIL A2	IND A2	ICRA A2	Brickwork A2	SMERA A2	50
CARE A3	CRISIL A3	IND A3	ICRA A3	Brickwork A3	SMERA A3	100
CARE A4 & D	CRISIL A4 & D	IND A4 & D	ICRA A4 & D	Brickwork A4 & D	SMERA A4 & D	150
Unrated	Unrated	Unrated	Unrated	Unrated	Unrated	100

6.5.5 Where “+” or “-” notation is attached to the rating, the corresponding main rating category risk weight should be used for A2and below, unless specified otherwise. For example, A2+ or A2- would be considered to be in the A2 rating category and assigned 50 per cent risk weight.

6.5.6 The above risk weight mapping of both long term and short term ratings of the chosen domestic rating agencies would be reviewed annually by the Reserve Bank.

6.6 Use of Unsolicited Ratings

A rating would be treated as solicited only if the issuer of the instrument has requested the credit rating agency for the rating and has accepted the rating assigned by the agency. As a general rule, banks should use only **solicited rating from the chosen credit rating agencies.** No ratings issued by the credit rating agencies on an unsolicited basis should be considered for risk weight calculation as per the Standardised Approach.

6.7 Use of Multiple Rating Assessments

Banks shall be guided by the following in respect of exposures / obligors having multiple ratings from the chosen credit rating agencies chosen by the bank for the purpose of risk weight calculation:

(i) If there is only one rating by a chosen credit rating agency for a particular claim, that rating would be used to determine the risk weight of the claim.

(ii) If there are two ratings accorded by chosen credit rating agencies that map into different risk weights, the higher risk weight should be applied.

(iii) If there are three or more ratings accorded by chosen credit rating agencies with different risk weights, the ratings corresponding to the two lowest risk weights should be referred to and the higher of those two risk weights should be applied. i.e., the second lowest risk weight.

6.8 Applicability of 'Issue Rating' to issuer/ other claims

6.8.1 Where a bank invests in a particular issue that has an issue specific rating by a chosen credit rating agency the risk weight of the claim will be based on this assessment. Where the bank's claim is not an investment in a specific assessed issue, the following general principles will apply:

(i) In circumstances where the borrower has a specific assessment for an issued debt - but the bank's claim is not an investment in this particular debt - the rating applicable to the specific debt (where the rating maps into a risk weight lower than that which applies to an unrated claim) may be applied to the bank's unassessed claim only if this claim ranks *pari-passu* or senior to the specific rated debt in all respects and the maturity of the unassessed claim is not later than the maturity of the rated claim,[30] except where the rated claim is a short term obligation as specified in paragraph 6.5.2. If not, the rating

[30] In a case where a short term claim on a counterparty is rated as A1+ and a long term claim on the same counterparty is rated as AAA, then a bank may assign a 30 per cent risk weight to an unrated short term claim and 20 per cent risk weight to an unrated long term claim on that counterparty where the seniority of the claim ranks pari-passu with the rated claims and the maturity of the unrated claim is not later than the rated claim. In a similar case where a short term claim is rated A1+ and a long term claim is rated A, the bank may assign 50 per cent risk weight to an unrated short term or long term claim .

applicable to the specific debt cannot be used and the unassessed claim will receive the risk weight for unrated claims.

(ii) If either the issuer or single issue has been assigned a rating which maps into a risk weight equal to or higher than that which applies to unrated claims, a claim on the same counterparty, which is unrated by any chosen credit rating agency, will be assigned the same risk weight as is applicable to the rated exposure, if this claim ranks *paripassu* or junior to the rated exposure in all respects.

(iii) Where a bank intends to extend an issuer or an issue specific rating assigned by a chosen credit rating agency to any other exposure which the bank has on the same counterparty and which meets the above criterion, it should be extended to the entire amount of credit risk exposure the bank has with regard to that exposure i.e., both principal and interest.

(iv) With a view to avoiding any double counting of credit enhancement factors, no recognition of credit risk mitigation techniques should be taken into account if the credit enhancement is already reflected in the issue specific rating accorded by a chosen credit rating agency relied upon by the bank.

(v) Where unrated exposures are risk weighted based on the rating of an equivalent exposure to that borrower, the general rule is that foreign currency ratings would be used only for exposures in foreign currency.

6.8.2 If the conditions indicated in paragraph 6.8.1 above are not satisfied, the rating applicable to the specific debt cannot be used and the claims on NABARD/SIDBI/NHB[31] on account of deposits placed in lieu of shortfall in achievement of priority sector lending targets/sub-targets shall be risk weighted as applicable for unrated claims, i.e. 100%.

7. Credit Risk Mitigation

7.1 General Principles

7.1.1 Banks use a number of techniques to mitigate the credit risks to which they are exposed. For example, exposures may be collateralised in whole or in part by cash or securities, deposits from the same counterparty, guarantee of a third party, etc. The revised

[31] Please refer to the circular DBOD.BP.BC.No.103/21.06.001/2012-13 dated June 20, 2013 on 'Risk Weights on Deposits Placed with NABARD / SIDBI / NHB in lieu of Shortfall in Achievement of Priority Sector Lending Targets / Sub-targets'.

approach to credit risk mitigation allows a wider range of credit risk mitigants to be recognised for regulatory capital purposes than is permitted under the 1988 Framework provided these techniques meet the requirements for legal certainty as described in paragraph 7.2 below. Credit risk mitigation approach as detailed in this section is applicable to the banking book exposures. This will also be applicable for calculation of the counterparty risk charges for OTC derivatives and repo-style transactions booked in the trading book.

7.1.2 The general principles applicable to use of credit risk mitigation techniques are as under:

(i) No transaction in which Credit Risk Mitigation (CRM) techniques are used should receive a higher capital requirement than an otherwise identical transaction where such techniques are not used.

(ii) The effects of CRM will **not** be double counted. Therefore, no additional supervisory recognition of CRM for regulatory capital purposes will be granted on claims for which an issue-specific rating is used that already reflects that CRM.

(iii) Principal-only ratings will not be allowed within the CRM framework.

(iv) While the use of CRM techniques reduces or transfers credit risk, it simultaneously may increase other risks (residual risks). Residual risks include legal, operational, liquidity and market risks. Therefore, it is imperative that banks employ robust procedures and processes to control these risks, including strategy; consideration of the underlying credit; valuation; policies and procedures; systems; control of roll-off risks; and management of concentration risk arising from the bank's use of CRM techniques and its interaction with the bank's overall credit risk profile. Where these risks are not adequately controlled, Reserve Bank may impose additional capital charges or take other supervisory actions. The disclosure requirements prescribed in Table DF-6 (paragraph 10 – Market Discipline) must also be observed for banks to obtain capital relief in respect of any CRM techniques.

7.2 Legal Certainty

In order for banks to obtain capital relief for any use of CRM techniques, the following minimum standards for legal documentation must be met. All documentation used in collateralised transactions and guarantees must be binding on all parties and legally

enforceable in all relevant jurisdictions. Banks must have conducted sufficient legal review, which should be well documented, to verify this requirement. Such verification should have a well-founded legal basis for reaching the conclusion about the binding nature and enforceability of the documents. Banks should also undertake such further review as necessary to ensure continuing enforceability.

7.3 Credit Risk Mitigation Techniques – Collateralised Transactions

7.3.1 A Collateralised Transaction is one in which:

(i) banks have a credit exposure and that credit exposure is hedged in whole or in part by collateral posted by a counterparty or by a third party on behalf of the counterparty. Here, "counterparty" is used to denote a party to whom a bank has an on- or off-balance sheet credit exposure.

(ii) banks have a specific lien on the collateral and the requirements of legal certainty are met.

7.3.2 Overall framework and minimum conditions

The Revised Framework allows banks to adopt either the simple approach, which, similar to the 1988 Accord, substitutes the risk weighting of the collateral for the risk weighting of the counterparty for the collateralised portion of the exposure (generally subject to a 20 per cent floor), or the comprehensive approach, which allows fuller offset of collateral against exposures, by effectively reducing the exposure amount by the value ascribed to the collateral. Banks in India shall adopt the Comprehensive Approach, which allows fuller offset of collateral against exposures, by effectively reducing the exposure amount by the value ascribed to the collateral. Under this approach, banks, which take eligible financial collateral (e.g., cash or securities, more specifically defined below), are allowed to reduce their credit exposure to a counterparty when calculating their capital requirements to take account of the risk mitigating effect of the collateral. Credit risk mitigation is allowed only on an account-by-account basis, even within regulatory retail portfolio. However, before capital relief will be granted the standards set out below must be met:

(i) In addition to the general requirements for legal certainty, the legal mechanism by which collateral is pledged or transferred must ensure that the bank has the right to liquidate or take legal possession of it, in a timely manner, in the event of the default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the counterparty (and, where applicable, of the custodian holding the collateral). Furthermore banks must take all steps necessary to fulfill those requirements under the law applicable to the bank's interest in the collateral for obtaining and maintaining an enforceable security interest, e.g. by registering it with a registrar.

(ii) In order for collateral to provide protection, the credit quality of the counterparty and the value of the collateral must not have a material positive correlation. For example, securities issued by the counterparty - or by any related group entity - would provide little protection and so would be ineligible.

(iii) Banks must have clear and robust procedures for the timely liquidation of collateral to ensure that any legal conditions required for declaring the default of the counterparty and liquidating the collateral are observed, and that collateral can be liquidated promptly.

(iv) Where the collateral is held by a custodian, banks must take reasonable steps to ensure that the custodian segregates the collateral from its own assets.

7.3.3 A capital requirement will be applied to a bank on either side of the collateralised transaction: for example, both repos and reverse repos will be subject to capital requirements. Likewise, both sides of securities lending and borrowing transactions will be subject to explicit capital charges, as will the posting of securities in connection with a derivative exposure or other borrowing.

7.3.4 <u>The Comprehensive Approach</u>

i) In the comprehensive approach, when 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'. The application of haircuts will produce volatility adjusted amounts for both exposure and collateral. The volatility adjusted amount for the exposure will be higher than the exposure and the volatility adjusted amount for the collateral will be lower than the collateral, unless either side of the transaction is cash. In other words, the 'haircut' for the exposure will be a premium factor and the 'haircut' for the collateral will be a discount factor. It may be noted that the purpose underlying the application of haircut is to capture the market-related volatility inherent in the value of exposures as well as of the eligible financial collaterals. Since the value of credit exposures acquired by banks in the course of their banking operations, would not be subject to market volatility, (since the loan disbursal / investment would be a "cash" transaction) though the value of eligible financial collateral would be, the haircut stipulated in Table-14 would apply in respect of credit transactions 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 require upward adjustment for

volatility, as the value of security sold/lent/pledged in the repo transaction, would be subject to market volatility. Hence, such exposures shall attract haircut.

ii) Additionally where the exposure and collateral are held in different currencies an additional downwards adjustment must be made to the volatility adjusted collateral amount to take account of possible future fluctuations in exchange rates.

iii) Where the volatility-adjusted exposure amount is greater than the volatility-adjusted collateral amount (including any further adjustment for foreign exchange risk), banks shall calculate their risk-weighted assets as the difference between the two multiplied by the risk weight of the counterparty. The framework for performing calculations of capital requirement is indicated in paragraph 7.3.6.

7.3.5 Eligible Financial Collateral

The following collateral instruments are eligible for recognition in the comprehensive approach:

(i) Cash (as well as certificates of deposit or comparable instruments, including fixed deposit receipts, issued by the lending bank) on deposit with the bank which is incurring the counterparty exposure.

(ii) Gold: Gold would include both bullion and jewellery. However, the value of the collateralized jewellery should be arrived at after notionally converting these to 99.99 purity.

(iii) Securities issued by Central and State Governments

(iv) Kisan Vikas Patra and National Savings Certificates provided no lock-in period is operational and if they can be encashed within the holding period.

(v) Life insurance policies with a declared surrender value of an insurance company which is regulated by an insurance sector regulator.

(vi) Debt securities rated by a chosen Credit Rating Agency in respect of which banks should be sufficiently confident about the market liquidity[32] where these are either:

a) Attracting 100 per cent or lesser risk weight i.e., rated at least BBB(-) when issued by public sector entities and other entities (including banks and Primary Dealers); or

b) Attracting 100 per cent or lesser risk weight i.e., rated at least CARE A3/ CRISIL A3/INDA3/ICRA A3/Brickwork A3/SMERA A3for short-term debt

[32] A debenture would meet the test of liquidity if it is traded on a recognised stock exchange(s) on at least 90 per cent of the trading days during the preceding 365 days. Further, liquidity can be evidenced in the trading during the previous one month in the recognised stock exchange if there are aminimum of 25trades of marketable lots in securities of each issuer.

instruments.

vii) Debt Securities not rated by a chosen Credit Rating Agency in respect of which banks should be sufficiently confident about the market liquidity where these are:

a) issued by a bank; and

b) listed on a recognised exchange; and

c) classified as senior debt; and

d) all rated issues of the same seniority by the issuing bank are rated at least BBB(-) or CARE A3/ CRISIL A3/INDA3/ICRA A3/Brickwork A3/SMERA A3by a chosen Credit Rating Agency; and

e) the bank holding the securities as collateral has no information to suggest that the issue justifies a rating below BBB(-) or CARE A3/ CRISIL A3/INDA3/ICRA A3/Brickwork A3/SMERA A3 (as applicable) and;

f) Banks should be sufficiently confident about the market liquidity of the security.

viii) Units of Mutual Funds regulated by the securities regulator of the jurisdiction of the bank's operation mutual funds where:

a) a price for the units is publicly quoted daily i.e., where the daily NAV is available in public domain; and

b) Mutual fund is limited to investing in the instruments listed in this paragraph.

7.3.6 Calculation of capital requirement

For a collateralised transaction, the exposure amount after risk mitigation is calculated as follows:

$$E^* = \max \{0, [E \times (1 + H_e) - C \times (1 - H_c - H_{fx})]\}$$

where:

E^* = the exposure value after risk mitigation

E = current value of the exposure for which the collateral qualifies as a risk mitigant

H_e = haircut appropriate to the exposure

C = the current value of the collateral received

H_c = haircut appropriate to the collateral

H_{fx} = haircut appropriate for currency mismatch between the collateral and exposure

The exposure amount after risk mitigation (i.e., E*) will be multiplied by the risk weight of the counterparty to obtain the risk-weighted asset amount for the collateralised transaction. Illustrative examples calculating the effect of Credit Risk Mitigation is furnished in **Annex- 6.**

7.3.7 Haircuts

i. In principle, banks have two ways of calculating the haircuts: (i) standard supervisory haircuts, using parameters set by the Basel Committee, and (ii) own-estimate haircuts, using banks' own internal estimates of market price volatility. Banks in India shall use only the standard supervisory haircuts for both the exposure as well as the collateral.

ii. The Standard Supervisory Haircuts (assuming daily mark-to-market, daily re-margining and a 10 business-day holding period)[33],expressed as percentages, would be as furnished in Table 14.

iii. The ratings indicated in Table – 14 represent the ratings assigned by the domestic rating agencies. In the case of exposures toward debt securities issued by foreign Central Governments and foreign corporates, the haircut may be based on ratings of the international rating agencies, as indicated in Table 15.

iv. Sovereign will include Reserve Bank of India, DICGC,CGTMSE and CRGFTLIH, which are eligible for zero per cent risk weight.

v. Banks may apply a zero haircut for eligible collateral where it is a National Savings Certificate, Kisan Vikas Patras, surrender value of insurance policies and banks' own deposits.

vi. The standard supervisory haircut for currency risk where exposure and collateral are denominated in different currencies is eight per cent (also based on a 10-business day holding period and daily mark-to-market)

[33] Holding period will be the time normally required by the bank to realise the value of the collateral.

Table – 14: Standard Supervisory Haircuts for Sovereign and other securities which constitute Exposure and Collateral

Sl. No.	Issue Rating by accredited ECAIs (CARE/ CRISIL/ India Ratings/ ICRA/ Brickwork/SMERA)for Debt securities		Residual Maturity (in years)	Haircut (in percentage)
A	**Securities issued / guaranteed by the Government of India and issued by the State Governments (Sovereign securities)**			
	i	Rating not applicable – as Government securities are not currently rated in India	< or = 1 year	0.5
			> 1 year and < or = 5 years	2
			> 5 years	4
B	**Domestic debt securities other than those indicated at Item No. A above including the securities guaranteed by Indian State Governments**			
	ii	AAA to AA A1	< or = 1 year	1
			> 1 year and < or = 5 years	4
			> 5 years	8
	iii	A to BBB A2;A3 and unrated bank securities as specified in paragraph 7.3.5 (vii) of the circular	< or = 1 year	2
			> 1 year and < or = 5 years	6
			> 5 years	12
	iv	Units of Mutual Funds		Highest haircut applicable to any of the above securities, in which the eligible mutual fund {cf. paragraph 7.3.5 (viii)} can invest
C	**Cash in the same currency**			0
D	**Gold**			15

Table – 15 : Standard Supervisory Haircut for Exposures and Collaterals which are obligations of foreign central sovereigns/foreign corporates

Issue rating for debt securities as assigned by international rating agencies	Residual Maturity	Sovereigns (%)	Other Issues (%)
AAA to AA / A-1	< = 1 year	0.5	1
	> 1 year and < or = 5 years	2	4
	> 5 years	4	8
A to BBB / A-2 / A-3 / P-3 and Unrated Bank Securities	< = 1 year	1	2
	> 1 year and < or = 5 years	3	6
	> 5 years	6	12

vii) For transactions in which banks' exposures are unrated or bank lends non-eligible instruments (i.e, non-investment grade corporate securities), the haircut to be applied

on a exposure should be 25 per cent. (Since, at present, the repos are allowed only in the case of Government securities,banks are not likely to have any exposure which will attract the provisions of this clause. However, this would be relevant, if in future, repos/security lending transactions are permitted in the case of unrated corporate securities).

viii) Where the collateral is a basket of assets, the haircut on the basket will be,

$$H = \sum_i a_i H_i$$

Where$a_i$is the weight of the asset (as measured by the amount/value of the asset in units of currency) in the basket and H_i the haircut applicable to that asset.

ix) Adjustment for different holding periods:

For some transactions, depending on the nature and frequency of the revaluation and remargining provisions, different holding periods (other than 10 business-days) are appropriate. The framework for collateral haircuts distinguishes between repo-style transactions (i.e. repo/reverse repos and securities lending/borrowing), “other capital-market-driven transactions” (i.e. OTC derivatives transactions and margin lending) and secured lending. In capital-market-driven transactions and repo-style transactions, the documentation contains remargining clauses; in secured lending transactions, it generally does not. In view of different holding periods, in the case of these transactions, the minimum holding period shall be taken as indicated below:

Transaction type	**Minimum holding Period**	**Condition**
Repo-style transaction	five business days	daily remargining
Other capital market transactions	ten business days	daily remargining
Secured lending	twenty business days	daily revaluation

The haircut for the transactions with other than 10 business-days minimum holding period, as indicated above, will have to be adjusted by scaling up/down the haircut for 10 business–days indicated in the Table-14, as per the formula given in paragraph 7.3.7 (xi) below.

x) Adjustment for non-daily mark-to-market or remargining:

In case a transaction has margining frequency different from daily margining assumed, the applicable haircut for the transaction will also need to be adjusted by using the formula given in paragraph 7.3.7 (xi) below.

xi) Formula for adjustment for different holding periods and / or non-daily mark – to – market or remargining:

Adjustment for the variation in holding period and margining / mark – to – market, as indicated in paragraph (ix) and (x) above will be done as per the following formula:

$$H = H_{10}\sqrt{\frac{N_R + (T_M - 1)}{10}}$$

where:

H = haircut;

H_{10} = 10-business-day standard supervisory haircut for instrument

N_R = actual number of business days between remargining for capital market transactions or revaluation for secured transactions.

T_M = minimum holding period for the type of transaction

7.3.8 Capital Adequacy Framework for Repo-/Reverse Repo-style transactions.

The repo-style transactions also attract capital charge for Counterparty credit risk (CCR), in addition to the credit risk and market risk. The CCR is defined as the risk of default by the counterparty in a repo-style transaction, resulting in non-delivery of the security lent/pledged/sold or non-repayment of the cash.

A. Treatment in the books of the borrower of funds:

i) Where a bank has borrowed funds by selling / lending or posting, as collateral, of securities, the 'Exposure' will be an off-balance sheet exposure equal to the 'market value' of the securities sold/lent as scaled up after applying appropriate haircut. For the purpose, the haircut as per Table 14 would be used as the basis which should be applied by using the formula in paragraph 7.3.7 (xi), to reflect minimum (prescribed) holding period of five business-days for repo-style transactions and the variations, if any, in the frequency of re-margining, from the daily margining assumed for the standard supervisory haircut. The 'off-balance sheet exposure' will be converted into 'on-balance sheet' equivalent by applying a credit conversion factor of 100 per cent., as per item 5 in Table 8 of the circular.

ii) The amount of money received will be treated as collateral for the securities lent/sold/pledged. Since the collateral is cash, the haircut for it would be zero.

iii) The credit equivalent amount arrived at (i) above, net of amount of cash collateral, will attract a risk weight as applicable to the counterparty.

iv) As the securities will come back to the books of the borrowing bank after the repo period, it will continue to maintain the capital for the credit risk in the

securities in the cases where the securities involved in repo are held under HTM category, and capital for market risk in cases where the securities are held under AFS/HFT categories. The capital charge for credit risk / specific risk would be determined according to the credit rating of the issuer of the security. In the case of Government securities, the capital charge for credit / specific risk will be 'zero'.

B. Treatment in the books of the lender of funds:

i) The amount lent will be treated as on-balance sheet/funded exposure on the counter party, collateralised by the securities accepted under the repo.

ii) The exposure, being cash, will receive a zero haircut.

iii) The collateral will be adjusted downwards/marked down as per applicable haircut.

iv) The amount of exposure reduced by the adjusted amount of collateral, will receive a risk weight as applicable to the counterparty, as it is an on- balance sheet exposure.

v) The lending bank will not maintain any capital charge for the security received by it as collateral during the repo period, since such collateral does not enter its balance sheet but is only held as a bailee.

7.4 Credit Risk Mitigation Techniques – On-Balance Sheet Netting

On-balance sheet netting is confined to loans/advances and deposits, where banks have legally enforceable netting arrangements, involving specific lien with proof of documentation. They may calculate capital requirements on the basis of net credit exposures subject to the following conditions:

Where a bank,

a) has a well-founded legal basis for concluding that the netting or offsetting agreement is enforceable in each relevant jurisdiction regardless of whether the counterparty is insolvent or bankrupt;

b) is able at any time to determine the loans/advances and deposits with the same counterparty that are subject to the netting agreement; and

c) monitors and controls the relevant exposures on a net basis,

it may use the net exposure of loans/advances and deposits as the basis for its capital adequacy calculation in accordance with the formula in paragraph 7.3.6. Loans/advances are treated as exposure and deposits as collateral. The haircuts will be zero except when a currency mismatch exists. All the requirements contained in paragraph 7.3.6 and 7.6 will also apply.

7.5 Credit Risk Mitigation Techniques - Guarantees

7.5.1 Where guarantees are direct, explicit, irrevocable and unconditional banks may take

account of such credit protection in calculating capital requirements.

7.5.2 A range of guarantors are recognised. As under the 1988 Accord, a substitution approach will be applied. Thus only guarantees issued by entities with a lower risk weight than the counterparty will lead to reduced capital charges since the protected portion of the counterparty exposure is assigned the risk weight of the guarantor, whereas the uncovered portion retains the risk weight of the underlying counterparty.

7.5.3 Detailed operational requirements for guarantees eligible for being treated as a CRM are as under:

7.5.4 Operational requirements for guarantees

i) A guarantee (counter-guarantee) must represent a direct claim on the protection provider and must be explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and incontrovertible. The guarantee must be irrevocable; there must be no clause in the contract that would allow the protection provider unilaterally to cancel the cover or that would increase the effective cost of cover as a result of deteriorating credit quality in the guaranteed exposure. The guarantee must also be unconditional; there should be no clause in the guarantee outside the direct control of the bank that could prevent the protection provider from being obliged to pay out in a timely manner in the event that the original counterparty fails to make the payment(s) due.

ii) All exposures will be risk weighted after taking into account risk mitigation available in the form of guarantees. When a guaranteed exposure is classified as non-performing, the guarantee will cease to be a credit risk mitigant and no adjustment would be permissible on account of credit risk mitigation in the form of guarantees. The entire outstanding, net of specific provision and net of realisable value of eligible collaterals / credit risk mitigants, will attract the appropriate risk weight.

7.5.5 Additional operational requirements for guarantees

In addition to the legal certainty requirements in paragraphs 7.2 above, in order for a guarantee to be recognised, the following conditions must be satisfied:

i) On the qualifying default/non-payment of the counterparty, the bank is able in a timely manner to pursue the guarantor for any monies outstanding under the documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the bank, or the guarantor may assume the future payment obligations of the counterparty covered by the guarantee.

The bank must have the right to receive any such payments from the guarantor without first having to take legal actions in order to pursue the counterparty for payment.

ii) The guarantee is an explicitly documented obligation assumed by the guarantor.

iii) Except as noted in the following sentence, the guarantee covers all types of payments the underlying obligor is expected to make under the documentation governing the transaction, for example notional amount, margin payments etc. Where a guarantee covers payment of principal only, interests and other uncovered payments should be treated as an unsecured amount in accordance with paragraph

7.5.6 Range of Eligible Guarantors (Counter-Guarantors)

Credit protection given by the following entities will be recognised:

(i) Sovereigns, sovereign entities (including BIS, IMF, European Central Bank and European Community as well as those MDBs referred to in paragraph 5.5, ECGC and CGTMSE), banks and primary dealers with a lower risk weight than the counterparty;

(ii) other entities rated AA (-) or better. This would include guarantee cover provided by parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor. The rating of the guarantor should be an entity rating which has factored in all the liabilities and commitments (including guarantees) of the entity.

7.5.7 Risk Weights

The protected portion is assigned the risk weight of the protection provider. Exposures covered by State Government guarantees will attract a risk weight of 20 per cent. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.

7.5.8 Proportional Cover

Where the amount guaranteed, or against which credit protection is held, is less than the amount of the exposure, and the secured and unsecured portions are of equal seniority, i.e. the bank and the guarantor share losses on a pro-rata basis capital relief will be afforded on a proportional basis: i.e. the protected portion of the exposure will receive the treatment applicable to eligible guarantees, with the remainder treated as unsecured.

7.5.9 Currency Mismatches

Where the credit protection is denominated in a currency different from that in which the exposure is denominated – i.e. there is a currency mismatch – the amount of the exposure deemed to be protected will be reduced by the application of a haircut H_{FX}, i.e.,

$$G_A = G \times (1 - H_{FX})$$

where:

G = nominal amount of the credit protection

H_{FX} = haircut appropriate for currency mismatch between the credit protection and underlying obligation.

Banks using the supervisory haircuts will apply a haircut of eight per cent for currency mismatch.

7.5.10 Sovereign Guarantees and Counter-Guarantees

A claim may be covered by a guarantee that is indirectly counter-guaranteed by a sovereign. Such a claim may be treated as covered by a sovereign guarantee provided that:

(i) the sovereign counter-guarantee covers all credit risk elements of the claim;
(ii) both the original guarantee and the counter-guarantee meet all operational requirements for guarantees, except that the counter-guarantee need not be direct and explicit to the original claim; and
(iii) the cover should be robust and no historical evidence suggests that the coverage of the counter-guarantee is less than effectively equivalent to that of a direct sovereign guarantee.

7.5.11 ECGC Guaranteed Exposures:

Under the Export Credit insurance[34] for banks on Whole Turnover Basis, the guarantee/insurance cover given by ECGC for export credit exposures of the banks ranges between 50% and 75% for pre-shipment credit and 50% to 85% in case of post-shipment credit. However, the ECGC's total liability on account of default by the exporters is capped by an amount specified as Maximum Liability (ML). In this context, it is clarified that risk weight (as given in para 5.2.3 of this Master Circular) applicable to the claims on ECGC should be capped to the ML amount specified in the whole turnover policy of the ECGC. The banks are required to proportionately distribute the ECGC maximum liability amount to all individual export credits that are covered by the ECGC Policy. For the covered portion of individual export credits, the banks may apply the risk weight applicable to claims on ECGC. For the remaining portion of individual export credit, the banks may apply the risk weight as per the rating of the counter-party. The Risk Weighted Assets computation can be mathematically represented as under:

[34] DBOD Mailbox Clarification dated October 18, 2013

Size of individual export credit exposure i A_i

Size of individual covered export credit exposure i B_i

Sum of individual covered export credit exposures $\sum Bi$

Where:

i = 1 to n, if total number of exposures is n

Maximum Liability Amount *ML*

Risk Weight of counter party for exposure i RW_i

RWA for ECGC Guaranteed Export Credit:

$$\sum\left[\left(\frac{Bi}{\sum Bi} * ML * 20\%\right) + \{Ai - (\frac{Bi}{\sum Bi} * ML)\} * RWi\right]$$

7.6 Maturity Mismatch

7.6.1 For the purposes of calculating risk-weighted assets, a maturity mismatch occurs when the residual maturity of collateral is less than that of the underlying exposure. Where there is a maturity mismatch and the CRM has an original maturity of less than one year, the CRM is not recognised for capital purposes. In other cases where there is a maturity mismatch, partial recognition is given to the CRM for regulatory capital purposes as detailed below in paragraphs 7.6.2 to 7.6.4. In case of loans collateralised by the bank's own deposits, even if the tenor of such deposits is less than three months or deposits have maturity mismatch vis-à-vis the tenor of the loan, the provisions of paragraph 7.6.1 regarding derecognition of collateral would not be attracted provided an explicit consent of the depositor has been 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.

7.6.2 Definition of Maturity

The maturity of the underlying exposure and the maturity of the collateral should both be defined conservatively. The effective maturity of the underlying should be gauged as the longest possible remaining time before the counterparty is scheduled to fulfill its obligation, taking into account any applicable grace period. For the collateral, embedded options which

may reduce the term of the collateral should be taken into account so that the shortest possible effective maturity is used. The maturity relevant here is the residual maturity.

7.6.3 Risk Weights for Maturity Mismatches

As outlined in paragraph 7.6.1, collateral with maturity mismatches are only recognised when their original maturities are greater than or equal to one year. As a result, the maturity of collateral for exposures with original maturities of less than one year must be matched to be recognised. In all cases, collateral with maturity mismatches will no longer be recognised when they have a residual maturity of three months or less.

7.6.4 When there is a maturity mismatch with recognised credit risk mitigants (collateral, on-balance sheet netting and guarantees) the following adjustment will be applied:

$$Pa = P \times (t - 0.25) \div (T - 0.25)$$

where:

Pa = value of the credit protection adjusted for maturity mismatch

P = credit protection (e.g. collateral amount, guarantee amount) adjusted for any haircuts

t = min (T, residual maturity of the credit protection arrangement) expressed in years

T = min (5, residual maturity of the exposure) expressed in years

7.7 Treatment of pools of CRM Techniques

In the case where a bank has multiple CRM techniques covering a single exposure (e.g. a bank has both collateral and guarantee partially covering an exposure), the bank will be required to subdivide the exposure into portions covered by each type of CRM technique (e.g. portion covered by collateral, portion covered by guarantee) and the risk-weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, they must be subdivided into separate protection as well.

8. Capital charge for Market Risk

8.1 Introduction

Market risk is defined as the risk of losses in on-balance sheet and off-balance sheet positions arising from movements in market prices. The market risk positions subject to capital charge requirement are:

(i) The risks pertaining to interest rate related instruments and equities in the trading book; and

(ii) Foreign exchange risk (including open position in precious metals) throughout the bank (both banking and trading books).

8.2 Scope and coverage of capital charge for Market Risks

8.2.1 These guidelines seek to address the issues involved in computing capital charges for interest rate related instruments in the trading book, equities in the trading book and foreign exchange risk (including gold and other precious metals) in both trading and banking books. Trading book for the purpose of capital adequacy will include:

(i) Securities included under the Held for Trading category
(ii) Securities included under the Available for Sale category
(iii) Open gold position limits
(iv) Open foreign exchange position limits
(v) Trading positions in derivatives, and
(vi) Derivatives entered into for hedging trading book exposures.

8.2.2 Banks are required to manage the market risks in their books on an ongoing basis and ensure that the capital requirements for market risks are being maintained on a continuous basis, i.e. at the close of each business day. Banks are also required to maintain strict risk management systems to monitor and control intra-day exposures to market risks.

8.2.3 Capital for market risk would not be relevant for securities, which have already matured and remain unpaid. These securities will attract capital only for credit risk. On completion of 90 days delinquency, these will be treated on par with NPAs for deciding the appropriate risk weights for credit risk.

8.3 Measurement of capital charge for Interest Rate Risk

8.3.1 This section describes the framework for measuring the risk of holding or taking positions in debt securities and other interest rate related instruments in the trading book.

8.3.2 The capital charge for interest rate related instruments would apply to current market value of these items in bank's trading book. Since banks are required to maintain capital for market risks on an ongoing basis, they are required to mark to market their trading positions on a daily basis. The current market value will be determined as per extant RBI guidelines on valuation of investments.

8.3.3 The minimum capital requirement is expressed in terms of two separately calculated

charges, (i) "**specific risk**" charge for each security, which is designed to protect against an adverse movement in the price of an individual security owing to factors related to the individual issuer, both for short (short position is not allowed in India except in derivatives and Central Government Securities) and long positions, and (ii) "**general market risk**" charge towards interest rate risk in the portfolio, where long and short positions (which is not allowed in India except in derivatives) in different securities or instruments can be offset.

8.3.4 For the debt securities held under AFS category, in view of the possible longer holding period and attendant higher specific risk, the banks shall hold total capital charge for market risk equal to greater of (a) or (b) below:

a) Specific risk capital charge, computed notionally for the AFS securities treating them as held under HFT category (as computed according to Table 16: Part A/C/E, as applicable) plus the General Market Risk Capital Charge.

b) Alternative total capital charge for the AFS category computed notionally treating them as held in the banking book (as computed in accordance with Table 16: Part B/D/F, as applicable)

A. Specific Risk

8.3.5 The capital charge for specific risk is designed to protect against an adverse movement in the price of an individual security owing to factors related to the individual issuer. The specific risk charges for various kinds of exposures would be applied as detailed below:

S.No.	Nature of debt securities / issuer	Table to be followed
a.	Central, State and Foreign Central Governments' bonds: (i) Held in HFT category (ii) Held in AFS category	 Table 16 – Part A Table 16 – Par B
b.	Banks' Bonds: (i) Held in HFT category (ii) Held in AFS category	 Table 16 – Part C Table 16 – Par D
c.	Corporate Bonds and securitised debt: (i) Held in HFT category (ii) Held in AFS category	 Table 16 – Par E Table 16 – Part F

Table 16 – Part A
Specific Risk Capital Charge for Sovereign securities issued by
Indian and foreign sovereigns – Held by banks under the HFT Category

Sr. No.	Nature of Investment	Residual Maturity	Specific risk capital (as % of exposure)
A.	**Indian Central Government and State Governments**		
1.	Investment in Central and State Government Securities	All	0.00
2.	Investments in other approved securities guaranteed by Central Government	All	0.00
3.	Investments in other approved securities guaranteed by State Government	6 months or less	0.28
		More than 6 months and up to and including 24 months	1.13
		More than 24 months	1.80
4.	Investment in other securities where payment of interest and repayment of principal are guaranteed by Central Government	All	0.00
5.	Investments in other securities where payment of interest and repayment of principal are guaranteed by State Government.	6 months or less	0.28
		More than 6 months and up to and including 24 months	1.13
		More than 24 months	1.80
B.	**Foreign Central Governments**		
1.	AAA to AA	All	0.00
2.	A to BBB	6 months or less	0.28
		More than 6 months and up to and including 24 months	1.13
		More than 24 months	1.80
3.	BB to B	All	9.00
4.	Below B	All	13.50
5.	Unrated	All	13.50

Table 16 – Part B
Alternative Total Capital Charge
for securities issued by Indian and foreign sovereigns
– Held by banks under the AFS Category

Sr. No.	Nature of Investment	Residual Maturity	Specific risk capital (as % of exposure)
A.	**Indian Central Government and State Governments**		
1.	Investment in Central and State Government Securities	All	0.00
2.	Investments in other approved securities guaranteed by Central Government	All	0.00
3.	Investments in other approved securities guaranteed by State Government	All	1.80
4.	Investment in other securities where payment of interest and repayment of principal are guaranteed by Central Government	All	0.00
5.	Investments in other securities where payment of interest and repayment of principal are guaranteed by State Government.	All	1.80
B.	**Foreign Central Governments**		
1.	AAA to AA	All	0.00
2.	A	All	1.80
3.	BBB	All	4.50
4.	BB to B	All	9.00
5.	Below B	All	13.50
	Unrated	All	9.00

Table 16 – Part C
Specific risk capital charge for
bonds issued by banks – Held by banks under the HFT category

Level of CRAR (where available) (in per cent)	Residual maturity	Specific risk capital charge			
		All Scheduled Banks (Commercial, Co-Operative and Regional Rural Banks)		All Non-Scheduled Banks (Commercial, Co-Operative and Regional Rural Banks)	
		Investments within 10% limit referred to in para 4.4.8 (in per cent)	All other claims (in per cent)	Investments within 10% limit referred to in para 4.4.8 (in per cent)	All other claims (in per cent)
1	2	3	4	5	6
9 and above	6 months or less	1.40	0.28	1.40	1.40
	Greater than 6 months and up to and including 24 months	5.65	1.13	5.65	5.65
	Exceeding 24 months	9.00	1.80	9.00	9.00
6 to < 9	All maturities	13.50	4.50	22.50	13.50
3 to < 6	All maturities	22.50	9.00	31.50	22.50
0 to < 3	All maturities	31.50	13.50	56.25	31.50
Negative	All maturities	56.25	56.25	Full deduction	56.25

Notes:

i) In the case of banks where no capital adequacy norms have been prescribed by the RBI, the lending / investing bank may calculate the CRAR of the bank concerned, notionally, by obtaining necessary information from the investee bank and using the capital adequacy norms as applicable to the commercial banks. In case, it is not found feasible to compute CRAR on such notional basis, the specific risk capital charge of 31.50 or 56.25 per cent, as per the risk perception of the investing bank, should be applied uniformly to the investing bank's entire exposure.

ii) In case of banks where capital adequacy norms are not applicable at present, the matter of investments in their capital-eligible instruments would not arise for now. However, column Nos. 3 and 5 of the Table above will become applicable to them, if in future they issue any capital instruments where other banks are eligible to invest.

Table 16 – Part D

Alternative Total Capital Charge
for bonds issued by banks – Held by banks under AFS category

(subject to the conditions stipulated in paragraph 8.3.4)

Level of CRAR (where available) (in %)	Alternative Total Capital Charge			
	All Scheduled Banks (Commercial, Co-operative and Regional Rural Banks)		All Non-Scheduled Banks (Commercial, Co-operative and Regional Rural Banks)	
	Investments within 10 % limit referred to in para 4.4.8 above (in %)	All other claims (in%)	Investments within 10 % limit referred to in para 4.4.8 above (in %)	All other claims (in %)
1	2	3	4	5
9 and above	9.00	1.80	9.00	9.00
6 to < 9	13.50	4.50	22.50	13.50
3 to < 6	22.50	9.00	31.50	22.50
0 to < 3	31.50	13.50	50.00	31.50
Negative	56.25	56.25	Full deduction	56.25

Notes:

i) In the case of banks where no capital adequacy norms have been prescribed by the RBI, the lending / investing bank may calculate the CRAR of the bank concerned, notionally, by obtaining necessary information from the investee bank and using the capital adequacy norms as applicable to the commercial banks. In case, it is not found feasible to compute CRAR on such notional basis, the specific risk capital charge of 31.50 or 56.25 per cent, as per the risk perception of the investing bank, should be applied uniformly to the investing bank's entire exposure.

ii) In case of banks where capital adequacy norms are not applicable at present, the matter of investments in their capital-eligible instruments would not arise for now. However, column Nos. 2 and 4 of the Table above will become applicable to them, if in future they issue any capital instruments where other banks are eligible to invest.

Table 16 –Part E (i)[35]

Specific Risk Capital Charge for Corporate Bonds (Other than bank bonds) – Held by banks under HFT Category

* Rating by the ECAI	Residual maturity	Specific Risk Capital Charge (in %)
AAA to BBB	6 months or less	0.28
	Greater than 6 months and up to and including 24 months	1.14
	Exceeding 24 months	1.80
BB and below	All maturities	13.5
Unrated (if permitted)	All maturities	9

* These ratings indicate the ratings assigned by Indian rating agencies/ECAIs or foreign rating agencies. In the case of foreign ECAIs, the rating symbols used here correspond to Standard and Poor. The modifiers "+" or "-" have been subsumed with the main rating category.

Table 16 –Part E (ii)
Alternative Total Capital Charge for Corporate Bonds (Other than bank bonds) – Held by banks under AFS Category

* Rating bytheECAI	Total Capital Charge (in per cent)
AAA	1.8
AA	2.7
A	4.5
BBB	9.0
BB and below	13.5
Unrated	9.0

***** These ratings indicate the ratings assigned by *Indian rating agencies/ECAIs or foreign rating agencies. In the case of foreign ECAIs, the rating symbols used here correspond to Standard and Poor. The modifiers "+" or "-" have been subsumed with the main rating category.*

[35] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

Table 16 – Part F
Specific Risk Capital Charge for Securitised Debt Instruments (SDIs) – Held by banks under HFT and AFS Category

* Rating by the ECAI	Specific Risk Capital Charge	
	Securitisation Exposures (in %)	**Securitisation Exposures (SDIs) relating to Commercial Real Estate Exposures (in %)**
AAA	1.8	9.0
AA	2.7	9.0
A	4.5	9.0
BBB	9.0	9.0
BB	31.5 (Deduction in the case of originators)	31.5 (Deduction in the case of originators)
B and below or unrated	Deduction	Deduction

***** These ratings indicate the ratings assigned by Indian rating agencies/ECAIs or foreign rating agencies. In the case of foreign ECAIs, the rating symbols used here correspond to Standard and Poor. The modifiers "+" or "-" have been subsumed with the main rating category.

Table 16 – Part G
Specific Risk Capital Charge for Re-securitised Debt Instruments (RSDIs) – Held by banks under HFT and AFS Category

* Rating by the ECAI	Specific Risk Capital Charge	
	Re-Securitisation Exposures (in %)	**Re-Securitisation Exposures (RSDIs) relating to Commercial Real Estate Exposures(in %)**
AAA	3.6	18
AA	5.4	18
A	9.0	18
BBB	18	18
BB	63 (Deduction in the case of originators)	63 (Deduction in the case of originators)
B and below or unrated	Deduction	Deduction

***** These ratings indicate the ratings assigned by Indian rating agencies/ECAIs or foreign rating agencies. In the case of foreign ECAIs, the rating symbols used here correspond to Standard and Poor. The modifiers "+" or "-"have been subsumed with the main rating category.

8.3.6 Banks shall, in addition to computing the counterparty credit risk (CCR) charge for OTC derivatives, as part of capital for credit risk as per the Standardised Approach covered in paragraph 5 above, also compute the specific risk charge for OTC derivatives in the trading book as required in terms of **Annex - 7**.

B. General Market Risk

8.3.7 The capital requirements for general market risk are designed to capture the risk of loss arising from changes in market interest rates. The capital charge is the sum of four components:

(i) the net short (short position is not allowed in India except in derivatives) or long position in the whole trading book;

(ii) a small proportion of the matched positions in each time-band (the "vertical disallowance");

(iii) a larger proportion of the matched positions across different time-bands (the "horizontal disallowance"), and

(iv) a net charge for positions in options, where appropriate.

8.3.8 Separate maturity ladders should be used for each currency and capital charges should be calculated for each currency separately and then summed with no offsetting between positions of opposite sign. In the case of those currencies in which business is insignificant (where the turnover in the respective currency is less than 5 per cent of overall foreign exchange turnover), separate calculations for each currency are not required. The bank may, instead, slot within each appropriate time-band, the net long or short position for each currency. However, these individual net positions are to be summed within each time-band, irrespective of whether they are long or short positions, to produce a gross position figure. The gross positions in each time-band will be subject to the assumed change in yield set out in Table-18 with no further offsets.

8.3.9 TheBasle Committee has suggested two broad methodologies for computation of capital charge for market risks. One is the standardised method and the other is the banks' internal risk management models method. As banks in India are still in a nascent stage of developing internal risk management models, it has been decided that, to start with, banks may adopt the standardised method. Under the standardised method there are two principal methods of measuring market risk, a "maturity" method and a "duration" method. As "duration" method is a more accurate method of measuring interest rate risk, it has been decided to adopt standardised duration method to arrive at the capital charge. Accordingly, banks are required to measure the general market risk charge by calculating the price sensitivity (modified duration) of each position separately. Under this method, the mechanics are as follows:

(i) first calculate the price sensitivity (modified duration) of each instrument;

(ii) next apply the assumed change in yield to the modified duration of each instrument between 0.6 and 1.0 percentage points depending on the

maturity of the instrument (see **Table - 17)**;

(iii) slot the resulting capital charge measures into a maturity ladder with the fifteen time bands as set out in **Table - 17**;

(iv) subject long and short positions (short position is not allowed in India except in derivatives) in each time band to a 5 per cent vertical disallowance designed to capture basis risk; and

(v) carry forward the net positions in each time-band for horizontal offsetting subject to the disallowances set out in **Table - 18**.

Table 17 - Duration Method – Time Bands and Assumed changes in Yield

Time Bands	Assumed Change in Yield		Time Bands	Assumed Change in Yield
Zone 1			**Zone 3**	
1 month or less	1.00		3.6 to 4.3 years	0.75
1 to 3 months	1.00		4.3 to 5.7 years	0.70
3 to 6 months	1.00		5.7 to 7.3 years	0.65
6 to 12 months	1.00		7.3 to 9.3 years	0.60
Zone 2			9.3 to 10.6 years	0.60
1.0 to 1.9 years	0.90		10.6 to 12 years	0.60
1.9 to 2.8 years	0.80		12 to 20 years	0.60
2.8 to 3.6 years	0.75		over 20 years	0.60

Table 18 - Horizontal Disallowances

Zones	Time band	Within the zones	Between adjacent zones	Between zones 1 and 3
Zone 1	1 month or less	40%	40%	100%
	1 to 3 months			
	3 to 6 months			
	6 to 12 months			
Zone 2	1.0 to 1.9 years	30%		
	1.9 to 2.8 years			
	2.8 to 3.6 years			
Zone 3	3.6 to 4.3 years	30%	40%	
	4.3 to 5.7 years			
	5.7 to 7.3 years			
	7.3 to 9.3 years			
	9.3 to 10.6 years			
	10.6 to 12 years			
	12 to 20 years			
	over 20 years			

8.3.10 Interest rate derivatives

The measurement of capital charge for market risks should include all interest rate derivatives and off-balance sheet instruments in the trading book and derivatives entered

into for hedging trading book exposures which would react to changes in the interest rates, like FRAs, interest rate positions etc. The details of measurement of capital charge for interest rate derivatives are furnished in **Annex- 7**.

8.4 Measurement of capital charge for Equity Risk

8.4.1 The capital charge for equities would apply on their current market value in bank's trading book. Minimum capital requirement to cover the risk of holding or taking positions in equities in the trading book is set out below. This is applied to all instruments that exhibit market behaviour similar to equities but not to non-convertible preference shares (which are covered by the interest rate risk requirements described earlier). The instruments covered include equity shares, whether voting or non-voting, convertible securities that behave like equities, for example: units of mutual funds, and commitments to buy or sell equity.

Specific and General Market Risk

8.4.2 Capital charge for banks' capital market investments, including those exempted from CME norms, for specific risk (akin to credit risk) will be 11.25 per cent or higher (equivalent to risk weight of 125 per cent or risk weight warranted by external rating, or lack of it, of the counterparty, whichever is higher) and specific risk is computed on banks' gross equity positions (i.e. the sum of all long equity positions and of all short equity positions – short equity position is, however, not allowed for banks in India). The general market risk charge will be 9 per cent on the gross equity positions.

8.4.3 Specific Risk Capital Charge for banks' investment in Security Receipts will be 13.5 per cent (equivalent to 150 per cent risk weight). Since the Security Receipts are by and large illiquid and not traded in the secondary market, there will be no General Market Risk Capital Charge on them.(vide mailbox clarification dated January18, 2010)

8.5 Measurement of Capital Charge for Foreign Exchange Risk

The bank's net open position in each currency should be calculated by summing:

- The net spot position (i.e. all asset items less all liability items, including accrued interest, denominated in the currency in question);
- The net forward position (i.e. all amounts to be received less all amounts to be paid under forward foreign exchange transactions, including currency futures and the principal on currency swaps not included in the spot position);
- Guarantees (and similar instruments) that are certain to be called and are likely to be irrecoverable;

- Net future income/expenses not yet accrued but already fully hedged (at the discretion of the reporting bank);
- Depending on particular accounting conventions in different countries, any other item representing a profit or loss in foreign currencies;
- The net delta-based equivalent of the total book of foreign currency options

Foreign exchange open positions and gold open positions are at present risk-weighted at 100 per cent. Thus, capital charge for market risks in foreign exchange and gold open position is 9 per cent. These open positions, **limits or actual whichever is higher,** would continue to attract capital charge at 9 per cent. This capital charge is in addition to the capital charge for credit risk on the on-balance sheet and off-balance sheet items pertaining to foreign exchange and gold transactions.

8.6 Measurement of Capital Charge for Credit Default Swap(CDS) in the Trading Book

8.6.1 General Market Risk

A credit default swap does not normally create a position for general market risk for either the protection buyer or protection seller. However, the present value of premium payable / receivable is sensitive to changes in the interest rates. In order to measure the interest rate risk in premium receivable / payable, the present value of the premium can be treated as a notional position in Government securities of relevant maturity. These positions will attract appropriate capital charge for general market risk. The protection buyer / seller will treat the present value of the premium payable / receivable equivalent to a short / long notional position in Government securities of relevant maturity.

8.6.2 Specific Risk for Exposure to Reference Entity

A CDS creates a notional long / short position for specific risk in the reference asset / obligation for protection seller / protection buyer. For calculating specific risk capital charge, the notional amount of the CDS and its maturity should be used. The specific risk capital charge for CDS positions will be as per Tables below.

Specific Risk Capital Charges for bought and sold CDS positions in the Trading Book : Exposures to entities other than Commercial Real Estate Companies / NBFC-ND-SI				
Upto 90 days			After 90 days	
Ratings by the ECAI*	**Residual Maturity of the instrument**	**Capital charge**	**Ratings by the ECAI***	**Capital charge**
AAA to BBB	6 months or less	0.28 %	AAA	1.8 %
	Greater than 6 months and up to and including 24 months	1.14%	AA	2.7%
	Exceeding 24 months	1.80%	A	4.5%
			BBB	9.0%
BB and below	All maturities	13.5%	BB and below	13.5%
Unrated (if permitted)	All maturities	9.0%	Unrated (if permitted)	9.0%

* These ratings indicate the ratings assigned by Indian rating agencies / ECAIs or foreign rating agencies. In the case of foreign ECAIs, the rating symbols used here correspond to Standard and Poor. The modifiers "+" or "-" have been subsumed within the main category.

Specific Risk Capital Charges for bought and sold CDS positions in the Trading Book : Exposures to Commercial Real Estate Companies / NBFC-ND-SI#		
Ratings by the ECAI*	**Residual Maturity of the instrument**	**Capital charge**
AAA to BBB	6 months or less	1.4%
	Greater than 6 months and up to and including 24 months	7.7%
	Exceeding 24 months	9.0%
BB and below	All maturities	9.0%
Unrated (if permitted)	All maturities	9.0%

The above table will be applicable for exposures upto 90 days. Capital charge for exposures to Commercial Real Estate Companies / NBFC-ND-SI beyond 90 days shall be taken at 9.0%, regardless of rating of the reference / deliverable obligation.

* These ratings indicate the ratings assigned by Indian rating agencies / ECAIs or foreign rating agencies. In the case of foreign ECAIs, the rating symbols used here correspond to Standard and Poor. The modifiers "+" or "-" have been subsumed within the main category.

8.6.2.1 ***Specific Risk Capital Charges for Positions Hedged by CDS***

(i) Banks may fully offset the specific risk capital charges when the values of two legs (i.e. long and short in CDS positions) always move in the opposite direction and broadly to the same extent. This would be the case when the two legs consist of **completely identical CDS**. In these cases, no specific risk capital requirement applies to both sides of the CDS positions.

(ii) Banks may offset 80 per cent of the specific risk capital charges when the value of two legs (i.e. long and short) always moves in the opposite direction but not broadly to the same extent[7]. This would be the case when a long cash position is hedged by a credit default swap and there is an exact match in terms of the reference / deliverable obligation, and the maturity of both the reference / deliverable obligation and the CDS. In addition, key features of the CDS (e.g.

credit event definitions, settlement mechanisms) should not cause the price movement of the CDS to materially deviate from the price movements of the cash position. To the extent that the transaction transfers risk, an 80% specific risk offset will be applied to the side of the transaction with the higher capital charge, while the specific risk requirement on the other side will be zero.

(iii) Banks may offset partially the specific risk capital charges when the value of the two legs (i.e. long and short) usually moves in the opposite direction. This would be the case in the following situations:

(a) The position is captured in paragraph 8.6.2.1(ii) but there is an asset mismatch between the cash position and the CDS. However, the underlying asset is included in the (reference / deliverable) obligations in the CDS documentation and meets the requirements in paragraph 5.17.1.3(i) above.

(b) The position is captured in paragraph 8.6.2.1 (ii) but there is maturity mismatch between credit protection and the underlying asset. However, the underlying asset is included in the (reference/ deliverable) obligations in the CDS documentation.

(c) In each of the cases in paragraph (a) and (b) above, rather than applying specific risk capital requirements on each side of the transaction (i.e. the credit protection and the underlying asset), only higher of the two capital requirements will apply.

8.6.2.2 ***Specific Risk Charge in CDS Positions which are not meant for Hedging***

In cases not captured in paragraph 8.6.2.1, a specific risk capital charge will be assessed against both sides of the positions.

8.6.3 Capital Charge for Counterparty Credit Risk

The credit exposure for the purpose of counterparty credit risk on account of CDS transactions in the Trading Book will be calculated according to the Current Exposure Method[9] under Basel II framework.

8.6.3.1 Protection Seller

A protection seller will have exposure to the protection buyer only if the fee/premiais outstanding. In such cases, the counterparty credit risk charge for all single name long CDS positions in the Trading Book will be calculated as the sum of the current marked-to-market value, if positive (zero, if marked-to-market value is negative) and the potential future exposure add-on factors based on table given below. However, the add-on will be capped to the amount of unpaid premia.

Add-on Factors for Protection Sellers	
(As % of Notional Principal of CDS)	
Type of Reference Obligation	**Add-on Factor**
Obligations rated BBB- and above	10%
Below BBB- and unrated	20%

8.6.3.2Protection Buyer

A CDS contract creates a counterparty exposure on the protection seller on account of the credit event payment. The counterparty credit risk charge for all short CDS positions in the Trading Book will be calculated as the sum of the current marked-to-market value, if positive (zero, if marked-to-market value is negative) and the potential future exposure add-on factors based on table given below

Add-on Factors for Protection Buyers	
(As % of Notional Principal of CDS)	
Type of Reference Obligation	**Add-on Factor**
Obligations rated BBB- and above	10%
Below BBB- and unrated	20%

8.6.3.3 Capital Charge for Counterparty Risk for Collateralised Transactions in CDS

As mentioned in paragraph 3.3 of the circular IDMD.PCD.No.5053/14.03.04/2010-11 dated May 23, 2011, collaterals and margins would be maintained by the individual market participants. The counterparty exposure for CDS traded in the OTC market will be calculated as per the Current Exposure Method. Under this method, the calculation of the counterparty credit risk charge for an individual contract, taking into account the collateral, will be as follows :

Counterparty risk capital charge = [(RC + add-on) – CA] x r x 9%

where :

RC = the replacement cost,

add-on = the amount for potential future exposure calculated according to paragraph 5.17.3 above.

CA = the volatility adjusted amount of eligible collateral under the comprehensive approach prescribed in paragraphs 7.3on "Credit Risk Mitigation Techniques - Collateralised Transactions" of this Master Circular, or zero if no eligible collateral is applied to the transaction, and

r = the risk weight of the counterparty.

8.6.4 Treatment of Exposures below Materiality Thresholds of CDS

Materiality thresholds on payments below which no payment is made in the event of loss are equivalent to retained first loss positions and should be assigned risk weight of 1111 per cent for capital adequacy purpose by the protection buyer.

8.7 Aggregation of the capital charge for Market Risks

As explained earlier capital charges for specific risk and general market risk are to be computed separately before aggregation. For computing the total capital charge for market risks, the calculations may be plotted in the following table

Proforma

(₹ in crore)

Risk Category	Capital charge
I. **Interest Rate(a+b)**	
a. General market risk	
i) Net position (parallel shift) ii) Horizontal disallowance (curvature) iii) Vertical disallowance (basis) iv) Options	
b. Specific risk	
II. **Equity(a+b)**	
a. General market risk	
b. Specific risk	
III. **Foreign Exchange & Gold**	
IV.**Total capital charge for market risks** (I+II+III)	

8.8 Treatment for Illiquid Positions

8.8.1 Prudent Valuation Guidance

(i) This section provides banks with guidance on prudent valuation for positions that are accounted for at fair value. This guidance would be applicable to all positions enumerated in para 8.2.1 above. It is especially important for positions without actual market prices or observable inputs to valuation, as well as less liquid positions which raise supervisory concerns about prudent valuation. The valuation guidance set forth below is not intended to require banks to change valuation procedures for financial reporting purposes.

(ii) A framework for prudent valuation practices should at a minimum include the following:

8.8.1.1 *Systems and Controls*:

Banks must establish and maintain adequate systems and controls sufficient to give

management and supervisors the confidence that their valuation estimates are prudent and reliable. These systems must be integrated with other risk management systems within the organisation (such as credit analysis). Such systems must include:

(i) Documented policies and procedures for the process of valuation. This includes clearly defined responsibilities of the various areas involved in the determination of the valuation, sources of market information and review of their appropriateness, guidelines for the use of unobservable inputs reflecting the bank's assumptions of what market participants would use in pricing the position, frequency of independent valuation, timing of closing prices, procedures for adjusting valuations, end of the month and ad-hoc verification procedures; and

(ii) Clear and independent (i.e. independent of front office) reporting lines for the department accountable for the valuation process.

8.8.1.2 *Valuation Methodologies*:

Marking to Market

(i) Marking-to-market is at least the daily valuation of positions at readily available close out prices in orderly transactions that are sourced independently. Examples of readily available close out prices include exchange prices, screen prices, or quotes from several independent reputable brokers.

(ii) Banks must mark-to-market as much as possible. The more prudent side of bid/offer should be used unless the institution is a significant market maker in a particular position type and it can close out at mid-market. Banks should maximise the use of relevant observable inputs and minimise the use of unobservable inputs when estimating fair value using a valuation technique. However, observable inputs or transactions may not be relevant, such as in a forced liquidation or distressed sale, or transactions may not be observable, such as when markets are inactive. In such cases, the observable data should be considered, but may not be determinative.

Marking to Model

(iii) Marking-to model is defined as any valuation which has to be benchmarked, extrapolated or otherwise calculated from a market input. Where marking-to-market is not possible, banks should follow the guidelines on valuation of investments contained in Master Circular DBOD No. BP. BC.3 / 21.04.141 / 2009-10 dated July 1, 2009 on prudential norms for classification, valuation and operation of investment portfolio by banks. For investment and derivative positions other than those covered

in the Master Circular, the valuation model used by banks must be demonstrated to be prudent. When marking to valuation model other than that prescribed in RBI/FIMMDA guidelines, an extra degree of conservatism is appropriate. RBI will consider the following in assessing whether a mark-to-model valuation is prudent:

• Senior management should be aware of the elements of the trading book or of other fair-valued positions which are subject to mark to model and should understand the materiality of the uncertainty this creates in the reporting of the risk/performance of the business.

• Market inputs should be sourced, to the extent possible, in line with market prices (as discussed above). The appropriateness of the market inputs for the particular position being valued should be reviewed regularly.

• Where available, generally accepted valuation methodologies for particular products should be used as far as possible.

• Where the model is developed by the institution itself, it should be based on appropriate assumptions, which have been assessed and challenged by suitably qualified parties independent of the development process. The model should be developed or approved independently of the front office. It should be independently tested. This includes validating the mathematics, the assumptions and the software implementation.

• There should be formal change control procedures in place and a secure copy of the model should be held and periodically used to check valuations.

• Risk management should be aware of the weaknesses of the models used and how best to reflect those in the valuation output.

• The model should be subject to periodic review to determine the accuracy of its performance (eg assessing continued appropriateness of the assumptions, analysis of P&L versus risk factors, comparison of actual close out values to model outputs).

• Valuation adjustments should be made as appropriate, for example, to cover the uncertainty of the model valuation (see also valuation adjustments in paragraphs 8.7.1.2 (vi), (vii) and 8.7.2.1 to 8.7.2.4.

Independent Price Verification

(iv) Independent price verification is distinct from daily mark-to-market. It is the process by which market prices or model inputs are regularly verified for accuracy. While

daily marking-to-market may be performed by dealers, verification of market prices or model inputs should be performed by a unit independent of the dealing room, at least monthly (or, depending on the nature of the market/trading activity, more frequently). It need not be performed as frequently as daily mark-to-market, since the objective, i.e independent, marking of positions should reveal any error or bias in pricing, which should result in the elimination of inaccurate daily marks.

(v) Independent price verification entails a higher standard of accuracy in that the market prices or model inputs are used to determine profit and loss figures, whereas daily marks are used primarily for management reporting in between reporting dates. For independent price verification, where pricing sources are more subjective, eg only one available broker quote, prudent measures such as valuation adjustments may be appropriate.

Valuation Adjustments

(vi) As part of their procedures for marking to market, banks must establish and maintain procedures for considering valuation adjustments. RBI would particularly expect banks using third-party valuations to consider whether valuation adjustments are necessary. Such considerations are also necessary when marking to model.

(vii) At a minimum, banks should consider the following valuation adjustments while valuing their derivatives portfolios :

- unearned credit spreads,
- closeout costs,
- operational risks,
- early termination, investing and funding costs, and
- future administrative costs and,
- where appropriate, model risk.

Banks may follow any recognised method/model to compute the above adjustments. However, in the case of unearned credit spread adjustments, if a bank does not have a model, it may follow the following norms:

Derivatives dealers generally use dynamic credit adjustments that reflect changes in the creditworthiness of their counterparties to the OTC derivatives portfolios. Adjustments for default risk are of two general kinds. The first includes allowances for anticipated credit losses, and the second includes the cost of capital held to cover unanticipated credit losses.

Unearned credit spread adjustments are made to reflect the risk that the dealer will not receive payments because of anticipated defaults by the counterparty. These adjustments generally take into account netting arrangements and collateral. Thus, adjustments that dealers actually make for credit risk tend to be lower than adjustments that would be made if netting arrangements and collateral were ignored. In India, banks have not so far been permitted to have netting agreements in respect of derivatives transactions. Therefore, in cases where banks do not have models to estimate adjustment for unearned credit spreads, they may make provisions for expected losses by using CCF equal to 20% of the CCF used for computing the potential future exposure for the purpose of capital adequacy.

In addition to the cost of anticipated credit losses, some dealers may make adjustments for a capital charge for bearing the risk of unanticipated losses. Such a charge would be reflected in the prices at which market participants are willing to enter into derivatives transactions. These adjustments reflect the cost of the return that must be paid to capital held to absorb the risk that credit losses will exceed the highest anticipated level. Adjustments for the cost of unanticipated losses are appropriate since the risk of such losses is inherent in a portfolio as of any valuation date. Banks need not make any adjustment for unanticipated losses as these are taken care of through credit conversion factors for potential future exposures while computing capital requirement as per extant instructions.

Note: Some of other terms used above are explained below:

Close-out costs

Close-out costs adjustment factors in the cost of eliminating the market risk of the portfolio.

Investing and Funding costs

The "investing and funding costs adjustment" relating to the cost of funding and investing cash flow mismatches at rates different from the rate which models typically assume.

Administrative costs adjustment

Administrative costs adjustment relates to the costs that will be incurred to administer the portfolio.

8.8.2 Adjustment to the current valuation of less liquid positions for regulatory capital purposes:

8.8.2.1 Banks must establish and maintain procedures for judging the necessity of and calculating an adjustment to the current valuation of less liquid positions for regulatory

capital purposes. This adjustment may be in addition to any changes to the value of the position required for financial reporting purposes and should be designed to reflect the illiquidity of the position. An adjustment to a position's valuation to reflect current illiquidity should be considered whether the position is marked to market using market prices or observable inputs, third-party valuations or marked to model.

8.8.2.2 Bearing in mind that the assumptions made about liquidity in the market risk capital charge may not be consistent with the bank's ability to sell or hedge out less liquid positions where appropriate, banks must take an adjustment to the current valuation of these positions, and review their continued appropriateness on an on-going basis. Reduced liquidity may have arisen from market events. Additionally, close-out prices for concentrated positions and/or stale positions should be considered in establishing the adjustment. RBI has not prescribed any particularly methodology for calculating the amount of valuation adjustment on account of illiquid positions. Banks must consider all relevant factors when determining the appropriateness of the adjustment for less liquid positions. These factors may include, but are not limited to, the amount of time it would take to hedge out the position/risks within the position, the average volatility of bid/offer spreads, the availability of independent market quotes (number and identity of market makers), the average and volatility of trading volumes (including trading volumes during periods of market stress), market concentrations, the aging of positions, the extent to which valuation relies on marking-to-model, and the impact of other model risks not included in paragraph 8.7.2.2. The valuation adjustment on account of illiquidity should be considered irrespective of whether the guidelines issued by FIMMDA have taken into account the illiquidity premium or not, while fixing YTM/spreads for the purpose of valuation.

8.8.2.3 For complex products including, but not limited to, securitisation exposures, banks must explicitly assess the need for valuation adjustments to reflect two forms of model risk:

(i) the model risk associated with using a possibly incorrect valuation methodology; and

(ii) the risk associated with using unobservable (and possibly incorrect) calibration parameters in the valuation model.

8.8.2.4 The adjustment to the current valuation of less liquid positions made under paragraph 8.7.2.2 will not be debited to P&L Account, but will be deducted from Tier 1 regulatory capital while computing CRAR of the bank. The adjustment may exceed those valuation adjustments made under financial reporting/accounting standards and paragraphs 8.7.1.2 (vi) and (vii).

8.8.2.5 In calculating the eligible capital for market risk, it will be necessary first to calculate the banks' minimum capital requirement for credit and operational risk and only afterwards its market risk requirement to establish how much Tier 1 and Tier 2 capital is available to support market risk. Eligible capital will be the sum of the whole of banks' Tier 1 capital plus all of Tier 2 capital provided Tier 2 capital does not exceed 100% of the Tier 1 capital and the relevant conditions for Tier 1 and Tier 2 capital are fulfilled, as described in this Master Circular.

Computation of capital for Market Risk

(in₹ crore)

1.	Capital Funds • Tier 1 Capital • Tier 2 Capital	 55 50	105
2.	Total Risk Weighted Assets (RWA) • RWA for credit and operational risk • RWA for market risk	 1000 140	1140
3.	Total CRAR		9.21
4.	Minimum capital required to support credit and operational risk (1000*9%) Tier 1 (@ 4.5% of 1000) Tier 2 (@ 4.5% of 1000)	 45 45	90
5.	Capital available to support market risk (105-90) • Tier 1- (55-45) • Tier 2- (50-45)	 10 5	15

9. Capital Charge for Operational Risk

9.1 Definition of Operational Risk

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputational risk. Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements.

9.2 The measurement methodologies

9.2.1 The New Capital Adequacy Framework outlines three methods for calculating operational risk capital charges in a continuum of increasing sophistication and risk sensitivity: (i) the Basic Indicator Approach (BIA); (ii) the Standardised Approach (TSA); and (iii) Advanced Measurement Approaches (AMA).

9.2.2 Banks are encouraged to move along the spectrum of available approaches as they develop more sophisticated operational risk measurement systems and practices.

9.2.3 The New Capital Adequacy Framework provides that internationally active banks and banks with significant operational risk exposures are expected to use an approach that is more sophisticated than the Basic Indicator Approach and that is appropriate for the risk profile of the institution. However, to begin with, banks in India shall compute the capital requirements for operational risk under the Basic Indicator Approach. Reserve Bank will review the capital requirement produced by the Basic Indicator Approach for general credibility, especially in relation to a bank's peers and in the event that credibility is lacking, appropriate supervisory action under Pillar 2 will be considered.

9.3 The Basic Indicator Approach

9.3.1 Under the Basic Indicator Approach, banks must hold capital for operational risk equal to the average over the previous three years of a fixed percentage (denoted as alpha) of positive annual gross income. Figures for any year in which annual gross income is negative or zero should be excluded from both the numerator and denominator when calculating the average. If negative gross income distorts a bank's Pillar 1 capital charge, Reserve Bank will consider appropriate supervisory action under Pillar 2. The charge may be expressed as follows:

$$KBIA = [\sum (GI_{1...n} \times \alpha)]/n$$

Where:

KBIA = the capital charge under the Basic Indicator Approach

GI = annual gross income, where positive, over the previous three years

n = number of the previous three years for which gross income is positive

α = 15 per cent, which is set by the BCBS , relating the industry wide level of required capital to the industry wide level of the indicator.

9.3.2 Gross income is defined as "Net interest income" plus "net non-interest income". It is intended that this measure should:

i) be gross of any provisions (e.g. for unpaid interest) and write-offs made during the year;

ii) be gross of operating expenses, including fees paid to outsourcing service providers, *in addition to fees paid for services that are outsourced, fees received by banks that provide outsourcing services shall be included in the definition of gross income;*

iii) exclude reversal during the year in respect of provisions and write-offs made

during the previous year(s);

iv) exclude income recognised from the disposal of items of movable and immovable property;

v) exclude realised profits/losses from the sale of securities in the *"held to maturity" category*;

vi) exclude income from legal settlements in favour of the bank;

vii) exclude other extraordinary or irregular items of income and expenditure; and

viii) exclude income derived from insurance activities (i.e. income derived by writing insurance policies) and insurance claims in favour of the bank.

9.3.3 Banks are advised to compute capital charge for operational risk under the Basic Indicator Approach as follows:

a) Average of [Gross Income * alpha] for each of the last three financial years, excluding years of negative or zero gross income

b) Gross income = *Net profit (+) Provisions & contingencies* ***(+)*** *operating expenses (Schedule 16) (–) items (iii) to (viii) of paragraph 9.3.2.*

c) Alpha = 15 per cent

9.3.4 As a point of entry for capital calculation, no specific criteria for use of the Basic Indicator Approach are set out in the New Capital Adequacy Framework. Nevertheless, banks using this approach are encouraged to comply with the Committee's guidance on '*Sound Practices for the Management and Supervision of Operational Ris*k', February 2003 and the 'Guidance Note on Management of Operational Risk', issued by the Reserve Bank of India in October, 2005.

Part – B : Supervisory Review and Evaluation Process (SREP)

10. Introduction to the SREP under Pillar 2

10.1 The New Capital Adequacy Framework (NCAF), based on the Basel II Framework evolved by the Basel Committee on Banking Supervision, has been adapted for India vide our Circular DBOD.No.BP.BC 90/20.06.001/2006-07 dated April 27, 2007. In terms of paragraph 2.4 (iii)(c) of the Annex to the aforesaid circular banks were required to have a Board-approved policy on ICAAP and to assess the capital requirement as per ICAAP. It is presumed that banks would have formulated the policy and also undertaken the capital adequacy assessment accordingly.

10.2 The Basel II Framework has three components or three Pillars. The Pillar 1 is the Minimum Capital Ratio while the Pillar 2 and Pillar 3 are the Supervisory Review Process (SRP) and Market Discipline, respectively. While the guidelines on the Pillar 1 and Pillar 3 were issued by the RBI vide the aforesaid circular, since consolidated in this Master Circular in Part A and Part C, respectively, the guidelines in regard to the SRP and the Internal Capital Adequacy Assessment Process (ICAAP) are furnished at paragraph 11 below. An illustrative outline of the format of the ICAAP document, to be submitted to the RBI, by banks, is furnished at **Annex – 13**.

10.3 The objective of the SRP is to ensure that banks have adequate capital to support all the risks in their business as also to encourage them to develop and use better risk management techniques for monitoring and managing their risks. This in turn would require a well-defined internal assessment process within banks through which they assure the RBI that adequate capital is indeed held towards the various risks to which they are exposed. The process of assurance could also involve an active dialogue between the bank and the RBI so that, when warranted, appropriate intervention could be made to either reduce the risk exposure of the bank or augment / restore its capital. Thus, ICAAP is an important component of the SRP.

10.4 The main aspects to be addressed under the SRP, and therefore, under the ICAAP, would include:

(a) the risks that are not fully captured by the minimum capital ratio prescribed under Pillar 1;

(b) the risks that are not at all taken into account by the Pillar 1; and

(c) the factors external to the bank.

Since the capital adequacy ratio prescribed by the RBI under the Pillar 1 of the Framework is only the regulatory **minimum** level, addressing only the three specified risks (viz., credit, market and operational risks), holding additional capital might be necessary for banks, on account of both – the possibility of some under-estimation of risks under the Pillar 1 and the actual risk exposure of a bank vis-à-vis the quality of its risk management architecture. **Illustratively**, some of the risks that the banks are generally exposed to but which are not captured or not fully captured in the regulatory CRAR would include:

(a) Interest rate risk in the banking book;

(b) Credit concentration risk;

(c) Liquidity risk;

(d) Settlement risk;

(e) Reputational risk;

(f) Strategic risk;

(g) Risk of under-estimation of credit risk under the Standardised approach;

(h) "Model risk" i.e., the risk of under-estimation of credit risk under the IRB approaches;

(i) Risk of weakness in the credit-risk mitigants;

(j) Residual risk of securitisation, etc.

The quantification of currency induced credit risk will form a part of banks' Internal Capital Adequacy Assessment Programme (ICAAP) and banks are expected to address this risk in a comprehensive manner. The ICAAP should measure the extent of currency induced credit risk[36] the bank is exposed to and also concentration of such exposures. Banks may also like to perform stress tests under various extreme but plausible exchange rate scenarios under ICAAP. Outcome of ICAAP may lead a bank to take appropriate risk management actions like risk reduction, maintenance of more capital or provision, etc.

It is, therefore, only appropriate that the banks make their own assessment of their various risk exposures, through a well-defined internal process, and maintain an adequate capital cushion for such risks.

10.5 It is recognised that there is no one single approach for conducting the ICAAP and the market consensus in regard to the best practice for undertaking ICAAP is yet to emerge. The methodologies and techniques are still evolving particularly in regard to measurement of

[36]Please refer to circulars DBOD.No.BP.BC.85/21.06.200/2013-14 and DBOD.No.BP.BC.116/ 21.06.200/2013-14 dated January 15, 2014 and June 3, 2014, respectively

non-quantifiable risks, such as reputational and strategic risks. These guidelines, therefore, seek to provide only broad principles to be followed by banks in developing their ICAAP.

10.6 Bankswere advised to develop and put in place, with the approval of their Boards, an ICAAP commensurate with their size, level of complexity, risk profile and scope of operations. The ICAAP, which would be in addition to a bank's calculation of regulatory capital requirements under Pillar 1, was to be operationalised with effect from March 31, 2008 by the foreign banks and the Indian banks with operational presence outside India, and from March 31, 2009 by all other commercial banks, excluding the Local Area Banks and Regional Rural banks.

10.7 The ICAAP document should, *inter alia*, include the capital adequacy assessment and projections of capital requirement for the ensuing year, along with the plans and strategies for meeting the capital requirement. An illustrative outline of a format of the ICAAP document is furnished at **Annex – 15**, for guidance of the banks though the ICAAP documents of the banks could vary in length and format, in tune with their size, level of complexity, risk profile and scope of operations.

11. Need for improved risk management [37]

11.1. While financial institutions have faced difficulties over the years for a multitude of reasons, the major causes of serious banking problems continue to be lax credit standards for borrowers and counterparties, poor portfolio risk management, and a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties. This experience is common in both advanced and developing countries.

11.2. The financial market crisis of 2007-08 has underscored the critical importance of effective credit risk management to the long-term success of any banking organisation and as a key component to financial stability. It has provided a stark reminder of the need for banks to effectively identify, measure, monitor and control credit risk, as well as to understand how credit risk interacts with other types of risk (including market, liquidity and reputational risk). The essential elements of a comprehensive credit risk management programme include (i) establishing an appropriate credit risk environment; (ii) operating

[37] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

under a sound credit granting process; (iii) maintaining an appropriate credit administration, measurement and monitoring process; and (iv) ensuring adequate controls over credit risk as elaborated in our Guidance note on Credit Risk issued on October 12, 2002.

11.3. The recent crisis has emphasised the importance of effective capital planning and longer-term capital maintenance. A bank's ability to withstand uncertain market conditions is bolstered by maintaining a strong capital position that accounts for potential changes in the bank's strategy and volatility in market conditions over time. Banks should focus on effective and efficient capital planning, as well as long-term capital maintenance. An effective capital planning process requires a bank to assess both the risks to which it is exposed and the risk management processes in place to manage and mitigate those risks; evaluate its capital adequacy relative to its risks; and consider the potential impact on earnings and capital from economic downturns. A bank's capital planning process should incorporate rigorous, forward-looking stress testing, as discussed below in Para 12.9.

11.4 Rapid growth in any business activity can present banks with significant risk management challenges. This was the case with the expanded use of the "originate-to-distribute" business model, off-balance sheet vehicles, liquidity facilities and credit derivatives. The originate-to-distribute model and securitisation can enhance credit intermediation and bank profitability, as well as more widely diversify risk. Managing the associated risks, however, poses significant challenges. Indeed, these activities create exposures within business lines, across the firm and across risk factors that can be difficult to identify, measure, manage, mitigate and control. This is especially true in an environment of declining market liquidity, asset prices and risk appetite. The inability to properly identify and measure such risks may lead to unintended risk exposures and concentrations, which in turn can lead to concurrent losses arising in several businesses and risk dimensions due to a common set of factors. Strong demand for structured products created incentives for banks using the originate-to-distribute model to originate loans, such as subprime mortgages, using unsound and unsafe underwriting standards. At the same time, many investors relied solely on the ratings of the credit rating agencies (CRAs) when determining whether to invest in structured credit products. Many investors conducted little or no independent due diligence on the structured products they purchased. Furthermore, many banks had insufficient risk management processes in place to address the risks associated with exposures held on their balance sheet, as well as those associated with off-balance sheet entities, such as asset backed commercial paper (ABCP) conduits and structured investment vehicles (SIVs).

11.5 Innovation has increased the complexity and potential illiquidity of structured credit products. This, in turn, can make such products more difficult to value and hedge, and may lead to inadvertent increases in overall risk. Further, the increased growth of complex investor-specific products may result in thin markets that are illiquid, which can expose a bank to large losses in times of stress if the associated risks are not well understood and managed in a timely and effective manner.

12 Guidelines for the SREP of the RBI and the ICAAP of banks

12.1 The Background

12.1.1 While the Basel - I framework was confined to the prescription of only minimum capital requirements for banks, the Basel II framework expands this approach not only to capture certain additional risks in the minimum capital ratio but also includes two additional areas, namely, the Supervisory Review Process and Market Discipline through increased disclosure requirements for banks. Thus, the Basel II framework rests on the following three mutually- reinforcing pillars:

Pillar 1: Minimum Capital Requirements — which prescribes a risk-sensitive calculation of capital requirements that, for the first time, explicitly includes operational risk in addition to market and credit risk.

Pillar 2: Supervisory Review Process (SRP) — which envisages the establishment of suitable risk management systems in banks and their review by the supervisory authority.

Pillar 3: Market Discipline — which seeks to achieve increased transparency through expanded disclosure requirements for banks.

12.1.2. The Basel II document of the Basel Committee also lays down the following four key principles in regard to the SRP envisaged under Pillar 2:

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

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

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

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

12.1.3 It would be seen that the principles 1 and 3 relate to the supervisory expectations from banks while the principles 2 and 4 deal with the role of the supervisors under Pillar 2. Pillar 2 (Supervisory Review Process - SRP) requires banks to implement an internal process, called the Internal Capital Adequacy Assessment Process (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, hereafter called Supervisory Review and Evaluation Process (SREP), and to initiate such supervisory measures on that basis, as might be considered necessary. An analysis of the foregoing principles indicates that the following broad responsibilities have been cast on banks and the supervisors:

Banks' responsibilities

a) Banks should have in place a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels (Principle 1)

b) Banks should operate above the minimum regulatory capital ratios *(Principle 3)*

Supervisors' responsibilities

a) Supervisors should review and evaluate a bank's ICAAP. (Principle 2)

b) Supervisors should take appropriate action if they are not satisfied with the results of this process. (Principle 2)

c) Supervisors should review and evaluate a bank's compliance with the regulatory capital ratios. (Principle 2)

d) Supervisors should have the ability to require banks to hold capital in excess of the minimum. (Principle 3)

e) Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels. (Principle 4)

f) Supervisors should require rapid remedial action if capital is not maintained or restored. (Principle 4)

12.1.4 Thus, the ICAAP and SREP are the two important components of Pillar 2 and could be broadly defined as follows:

The ICAAP comprises a bank's procedures and measures designed to ensure the following:

a) An appropriate identification and measurement of risks;
b) An appropriate level of internal capital in relation to the bank's risk profile; and
c) Application and further development of suitable risk management systems in the bank.

The SREP consists of a review and evaluation process adopted by the supervisor, which covers all the processes and measures defined in the principles listed above. Essentially, these include the review and evaluation of the bank's ICAAP, conducting an independent

assessment of the bank's risk profile, and if necessary, taking appropriate prudential measures and other supervisory actions.

12.1.5 These guidelines seek to provide broad guidance to banks by outlining the manner in which the SREP would be carried out by the RBI, the expected scope and design of their ICAAP, and the expectations of the RBI from banks in regard to implementation of the ICAAP.

12.2 Conduct of the SREP by the RBI

12.2.1 Capital helps protect individual banks from insolvency, thereby promoting safety and soundness in the overall banking system. Minimum regulatory capital requirements under Pillar 1 establish a threshold below which a sound bank's regulatory capital must not fall. Regulatory capital ratios permit some comparative analysis of capital adequacy across regulated banking entities because they are based on certain common methodology / assumptions. However, supervisors need to perform a more comprehensive assessment of capital adequacy that considers risks specific to a bank, conducting analyses that go beyond minimum regulatory capital requirements.

12.2.2 The RBI generally expects banks to hold capital above their minimum regulatory capital levels, commensurate with their individual risk profiles, to account for all material risks. Under the SREP, the RBI will assess the overall capital adequacy of a bank through a comprehensive evaluation that takes into account all relevant available information. In determining the extent to which banks should hold capital in excess of the regulatory minimum, the RBI would take into account the combined implications of a bank's compliance with regulatory minimum capital requirements, the quality and results of a bank's ICAAP, and supervisory assessment of the bank's risk management processes, control systems and other relevant information relating to the bank's risk profile and capital position.

12.2.3 The SREP of banks would, thus, be conducted by the RBI periodically, generally, along with the RBI's Annual Financial Inspection (AFI) of banks and in the light of the data in the off-site returns received from banks in the RBI, in conjunction with the ICAAP document, which is required to be submitted every year by banks to the RBI (Cf. Para 11.3.4 below). Through the SREP, the RBI would evaluate the adequacy and efficacy of the ICAAP of banks and the capital requirements derived by them therefrom. While in the course of evaluation, there would be no attempt to reconcile the difference between the regulatory minimum CRAR and the outcome of the ICAAP of a bank (as the risks covered under the two processes are different), banks would be expected to demonstrate to the RBI that the ICAAP adopted by them is fully responsive to their size, level of complexity, scope & scale of

operations and the resultant risk profile / exposures, and adequately captures their capital requirements. Such an evaluation of the effectiveness of the ICAAP would help the RBI in understanding the capital management processes and strategies adopted by banks. If considered necessary, the SREP could also involve a dialogue between the bank's top management and the RBI from time to time. In addition to the periodic reviews, independent external experts may also be commissioned by the RBI, if deemed necessary, to perform *ad hoc* reviews and comment on specific aspects of the ICAAP process of a bank; the nature and extent of such a review shall be determined by the RBI.

12.2.4 Under the SREP, the RBI would also seek to determine whether a bank's overall capital remains adequate as the underlying conditions change. Generally, material increases in risk that are not otherwise mitigated should be accompanied by commensurate increases in capital. Conversely, reductions in overall capital (to a level still above regulatory minima) may be appropriate if the RBI's supervisory assessment leads it to a conclusion that risk has materially declined or that it has been appropriately mitigated. Based on such an assessment, the RBI could consider initiating appropriate supervisory measures to address its supervisory concerns. The measures could include requiring a modification or enhancement of the risk management and internal control processes of a bank, a reduction in risk exposures, or any other action as deemed necessary to address the identified supervisory concerns. These measures could also include the stipulation of a bank-specific minimum CRAR that could potentially be even higher, if so warranted by the facts and circumstances, than the regulatory minimum stipulated under Pillar 1. In cases where the RBI decides to stipulate a CRAR at a level higher than the regulatory minimum, it would explain the rationale for doing so, to the bank concerned. However, such an add-on CRAR stipulation, though possible, is not expected to be an automatic or inevitable outcome of the SREP exercise, the prime objective being improvement in the risk management systems of banks. As a part of Supervisory Review and Evaluation Process (SREP) under Pillar 2, RBI may review the risk management measures taken by the bank and its adequacy to manage currency induced credit risk[38], especially if exposure to such risks is assessed to be on higher side.

12.2.5 As and when the advanced approaches envisaged in the Basel II document are permitted to be adopted in India, the SREP would also assess the ongoing compliance by banks with the eligibility criteria for adopting the advanced approaches.

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[38]Please refer to circulars DBOD.No.BP.BC.85/21.06.200/2013-14 and DBOD.No.BP.BC.116/ 21.06.200/2013-14 dated January 15, 2014 and June 3, 2014, respectively

12.3 The structural aspects of the ICAAP

12.3.1 This section outlines the broad parameters of the ICAAP that banks are required to comply with in designing and implementing their ICAAP.

12.3.2 Every bank to have an ICAAP

Reckoning that the Basel II framework is applicable to all commercial banks (except the Local Area Banks and the Regional Rural Banks), both at the solo level (global position) as well as at the consolidated level, the ICAAP should be prepared, on a solo basis, at every tier for each banking entity within the banking group, as also at the level of the consolidated bank (i.e., a group of entities where the licensed bank is the controlling entity). This requirement would also apply to the foreign banks which have a branch presence in India and their ICAAP should cover their Indian operations only.

12.3.3 ICAAP to encompass firm-wide risk profile[39]

12.3.3.1 General firm-wide risk management principles:

Senior management should understand the importance of taking an integrated, firm-wide perspective of a bank's risk exposure, in order to support its ability to identify and react to emerging and growing risks in a timely and effective manner. The purpose of this guidance is the need to enhance firm-wide oversight, risk management and controls around banks' capital markets activities, including securitisation, off-balance sheet exposures, structured credit and complex trading activities.

A sound risk management system should have the following key features:

- Active board and senior management oversight;
- Appropriate policies, procedures and limits;
- Comprehensive and timely identification, measurement, mitigation, controlling, monitoring and reporting of risks;
- Appropriate management information systems (MIS) at the business and firm-wide level; and
- Comprehensive internal controls.

12.3.3.2 Board and Senior Management Oversight:

[39] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

The ultimate responsibility for designing and implementation of the ICAAP lies with the bank's board of directors of the bank and with the Chief Executive Officer in the case of the foreign banks with branch presence in India**.**It is the responsibility of the board of directors and senior management to define the institution's risk appetite and to ensure that the bank's risk management framework includes detailed policies that set specific firm-wide prudential limits on the bank's activities, which are consistent with its risk taking appetite and capacity. In order to determine the overall risk appetite, the board and senior management must first have an understanding of risk exposures on a firm-wide basis. To achieve this understanding, the appropriate members of senior management must bring together the perspectives of the key business and control functions. In order to develop an integrated firm-wide perspective on risk, senior management must overcome organisational silos between business lines and share information on market developments, risks and risk mitigation techniques. As the banking industry is exhibiting the tendency to move increasingly towards market-based intermediation, there is a greater probability that many areas of a bank may be exposed to a common set of products, risk factors or counterparties. Senior management should establish a risk management process that is not limited to credit, market, liquidity and operational risks, but incorporates all material risks. This includes reputational, legal and strategic risks, as well as risks that do not appear to be significant in isolation, but when combined with other risks could lead to material losses.

The board of directors and senior management should possess sufficient knowledge of all major business lines to ensure that appropriate policies, controls and risk monitoring systems are effective. They should have the necessary expertise to understand the capital markets activities in which the bank is involved – such as securitisation and off-balance sheet activities – and the associated risks. The board and senior management should remain informed on an on-going basis about these risks as financial markets, risk management practices and the bank's activities evolve. In addition, the board and senior management should ensure that accountability and lines of authority are clearly delineated. With respect to new or complex products and activities, senior management should understand the underlying assumptions regarding business models, valuation and risk management practices. In addition, senior management should evaluate the potential risk exposure if those assumptions fail. Before embarking on new activities or introducing products new to the institution, the board and senior management should identify and review the changes in firm-wide risks arising from these potential new products or activities and ensure that the infrastructure and internal controls necessary to manage the related risks are in place. In this review, a bank should also consider the possible difficulty in valuing the new

products and how they might perform in a stressed economic environment. The Board should ensure that the senior management of the bank :

i) establishes a risk framework in order to assess and appropriately manage the various risk exposures of the bank;

ii) develops a system to monitor the bank's risk exposures and to relate them to the bank's capital and reserve funds;

iii) establishes a method to monitor the bank's compliance with internal policies, particularly in regard to risk management; and

iv) effectively communicates all relevant policies and procedures throughout the bank.

A bank’s risk function and its chief risk officer (CRO) or equivalent position should be independent of the individual business lines and report directly to the chief executive officer (CEO)/ Managing Director and the institution’s board of directors. In addition, the risk function should highlight to senior management and the board risk management concerns, such as risk concentrations and violations of risk appetite limits.

12.3.3.4 Policies, procedures, limits and controls:

The structure, design and contents of a bank's ICAAP should be approved by the board of directors to ensure that the ICAAP forms an integral part of the management process and decision making culture of the bank. Firm-wide risk management programmes should include detailed policies that set specific firm-wide prudential limits on the principal risks relevant to a bank’s activities. A bank’s policies and procedures should provide specific guidance for the implementation of broad business strategies and should establish, where appropriate, internal limits for the various types of risk to which the bank may be exposed. These limits should consider the bank’s role in the financial system and be defined in relation to the bank’s capital, total assets, earnings or, where adequate measures exist, its overall risk level.

A bank’s policies, procedures and limits should:

- Provide for adequate and timely identification, measurement, monitoring, control and mitigation of the risks posed by its lending, investing, trading, securitisation,

off-balance sheet, fiduciary and other significant activities at the business line and firm-wide levels;

- Ensure that the economic substance of a bank's risk exposures, including reputational risk and valuation uncertainty, are fully recognised and incorporated into the bank's risk management processes;

- Be consistent with the bank's stated goals and objectives, as well as its overall financial strength;

- Clearly delineate accountability and lines of authority across the bank's various business activities, and ensure there is a clear separation between business lines and the risk function;

- Escalate and address breaches of internal position limits;

- Provide for the review of new businesses and products by bringing together all relevant risk management, control and business lines to ensure that the bank is able to manage and control the activity prior to it being initiated; and

- Include a schedule and process for reviewing the policies, procedures and limits and for updating them as appropriate.

12.3.3.5 Identifying, measuring, monitoring and reporting of risk:

A bank's MIS should provide the board and senior management in a clear and concise manner with timely and relevant information concerning their institutions' risk profile. This information should include all risk exposures, including those that are off-balance sheet. Management should understand the assumptions behind and limitations inherent in specific risk measures.

The key elements necessary for the aggregation of risks are an appropriate infrastructure and MIS that (i) allow for the aggregation of exposures and risk measures across business lines and (ii) support customised identification of concentrations and emerging risks. MIS developed to achieve this objective should support the ability to evaluate the impact of various types of economic and financial shocks that affect the whole of the financial institution. Further, a bank's systems should be flexible enough to incorporate hedging and other risk mitigation actions to be carried out on a firm-wide basis while taking into account the various related basis risks.

To enable proactive management of risk, the board and senior management need to ensure that MIS is capable of providing regular, accurate and timely information on the bank's aggregate risk profile, as well as the main assumptions used for risk aggregation. MIS should be adaptable and responsive to changes in the bank's underlying risk assumptions and should incorporate multiple perspectives of risk exposure to account for uncertainties in risk measurement. In addition, it should be sufficiently flexible so that the institution can generate forward-looking bank-wide scenario analyses that capture management's interpretation of evolving market conditions and stressed conditions. Third-party inputs or other tools used within MIS (e.g. credit ratings, risk measures, models) should be subject to initial and ongoing validation.

A bank's MIS should be capable of capturing limit breaches and there should be procedures in place to promptly report such breaches to senior management, as well as to ensure that appropriate follow-up actions are taken. For instance, similar exposures should be aggregated across business platforms (including the banking and trading books) to determine whether there is a concentration or a breach of an internal position limit.

12.3.3.6 Internal controls:

Risk management processes should be frequently monitored and tested by independent control areas and internal, as well as external, auditors. The aim is to ensure that the information on which decisions are based is accurate so that processes fully reflect management policies and that regular reporting, including the reporting of limit breaches and other exception-based reporting, is undertaken effectively. The risk management function of banks must be independent of the business lines in order to ensure an adequate separation of duties and to avoid conflicts of interest.

Since a sound risk management process provides the basis for ensuring that a bank maintains adequate capital, the board of directors of a bank shall set the tolerance level for risk.

12.3.3.7 <u>Submission of the outcome of the ICAAP to the Board and the RBI:</u>

As the ICAAP is an ongoing process, a written record on the outcome of the ICAAP should to be periodically submitted by banks to their board of directors. Such written record of the internal assessment of its capital adequacy should include, *inter alia*, the risks identified, the manner in which those risks are monitored and managed, the impact of the bank's changing risk profile on the bank's capital position, details of stress tests/scenario analysis conducted

and the resultant capital requirements. The reports shall be sufficiently detailed to allow the Board of Directors to evaluate the level and trend of material risk exposures, whether the bank maintains adequate capital against the risk exposures and in case of additional capital being needed, the plan for augmenting capital. The board of directors would be expected make timely adjustments to the strategic plan, as necessary.

Based on the outcome of the ICAAP as submitted to and approved by the Board, the ICAAP Document, in the format furnished at **Annex - 13**, should be furnished to the RBI (i.e., to the CGM-in-Charge, Department of Banking Supervision, Central Office, Reserve Bank of India, World Trade Centre, Centre I, Colaba, Cuffe Parade, Mumbai – 400 005). The document should reach the RBI latest by end of the first quarter (i.e April-June) of the relevant financial year.

12.4 Review of the ICAAP outcomes

The board of directors shall, at least once a year, assess and document whether the processes relating the ICAAP implemented by the bank successfully achieve the objectives envisaged by the board. The senior management should also receive and review the reports regularly to evaluate the sensitivity of the key assumptions and to assess the validity of the bank's estimated future capital requirements. In the light of such an assessment, appropriate changes in the ICAAP should be instituted to ensure that the underlying objectives are effectively achieved.

12.5 ICAAP to be an Integral part of the management and decision-making culture

The ICAAP should from an integral part of the management and decision-making culture of a bank. This integration could range from using the ICAAP to internally allocate capital to various business units, to having it play a role in the individual credit decision process and pricing of products or more general business decisions such as expansion plans and budgets. The integration would also mean that ICAAP should enable the bank management to assess, on an ongoing basis, the risks that are inherent in their activities and material to the institution.

12.6 The Principle of proportionality

The implementation of ICAAP should be guided by the principle of proportionality. Though banks are encouraged to migrate to and adopt progressively sophisticated approaches in designing their ICAAP, the RBI would expect the degree of sophistication adopted in the ICAAP in regard to risk measurement and management to be commensurate with the nature, scope, scale and the degree of complexity in the bank's business operations. The

following paragraphs **illustratively** enumerate the broad approach which could be considered by banks with varying levels of complexity in their operations, in formulating their ICAAP.

(A) In relation to a bank that defines its activities and risk management practices as **simple**, in carrying out its ICAAP, that bank could:

a) identify and consider that bank's largest losses over the last 3 to 5 years and whether those losses are likely to recur;

b) prepare a short list of the most significant risks to which that bank is exposed;

c) consider how that bank would act, and the amount of capital that would be absorbed in the event that each of the risks identified were to materialise;

d) consider how that bank's capital requirement might alter under the scenarios in (c) and how its capital requirement might alter in line with its business plans for the next 3 to 5 years; and

e) document the ranges of capital required in the scenarios identified above and form an overall view on the amount and quality of capital which that bankshould hold, ensuring that its senior management is involved in arriving at that view.

(B) In relation to a bank that define its activities and risk management practices as **moderately complex**, in carrying out its ICAAP, that bank could:

a) having consulted the operational management in each major business line, prepare a comprehensive list of the major risks to which the business is exposed;

b) estimate, with the aid of historical data, where available, the range and distribution of possible losses which might arise from each of those risks and consider using shock stress tests to provide risk estimates;

c) consider the extent to which that bank's capital requirement adequately captures the risks identified in (a) and (b) above;

d) for areas in which the capital requirement is either inadequate or does not address a risk, estimate the additional capital needed to protect that bank and its customers, in addition to any other risk mitigation action that bank plans to take;

e) consider the risk that the bank's own analyses of capital adequacy may be inaccurate and that it may suffer from management weaknesses which affect the effectiveness of its risk management and mitigation;

f) project that bank's business activities forward in detail for one year and in less detail for the next 3 to 5 years, and estimate how that bank's capital and capital requirement would alter, assuming that business develops as expected;

g) assume that business does not develop as expected and consider how that bank's capital and capital requirement would alter and what that bank's reaction to a range of adverse economic scenarios might be;

h) document the results obtained from the analyses in (b), (d), (f), and (g) above in a detailed report for that bank's top management / board of directors; and

i) ensure that systems and processes are in place to review the accuracy of the estimates made in (b), (d), (f) and (g) (i.e., systems for back testing) vis-à-vis the performance / actuals.

(C) In relation to a bank that define its activities and risk management practices as **complex**, in carrying out its ICAAP, that bank could follow a proportional approach to that bank's ICAAP which should cover the issues identified at (a) to (d) in paragraph (B) above, but is likely also to involve the use of models, most of which will be integrated into its day-to-day management and operations.

Models of the kind referred to above may be linked so as to generate an overall estimate of the amount of capital that a bank considers appropriate to hold for its business needs. A bank may also link such models to generate information on the economic capital considered desirable for that bank. A model which a bank uses to generate its target amount of economic capital is known as an economic capital model (ECM). Economic capital is the target amount of capital which optimises the return for a bank's stakeholders for a desired level of risk. For example, a bank is likely to use value-at-risk (VaR) models for market risk, advanced modelling approaches for credit risk and, possibly, advanced measurement approaches for operational risk. A bank might also use economic scenario generators to model stochastically its business forecasts and risks. However, the advanced approaches envisaged in the Basel II Framework are not currently permitted by the RBI and the banks would need prior approval of the RBI for migrating to the advanced approaches.

Such a bank is also likely to be part of a group and to be operating internationally. There is likely to be centralised control over the models used throughout the group, the assumptions made and their overall calibration.

12.7 Regular independent review and validation

The ICAAP should be subject to regular and independent review through an internal or external audit process, separately from the SREP conducted by the RBI, to ensure that the ICAAP is comprehensive and proportionate to the nature, scope, scale and level of complexity of the bank's activities so that it accurately reflects the major sources of risk that the bank is exposed to. A bank shall ensure appropriate and effective internal control structures, particularly in regard to the risk management processes, in order to monitor the bank's continued compliance with internal policies and procedures. As a minimum, a bank shall conduct periodic reviews of its risk management processes, which should ensure:

a) the integrity, accuracy, and reasonableness of the processes;

b) the appropriateness of the bank's capital assessment process based on the nature, scope, scale and complexity of the bank's activities;

c) the timely identification of any concentration risk;

d) the accuracy and completeness of any data inputs into the bank's capital assessment process;

e) the reasonableness and validity of any assumptions and scenarios used in the capital assessment process;

f) that the bank conducts appropriate stress testing;

12.8 ICAAP to be a forward-looking process

The ICAAP should be forward looking in nature, and thus, should take into account the expected / estimated future developments such as strategic plans, macro economic factors, etc., including the likely future constraints in the availability and use of capital. As a minimum, the management of a bank shall develop and maintain an appropriate strategy that would ensure that the bank maintains adequate capital commensurate with the nature, scope, scale, complexity and risks inherent in the bank's on-balance-sheet and off-balance-sheet activities, and should demonstrate as to how the strategy dovetails with the macro-economic factors.

Thus, banks shall have an explicit, Board-approved capital plan which should spell out the institution's objectives in regard to level of capital, the time horizon for achieving those objectives, and in broad terms, the capital planning process and the allocate responsibilities for that process. The plan shall outline:

a) the bank's capital needs;

b) the bank's anticipated capital utilisation;

c) the bank's desired level of capital;

d) limits related to capital;

e) a general contingency plan for dealing with divergences and unexpected events.

12.9 ICAAP to be a risk-based process

The adequacy of a bank's capital is a function of its risk profile. Banks shall, therefore, set their capital targets which are consistent with their risk profile and operating environment. As a minimum, a bank shall have in place a sound ICAAP, which shall include all **material** risk exposures incurred by the bank. There are some types of risks (such as reputation risk and strategic risk) which are less readily quantifiable; for such risks, the focus of the ICAAP should be more on qualitative assessment, risk management and mitigation than on

quantification of such risks. Banks' ICAAP document shall clearly indicate for which risks a quantitative measure is considered warranted, and for which risks a qualitative measure is considered to be the correct approach.

12.10 ICAAP to include stress tests and scenario analyses

As part of the ICAAP, the management of a bank shall, as a minimum, conduct relevant stress tests periodically, particularly in respect of the bank's material risk exposures, in order to evaluate the potential vulnerability of the bank to some unlikely but plausible events or movements in the market conditions that could have an adverse impact on the bank. The use of stress testing framework can provide a bank's management a better understanding of the bank's likely exposure in extreme circumstances. In this context, the attention is also invited to the RBI circular DBOD.No.BP.BC.101/21.04.103/2006-07 and DBOD.BP.BC.No. 75/21.04.103/2013-14 dated June 26, 2007 and December 2, 2013, respectively on stress testing wherein the banks were advised to put in place appropriate stress testing policies and stress test frameworks, incorporating "sensitivity tests" and "scenario tests", for the various risk factors, by September 30, 2007, on a trial / pilot basis and to operationalise formal stress testing frameworks from March 31, 2008. The banks are urged to take necessary measures for implementing an appropriate formal stress testing framework by the date specified which would also meet the stress testing requirements under the ICAAP of the banks.

12.11 Use of capital models for ICAAP

While the RBI does not expect the banks to use complex and sophisticated econometric models for internal assessment of their capital requirements, and there is no RBI-mandated requirement for adopting such models, the banks, with international presence, were required, in terms of paragraph 17 of our Circular DBOD.No.BP(SC).BC. 98/21.04.103/99 dated October 7, 1999, to develop suitable methodologies, by March 31, 2001, for estimating and maintaining economic capital. However, some of the banks, which have relatively complex operations and are adequately equipped in this regard, may like to place reliance on such models as part of their ICAAP. While there is no single prescribed approach as to how a bank should develop its capital model, a bank adopting a model-based approach to its ICAAP shall be able to, *inter alia,* demonstrate:

a) Well documented model specifications, including the methodology / mechanics and the assumptions underpinning the working of the model;

b) The extent of reliance on the historical data in the model and the system of back testing to be carried out to assess the validity of the outputs of the model vis-à-vis the actual outcomes;

c) A robust system for independent validation of the model inputs and outputs;

d) A system of stress testing the model to establish that the model remains valid even under extreme conditions / assumptions;

e) The level of confidence assigned to the model outputs and its linkage to the bank's business strategy;

f) The adequacy of the requisite skills and resources within the banks to operate, maintain and develop the model.

13 Select operational aspects of the ICAAP

This Section outlines in somewhat greater detail the scope of the risk universe expected to be normally captured by the banks in their ICAAP.

13.1 Identifying and measuring material risks in ICAAP

The first objective of an ICAAP is to identify all material risks. Risks that can be reliably measured and quantified should be treated as rigorously as data and methods allow. The appropriate means and methods to measure and quantify those material risks are likely to vary across banks.

Some of the risks to which banks are exposed include credit risk, market risk, operational risk, interest rate risk in the banking book, credit concentration risk and liquidity risk (as briefly outlined below). The RBI has issued guidelines to the banks on asset liability management, management of country risk, credit risk, operational risk, etc., from time to time. A bank's risk management processes, including its **ICAAP, should, therefore, be consistent with this existing body of guidance**. However, certain other risks, such as reputational risk and business or strategic risk, may be equally important for a bank and, in such cases, should be given same consideration as the more formally defined risk types. For example, a bank may be engaged in businesses for which periodic fluctuations in activity levels, combined with relatively high fixed costs, have the potential to create unanticipated losses that must be supported by adequate capital. Additionally, a bank might be involved in strategic activities (such as expanding business lines or engaging in acquisitions) that introduce significant elements of risk and for which additional capital would be appropriate.

Additionally, if banks employ risk mitigation techniques, they should understand the risk to be mitigated and the potential effects of that mitigation, reckoning its enforceability and effectiveness, on the risk profile of the bank.

13.2 Credit risk: A bank should have the ability to assess credit risk at the portfolio level as well as at the exposure or counterparty level. Banks should be particularly attentive to identifying credit risk concentrations and ensuring that their effects are adequately assessed.

This should include consideration of various types of dependence among exposures, incorporating the credit risk effects of extreme outcomes, stress events, and shocks to the assumptions made about the portfolio and exposure behavior. Banks should also carefully assess concentrations in counterparty credit exposures, including counterparty credit risk exposures emanating from trading in less liquid markets, and determine the effect that these might have on the bank's capital adequacy.

13.3 Market risk: A bank should be able to identify risks in trading activities resulting from a movement in market prices. This determination should consider factors such as illiquidity of instruments, concentrated positions, one-way markets, non-linear/deep out-of-the money positions, and the potential for significant shifts in correlations. Exercises that incorporate extreme events and shocks should also be tailored to capture key portfolio vulnerabilities to the relevant market developments.

13.4 Operational risk: A bank should be able to assess the potential risks resulting from inadequate or failed internal processes, people, and systems, as well as from events external to the bank. This assessment should include the effects of extreme events and shocks relating to operational risk. Events could include a sudden increase in failed processes across business units or a significant incidence of failed internal controls.

13.5 Interest rate risk in the banking book (IRRBB):A bank should identify the risks associated with the changing interest rates on its on-balance sheet and off-balance sheet exposures in the banking book from both, a short-term and long-term perspective. This might include the impact of changes due to parallel shocks, yield curve twists, yield curve inversions, changes in the relationships of rates (basis risk), and other relevant scenarios. The bank should be able to support its assumptions about the behavioral characteristics of its non-maturity deposits and other assets and liabilities, especially those exposures characterized by embedded optionality. Given the uncertainty in such assumptions, stress testing and scenario analysis should be used in the analysis of interest rate risks. While there could be several approaches to measurement of IRRBB, an **illustrative** approach for measurement of IRRBB is furnished at **Annex - 8.** The banks would, however, be free to adopt any other variant of these approaches or entirely different methodology for computing / quantifying the IRRBB provided the technique is based on objective, verifiable and transparent methodology and criteria.

13.6 Credit concentration risk: A risk concentration is any single exposure or a group of exposures with the potential to produce losses large enough (relative to a bank's capital,

total assets, or overall risk level) to threaten a bank's health or ability to maintain its core operations. Risk concentrations have arguably been the single most important cause of major problems in banks. Concentration risk resulting from concentrated portfolios could be significant for most of the banks.

The following **qualitative criteria** could be adopted by banks to demonstrate that the credit concentration risk is being adequately addressed:

a) While assessing the exposure to concentration risk, a bank should keep in view that the calculations of Basel II framework are based on the assumption that a bank is well diversified.

b) While the banks' single borrower exposures, the group borrower exposures and capital market exposures are regulated by the exposure norms prescribed by the RBI, there could be concentrations in these portfolios as well. In assessing the degree of credit concentration, therefore, a bank shall consider not only the foregoing exposures but also consider the degree of credit concentration in a particular economic sector or geographical area. Banks with operational concentration in a few geographical regions, by virtue of the pattern of their branch network, shall also consider the impact of adverse economic developments in that region, and their impact on the asset quality.

c) The performance of specialised portfolios may, in some instances, also depend on key individuals / employees of the bank. Such a situation could exacerbate the concentration risk because the skills of those individuals, in part, limit the risk arising from a concentrated portfolio. The impact of such key employees / individuals on the concentration risk is likely to be correspondingly greater in smaller banks. In developing its stress tests and scenario analyses, a bank shall, therefore, also consider the impact of losing key personnel on its ability to operate normally, as well as the direct impact on its revenues.

As regards the **quantitative criteria** to be used to ensure that credit concentration risk is being adequately addressed, the credit concentration risk calculations shall be performed at the counterparty level (i.e., large exposures), at the portfolio level (i.e., sectoral and geographical concentrations) and at the asset class level (i.e., liability and assets concentrations). In this regard, a reference is invited to paragraph 3.2.2 (c) of the Annex to our Circular DBOD.No.BP.(SC).BC.98/ 21.04.103/ 99 dated October 7, 1999 regarding Risk Management System in Banks in terms of which certain prudential limits have been stipulated in regard to 'substantial exposures' of banks. As a prudent practice, banks may like to ensure that their aggregate exposure (including non-funded exposures) to all 'large borrowers' does not exceed at any time, 800 per cent of their 'capital funds' (as defined for

the purpose of extant exposure norms of the RBI). The 'large borrower' for this purpose could be taken to mean as one to whom the bank's aggregate exposure (funded as well as non-funded) exceeds 10 per cent of the bank's capital funds. The banks would also be well advised to pay special attention to their industry-wise exposures where their exposure to a particular industry exceeds 10 per cent of their aggregate credit exposure (including investment exposure) to the industrial sector as a whole.

There could be several approaches to the measurement of credit concentration the banks' portfolio. One of the approaches commonly used for the purpose involves computation of Herfindahl-Hirshman Index (HHI). It may please be noted that the HHI as a measure of concentration risk is only one of the possible methods and the banks would be free to adopt any other appropriate method for the purpose, which has objective and transparent criteria for such measurement.

Risk concentrations should be analysed on both solo and consolidated basis.[40] Risk concentrations should be viewed in the context of a single or a set of closely related risk-drivers that may have different impacts on a bank. These concentrations should be integrated when assessing a bank's overall risk exposure. A bank should consider concentrations that are based on common or correlated risk factors that reflect more subtle or more situation-specific factors than traditional concentrations, such as correlations between market, credit risks and liquidity risk.

The growth of market-based intermediation has increased the possibility that different areas of a bank are exposed to a common set of products, risk factors or counterparties. This has created new challenges for risk aggregation and concentration management. Through its risk management processes and MIS, a bank should be able to identify and aggregate similar risk exposures across the firm, including across legal entities, asset types (e.g. loans, derivatives and structured products), risk areas (e.g. the trading book) and geographic regions. In addition to the situations described in para 13.6 (b) above, risk concentrations can arise include:

- exposures to a single counterparty, or group of connected counterparties ;
- exposures to both regulated and non-regulated financial institutions such as hedge funds and private equity firms;
- trading exposures/market risk;

[40] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

- exposures to counterparties (eg hedge funds and hedge counterparties) through the execution or processing of transactions (either product or service);

- funding sources;

- assets that are held in the banking book or trading book, such as loans, derivatives and structured products; and

- off-balance sheet exposures, including guarantees, liquidity lines and other commitments.

Risk concentrations can also arise through a combination of exposures across these broad categories. A bank should have an understanding of its firm-wide risk concentrations resulting from similar exposures across its different business lines. Examples of such business lines include subprime exposure in lending books; counterparty exposures; conduit exposures and SIVs; contractual and non-contractual exposures; trading activities; and underwriting pipelines. While risk concentrations often arise due to direct exposures to borrowers and obligors, a bank may also incur a concentration to a particular asset type indirectly through investments backed by such assets (e.g. collateralised debt obligations – CDOs), as well as exposure to protection providers guaranteeing the performance of the specific asset type (e.g. monoline insurers). In this context, it may be noted that while banks in India are presently not allowed to pursue most of such business lines/assume most of such exposures without RBI's permission, their foreign branches may have such exposures booked before issuance of circular DBOD.No. BP.BC.89/21.04.141/2008-09 dated December 1, 2008. A bank should have in place adequate, systematic procedures for identifying high correlation between the creditworthiness of a protection provider and the obligors of the underlying exposures due to their performance being dependent on common factors beyond systematic risk (i.e. "wrong way risk").

Procedures should be in place to communicate risk concentrations to the board of directors and senior management in a manner that clearly indicates where in the organisation each segment of a risk concentration resides. A bank should have credible risk mitigation strategies in place that have senior management approval. This may include altering business strategies, reducing limits or increasing capital buffers in line with the desired risk profile. While it implements risk mitigation strategies, the bank should be aware of possible concentrations that might arise as a result of employing risk mitigation techniques.

Banks should employ a number of techniques, as appropriate, to measure risk

concentrations. These techniques include shocks to various risk factors; use of business level and firm-wide scenarios; and the use of integrated stress testing and economic capital models. Identified concentrations should be measured in a number of ways, including for example consideration of gross versus net exposures, use of notional amounts, and analysis of exposures with and without counterparty hedges. A bank should establish internal position limits for concentrations to which it may be exposed. When conducting periodic stress tests a bank should incorporate all major risk concentrations and identify and respond to potential changes in market conditions that could adversely impact their performance and capital adequacy.

The assessment of such risks under a bank's ICAAP and the supervisory review process should not be a mechanical process, but one in which each bank determines, depending on its business model, its own specific vulnerabilities. An appropriate level of capital for risk concentrations should be incorporated in a bank's ICAAP, as well as in Pillar 2 assessments. Each bank should discuss such issues with its supervisor.

A bank should have in place effective internal policies, systems and controls to identify, measure, monitor, manage, control and mitigate its risk concentrations in a timely manner. Not only should normal market conditions be considered, but also the potential build-up of concentrations under stressed market conditions, economic downturns and periods of general market illiquidity. In addition, the bank should assess scenarios that consider possible concentrations arising from contractual and non-contractual contingent claims. The scenarios should also combine the potential build-up of pipeline exposures together with the loss of market liquidity and a significant decline in asset values.

13.7 Liquidity risk:A bank should understand the risks resulting from its inability to meet its obligations as they come due, because of difficulty in liquidating assets (market liquidity risk) or in obtaining adequate funding (funding liquidity risk). This assessment should include analysis of sources and uses of funds, an understanding of the funding markets in which the bank operates, and an assessment of the efficacy of a contingency funding plan for events that could arise.

The recent financial market crisis underscores the importance of assessing the potential impact of liquidity risk on capital adequacy in a bank's ICAAP[41]. Senior management should consider the relationship between liquidity and capital since liquidity risk can impact capital

[41] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

adequacy which, in turn, can aggravate a bank's liquidity profile.

In September 2008, the Basel Committee on Banking Supervision published Principles for Sound Liquidity Risk Management and Supervision, which stresses that banks need to have strong liquidity cushions in order to weather prolonged periods of financial market stress and illiquidity. The standards address many of the shortcomings experienced by the banking sector during the market turmoil that began in mid-2007, including those related to stress testing practices contingency funding plans, management of on- and off-balance sheet activity and contingent commitments.

This liquidity guidance outlines requirements for sound practices for the liquidity risk management of banks. The fundamental principle is that a bank should both assiduously manage its liquidity risk and also maintain sufficient liquidity to withstand a range of stress events. Liquidity is a critical element of a bank's resilience to stress, and as such, a bank should maintain a liquidity cushion, made up of unencumbered, high quality liquid assets, to protect against liquidity stress events, including potential losses of unsecured and typically available secured funding sources.

A key element in the management of liquidity risk is the need for strong governance of liquidity risk, including the setting of a liquidity risk tolerance by the board. The risk tolerance should be communicated throughout the bank and reflected in the strategy and policies that senior management set to manage liquidity risk. Another facet of liquidity risk management is that a bank should appropriately price the costs, benefits and risks of liquidity into the internal pricing, performance measurement, and new product approval process of all significant business activities.

A bank is expected to be able to thoroughly identify, measure and control liquidity risks, especially with regard to complex products and contingent commitments (both contractual and non-contractual). This process should involve the ability to project cash flows arising from assets, liabilities and off-balance sheet items over various time horizons, and should ensure diversification in both the tenor and source of funding. A bank should utilise early warning indicators to identify the emergence of increased risk or vulnerabilities in its liquidity position or funding needs. It should have the ability to control liquidity risk exposure and funding needs, regardless of its organisation structure, within and across legal entities, business lines, and currencies, taking into account any legal, regulatory and operational limitations to the transferability of liquidity.

A bank's failure to effectively manage intraday liquidity could leave it unable to meet its payment obligations at the time expected, which could lead to liquidity dislocations that cascade quickly across many systems and institutions. As such, the bank's management of intraday liquidity risks should be considered as a crucial part of liquidity risk management. It should also actively manage its collateral positions and have the ability to calculate all of its collateral positions.

While banks typically manage liquidity under "normal" circumstances, they should also be prepared to manage liquidity under "stressed" conditions. A bank should perform stress tests or scenario analyses on a regular basis in order to identify and quantify their exposures to possible future liquidity stresses, analysing possible impacts on the institutions' cash flows, liquidity positions, profitability, and solvency. The results of these stress tests should be discussed thoroughly by management, and based on this discussion, should form the basis for taking remedial or mitigating actions to limit the bank's exposures, build up a liquidity cushion, and adjust its liquidity profile to fit its risk tolerance. The results of stress tests should also play a key role in shaping the bank's contingency funding planning, which should outline policies for managing a range of stress events and clearly sets out strategies for addressing liquidity shortfalls in emergency situations.

As public disclosure increases certainty in the market, improves transparency, facilitates valuation, and strengthens market discipline, it is important that banks publicly disclose information on a regular basis that enables market participants to make informed decisions about the soundness of their liquidity risk management framework and liquidity position.

13.8 Off-Balance Sheet Exposures and SecuritisationRisk

Banks' use of securitisation has grown dramatically over the last several years. It has been used as an alternative source of funding and as a mechanism to transfer risk to investors. While the risks associated with securitisation are not new to banks, the recent financial turmoil highlighted unexpected aspects of credit risk, concentration risk, market risk, liquidity risk, legal risk and reputational risk, which banks failed to adequately address. For instance, a number of banks that were not contractually obligated to support sponsored securitisation structures were unwilling to allow those structures to fail due to concerns about reputational risk and future access to capital markets. The support of these structures exposed the banks to additional and unexpected credit, market and liquidity risk as they brought assets onto their balance sheets, which put significant pressure on their financial profile and capital ratios.

Weaknesses in banks' risk management of securitisation and off-balance sheet exposures resulted in large unexpected losses during the financial crisis. To help mitigate these risks, a bank's on- and off-balance sheet securitisation activities should be included in its risk management disciplines, such as product approval, risk concentration limits, and estimates of market, credit and operational risk.

In light of the wide range of risks arising from securitisation activities, which can be compounded by rapid innovation in securitisation techniques and instruments, minimum capital requirements calculated under Pillar 1 are often insufficient. All risks arising from securitisation, particularly those that are not fully captured under Pillar 1, should be addressed in a bank's ICAAP. These risks include:

- Credit, market, liquidity and reputational risk of each exposure;
- Potential delinquencies and losses on the underlying securitised exposures;
- Exposures from credit lines or liquidity facilities to special purpose entities;
- Exposures from guarantees provided by monolines and other third parties.

Securitisation exposures should be included in the bank's MIS to help ensure that senior management understands the implications of such exposures for liquidity, earnings, risk concentration and capital. More specifically, a bank should have the necessary processes in place to capture in a timely manner updated information on securitisation transactions including market data, if available, and updated performance data from the securitisation trustee or servicer.

13.9 Reputational Risk and Implicit Support

Reputational risk can be defined as the risk arising from negative perception on the part of customers, counterparties, shareholders, investors, debt-holders, market analysts, other relevant parties or regulators that can adversely affect a bank's ability to maintain existing, or establish new, business relationships and continued access to sources of funding (eg through the interbank or securitisation markets). Reputational risk is multidimensional and reflects the perception of other market participants. Furthermore, it exists throughout the organisation and exposure to reputational risk is essentially a function of the adequacy of the bank's internal risk management processes, as well as the manner and efficiency with which management responds to external influences on bank-related transactions.

Reputational risk can lead to the provision of implicit support, which may give rise to credit,

liquidity, market and legal risk – all of which can have a negative impact on a bank's earnings, liquidity and capital position. A bank should identify potential sources of reputational risk to which it is exposed. These include the bank's business lines, liabilities, affiliated operations, off-balance sheet vehicles and the markets in which it operates. The risks that arise should be incorporated into the bank's risk management processes and appropriately addressed in its ICAAP and liquidity contingency plans.

Prior to the 2007 upheaval, many banks failed to recognise the reputational risk associated with their off-balance sheet vehicles. In stressed conditions some firms went beyond their contractual obligations to support their sponsored securitisations and off balance sheet vehicles. A bank should incorporate the exposures that could give rise to reputational risk into its assessments of whether the requirements under the securitisation framework have been met and the potential adverse impact of providing implicit support.

Reputational risk may arise, for example, from a bank's sponsorship of securitisation structures such as ABCP conduits and SIVs, as well as from the sale of credit exposures to securitisation trusts. It may also arise from a bank's involvement in asset or funds management, particularly when financial instruments are issued by owned or sponsored entities and are distributed to the customers of the sponsoring bank. In the event that the instruments were not correctly priced or the main risk drivers not adequately disclosed, a sponsor may feel some responsibility to its customers, or be economically compelled, to cover any losses. Reputational risk also arises when a bank sponsors activities such as money market mutual funds, in-house hedge funds and real estate investment trusts. In these cases, a bank may decide to support the value of shares/units held by investors even though is not contractually required to provide the support.

The financial market crisis has provided several examples of banks providing financial support that exceeded their contractual obligations. In order to preserve their reputation, some banks felt compelled to provide liquidity support to their SIVs, which was beyond their contractual obligations. In other cases, banks purchased ABCP issued by vehicles they sponsored in order to maintain market liquidity. As a result, these banks assumed additional liquidity and credit risks, and also put pressure on capital ratios.

Reputational risk also may affect a bank's liabilities, since market confidence and a bank's ability to fund its business are closely related to its reputation. For instance, to avoid damaging its reputation, a bank may call its liabilities even though this might negatively affect its liquidity profile. This is particularly true for liabilities that are components of

regulatory capital, such as hybrid/subordinated debt. In such cases, a bank's capital position is likely to suffer.

Bank management should have appropriate policies in place to identify sources of reputational risk when entering new markets, products or lines of activities. In addition, a bank's stress testing procedures should take account of reputational risk so management has a firm understanding of the consequences and second round effects of reputational risk.

Once a bank identifies potential exposures arising from reputational concerns, it should measure the amount of support it might have to provide (including implicit support of securitisations) or losses it might experience under adverse market conditions. In particular, in order to avoid reputational damages and to maintain market confidence, a bank should develop methodologies to measure as precisely as possible the effect of reputational risk in terms of other risk types (e.g. credit, liquidity, market or operational risk) to which it may be exposed. This could be accomplished by including reputational risk scenarios in regular stress tests. For instance, non-contractual off-balance sheet exposures could be included in the stress tests to determine the effect on a bank's credit, market and liquidity risk profiles. Methodologies also could include comparing the actual amount of exposure carried on the balance sheet versus the maximum exposure amount held off-balance sheet, that is, the potential amount to which the bank could be exposed.

A bank should pay particular attention to the effects of reputational risk on its overall liquidity position, taking into account both possible increases in the asset side of the balance sheet and possible restrictions on funding, should the loss of reputation result in various counterparties' loss of confidence.

In contrast to contractual credit exposures, such as guarantees, implicit support is a more subtle form of exposure. Implicit support arises when a bank provides post-sale support to a securitisation transaction in excess of any contractual obligation. Implicit support may include any letter of comfort provided by the originator in respect of the present or future liabilities of the SPV. Such non-contractual support exposes a bank to the risk of loss, such as loss arising from deterioration in the credit quality of the securitisation's underlying assets.

By providing implicit support, a bank signals to the market that all of the risks inherent in the securitised assets are still held by the organisation and, in effect, had not been transferred. Since the risk arising from the potential provision of implicit support is not captured ex ante under Pillar 1, it must be considered as part of the Pillar 2 process. In addition, the

processes for approving new products or strategic initiatives should consider the potential provision of implicit support and should be incorporated in a bank's ICAAP.

13.10 Risk Evaluation and Management

A bank should conduct analyses of the underlying risks when investing in the structured products (permitted by RBI) and must not solely rely on the external credit ratings assigned to securitisation exposures by the credit rating agencies. A bank should be aware that external ratings are a useful starting point for credit analysis, but are no substitute for full and proper understanding of the underlying risk, especially where ratings for certain asset classes have a short history or have been shown to be volatile. Moreover, a bank also should conduct credit analysis of the securitisation exposure at acquisition and on an ongoing basis. It should also have in place the necessary quantitative tools, valuation models and stress tests of sufficient sophistication to reliably assess all relevant risks.

When assessing securitisation exposures, a bank should ensure that it fully understands the credit quality and risk characteristics of the underlying exposures in structured credit transactions, including any risk concentrations. In addition, a bank should review the maturity of the exposures underlying structured credit transactions relative to the issued liabilities in order to assess potential maturity mismatches.

A bank should track credit risk in securitisation exposures at the transaction level and across securitisations exposures within each business line and across business lines. It should produce reliable measures of aggregate risk. A bank also should track all meaningful concentrations in securitisation exposures, such as name, product or sector concentrations, and feed this information to firm-wide risk aggregation systems that track, for example, credit exposure to a particular obligor.

A bank's own assessment of risk needs to be based on a comprehensive understanding of the structure of the securitisation transaction. It should identify the various types of triggers, credit events and other legal provisions that may affect the performance of its on- and off-balance sheet exposures and integrate these triggers and provisions into its funding/liquidity, credit and balance sheet management. The impact of the events or triggers on a bank's liquidity and capital position should also be considered.

Banks globally, either underestimated or did not anticipate that a market-wide disruption could prevent them from securitising warehoused or pipeline exposures and did not

anticipate the effect this could have on liquidity, earnings and capital adequacy. As part of its risk management processes, a bank should consider and, where appropriate, mark-to-market warehoused positions, as well as those in the pipeline, regardless of the probability of securitising the exposures. It should consider scenarios which may prevent it from securitising its assets as part of its stress testing and identify the potential effect of such exposures on its liquidity, earnings and capital adequacy.

A bank should develop prudent contingency plans specifying how it would respond to funding, capital and other pressures that arise when access to securitisation markets is reduced. The contingency plans should also address how the bank would address valuation challenges for potentially illiquid positions held for sale or for trading. The risk measures, stress testing results and contingency plans should be incorporated into the bank's risk management processes and its ICAAP, and should result in an appropriate level of capital under Pillar 2 in excess of the minimum requirements.

A bank that employs risk mitigation techniques should fully understand the risks to be mitigated, the potential effects of that mitigation and whether or not the mitigation is fully effective. This is to help ensure that the bank does not understate the true risk in its assessment of capital. In particular, it should consider whether it would provide support to the securitisation structures in stressed scenarios due to the reliance on securitisation as a funding tool.

13.11 Valuation Practices

The characteristics of complex structured products, including securitisation transactions, make their valuation inherently difficult due, in part, to the absence of active and liquid markets, the complexity and uniqueness of the cash waterfalls, and the links between valuations and underlying risk factors. As mentioned earlier, banks in India are presently not allowed to assume such exposures without RBI's permission. However, their foreign branches may have such exposures booked before issuance of circular DBOD.No. BP.BC.89/21.04.141/2008-09 dated December 1, 2008. The absence of a transparent price from a liquid market means that the valuation must rely on models or proxy-pricing methodologies, as well as on expert judgment. The outputs of such models and processes are highly sensitive to the inputs and parameter assumptions adopted, which may themselves be subject to estimation error and uncertainty. Moreover, calibration of the valuation methodologies is often complicated by the lack of readily available benchmarks. Therefore, a bank is expected to have adequate governance structures and control

processes for fair valuing exposures for risk management and financial reporting purposes. The valuation governance structures and related processes should be embedded in the overall governance structure of the bank, and consistent for both risk management and reporting purposes. The governance structures and processes are expected to explicitly cover the role of the board and senior management. In addition, the board should receive reports from senior management on the valuation oversight and valuation model performance issues that are brought to senior management for resolution, as well as all significant changes to valuation policies.

A bank should also have clear and robust governance structures for the production, assignment and verification of financial instrument valuations. Policies should ensure that the approvals of all valuation methodologies are well documented. In addition, policies and procedures should set forth the range of acceptable practices for the initial pricing, marking-to-market/model, valuation adjustments and periodic independent revaluation. New product approval processes should include all internal stakeholders relevant to risk measurement, risk control, and the assignment and verification of valuations of financial instruments.

A bank's control processes for measuring and reporting valuations should be consistently applied across the firm and integrated with risk measurement and management processes. In particular, valuation controls should be applied consistently across similar instruments (risks) and consistent across business lines (books). These controls should be subject to internal audit. Regardless of the booking location of a new product, reviews and approval of valuation methodologies must be guided by a minimum set of considerations. Furthermore, the valuation/new product approval process should be supported by a transparent, well-documented inventory of acceptable valuation methodologies that are specific to products and businesses.

In order to establish and verify valuations for instruments and transactions in which it engages, a bank must have adequate capacity, including during periods of stress. This capacity should be commensurate with the importance, riskiness and size of these exposures in the context of the business profile of the institution. In addition, for those exposures that represent material risk, a bank is expected to have the capacity to produce valuations using alternative methods in the event that primary inputs and approaches become unreliable, unavailable or not relevant due to market discontinuities or illiquidity. A bank must test and review the performance of its models under stress conditions so that it understands the limitations of the models under stress conditions.

The relevance and reliability of valuations is directly related to the quality and reliability of the inputs. A bank is expected to apply the accounting guidance provided to determine the relevant market information and other factors likely to have a material effect on an instrument's fair value when selecting the appropriate inputs to use in the valuation process. Where values are determined to be in an active market, a bank should maximise the use of relevant observable inputs and minimise the use of unobservable inputs when estimating fair value using a valuation technique. However, where a market is deemed inactive, observable inputs or transactions may not be relevant, such as in a forced liquidation or distress sale, or transactions may not be observable, such as when markets are inactive. In such cases, accounting fair value guidance provides assistance on what should be considered, but may not be determinative. In assessing whether a source is reliable and relevant, a bank should consider, among other things:

- the frequency and availability of the prices/quotes;
- whether those prices represent actual regularly occurring transactions on an arm's length basis;
- the breadth of the distribution of the data and whether it is generally available to the relevant participants in the market;
- the timeliness of the information relative to the frequency of valuations;
- the number of independent sources that produce the quotes/prices;
- whether the quotes/prices are supported by actual transactions;
- the maturity of the market; and
- the similarity between the financial instrument sold in a transaction and the instrument held by the institution.

A bank’s external reporting should provide timely, relevant, reliable and decision useful information that promotes transparency. Senior management should consider whether disclosures around valuation uncertainty can be made more meaningful. For instance, the bank may describe the modelling techniques and the instruments to which they are applied; the sensitivity of fair values to modelling inputs and assumptions; and the impact of stress scenarios on valuations. A bank should regularly review its disclosure policies to ensure that the information disclosed continues to be relevant to its business model and products and to current market conditions.

13.12 Sound Stress Testing Practices

Stress testing is an important tool that is used by banks as part of their internal risk management that alerts bank management to adverse unexpected outcomes related to a broad variety of risks, and provides an indication to banks of how much capital might be needed to absorb losses should large shocks occur. Moreover, stress testing supplements other risk management approaches and measures. It plays a particularly important role in:

- providing forward looking assessments of risk,
- overcoming limitations of models and historical data,
- supporting internal and external communication,
- feeding into capital and liquidity planning procedures,
- informing the setting of a banks' risk tolerance,
- addressing existing or potential, firm-wide risk concentrations, and
- facilitating the development of risk mitigation or contingency plans across a range of stressed conditions.

Stress testing is especially important after long periods of benign risk, when the fading memory of negative economic conditions can lead to complacency and the underpricing of risk, and when innovation leads to the rapid growth of new products for which there is limited or no loss data.

It should be recognised that improvements in stress testing alone cannot address all risk management weaknesses, but as part of a comprehensive approach, stress testing has a leading role to play in strengthening bank corporate governance and the resilience of individual banks and the financial system.

Stress testing should form an integral part of the overall governance and risk management culture of the bank. Board and senior management involvement in setting stress testing objectives, defining scenarios, discussing the results of stress tests, assessing potential actions and decision making is critical in ensuring the appropriate use of stress testing in banks' risk governance and capital planning. Senior management should take an active interest in the development in, and operation of, stress testing. The results of stress tests should contribute to strategic decision making and foster internal debate regarding assumptions, such as the cost, risk and speed with which new capital could be raised or that positions could be hedged or sold. Board and senior management involvement in the stress testing program is essential for its effective operation.

A bank's capital planning process should incorporate rigorous; forward looking stress testing that identifies possible events or changes in market conditions that could adversely impact the bank. Banks, under their ICAAPs should examine future capital resources and capital requirements under adverse scenarios. In particular, the results of forward-looking stress testing should be considered when evaluating the adequacy of a bank's capital buffer. Capital adequacy should be assessed under stressed conditions against a variety of capital ratios, including regulatory ratios, as well as ratios based on the bank's internal definition of capital resources. In addition, the possibility that a crisis impairs the ability of even very healthy banks to raise funds at reasonable cost should be considered.

A bank should develop methodologies to measure the effect of reputational risk in terms of other risk types, namely credit, liquidity, market and other risks that they may be exposed to in order to avoid reputational damages and in order to maintain market confidence. This could be done by including reputational risk scenarios in regular stress tests. For instance, including non-contractual off-balance sheet exposures in the stress tests to determine the effect on a bank's credit, market and liquidity risk profiles.

A bank should carefully assess the risks with respect to commitments to off-balance sheet vehicles and third-party firms related to structured credit securities and the possibility that assets will need to be taken on balance sheet for reputational reasons. Therefore, in its stress testing programme, a bank should include scenarios assessing the size and soundness of such vehicles and firms relative to its own financial, liquidity and regulatory capital positions. This analysis should include structural, solvency, liquidity and other risk issues, including the effects of covenants and triggers.

13.13 Sound Compensation Practices

Risk management must be embedded in the culture of a bank. It should be a critical focus of the CEO/Managing Director, Chief Risk Officer (CRO), senior management, trading desk and other business line heads and employees in making strategic and day-to-day decisions. For a broad and deep risk management culture to develop and be maintained over time, compensation policies must not be unduly linked to short-term accounting profit generation. Compensation policies should be linked to longer-term capital preservation and the financial strength of the firm, and should consider risk-adjusted performance measures. In addition, a bank should provide adequate disclosure regarding its compensation policies to stakeholders. Each bank's board of directors and senior management have the responsibility to mitigate the risks arising from remuneration policies in order to ensure effective firm-wide risk management.

Compensation practices at large financial institutions are one factor among many that contributed to the financial crisis that began in 2007. High short-term profits led to generous bonus payments to employees without adequate regard to the longer-term risks they imposed on their firms. These incentives amplified the excessive risk-taking that has threatened the global financial system and left firms with fewer resources to absorb losses as risks materialised. The lack of attention to risk also contributed to the large, in some cases extreme absolute level of compensation in the industry. As a result, to improve compensation practices and strengthen supervision in this area, particularly for systemically important firms, the Financial Stability Board (formerly the Financial Stability Forum) published its Principles for Sound Compensation Practices in April 2009.

A bank's board of directors must actively oversee the compensation system's design and operation, which should not be controlled primarily by the chief executive officer and management team. Relevant board members and employees must have independence and expertise in risk management and compensation. In addition, the board of directors must monitor and review the compensation system to ensure the system includes adequate controls and operates as intended. The practical operation of the system should be regularly reviewed to ensure compliance with policies and procedures. Compensation outcomes, risk measurements, and risk outcomes should be regularly reviewed for consistency with intentions.

Staff that are engaged in the financial and risk control areas must be independent, have appropriate authority, and be compensated in a manner that is independent of the business areas they oversee and commensurate with their key role in the firm. Effective independence and appropriate authority of such staff is necessary to preserve the integrity of financial and risk management's influence on incentive compensation.

Compensation must be adjusted for all types of risk so that remuneration is balanced between the profit earned and the degree of risk assumed in generating the profit. In general, both quantitative measures and human judgment should play a role in determining the appropriate risk adjustments, including those that are difficult to measure such as liquidity risk and reputation risk.

Compensation outcomes must be symmetric with risk outcomes and compensation systems should link the size of the bonus pool to the overall performance of the firm. Employees' incentive payments should be linked to the contribution of the individual and business to the

firm's overall performance.

Compensation payout schedules must be sensitive to the time horizon of risks. Profits and losses of different activities of a financial firm are realised over different periods of time. Variable compensation payments should be deferred accordingly. Payments should not be finalised over short periods where risks are realised over long periods. Management should question payouts for income that cannot be realised or whose likelihood of realisation remains uncertain at the time of payout.

The mix of cash, equity and other forms of compensation must be consistent with risk alignment. The mix will vary depending on the employee's position and role. The firm should be able to explain the rationale for its mix.

RBI will review compensation practices in a rigorous and sustained manner and deficiencies, if any, will be addressed promptly with the appropriate supervisory action.

13.14 The risk factors discussed above should not be considered an exhaustive list of those affecting any given bank. All relevant factors that present a material source of risk to capital should be incorporated in a well-developed ICAAP. Furthermore, banks should be mindful of the capital adequacy effects of concentrations that may arise within each risk type.

13.15 Quantitative and Qualitative Approaches in ICAAP

(a) All measurements of risk incorporate both quantitative and qualitative elements, but to the extent possible, a quantitative approach should form the foundation of a bank's measurement framework. In some cases, quantitative tools can include the use of large historical databases; when data are more scarce, a bank may choose to rely more heavily on the use of stress testing and scenario analyses. Banks should understand when measuring risks that measurement error always exists, and in many cases the error is itself difficult to quantify. In general, an increase in uncertainty related to modeling and business complexity should result in a larger capital cushion.

(b) Quantitative approaches that focus on most likely outcomes for budgeting, forecasting, or performance measurement purposes may not be fully applicable for capital adequacy because the ICAAP should also take less likely events into account. Stress testing and scenario analysis can be effective in gauging the consequences of outcomes that are unlikely but would have a considerable impact on safety and soundness.

(c) To the extent that risks cannot be reliably measured with quantitative tools – for

example, where measurements of risk are based on scarce data or unproven quantitative methods – qualitative tools, including experience and judgment, may be more heavily utilised. Banks should be cognisant that qualitative approaches have their own inherent biases and assumptions that affect risk assessment; accordingly, banks should recognise the biases and assumptions embedded in, and the limitations of, the qualitative approaches used.

13.16 Risk Aggregation and Diversification Effects

(a) An effective ICAAP should assess the risks across the entire bank. A bank choosing to conduct risk aggregation among various risk types or business lines should understand the challenges in such aggregation. In addition, when aggregating risks, banks should be ensure that any potential concentrations across more than one risk dimension are addressed, recognising that losses could arise in several risk dimensions at the same time, stemming from the same event or a common set of factors. For example, a localised natural disaster could generate losses from credit, market, and operational risks at the same time.

(b) In considering the possible effects of diversification, management should be systematic and rigorous in documenting decisions, and in identifying assumptions used in each level of risk aggregation. Assumptions about diversification should be supported by analysis and evidence. The bank should have systems capable of aggregating risks based on the bank's selected framework. For example, a bank calculating correlations within or among risk types should consider data quality and consistency, and the volatility of correlations over time and under stressed market conditions.

Part – C: Market Discipline

14. Guidelines for Market Discipline

14.1 General

14.1.1 The purpose of Market discipline (detailed in Pillar 3) in the Revised Framework is to complement the minimum capital requirements (detailed under Pillar 1) and the supervisory review process (detailed under Pillar 2). The aim is to encourage market discipline by developing a set of disclosure requirements which will allow market participants to assess key pieces of information on the scope of application, capital, risk exposures, risk assessment processes, and hence the capital adequacy of the institution.

14.1.2 In principle, banks' disclosures should be consistent with how senior management and the Board of directors assess and manage the risks of the bank. Under Pillar 1, banks use specified approaches/ methodologies for measuring the various risks they face and the resulting capital requirements. It is believed that providing disclosures that are based on a common framework is an effective means of informing the market about a bank's exposure to those risks and provides a consistent and comprehensive disclosure framework that enhances comparability

14.2 Achieving appropriate disclosure

14.2.1 Market discipline can contribute to a safe and sound banking environment. Hence, non-compliance with the prescribed disclosure requirements would attract a penalty, including financial penalty. However, it is not intended that direct additional capital requirements would be a response to non-disclosure, except as indicated below.

14.2.2 In addition to the general intervention measures, the Revised Framework also anticipates a role for specific measures. Where disclosure is a qualifying criterion under Pillar 1 to obtain lower risk weightings and/or to apply specific methodologies, there would be a direct sanction (not being allowed to apply the lower risk weighting or the specific methodology).

14.3 Interaction with accounting disclosures

It is recognised that the Pillar 3 disclosure framework does not conflict with requirements under accounting standards, which are broader in scope. The BCBS has taken considerable efforts to see that the narrower focus of Pillar 3, which is aimed at disclosure of bank capital adequacy, does not conflict with the broader accounting requirements. The Reserve Bank will consider future modifications to the Market Discipline disclosures as necessary in light of its ongoing monitoring of this area and industry developments.

14.4 Scope and frequency of disclosures

14.4.1 Banks, including consolidated banks, should provide all Pillar 3 disclosures, both qualitative and quantitative, as at end March each year along with the annual financial statements. With a view to enhance the ease of access to the Pillar 3 disclosures, banks may make their annual disclosures both in their annual reports as well as their respective web sites. Banks with capital funds of Rs.100 crore or more should make interim disclosures on the quantitative aspects, on a stand alone basis, on their respective websites as at end September each year. Qualitative disclosures that provide a general summary of a bank's risk management objectives and policies, reporting system and definitions may be published only on an annual basis.

14.4.2 In recognition of the increased risk sensitivity of the Revised Framework and the general trend towards more frequent reporting in capital markets, all banks with capital funds of ₹ 500 crore or more, and their significant bank subsidiaries, must disclose their Tier I capital, total capital, total required capital and Tier I ratio and total capital adequacy ratio, on a quarterly basis on their respective websites.

14.4.3 The disclosure on the websites should be made in a web page titled "Basel II Disclosures" and the link to this page should be prominently provided on the home page of the bank's website. Each of these disclosures pertaining to a financial year should be available on the websites until disclosure of the third subsequent annual (March end) disclosure[42] is made.

14.5 Validation

The disclosures in this manner should be subjected to adequate validation. For example, since information in the annual financial statements would generally be audited, the additional material published with such statements must be consistent with the audited statements. In addition, supplementary material (such as Management's Discussion and Analysis) that is published should also be subjected to sufficient scrutiny (e.g. internal control assessments, etc.) to satisfy the validation issue. If material is not published under a validation regime, for instance in a standalone report or as a section on a website, then management should ensure that appropriate verification of the information takes place, in accordance with the general disclosure principle set out below. In the light of the above,

[42] For example: Disclosures for the financial year ending March 31, 2009 (i.e., June/ September/ December 2008 and March 2009) should be available until disclosure as on March 31, 2012.

Pillar 3 disclosures will not be required to be audited by an external auditor, unless specified.

14.6 Materiality

A bank should decide which disclosures are relevant for it based on the materiality concept. Information would be regarded as material if its omission or misstatement could change or influence the assessment or decision of a user relying on that information for the purpose of making economic decisions. This definition is consistent with International Accounting Standards and with the national accounting framework. The Reserve Bank recognises the need for a qualitative judgment of whether, in light of the particular circumstances, a user of financial information would consider the item to be material (user test). The Reserve Bank does not consider it necessary to set specific thresholds for disclosure as the user test is a useful benchmark for achieving sufficient disclosure. However, with a view to facilitate smooth transition to greater disclosures as well as to promote greater comparability among the banks' Pillar 3 disclosures, the materiality thresholds have been prescribed for certain limited disclosures. Notwithstanding the above, banks are encouraged to apply the user test to these specific disclosures and where considered necessary make disclosures below the specified thresholds also.

14.7 Proprietary and confidential information

Proprietary information encompasses information (for example on products or systems), that if shared with competitors would render a bank's investment in these products/systems less valuable, and hence would undermine its competitive position. Information about customers is often confidential, in that it is provided under the terms of a legal agreement or counterparty relationship. This has an impact on what banks should reveal in terms of information about their customer base, as well as details on their internal arrangements, for instance methodologies used, parameter estimates, data etc. The Reserve Bank believes that the requirements set out below strike an appropriate balance between the need for meaningful disclosure and the protection of proprietary and confidential information.

14.8 General disclosure principle

Banks should have a formal disclosure policy approved by the Board of directors that addresses the bank's approach for determining what disclosures it will make and the internal controls over the disclosure process. In addition, banks should implement a process for assessing the appropriateness of their disclosures, including validation and frequency.

14.9 Scope of application

Pillar 3 applies at the top consolidated level of the banking group to which the Framework

applies (as indicated above under paragraph 3 Scope of Application). Disclosures related to individual banks within the groups would not generally be required to be made by the parent bank. An exception to this arises in the disclosure of Total and Tier I Capital Ratios by the top consolidated entity where an analysis of significant bank subsidiaries within the group is appropriate, in order to recognise the need for these subsidiaries to comply with the Framework and other applicable limitations on the transfer of funds or capital within the group. Pillar 3 disclosures will be required to be made by the individual banks on a standalone basis when they are not the top consolidated entity in the banking group.

14.10 Effective Date of Disclosures

The first of the disclosures as per these guidelines were required to be made as on the effective dates of migration to the revised framework by banks as applicable to them viz. March 31, 2008 or 2009.

14.11 Revisions to Pillar III[43]

14.11.1 In response to observed weaknesses in public disclosure and after a careful assessment of leading disclosure practices, Basel Committee on Banking Supervision decided to revise the current Pillar 3 requirements. Banks are expected to comply with the revised requirements by March 31, 2010. These enhancements also respond to the Financial Stability Board's recommendations for strengthened Pillar 3 requirements and draw upon the Senior Supervisors Group's analysis of disclosure practices.

14.11.2. The Pillar 3 revisions include disclosure requirements that are not specifically required to compute capital requirements under Pillar 1. This information, however, will help market participants to better understand the overall risk profile of an institution. These enhanced disclosure requirements will help to avoid a recurrence of market uncertainties about the strength of banks' balance sheets related to their securitisation activities.

14.11.3. It may be noted that beyond disclosure requirements as set forth under New Capital Adequacy Framework, banks are responsible for conveying their actual risk profile to market participants. The information banks disclose must be adequate to fulfill this objective.

14.11.4. Banks operating in India should make additional disclosures in the following areas:

(i) Securitisation exposures in the trading book;

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[43] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

(ii) Sponsorship of off-balance sheet vehicles;

(iii) Valuation with regard to securitisation exposures; and

(iv) Pipeline and warehousing risks with regard to securitisation exposures

14.12 The disclosure requirements

The following sections set out in tabular form are the disclosure requirements under Pillar 3. Additional definitions and explanations are provided in a series of footnotes.

Table DF – 1: Scope of Application

Qualitative Disclosures (a) The name of the top bank in the group to which the Framework applies. (b) An outline of differences in the basis of consolidation for accounting and regulatory purposes, with a brief description of the entities [44] within the group (i) that are fully consolidated;[45] (ii) that are pro-rata consolidated;[46] (iii) that are given a deduction treatment; and (iv) that are neither consolidated nor deducted (e.g. where the investment is risk-weighted).
Quantitative Disclosures (c) The aggregate amount of capital deficiencies[47] in all subsidiaries not included in the consolidation i.e. that are deducted and the name(s) of such subsidiaries. (d) The aggregate amounts (e.g. current book value) of the bank's total interests in insurance entities, which are risk-weighted [48] as well as their name, their country of incorporation or residence, the proportion of ownership interest and, if different, the proportion of voting power in these entities. In addition, indicate the quantitative impact on regulatory capital of using this method versus using the deduction.

[44] Entity = securities, insurance and other financial subsidiaries, commercial subsidiaries, significant minority equity investments in insurance, financial and commercial entities.

[45] viz. subsidiaries as in consolidated accounting, e.g. AS 21.

[46] viz. Joint ventures in consolidated accounting, e.g. AS 27.

[47] A capital deficiency is the amount by which actual capital is less than the regulatory capital requirement. Any deficiencies which have been deducted on a group level in addition to the investment in such subsidiaries are not to be included in the aggregate capital deficiency.

[48] See paragraph 3

Table DF – 2 : Capital Structure

Qualitative Disclosures (a) Summary information on the terms and conditions of the main features of all capital instruments, especially in the case of capital instruments eligible for inclusion in Tier I or in Upper Tier II.
Quantitative Disclosures (b) The amount of Tier I capital, with separate disclosure of: • paid-up share capital; • reserves; • innovative instruments; [49] • other capital instruments; • amounts deducted from Tier I capital, including goodwill and investments. (c) The total amount of Tier II capital (net of deductions from Tier II capital). (d) Debt capital instruments eligible for inclusion in Upper Tier II capital • Total amount outstanding • Of which amount raised during the current year • Amount eligible to be reckoned as capital funds (e) Subordinated debt eligible for inclusion in Lower Tier II capital • Total amount outstanding • Of which amount raised during the current year • Amount eligible to be reckoned as capital funds (f) Other deductions from capital, if any. (g) Total eligible capital.

Table DF – 3 :Capital Adequacy

Qualitative disclosures (a) A summary discussion of the bank's approach to assessing the adequacy of its capital to support current and future activities.
Quantitative disclosures (b) Capital requirements for credit risk: • Portfolios subject to standardised approach • Securitisation exposures.
(c) Capital requirements for market risk: • Standardised duration approach; - Interest rate risk - Foreign exchange risk (including gold) - Equity risk
(d) Capital requirements for operational risk: • Basic indicator approach;
(e) Total and Tier I capital ratio: • For the top consolidated group; and • For significant bank subsidiaries (stand alone or sub-consolidated depending on how the Framework is applied).

[49] Innovative perpetual debt instruments (or head office borrowings of foreign banks eligible for similar treatment) and any other type of instrument that may be allowed from time to time.

14.13 Risk exposure and assessment

The risks to which banks are exposed and the techniques that banks use to identify, measure, monitor and control those risks are important factors market participants consider in their assessment of an institution. In this section, several key banking risks are considered: credit risk, market risk, and interest rate risk in the banking book and operational risk. Also included in this section are disclosures relating to credit risk mitigation and asset securitisation, both of which alter the risk profile of the institution. Where applicable, separate disclosures are set out for banks using different approaches to the assessment of regulatory capital.

14.14 General qualitative disclosure requirement

For each separate risk area (e.g. credit, market, operational, banking book interest rate risk) banks must describe their risk management objectives and policies, including:

(i) strategies and processes;
(ii) the structure and organisation of the relevant risk management function;
(iii) the scope and nature of risk reporting and/or measurement systems;
(iv) policies for hedging and/or mitigating risk and strategies and processes for monitoring the continuing effectiveness of hedges/mitigants.

Credit risk

General disclosures of credit risk provide market participants with a range of information about overall credit exposure and need not necessarily be based on information prepared for regulatory purposes. Disclosures on the capital assessment techniques give information on the specific nature of the exposures, the means of capital assessment and data to assess the reliability of the information disclosed.

Table DF – 4: Credit Risk: General Disclosures for All Banks

Qualitative Disclosures

(a) The general qualitative disclosure requirement (paragraph 10.13) with respect to credit risk, including:

- Definitions of past due and impaired (for accounting purposes);
- Discussion of the bank's credit risk management policy;

Quantitative Disclosures

(b) Total gross credit risk exposures[50], Fund based and Non-fund based separately.

(c) Geographic distribution of exposures[51], Fund based and Non-fund based separately

- Overseas
- Domestic

(d) Industry[52] type distribution of exposures, fund based and non-fund based separately

(e) Residual contractual maturity breakdown of assets,[53]

(f) Amount of NPAs (Gross)

- Substandard
- Doubtful 1
- Doubtful 2
- Doubtful 3
- Loss

(g) Net NPAs

(h) NPA Ratios

- Gross NPAs to gross advances
- Net NPAs to net advances

(i) Movement of NPAs (Gross)

- Opening balance
- Additions
- Reductions
- Closing balance

(j) Movement of provisions for NPAs

- Opening balance
- Provisions made during the period
- Write-off
- Write-back of excess provisions
- Closing balance

(k) Amount of Non-Performing Investments

(l) Amount of provisions held for non-performing investments

(m) Movement of provisions for depreciation on investments

- Opening balance
- Provisions made during the period
- Write-off
- Write-back of excess provisions
- Closing balance

[50] That is after accounting offsets in accordance with the applicable accounting regime and without taking into account the effects of credit risk mitigation techniques, e.g. collateral and netting.

[51] That is, on the same basis as adopted for Segment Reporting adopted for compliance with AS 17.

[52] The industries break-up may be provided on the same lines as prescribed for DSB returns. If the exposure to any particular industry is more than 5 per cent of the gross credit exposure as computed under (b) above it should be disclosed separately.

[53] Banks shall use the same maturity bands as used for reporting positions in the ALM returns.

Table DF – 5

Credit Risk: Disclosures for Portfolios Subject to the Standardised Approach

Qualitative Disclosures (a) For portfolios under the standardised approach: • Names of credit rating agencies used, plus reasons for any changes; • Types of exposure for which each agency is used; and • A description of the process used to transfer public issue ratings onto comparable assets in the banking book;
Quantitative Disclosures (b) For exposure[54] amounts after risk mitigation subject to the standardised approach, amount of a bank's outstandings (rated and unrated) in the following three major risk buckets as well as those that are deducted; • Below 100 % risk weight • 100 % risk weight • More than 100 % risk weight • Deducted

Table DF – 6

Credit Risk Mitigation: Disclosures for Standardised Approaches [55]

Qualitative Disclosures (a) The general qualitative disclosure requirement (paragraph 10.13) with respect to credit risk mitigation including: • ***Policies and processes for, and an indication of the extent to which the bank makes use of, on- and off-balance sheet netting;*** • policies and processes for collateral valuation and management; • a description of the main types of collateral taken by the bank; • the main types of guarantor counterparty and their ceditworthiness; and • information about (market or credit) risk concentrations within the mitigation taken
Quantitative Disclosures ***(b) For each separately disclosed credit risk portfolio the total exposure (after, where applicable, on- or off balance sheet netting) that is covered by eligible financial collateral after the application of haircuts.*** ***(c) For each separately disclosed portfolio the total exposure (after, where applicable, on- or off-balance sheet netting) that is covered by guarantees/credit derivatives (whenever specifically permitted by RBI)***

[54] As defined for disclosures in Table 4

[55] At a minimum, banks must give the disclosures in this Table in relation to credit risk mitigation that has been recognised for the purposes of reducing capital requirements under this Framework. Where relevant, banks are encouraged to give further information about mitigants that have not been recognised for that purpose.

Table: DF-7[56]

Securitisation Exposures: Disclosure for Standardised Approach

Qualitative Disclosures	
(a)	The general qualitative disclosure requirement with respect to securitisation including a discussion of: • the bank's objectives in relation to securitisation activity, including the extent to which these activities transfer credit risk of the underlying securitised exposures away from the bank to other entities. • the nature of other risks (e.g. liquidity risk) inherent in securitised assets; • the various roles played by the bank in the securitisation process (For example: originator, investor, servicer, provider of credit enhancement, liquidity provider, swap provider[@], protection provider[#]) and an indication of the extent of the bank's involvement in each of them; • a description of the processes in place to monitor changes in thecredit and market risk of securitisation exposures (for example, how the behaviour of the underlying assets impacts securitisation exposures as defined in para 5.16.1 of the Master Circular on NCAF dated July 1, 2009). • a description of the bank's policy governing the use of credit risk mitigation to mitigate the risks retained through securitisation exposures; [@] A bank may have provided support to a securitisation structure in the form of an interest rate swap or currency swap to mitigate the interest rate/currency risk of the underlying assets, if permitted as per regulatory rules. [#] A bank may provide credit protection to a securitisation transaction through guarantees, credit derivatives or any other similar product, if permitted as per regulatory rules.
(b)	**Summary of the bank's accounting policies for securitisation activities, including**: • whether the transactions are treated as sales or financings; • methods and key assumptions (including inputs) applied in valuing positions retained or purchased • changes in methods and key assumptions from the previous period and impact of the changes; • policies for recognising liabilities on the balance sheet for arrangements that

[56] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

	could require the bank to provide financial support for securitised assets.
(c)	In the banking book, the names of ECAIs used for securitisations and the types of securitisation exposure for which each agency is used.
Quantitative disclosures:Banking Book	
(d)	The total amount of exposures securitised by the bank.
(e)	For exposures securitised losses recognised by the bank during the current period broken by the exposure type (e.g. Credit cards, housing loans, auto loans etc. detailed by underlying security)
(f)	Amount of assets intended to be securitised within a year
(g)	Of (f), amount of assets originated within a year before securitisation.
(h)	The total amount of exposures securitised (by exposure type) and unrecognised gain or losses on sale by exposure type.
(i)	Aggregate amount of: •on-balance sheet securitisation exposures retained or purchased broken down by exposure type and •off-balance sheet securitisation exposures broken down by exposure type
(j)	• Aggregate amount of securitisation exposures retained or purchased and the associated capital charges, broken down between exposures and further broken down into different risk weight bands for each regulatory capital approach • Exposures that have been deducted entirely from Tier 1 capital, credit enhancing I/Os deducted from total capital, and other exposures deducted from total capital (by exposure type).
QuantitativeDisclosures:Trading book	
(k)	Aggregate amount of exposures securitised by the bank for which the bank has retained some exposures and which is subject to the market risk approach, by exposure type.
(l)	Aggregate amount of: • on-balance sheet securitisation exposures retained or purchased broken down by exposure type; and • off-balance sheet securitisation exposures broken down by exposure type.
(m)	**Aggregate amount of securitisation exposures retained or purchased separately for**: • securitisation exposures retained or purchased subject to Comprehensive Risk Measure for specific risk; and

	• securitisation exposures subject to the securitisation framework for specific risk broken down into different risk weight bands.
(n)	Aggregate amount of: • the capital requirements for the securitisation exposures, subject to the securitisation framework broken down into different risk weight bands. • securitisation exposures that are deducted entirely from Tier 1 capital, credit enhancing I/Os deducted from total capital, and other exposures deducted from total capital(by exposure type).

Table DF- 8 : Market Risk in Trading Book

Qualitative disclosures (a) The general qualitative disclosure requirement (paragraph 10.13) for market risk including the portfolios covered by the standardised approach.
Quantitative disclosures (b) The capital requirements for: • interest rate risk; • equity position risk; and • foreign exchange risk;

Table DF-9 :Operational Risk

Qualitative disclosures • In addition to the general qualitative disclosure requirement (paragraph 10.13), the approach(es) for operational risk capital assessment for which the bank qualifies.

Table DF- 10 :Interest Rate Risk in the Banking Book (IRRBB)

Qualitative Disclosures (a) The general qualitative disclosure requirement (paragraph 10.13), including the nature of IRRBB and key assumptions, including assumptions regarding loan prepayments and behaviour of non-maturity deposits, and frequency of IRRBB measurement.
Quantitative Disclosures (b) The increase (decline) in earnings and economic value (or relevant measure used by management) for upward and downward rate shocks according to management's method for measuring IRRBB, broken down by currency (where the turnover is more than 5% of the total turnover).

ANNEX -1
[Cf. para4.2.1(iii)]

Terms and Conditions Applicable to Innovative Perpetual Debt Instruments (IPDI) to Qualify for Inclusion as Tier I Capital

The Innovative Perpetual Debt Instruments (Innovative Instruments) that may be issued as bonds or debentures by Indian banks should meet the following terms and conditions to qualify for inclusion as Tier I Capital for capital adequacy purposes:

1. Terms of Issue of innovative instruments denominated in Indian Rupees

i) *Amount:* The amount of innovative instruments to be raised may be decided by the Board of Directors of banks.

ii) *Limits:* The total amount raised by a bank through innovative instruments shall not exceed 15 per cent of total Tier I capital. The eligible amount will be computed with reference to the amount of Tier I capital as on March 31 of the previous financial year, after deduction of goodwill, DTA and other intangible assets but before the deduction of investments, as required in paragraph 4.4. Innovative instruments in excess of the above limits shall be eligible for inclusion under Tier II, subject to limits prescribed for Tier II capital. However, investors' rights and obligations would remain unchanged.

iii) *Maturity period:* The innovative instruments shall be perpetual.

iv) *Rate of Interest:* The interest payable to the investors may be either at a fixed rate or at a floating rate referenced to a market determined rupee interest benchmark rate.

v) *Options:* Innovative instruments shall not be issued with a 'put option'. However banks may issue the instruments with a call option subject to strict compliance with each of the following conditions:

a) Call option may be exercised after the instrument has run for at least ten years; and

b) Call option shall be exercised only with the prior approval of RBI (Department of Banking Regulation). While considering the proposals received from banks for exercising the call option the RBI would, among other things, take into consideration the bank's CRAR position both at the time of exercise of the call option and after exercise of the call option.

vi) *Step-up option:*In terms of document titled 'Basel-III- A global regulatory framework for more resilient banks and banking systems', released by Basel Committee on Banking Supervision (BCBS) in December 2010, regulatory capital instruments should not have step-up's or other incentives to redeem. However, the BCBS has proposed certain transitional arrangements, in terms of

which only those instruments having such features which were issued before September 12, 2010 will continue to be recognised as eligible capital instruments under Basel III which becomes operational beginning January 01, 2013 in a phased manner. Hence, banks should not issue Tier I or Tier II capital instruments with 'step-up' option, so that these instruments continue to remain eligible for inclusion in the new definition of regulatory capital.

vii) *Lock-In Clause :*

(a) Innovative instruments shall be subjected to a lock-in clause in terms of which the issuing bank shall not be liable to pay interest, if

i) the bank's CRAR is below the minimum regulatory requirement prescribed by RBI; OR

ii) the impact of such payment results in bank's capital to risk assets ratio (CRAR) falling below or remaining below the minimum regulatory requirement prescribed by Reserve Bank of India;

(b) However, banks may pay interest with the prior approval of RBI when the impact of such payment may result in net loss or increase the net loss, provided the CRAR remains above the regulatory norm.

(c) The interest shall not be cumulative.

(d) All instances of invocation of the lock-in clause should be notified by the issuing banks to the Chief General Managers-in-Charge of Department of Banking Regulation and Department of Banking Supervision of the Reserve Bank of India, Mumbai.

viii) *Seniority of claim:* The claims of the investors in innovative instruments shall be

a) Superior to the claims of investors in equity shares; and

b) Subordinated to the claims of all other creditors.

ix) Discount: The innovative instruments shall not be subjected to a progressive discount for capital adequacy purposes since these are perpetual.

x) *Other conditions*

a) Innovative instruments should be fully paid-up, unsecured, and free of any restrictive clauses.

b) Investment by FIIs in innovative instruments raised in Indian Rupees shall be outside the ECB limit for rupee denominated corporate debt, as fixed by the Govt. of India from time to time, for investment by FIIs in corporate debt instruments. Investment in these instruments by FIIs and NRIs shall be within an overall limit of 49 per cent and 24 per cent of the issue, respectively, subject

to the investment by each FII not exceeding 10 per cent of the issue and investment by each NRI not exceeding five per cent of the issue.

c) Banks should comply with the terms and conditions, if any, stipulated by SEBI / other regulatory authorities in regard to issue of the instruments.

2. Terms of issue of innovative instruments denominated in foreign currency

Banks may augment their capital funds through the issue of innovative instruments in foreign currency without seeking the prior approval of the Reserve Bank of India, subject to compliance with the under-mentioned requirements:

i) Innovative instruments issued in foreign currency should comply with all terms and conditions as applicable to the instruments issued in Indian Rupees.

ii) Not more than 49 per cent of the eligible amount can be issued in foreign currency.

iii) Innovative instruments issued in foreign currency shall be outside the limits for foreign currency borrowings indicated below:

a) The total amount of Upper Tier II Instruments issued in foreign currency shall not exceed 25 per cent of the unimpaired Tier I capital. This eligible amount will be computed with reference to the amount of Tier I capital as on March 31 of the previous financial year, after deduction of goodwill and other intangible assets but before the deduction of investments, as per para 4.4.6 of this Master Circular.

b) This will be in addition to the existing limit for foreign currency borrowings by Authorised Dealers, stipulated in terms of Master Circular No. RBI/2006-07/24 dated July 1, 2006 on Risk Management and Inter-Bank Dealings.

3. Compliance with Reserve Requirements

The total amount raised by a bank through innovative instruments shall not be reckoned as liability for calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, will not attract CRR / SLR requirements.

4. Reporting Requirements

Banks issuing innovative instruments shall submit a report to the Chief General Manager-in-charge, Department of Banking Regulation, Reserve Bank of India, Mumbai giving details of

the debt raised, including the terms of issue specified at para 1 above , together with a copy of the offer document soon after the issue is completed.

5. Investment in IPDIs issued by other banks/ FIs

i) A bank's investment in innovative instruments issued by other banks and financial institutions will be reckoned along with the investment in other instruments eligible for capital status while computing compliance with the overall ceiling of 10 percent for cross holding of capital among banks/FIs prescribed vide circular DBOD.BP.BC.No. 3/21.01.002/2004-05 dated 6th July 2004 and also subject to cross holding limits.

ii) Bank's investments in innovative instruments issued by other banks will attract risk weight for capital adequacy purposes, as prescribed in paragraph 5.6 of this Master Circular.

6. Grant of advances against innovative instruments

Banks should not grant advances against the security of the innovative instruments issued by them.

7. Classification in the Balance Sheet

The amount raised by way of issue of IPDI may be classified under 'Schedule 4 – Borrowings' in the Balance Sheet.[57]

8. Raising of innovative Instruments for inclusion as Tier I capital by foreign banks in India

Foreign banks in India may raise Head Office (HO) borrowings in foreign currency for inclusion as Tier I capital subject to the same terms and conditions as mentioned in items 1 to 5 above for Indian banks. In addition, the following terms and conditions would also be applicable:

i) *Maturity period:* If the amount of innovative Tier I capital raised as Head Office borrowings shall be retained in India on a perpetual basis.

ii) *Rate of interest:* Rate of interest on innovative Tier I capital raised as HO borrowings should not exceed the on-going market rate. Interest should be paid at half yearly rests.

iii) *Withholding tax:* Interest payments to the HO will be subject to applicable withholding tax.

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[57] Circular DBOD.No.BP.BC.81/21.01.002/2009-10 dated March 30, 2010

iv) ***Documentation:*** The foreign bank raising innovative Tier I capital as HO borrowings should obtain a letter from its HO agreeing to give the loan for supplementing the capital base for the Indian operations of the foreign bank. The loan documentation should confirm that the loan given by HO shall be eligible for the same level of seniority of claim as the investors in innovative capital instruments issued by Indian banks. The loan agreement will be governed by and construed in accordance with the Indian law.

v) ***Disclosure:*** The total eligible amount of HO borrowings shall be disclosed in the balance sheet under the head 'Innovative Tier I capital raised in the form of Head Office borrowings in foreign currency'.

vi) ***Hedging:*** The total eligible amount of HO borrowing should remain fully swapped in Indian Rupees with the bank at all times.

vii) ***Reporting and certification:*** Details regarding the total amount of innovative Tier I capital raised as HO borrowings, along with a certification to the effect that the borrowing is in accordance with these guidelines, should be advised to the Chief General Managers-in-Charge of the Department of Banking Regulation (International Banking Division), Department of External Investments & Operations and Foreign Exchange Department (Forex Markets Division), Reserve Bank of India, Mumbai.

ANNEX – 2

[Cf. para 4.2.1(iv)]

Terms and Conditions Applicable to Perpetual Non-Cumulative Preference Shares (PNCPS) to Qualify for Inclusion as Tier I Capital

1. Terms of Issue

i) *Limits:* The outstanding amount of Tier I Preference Shares along with Innovative Tier I instruments shall not exceed 40per cent of total Tier I capital at any point of time. The above limit will be based on the amount of Tier I capital after deduction of goodwill and other intangible assets but before the deduction of investments. Tier I Preference Shares, issued in excess of the overall ceiling of 40 per cent, shall be eligible for inclusion under Upper Tier II capital, subject to limits prescribed for Tier II capital. However, investors' rights and obligations would remain unchanged.

ii) *Amount:* The amount of PNCPS to be raised may be decided by the Board of Directors of banks.

iii) *Maturity:* The PNCPS shall be perpetual.

iv) Options:

(a) PNCPS shall not be issued with a 'put option' or' step up option'.

(b) However, banks may issue the instruments with a call option at a particular date subject to following conditions:

(i) The call option on the instrument is permissible after the instrument has run for at least ten years; and

(ii) Call option shall be exercised only with the prior approval of RBI (Department of Banking Regulation). While considering the proposals received from banks for exercising the call option the RBI would, among other things, take into consideration the bank's CRAR position both at the time of exercise of the call option and after exercise of the call option.

V) *Classification in the Balance sheet:* These instruments will be classified as capital and shown under 'Schedule I- Capital' of the Balance sheet.

vi) *Dividend:*The rate of dividend payable to the investors may be either a fixed rate or a floating rate referenced to a market determined rupee interest benchmark rate.

vii) Payment of Dividend:

(a) The issuing bank shall pay dividend subject to availability of distributable surplus out of current year's earnings, and if

(i) the bank's CRAR is above the minimum regulatory requirement prescribed by RBI;

(ii) the impact of such payment does not result in bank's capital to risk weighted assets ratio (CRAR) falling below or remaining below the minimum regulatory requirement prescribed by Reserve Bank of India;

(iii) In the case of half yearly payment of dividends, the balance sheet as at the end of the previous year does not show any accumulated losses; and

(iv) In the case of annual payment of dividends, the current year's balance sheet does not show any accumulated losses

(b) The dividend shall not be cumulative. i.e., dividend missed in a year will not be paid in future years, even if adequate profit is available and the level of CRAR conforms to the regulatory minimum. When dividend is paid at a rate lesser than the prescribed rate, the unpaid amount will not be paid in future years, even if adequate profit is available and the level of CRAR conforms to the regulatory minimum.

(c) All instances of non-payment of dividend / payment of dividend at a lesser rate than prescribedin consequence of conditions as at (a) above should be reported by the issuing banks to the Chief General Managers-in-Charge of Department of Banking Regulation and Department of Banking Supervision, Central Office of the Reserve Bank of India, Mumbai.

viii) Seniority of claim: The claims of the investors in PNCPS shall be senior to the claims of investors in equity shares and subordinated to the claims of all other creditors and the depositors.

Ix) Other conditions:

(a) PNCPS should be fully paid-up, unsecured, and free of any restrictive clauses.

(b) Investment by FIIs and NRIs shall be within an overall limit of 49 per cent and 24 per cent of the issue respectively, subject to the investment by each FII not exceeding 10 per cent of the issue, and investment by each NRI not exceeding five per cent of the issue. Investment by FIIs in these instruments shall be outside the ECB limit for rupee-denominated corporate debt, as fixed by Government of India from time to time. The overall non-resident holding of Preference Shares and

equity shares in public sector banks will be subject to the statutory / regulatory limit.

(c) Banks should comply with the terms and conditions, if any, stipulated by SEBI / other regulatory authorities in regard to issue of the instruments.

2. Compliance with Reserve Requirements

(a) The funds collected by various branches of the bank or other banks for the issue and held pending finalisation of allotment of the Tier I Preference Shares will have to be taken into account for the purpose of calculating reserve requirements.

(b) However, the total amount raised by the bank by issue of PNCPS shall not be reckoned as liability for calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, will not attract CRR / SLR requirements.

3. Reporting Requirements

i) Banks issuing PNCPS shall submit a report to the Chief General Manager-in-charge, Department of Banking Regulation, Reserve Bank of India, Mumbai giving details of the capital raised, including the terms of issue specified at para 1 above together with a copy of the offer document soon after the issue is completed.

ii) The issue-wise details of amount raised as PNCPS qualifying for Tier I capital by the bank from FIIs / NRIs are required to be reported within 30 days of the issue to the Chief General Manager, Reserve Bank of India, Foreign Exchange Department, Foreign Investment Division, Central Office, Mumbai 400 001 in the proforma given at the end of this **Annex**. The details of the secondary market sales / purchases by FIIs and the NRIs in these instruments on the floor of the stock exchange shall be reported by the custodians and designated banks, respectively, to the Reserve Bank of India through the soft copy of the LEC Returns, on a daily basis, as prescribed in Schedule 2 and 3 of the FEMA Notification No.20 dated 3rd May 2000, as amended from time to time.

4. Investment in perpetual non-cumulative Preference Sharesissued by other banks/ FIs

(a) A bank's investment in PNCPS issued by other banks and financial institutions will be reckoned along with the investment in other instruments eligible for capital status while computing compliance with the overall ceiling of 10 percent of investing banks' capital funds as prescribed vide circular DBOD.BP.BC.No.3/21.01.002/2004-05 dated 6th July 2004.

(b) Bank's investments in PNCPS issued by other banks / financial institutions will attract risk weight as provided in para 5.6.1 of this Master circular, for capital adequacy purposes.

(c) A bank's investments in the PNCPS of other banks will be treated as exposure to capital market and be reckoned for the purpose of compliance with the prudential ceiling for capital market exposure as fixed by RBI.

5. Grant of advances against Tier I Preference Shares

Banks should not grant advances against the security of the PNCPS issued by them.

6. Classification in the Balance Sheet

These instruments will be classified as capital and shown under 'Schedule I- Capital' of the Balance sheet.[58]

Reporting Format

(Cf. para 3(ii) of Annex – 2)

Details of Investments by FIIs and NRIs in Perpetual Non-Cumulative Preference Shares qualifying as Tier-I capital

(a) Name of the bank :
(b) Total issue size / amount raised (in Rupees) :
(c) Date of issue :

FIIs			NRIs		
No of FIIs	Amount raised		No. of NRIs	Amount raised	
	in Rupees	as a percentage of the total issue size		in Rupees	as a percentage of the total issue size

It is certified that

(i) the aggregate investment by all FIIs does not exceed 49 percent of the issue size and investment by no individual FII exceeds 10 percent of the issue size.

(ii) It is certified that the aggregate investment by all NRIs does not exceed 24 percent of the issue size and investment by no individual NRI exceeds 5 percent of the issue size

Authorised Signatory

Date
Seal of the bank

[58] DBOD.No.BP.BC.81/21.01.002/2009-10 dated March 30, 2010

ANNEX -3
(Cf. para 4.3.3)

Terms and Conditions Applicable to Debt Capital Instruments to Qualify for Inclusion as Upper Tier II Capital

The debt capital instruments that may be issued as bonds / debentures by Indian banks should meet the following terms and conditions to qualify for inclusion as Upper Tier II Capital for capital adequacy purposes.

1. Terms of Issue of Upper Tier II Capital instruments in Indian Rupees

i) Amount: The amount of Upper Tier II instruments to be raised may be decided by the Board of Directors of banks.

ii) Limits: Upper Tier II instruments along with other components of Tier II capital shall not exceed 100 per cent of Tier I capital. The above limit will be based on the amount of Tier I capital after deduction of goodwill, DTA and other intangible assets but before the deduction of investments, as required in paragraph 4.4.

iii) Maturity Period: The Upper Tier II instruments should have a minimum maturity of 15 years.

iv) Rate of interest: The interest payable to the investors may be either at a fixed rate or at a floating rate referenced to a market determined rupee interest benchmark rate.

v) Options: Upper Tier II instruments shall not be issued with a 'put option'. However banks may issue the instruments with a call option subject to strict compliance with each of the following conditions:

a) Call option may be exercised only if the instrument has run for at least ten years;

b) Call option shall be exercised only with the prior approval of RBI (Department of Banking Regulation). While considering the proposals received from banks for exercising the call option the RBI would, among other things, take into consideration the bank's CRAR position both at the time of exercise of the call option and after exercise of the call option.

vi) Step-up option: In terms of document titled 'Basel-III- A global regulatory framework for more resilient banks and banking systems', released by Basel Committee on Banking Supervision (BCBS) in December 2010, regulatory capital instruments should not have step-up's or other incentives to redeem. However, the BCBS has proposed certain transitional arrangements, in terms of which only those instruments having such features which were issued before September 12, 2010 will continue to be recognised as eligible capital instruments under Basel III which becomes operational beginning January 01, 2013 in a phased manner. Hence, banks should not issue Tier I or Tier II capital instruments with 'step-up' option, so that these instruments continue to remain eligible for

inclusion in the new definition of regulatory capital.

vii) Lock-in-Clause

a) Upper Tier II instruments shall be subjected to a lock-in clause in terms of which the issuing bank shall not be liable to pay either interest or principal, even at maturity, if

I. the bank's CRAR is below the minimum regulatory requirement prescribed by RBI; **OR**

II. the impact of such payment results in bank's capital to risk assets ratio (CRAR) falling below or remaining below the minimum regulatory requirement prescribed by Reserve Bank of India.

b) However, banks may pay interest with the prior approval of RBI when the impact of such payment may result in net loss or increase the net loss provided CRAR remains above the regulatory norm.

c) The interest amount due and remaining unpaid may be allowed to be paid in the later years in cash/ cheque subject to the bank complying with the above regulatory requirement.

d) All instances of invocation of the lock-in clause should be notified by the issuing banks to the Chief General Managers-in-Charge of Department of Banking Regulation and Department of Banking Supervision of the Reserve Bank of India, Mumbai.

viii) Seniority of claim: The claims of the investors in Upper Tier II instruments shall be

a) Superior to the claims of investors in instruments eligible for inclusion in Tier I capital; and

b) Subordinate to the claims of all other creditors.

ix) Discount: The Upper Tier II instruments shall be subjected to a progressive discount for capital adequacy purposes as in the case of long term subordinated debt over the last five years of their tenor. As they approach maturity these instruments should be subjected to progressive discount as indicated in the table below for being eligible for inclusion in Tier II capital.

Remaining Maturity of Instruments	**Rate of Discount (per cent)**
Less than one year	100
One year and more but less than two years	80
Two years and more but less than three years	60
Three years and more but less than four years	40
Four years and more but less than five years	20

x) Redemption: Upper Tier II instruments shall not be redeemable at the initiative of the holder. All redemptions shall be made only with the prior approval of the Reserve Bank of India (Department of Banking Regulation).

xi) Other conditions:

a) Upper Tier II instruments should be fully paid-up, unsecured, and free of any restrictive clauses.

b) Investment by FIIs in Upper Tier II Instruments raised in Indian Rupees shall be outside the limit for investment in corporate debt instruments, as fixed by the Govt. of India from time to time. However, investment by FIIs in these instruments will be subject to a separate ceiling as prescribed from time to time. In addition, NRIs shall also be eligible to invest in these instruments as per existing policy.

c) Banks should comply with the terms and conditions, if any, stipulated by SEBI/other regulatory authorities in regard to issue of the instruments.

2. Terms of issue of Upper Tier II capital instruments in foreign currency

Banks may augment their capital funds through the issue of Upper Tier II Instruments in foreign currency without seeking the prior approval of the Reserve Bank of India, subject to compliance with the under-mentioned requirements:

i) Upper Tier II Instruments issued in foreign currency should comply with all terms and conditions applicable to instruments issued in Indian Rupees.

ii) The total amount of Upper Tier II Instruments issued in foreign currency shall not exceed 25 per cent of the unimpaired Tier I capital. This eligible amount will be computed with reference to the amount of Tier I capital as on March 31 of the previous financial year, after deduction of goodwill and other intangible assets but before the deduction of investments, as per para 4.4.6 of this Master Circular.

iii) This will be in addition to the existing limit for foreign currency borrowings by Authorised Dealers stipulated in terms of Master Circular on Risk Management and Inter-Bank Dealings.

3. Compliance with Reserve Requirements

I. The funds collected by various branches of the bank or other banks for the issue and held pending finalisation of allotment of the Upper Tier II Capital instruments will have to be taken into account for the purpose of calculating reserve requirements.

II. The total amount raised by a bank through Upper Tier II instruments shall be reckoned as liability for the calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, will attract CRR/SLR requirements.

4. Reporting Requirements

Banks issuing Upper Tier II instruments shall submit a report to the Chief General Manager-in-charge, Department of Banking Regulation, Reserve Bank of India, Mumbai giving details of the debt raised, including the terms of issue specified at para 1 above, together with a copy of the offer document soon after the issue is completed.

5. Investment in Upper Tier II instruments issued by other banks/ FIs

i) A bank's investment in Upper Tier II instruments issued by other banks and financial institutions will be reckoned along with the investment in other instruments eligible for capital status while computing compliance with the overall ceiling of 10 percent for cross holding of capital among banks/FIs prescribed vide circular DBOD.BP.BC.No.3/ 21.01.002/ 2004-05 dated 6th July 2004 and also subject to cross holding limits.

ii) Bank's investments in Upper Tier II instruments issued by other banks/ financial institutions will attract risk weight as per para 5.6.1 of this Master Circular, for capital adequacy purposes.

6. Grant of advances against Upper Tier II instruments

Banks should not grant advances against the security of the Upper Tier II instruments issued by them.

7. Classification in the Balance Sheet.

The amount raised through Upper Tier II capital instruments will be classified under 'Schedule 4- Borrowing' in the Balance Sheet.[59]

8 Raising of Upper Tier II Instruments by Foreign Banks in India

Foreign banks in India may raise Head Office (HO) borrowings in foreign currency for inclusion as Upper Tier II capital subject to the same terms and conditions as mentioned in items 1 to 5 above for Indian banks. In addition, the following terms and conditions would

[59] DBOD.No.BP.BC.81/21.01.002/2009-10 dated March 30, 2010

also be applicable:

1) *Maturity Period:*If the amount of Upper Tier II capital raised as HO borrowings is in tranches, each tranche shall be retained in India for a minimum period of fifteen years.
2) *Rate of interest:*Rate of interest on Upper Tier II capital raised as HO borrowings should not exceed the on-going market rate. Interest should be paid at half yearly rests.
3) *Withholding tax:*Interest payments to the HO will be subject to applicable withholding tax.
4) *Documentation:*The foreign bank raising Upper Tier II capital as HO borrowings should obtain a letter from its HO agreeing to give the loan for supplementing the capital base for the Indian operations of the foreign bank. The loan documentation should confirm that the loan given by HO shall be eligible for the same level of seniority of claim as the investors in Upper Tier II debt capital instruments issued by Indian banks. The loan agreement will be governed by and construed in accordance with the Indian law.
5) *Disclosure:*The total eligible amount of HO borrowings shall be disclosed in the balance sheet under the head 'Upper Tier II capital raised in the form of Head Office borrowings in foreign currency'.
6) *Hedging:*The total eligible amount of HO borrowing should remain fully swapped in Indian Rupees with the bank at all times.
7) *Reporting and certification:* Details regarding the total amount of Upper Tier II capital raised as HO borrowings, along with a certification to the effect that the borrowing is in accordance with these guidelines, should be advised to the Chief General Managers-in-Charge of the Department of Banking (International Banking Division), Department of External Investments & Operations and Foreign Exchange Department (Forex Markets Division), Reserve Bank of India, Mumbai.

ANNEX - 4
(Cf.Para 4.3.3)

Terms and Conditions Applicable to Perpetual Cumulative Preference Shares(PCPS)/ Redeemable Non-Cumulative Preference Shares(RNCPS) / Redeemable Cumulative Preference Shares(RCPS) to Qualify for Inclusion as Part of Upper Tier II Capital

1. Terms of Issue

i) Characteristics of the instruments:

a. These instruments could be either perpetual (PCPS) or dated (RNCPS and RCPS) instruments with a fixed maturity of minimum 15 years.

b. The perpetual instruments shall be cumulative. The dated instruments could be cumulative or non-cumulative

ii) Limits: The outstanding amount of these instruments along with other components of Tier II capital shall not exceed 100 per cent of Tier I capital at any point of time. The above limit will be based on the amount of Tier I capital after deduction of goodwill and other intangible assets but before the deduction of investments.

iii) Amount: The amount to be raised may be decided by the Board of Directors of banks.

iv) Options:

(i) These instruments shall not be issued with a 'put option'.

(ii) However, banks may issue the instruments with a call option at a particular date subject to strict compliance with each of the following conditions:

(a) The call option on the instrument is permissible after the instrument has run for at least ten years; and

(b) Call option shall be exercised only with the prior approval of RBI (Department of Banking Regulation). While considering the proposals received from banks for exercising the call option the RBI would, among other things, take into consideration the bank's CRAR position both at the time of exercise of the call option and after exercise of the call option.

*v) Step-up option:*In terms of document titled 'Basel-III- A global regulatory framework for more resilient banks and banking systems', released by Basel Committee on Banking Supervision (BCBS) in December 2010, regulatory capital instruments should not have step-up's or other incentives to redeem. However, the BCBS has proposed certain transitional arrangements, in terms of which only those instruments having such features which were issued before September 12, 2010 will continue to be recognised as eligible capital instruments under Basel III which becomes operational beginning January 01, 2013 in a phased manner. Hence, banks should not issue Tier I or Tier II capital instruments with

'step-up' option, so that these instruments continue to remain eligible for inclusion in the new definition of regulatory capital.

vi) *Classification in the balance sheet:* These instruments will be classified as 'Borrowings' under Schedule 4 of the Balance Sheet under item No.I (i.e., Borrowings).

vii) *Coupon:* The coupon payable to the investors may be either at a fixed rate or at a floating rate referenced to a market determined rupee interest benchmark rate.

vii) *Payment of coupon:*

a) The coupon payable on these instruments will be treated as interest and accordingly debited to P& L Account. However, it will be payable only if

i) The bank's CRAR is above the minimum regulatory requirement prescribed by RBI.

ii) The impact of such payment does not result in bank's CRAR falling below or remaining below the minimum regulatory requirement prescribed by RBI.

iii) The bank does not have a net loss. For this purpose the Net Loss is defined as either (i) the accumulated loss at the end of the previous financial year / half year as the case may be; or (ii) the loss incurred during the current financial year.

iv) In the case of PCPS and RCPS the unpaid/ partly unpaid coupon will be treated as a liability. The interest amount due and remaining unpaid may be allowed to be paid in later years subject to the bank complying with the above requirements.

v) In the case of RNCPS, deferred coupon will not be paid in future years, even if adequate profit is available and the level of CRAR conforms to the regulatory minimum. The bank can however pay a coupon at a rate lesser than the prescribed rate, if adequate profit is available and the level of CRAR conforms to the regulatory minimum

b) All instances of non-payment of interest / payment of interest at a lesser rate than the prescribed rate should be notified by the issuing banks to the Chief General Managers-in-Charge of Department of Banking Regulationand Department of Banking Supervision, Central Office of the Reserve Bank of India, Mumbai.

ix) Redemption / repayment:

a) The RNCPS and RCPS shall not be redeemable at the initiative of the holder.

b) Redemption of these instruments at maturity shall be made only with the prior approval of the Reserve Bank of India (Department of Banking Regulation), subject, *inter alia,* to the following conditions :

I. the bank's CRAR is above the minimum regulatory requirement prescribed by the RBI, and

II. the impact of such payment does not result in bank's CRAR falling below or remaining below the minimum regulatory requirement prescribed by RBI.

1.10. Seniority of claim: The claims of the investors in these instruments shall be senior to the claims of investors in instruments eligible for inclusion in Tier I capital and subordinate to the claims of all other creditors including those in Lower Tier II and the depositors. Amongst the investors of various instruments included in Upper Tier II, the claims shall rank pari-passu with each other.

1.11 Amortisation for the purpose of computing CRAR: The Redeemable Preference Shares (both cumulative and non-cumulative) shall be subjected to a progressive discount for capital adequacy purposes over the last five years of their tenor, as they approach maturity as indicated in the table below for being eligible for inclusion in Tier II capital.

Remaining Maturity of Instruments	**Rate of Discount (%)**
Less than one year	100
One year and more but less than two years	80
Two years and more but less than three years	60
Three years and more but less than four years	40
Four years and more but less than five years	20

1.12 Other conditions:

a) These instruments should be fully paid-up, unsecured, and free of any restrictive clauses.

b) Investment by FIIs and NRIs shall be within an overall limit of 49 per cent and 24 per cent of the issue respectively, subject to the investment by each FII not exceeding 10 per cent of the issue and investment by each NRI not exceeding 5 per cent of the issue. Investment by FIIs in these instruments shall be outside the ECB limit for rupee denominated corporate debt as fixed by Government of India from time to time. However, investment by FIIs in these instruments will be subject to separate ceiling as prescribed from time to time. The overall non-resident holding of Preference

Shares and equity shares in public sector banks will be subject to the statutory / regulatory limit.

c) Banks should comply with the terms and conditions, if any, stipulated by SEBI / other regulatory authorities in regard to issue of the instruments.

2. Compliance with Reserve Requirements

a) The funds collected by various branches of the bank or other banks for the issue and held pending finalization of allotment of these instruments will have to be taken into account for the purpose of calculating reserve requirements.

b) The total amount raised by a bank through the issue of these instruments shall be reckoned as liability for the calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, will attract CRR / SLR requirements.

3. Reporting Requirements

Banks issuing these instruments shall submit a report to the Chief General Manager-in-charge, Department of Banking Regulation, Reserve Bank of India, Mumbai giving details of the debt raised, including the terms of issue specified at para 1 above ,together with a copy of the offer document soon after the issue is completed.

4. Investment in these instruments issued by other banks / FIs

a) A bank's investment in these instruments issued by other banks and financial institutions will be reckoned along with the investment in other instruments eligible for capital status while computing compliance with the overall ceiling of 10 percent of investing banks' total capital funds prescribed vide circular DBOD.BP.BC.No.3/ 21.01.002/ 2004-05 dated 6th July 2004 and also subject to cross holding limits.

b) Bank's investments in these instruments issued by other banks / financial institutions will attract risk weight for capital adequacy purposes as provided vide paragraph 5.6 of this Master Circular.

5. Grant of advances against these instruments

Banks should not grant advances against the security of these instruments issued by them.

ANNEX - 5
(Cf. Para 4.3.4)

Terms and Conditions Applicable to Subordinated Debt to Qualify for Inclusion as Lower Tier II Capital

PART 1 – Issue of Rupee-denominated subordinated debt by Indian banks, which is eligible for inclusion in lower Tier II capital

Rupee subordinated debt

Foreign banks operating in India are not permitted to raise Rupee Tier II subordinated debt in India. Indian banks can issue Rupee Tier II subordinated debt qualifying for inclusion in Lower Tier II capital as per the following conditions:

1. Terms of issue of bond

To be eligible for inclusion in Tier – II Capital, terms of issue of the bonds as subordinated debt instruments should be in conformity with the following:

(a) Amount

The amount of subordinated debt to be raised may be decided by the Board of Directors of the bank.

(b) Maturity period

(i) Subordinated debt instruments with an initial maturity period of less than 5 years, or with a remaining maturity of one year should not be included as part of Tier-II Capital. They should be subjected to progressive discount as they approach maturity at the rates shown below:

	Remaining maturity of the instruments	Rate of discount (%)
a)	Less than One year	100
b)	More than One year and less than Two years	80
c)	More than Two years and less than Three years	60
d)	More than three years and less than Four Years	40
e)	More than Four years and less than Five years	20

(ii) The bonds should have a minimum initial maturity of 5 years. However if the bonds are issued in the last quarter of the year i.e. from 1st January to 31st March, they should have a minimum initial tenure of sixty three months.

(c) Rate of interest

The coupon rate would be decided by the Board of Directors of banks.

(d) Call Option

Subordinated debt instruments shall not be issued with a 'put option'. However banks may issue the instruments with a call option subject to strict compliance with each of the following conditions:

(i) Call option may be exercised after the instrument has run for at least **five years**;

and

(ii) Call option shall be exercised only with the prior approval of RBI (Department of Banking Regulation). While considering the proposals received from banks for exercising the call option the RBI would, among other things, take into consideration the bank's CRAR position both at the time of exercise of the call option and after exercise of the call option.

(e) Step-up Option: In terms of document titled 'Basel-III- A global regulatory framework for more resilient banks and banking systems', released by Basel Committee on Banking Supervision (BCBS) in December 2010, regulatory capital instruments should not have step-up's or other incentives to redeem. However, the BCBS has proposed certain transitional arrangements, in terms of which only those instruments having such features which were issued before September 12, 2010 will continue to be recognised as eligible capital instruments under Basel III which becomes operational beginning January 01, 2013 in a phased manner. Hence, banks should not issue Tier I or Tier II capital instruments with 'step-up' option, so that these instruments continue to remain eligible for inclusion in the new definition of regulatory capital.

(f) Other conditions

(i) The instruments should be fully paid-up, unsecured, subordinated to the claims of other creditors, free of restrictive clauses and should not be redeemable at the initiative of the holder or without the consent of the Reserve Bank of India.

(ii) Necessary permission from Foreign Exchange Department should be obtained for issuing the instruments to NRIs/FIIs.

(iii) Banks should comply with the terms and conditions, if any, set by SEBI/other regulatory authorities in regard to issue of the instruments.

(g) Banks should indicate the amount of subordinated debt raised as Tier II capital by way of explanatory notes/ remarks in the Balance Sheet as well as in Schedule 5 to the Balance Sheet under 'Other Liabilities & Provisions'.

2. Inclusion in Tier II capital

Subordinated debt instruments will be limited to 50 per cent of Tier-I Capital of the bank. These instruments, together with other components of Tier II capital, should not exceed 100% of Tier I capital.

3. Grant of advances against bonds

Banks should not grant advances against the security of their own bonds.

4. Compliance with Reserve Requirements

The total amount of Subordinated Debt raised by the bank has to be reckoned as liability for the calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, will attract CRR/SLR requirements.

5. Treatment of Investment in subordinated debt

Investments by banks in subordinated debt of other banks will be assigned 100% risk weight for capital adequacy purpose. Also, the bank's aggregate investment in Tier II bonds issued by other banks and financial institutions shall be within the overall ceiling of 10 percent of the investing bank's total capital. The capital for this purpose will be the same as that reckoned for the purpose of capital adequacy.

6. Subordinated Debt to Retail Investors[60,61]

With a view to enhancing investor education relating to risk characteristics of regulatory capital requirements, banks issuing subordinated debt to retail investors should adhere to the following conditions:

a) The requirement for specific sign-off as quoted below, from the investors for having understood the features and risks of the instrument may be incorporated in the common application form of the proposed debt issue.

> ***"By making this application,I/We acknowledge that I/We have understood the terms and conditions of the Issue of [insert the name of the instruments being issued] of [Name of The Bank] as disclosed in the Draft Shelf Prospectus, Shelf Prospectus and Tranche Document ".***

b) For floating rate instruments, banks should not use its Fixed Deposit rate as benchmark.

c) All the publicity material, application form and other communication with the investor should clearly state in bold letters (**with font size 14**) how a subordinated bond is different from fixed deposit particularly that it is not covered by deposit insurance.

7. Subordinated Debt in foreign currency raised by Indian banks

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[60] Please refer to circular DBOD.BP.BC.No.69 / 21.01.002/ 2009-10 dated January 13, 2010.

[61] Please also refer to the circular DBOD.BP.BC.No.72/21.01.002/2012-13 dated January 24, 2013 on 'Retail Issue of Subordinated Debt for Raising Tier 2 Capital', in terms of which banks were advised that with a view to deepening the corporate bond market in India through enhanced retail participation, banks, while issuing subordinated debt for raising Tier 2 capital, are encouraged to consider the option of raising such funds through public issue to retail investors. However, while doing so banks are advised to adhere to the conditions prescribed in circular dated January 13, 2010 so as to ensure that the investor is aware of the risk characteristics of regulatory capital instruments.

Banks may take approval of RBI on a case-by-case basis**.**

8. Reporting Requirements

The banks should submit a report to Reserve Bank of India giving details of the capital raised through subordinated-debt, such as, amount raised, maturity of the instrument, and rate of interest together with a copy of the offer document soon after the issue is completed.

9.Classification in the Balance Sheet

The amount of capital raised should be classified under 'Schedule 4- Borrowing' in the Balance Sheet.

Part 2 - Raising of Head Office borrowings in foreign currency by foreign banks operating in India for inclusion in Tier II Capital

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1. Terms of borrowings:

Detailed guidelines on the standard requirements and conditions for Head Office borrowings in foreign currency raised by foreign banks operating in India for inclusion , as subordinated debt in Tier II capital are as indicated below:-

i) *Amount of borrowing :* The total amount of HO borrowing in foreign currency will be at the discretion of the foreign bank. However, the amount eligible for inclusion in Tier II capital as subordinated debt will be subject to a maximum ceiling of 50 per cent of the Tier I capital maintained in India, and the applicable discount rate mentioned in paragraph 5 below. Further as per extant instructions, the total of Tier II capital should not exceed 100 per cent of Tier I capital.

ii) *Maturity period:*Head Office borrowings should have a minimum initial maturity of 5 years. If the borrowing is in tranches, each tranche will have to be retained in India for a minimum period of five years. HO borrowings in the nature of perpetual subordinated debt, where there may be no final maturity date, will not be permitted.

iii) *Features:* The HO borrowings should be fully paid up, i.e. the entire borrowing or each tranche of the borrowing should be available in full to the branch in India. It should be unsecured, subordinated to the claims of other creditors of the foreign bank in India, free of restrictive clauses and should not be redeemable at the instance of the HO.

iii) *Rate of discount:* The HO borrowings will be subjected to progressive discount as they approach maturity at the rates indicated below:

Remaining maturity of borrowing	Rate of discount (%)
More than 5 years	Not Applicable (the entire amount can be included as subordinated debt in Tier II capital subject to the ceiling mentioned in paragraph 2)
More than 4 years and less than 5 years	20
More than 3 years and less than 4 years	40
More than 2 years and less than 3 years	60
More than 1 year and less than 2 years	80
Less than 1 year	100 (No amount can be treated as subordinated debt for Tier II capital)

v) *Rate of interest:*The rate of interest on HO borrowings should not exceed the on-going market rate. Interest should be paid at half yearly rests.

vi) *Withholding tax:* The interest payments to the HO will be subject to applicable withholding tax.

vii) *Repayment:* All repayments of the principal amount will be subject to prior approval of Reserve Bank of India, Department of Banking Regulation.

viii) *Documentation:* The bank should obtain a letter from its HO agreeing to give the loan for supplementing the capital base for the Indian operations of the foreign bank. The loan documentation should confirm that the loan given by HO would be subordinated to the claims of all other creditors of the foreign bank in India. The loan agreement will be governed by, and construed in accordance with the Indian law. Prior approval of the RBI should be obtained in case of any material changes in the original terms of issue.

2. Disclosure

The total amount of HO borrowings may be disclosed in the balance sheet under the head `Subordinated loan in the nature of long term borrowings inforeign currency from Head Office'. (Schedule 4 – Borrowing)

3. Reserve Requirements

The total amount of HO borrowings is to be reckoned as liability for the calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, will attract CRR/SLR requirements.

4. Hedging

The entire amount of HO borrowing should remain fully swapped with banks at all times. The swap should be in Indian rupees.

5. Reporting & Certification

Such borrowings done in compliance with the guidelines set out above would not require prior approval of Reserve Bank of India. However, information regarding the total amount of borrowing raised from Head Office under this Annex, along with a certification to the effect that the borrowing is as per the guidelines, should be advised to the Chief General Managers-in-Charge of the Department of Banking Regulation(International Banking Division), Department of External Investments & Operations and Foreign Exchange Department (Forex Markets Division), Reserve Bank of India, Mumbai.

ANNEX – 6
(Cf. Para 7.3.6)

Part – A

Illustrations on Credit Risk Mitigation (Loan- Exposures)

Calculation of Exposure amount for collateralised transactions:

$$E^* = \text{Max} \{ 0, [E \times (1 + H_e) - C \times (1 - H_c - H_{FX})] \}$$

Where,

E^* = Exposure value after risk mitigation

E = Current value of the exposure

H_e = Haircut appropriate to the exposure

C = Current value of the collateral received

H_c = Haircut appropriate to the collateral

H_{FX} = Haircut appropriate for currency mismatch between the collateral and exposure

Sly. No.	Particulars	Case I	Case 2	Case 3	Case 4	Case 5
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	**Exposure**	**100**	**100**	**100**	**100**	**100**
2	Maturity of the exposure	2	3	6	3	3
3	Nature of the exposure	Corporate Loan	Corporate Loan	Corporate Loan	Corporate Loan	Corporate Loan
4	Currency	INR	INR	USD	INR	INR
5	Exposure in rupees	100	100	4000 (Row 1 x exch. rate##)	100	100
6	Rating of exposure	BB	A	BBB-	AA	B-
	Applicable Risk weight	150	50	100@	30	150
7	Haircut for exposure*	0	0	0	0	0
8	**Collateral**	100	100	4000	2	100
9	Currency	INR	INR	INR	USD	INR
10	**Collateral in Rs.**	**100**	**100**	**4000**	**80** (Row 1 x Exch. Rate)	**100**
11	Residual maturity of collateral (years)	2	3	6	3	5
12	Nature of collateral	Sovereign	Bank	Corporate	Foreign	Units of

		(GoI) Security	Bonds	Bonds	Corporate Bonds	Mutual Funds
13	Rating of Collateral	NA	Unrated	BBB	AAA (S & P)	AA
14	Haircut for collateral (%)	0.02	0.06	0.12	0.04	0.08
15	Haircut for currency mismatches (%) [cf. para 7.3.7 (vi) of circular]	0	0	0.08	0.08	0
16	Total Haircut on collateral [Row 10 x (row 14+15)]	2	6	800	9.6	8.0
17	Collateral after haircut (Row 10 - Row 16)	98	94	3200	70.4	92
18	**Net Exposure (Row 5 – Row 17)**	**2**	**6**	**800**	**29.6**	**8**
19	Risk weight (%)	150	50	100@	30	150
20	**RWA (Row 18 x 19)**	**3**	**3**	**800**	**8.88**	**12**

Exchange rate assumed to be 1 USD = Rs.40

Not applicable

@ In case of long term ratings, as per para 6.4.2 of the circular, where "+" or "-" notation is attached to the rating, the corresponding main rating category risk weight is to be used. Hence risk weight is 100 per cent.

(*) Haircut for exposure is taken as zero because the loans are not marked to market and hence are not volatile

Case 4 : Haircut applicable as per Table - 14

Case 5 : It is assumed that the Mutual Fund meets the criteria specified in paragraph 7.3.5(viii) and has investments in the securities all of which have residual maturity of more than five years are rated AA and above – which would attract a haircut of eight per cent in terms of Table 14 of the Circular.

Part - B

Illustrations on computation of capital charge for Counterparty Credit Risk (CCR) – Repo Transactions

An illustration showing computation of total capital charge for a repo transaction comprising the capital charge for CCR and Credit/Market risk for the underlying security, under Basel-II is furnished below:

A. Particulars of a Repo Transaction:

Let us assume the following parameters of a hypothetical repo transaction:

Type of the Security	GOI security
Residual Maturity	5 years
Coupon	6 %
Current Market Value	Rs.1050
Cash borrowed	Rs.1000
Modified Duration of the security	4.5 years
Assumed frequency of margining	Daily
Haircut for security	2 % (Cf. Item A(i), Table 14 of the Circular)
Haircut on cash	Zero (Cf. Item C in Table 14 of the Circular)
Minimum holding period	5 business-days (Cf. para 7.3.7 (ix) of the Circular)
Change in yield for computing the capital charge for general market risk	0.7 % p.a. (Cf. Zone 3 in Table 17 of the Circular)

B. Computation of total capital charge comprising the capital charge for Counterparty Credit Risk (CCR) and Credit / Market risk for the underlying security

B.1 In the books of the borrower of funds (for the off-balance sheet exposure due to lending of the security under repo)

(In this case, the security lent is the exposure of the security lender while cash borrowed is the collateral)

Sl.No.	Items	Particulars	Amount (in Rs.)
A.	**Capital Charge for CCR**		
1.	Exposure	MV of the security	1050
2.	CCF for Exposure	100 %	
3.	On-Balance Sheet Credit Equivalent	1050 * 100 %	1050
4.	Haircut	1.4 % @	
5.	*Exposure adjusted for haircut as per Table 14 of the circular*	1050 * 1.014	1064.70
6.	Collateral for the security lent	Cash	1000
7.	Haircut for exposure	0 %	
8.	*Collateral adjusted for haircut*	1000 * 1.00	1000
9.	Net Exposure (5- 8)	1064.70 - 1000	64.70
10.	Risk weight (for a Scheduled CRAR-compliant bank)	20 %	
11.	Risk weighted assets for CCR (9 x 10)	**64.70 * 20 %**	**12.94**
12.	Capital Charge for CCR (11 x 9%)	12.94 * 0.09	1.16
B.	**Capital for Credit/ market Risk of the security**		
1.	Capital for credit risk (if the security is held under HTM)	Credit risk	Zero (Being Govt. security)
2.	Capital for market risk (if the security is held under AFS / HFT)	Specific Risk	Zero (Being Govt. security)
		General Market Risk (4.5 * 0.7 % * 1050) {Modified duration * assumed yield change (%) * market value of security}	33.07
Total capital required (for CCR + credit risk + specific risk + general market risk)			34.23

@ The supervisory haircut of 2 per cent has been scaled down using the formula indicated in paragraph 7.3.7 of the circular.

B.2 In the books of the lender of funds (for the on-balance sheet exposure due to lending of funds under repo)

(In this case, the cash lent is the exposure and the security borrowed is collateral)

Sl.No	Items	Particulars	Amount (in Rs.)
A.	**Capital Charge for CCR**		
1.	Exposure	Cash	1000
2.	Haircut for exposure	0 %	
3.	*Exposure adjusted for haircut as per Table 14 of the circular*	1000 * 1.00	1000
4.	Collateral for the cash lent	Market value of the security	1050
5.	Haircut for collateral	1.4 % @	
6.	*Collateral adjusted for haircut*	1050 * 0.986	1035.30
7.	Net Exposure (3 - 6)	Max { 1000 -1035.30}	0
8.	Risk weight (for a Scheduled CRAR-compliant bank)	20 %	
9.	Risk weighted assets for CCR (7 x 8)	**0 * 20 %**	**0**
10.	Capital Charge for CCR	0	**0**
B.	**Capital for Credit/ market Risk of the security**		
1.	Capital for credit risk (if the security is held under HTM)	Credit Risk	Not applicable, as it is maintained by the borrower of funds
2.	Capital for market risk (if the security is held under AFS/HFT)	Specific Risk	Not applicable, as it is maintained by the borrower of funds
		General Market Risk	Not applicable, as it is maintained by the borrower of funds

@ The supervisory haircut of 2 per cent has been scaled down using the formula indicated in paragraph 7.3.7 of the circular.

ANNEX- 7
(Cf. Para 8.3.10)

Measurement of capital charge for Market Risks in respect of
Interest Rate Derivatives and Options

A. Interest Rate Derivatives

The measurement system should include all interest rate derivatives and off-balance-sheet instruments in the trading book, which react to changes in interest rates, (e.g. forward rate agreements (FRAs), other forward contracts, bond futures, interest rate and cross-currency swaps and forward foreign exchange positions). Options can be treated in a variety of ways as described in para B.1 below. A summary of the rules for dealing with interest rate derivatives is set out in the Table at the end of this section.

1. Calculation of positions

The derivatives should be converted into positions in the relevant underlying and be subjected to specific and general market risk charges as described in the guidelines. In order to calculate the capital charge, the amounts reported should be the market value of the principal amount of the underlying or of the notional underlying. For instruments where the apparent notional amount differs from the effective notional amount, banks must use the effective notional amount.

(a) Futures and Forward Contracts, including Forward Rate Agreements

These instruments are treated as a combination of a long and a short position in a notional government security. The maturity of a future or a FRA will be the period until delivery or exercise of the contract, plus - where applicable - the life of the underlying instrument. *For example, a long position in a June three-month interest rate future (taken in April) is to be reported as a long position in a government security with a maturity of five months and a short position in a government security with a maturity of two months.* Where a range of deliverable instruments may be delivered to fulfill the contract, the bank has flexibility to elect which deliverable security goes into the duration ladder but should take account of any conversion factor defined by the exchange.

(b) Swaps

Swaps will be treated as two notional positions in government securities with relevant maturities. *For example, an interest rate swap under which a bank is receiving floating rate interest and paying fixed will be treated as a long position in a floating rate instrument ofmaturity equivalent to the period until the next interest fixing and a short position in a fixed-rate instrument of maturity equivalent to the residual life of the swap.* For swaps that pay or receive a fixed or floating interest rate against some other reference price, e.g. a stock index,

the interest rate component should be slotted into the appropriate repricing maturity category, with the equity component being included in the equity framework.

Separate legs of cross-currency swaps are to be reported in the relevant maturity ladders for the currencies concerned.

2. Calculation of capital charges for derivatives under the Standardised Methodology

(a) Allowable offsetting of Matched Positions

Banks may exclude the following from the interest rate maturity framework altogether (for both specific and general market risk);

- Long and short positions (both actual and notional) in identical instruments with exactly the same issuer, coupon, currency and maturity.
- A matched position in a future or forward and its corresponding underlying may also be fully offset, (the leg representing the time to expiry of the future should however be reported) and thus excluded from the calculation.

When the future or the forward comprises a range of deliverable instruments, offsetting of positions in the future or forward contract and its underlying is only permissible in cases where there is a readily identifiable underlying security which is most profitable for the trader with a short position to deliver. The price of this security, sometimes called the "cheapest-to-deliver", and the price of the future or forward contract should in such cases move in close alignment.

No offsetting will be allowed between positions in different currencies; the separate legs of cross-currency swaps or forward foreign exchange deals are to be treated as notional positions in the relevant instruments and included in the appropriate calculation for each currency.

In addition, opposite positions in the same category of instruments can in certain circumstances be regarded as matched and allowed to offset fully. To qualify for this treatment the positions must relate to the same underlying instruments, be of the same nominal value and be denominated in the same currency. In addition:

- for Futures: offsetting positions in the notional or underlying instruments to which the futures contract relates must be for identical products and mature within seven days of each other;
- for Swaps and FRAs: the reference rate (for floating rate positions) must be identical and the coupon closely matched (i.e. within 15 basis points); and

- for Swaps, FRAs and Forwards: the next interest fixing date or, for fixed coupon positions or forwards, the residual maturity must correspond within the following limits:
    - less than one month hence: same day;
    - between one month and one year hence: within seven days;
    - over one year hence: within thirty days.

Banks with large swap books may use alternative formulae for these swaps to calculate the positions to be included in the duration ladder. The method would be to calculate the sensitivity of the net present value implied by the change in yield used in the duration method and allocate these sensitivities into the time-bands set out in Table 17 in paragraph 8.3 of this Master Circular.

(b) Specific Risk

Interest rate and currency swaps, FRAs, forward foreign exchange contracts and interest rate futures will not be subject to a specific risk charge. This exemption also applies to futures on an interest rate index (e.g. LIBOR). However, in the case of futures contracts where the underlying is a debt security, or an index representing a basket of debt securities, a specific risk charge will apply according to the credit risk of the issuer as set out in paragraphs above.

(c) General Market Risk

General market risk applies to positions in all derivative products in the same manner as for cash positions, subject only to an exemption for fully or very closely matched positions in identical instruments as defined in paragraphs above. The various categories of instruments should be slotted into the maturity ladder and treated according to the rules identified earlier.

Table - Summary of treatment of Interest Rate Derivatives

Instrument	Specific risk charge	General Market risk charge
Exchange-traded future		
- Government debt security	No	Yes, as two positions
- Corporate debt security	Yes	Yes, as two positions
- Index on interest rates (e.g. MIBOR)	No	Yes, as two positions
OTC forward		
- Government debt security	No	Yes, as two positions
- Corporate debt security	Yes	Yes, as two positions
- Index on interest rates (e.g. MIBOR)	No	Yes, as two positions
FRAs, Swaps	No	Yes, as two positions
Forward Foreign Exchange	No	Yes, as one position in each currency
Options		
- Government debt security	No	
- Corporate debt security	Yes	
- Index on interest rates (e.g. MIBOR)	No	
- FRAs, Swaps	No	

B. <u>Treatment of Options</u>

1. In recognition of the wide diversity of banks' activities in options and the difficulties of measuring price risk for options, alternative approaches are permissible as under:

- those banks which solely use purchased options[62] will be free to use the simplified approach described in Section I below;
- those banks which also write options will be expected to use one of the intermediate approaches as set out in Section II below.

2. In the ***simplified approach***, the positions for the options and the associated underlying, cash or forward, are not subject to the standardised methodology but rather are "carved-out" and subject to separately calculated capital charges that incorporate both general market risk and specific risk. The risk numbers thus generated are then added to the capital charges for the relevant category, i.e. interest rate related instruments, equities, and foreign exchange as described in Paragraph 8.3 to 8.5 of this Master Circular. The *delta-plus method* uses the sensitivity parameters or "Greek letters" associated with options to measure their market risk and capital requirements. Under this method, the delta-equivalent

[62] Unless all their written option positions are hedged by perfectly matched long positions in exactly the same options, in which case no capital charge for market risk is required

position of each option becomes part of the standardised methodology set out in Paragraph 8.3 to 8.5 of this Master Circular with the delta-equivalent amount subject to the applicable general market risk charges. Separate capital charges are then applied to the gamma and Vega risks of the option positions. The ***scenario approach*** uses simulation techniques to calculate changes in the value of an options portfolio for changes in the level and volatility of its associated underlying. Under this approach, the general market risk charge is determined by the scenario "grid" (i.e. the specified combination of underlying and volatility changes) that produces the largest loss. For the delta-plus method and the scenario approach the specific risk capital charges are determined separately by multiplying the delta-equivalent of each option by the specific risk weights set out in Paragraph 8.3 to 8.4 of this Master Circular.

I. Simplified Approach

3. Banks which handle a limited range of purchased options only will be free to use the simplified approach set out in Table A below, for particular trades. As an example of how the calculation would work, if a holder of 100 shares currently valued at Rs.10 each holds an equivalent put option with a strike price of Rs.11, the capital charge would be: Rs.1,000 x 18 per cent (i.e. 9 per cent specific plus 9 per cent general market risk) = Rs.180, less the amount the option is in the money (Rs.11 – Rs.10) x 100 = Rs.100, i.e. the capital charge would be Rs.80. A similar methodology applies for options whose underlying is a foreign currency or an interest rate related instrument.

Table A - *Simplified approach: capital charges*

Position	Treatment
Long cash and Long put Or Short cash and Long call	The capital charge will be the market value of the underlying security[63] multiplied by the sum of specific and general market risk charges[64] for the underlying less the amount the option is in the money (if any) bounded at zero[65]
Long call Or Long put	The capital charge will be the lesser of: (i) the market value of the underlying security multiplied by the sum of specific and general market risk charges[3] for the underlying (ii) the market value of the option[66]

II. Intermediate approaches

(a) Delta-plus Method

4. Banks which write options will be allowed to include delta-weighted options positions within the standardised methodology set out in paragraph 8.3 to 8.5 of this Master Circular. Such options should be reported as a position equal to the market value of the underlying multiplied by the delta.

However, since delta does not sufficiently cover the risks associated with options positions, banks will also be required to measure gamma (which measures the rate of change of delta) and Vega (which measures the sensitivity of the value of an option with respect to a change in volatility) sensitivities in order to calculate the total capital charge. These sensitivities will be calculated according to an approved exchange model or to the bank's proprietary options

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[63] In some cases such as foreign exchange, it may be unclear which side is the "underlying security"; this should be taken to be the asset which would be received if the option were exercised. In addition the nominal value should be used for items where the market value of the underlying instrument could be zero, e.g. caps and floors, swaptions etc.

[64] Some options (e.g. where the underlying is an interest rate or a currency) bear no specific risk, but specific risk will be present in the case of options on certain interest rate-related instruments (e.g. options on a corporate debt security or corporate bond index; see Section B for the relevant capital charges) and for options on equities and stock indices (see Section C). The charge under this measure for currency options will be 9 per cent.

[65] For options with a residual maturity of more than six months, the strike price should be compared with the forward, not current, price. A bank unable to do this must take the "in-the-money" amount to be zero.

[66] Where the position does not fall within the trading book (i.e. options on certain foreign exchange or commodities positions not belonging to the trading book), it may be acceptable to use the book value instead.

pricing model subject to oversight by the Reserve Bank of India[67].

5. Delta-weighted positions with *debt securities or interest rates as the underlying* will be slotted into the interest rate time-bands, as set out in **Table 17** of paragraph 8.3 of this Master Circular**,** under the following procedure. A two-legged approach should be used as for other derivatives, requiring one entry at the time the underlying contract takes effect and a second at the time the underlying contract matures. For instance, a bought call option on a June three-month interest-rate future will in April be considered, on the basis of its delta-equivalent value, to be a long position with a maturity of five months and a short position with a maturity of two months[68]. The written option will be similarly slotted as a long position with a maturity of two months and a short position with a maturity of five months. Floating rate instruments with caps or floors will be treated as a combination of floating rate securities and a series of European-style options. For example, the holder of a three-year floating rate bond indexed to six month LIBOR with a cap of 15 per cent will treat it as:

(i) a debt security that reprices in six months; and

(ii) a series of five written call options on a FRA with a reference rate of 15 per cent, each with a negative sign at the time the underlying FRA takes effect and a positive sign at the time the underlying FRA matures[69].

6. The capital charge for *options with equities as the underlying* will also be based on the delta-weighted positions which will be incorporated in the measure of market risk described in paragraph 8.4 of this Master Circular. For purposes of this calculation each national market is to be treated as a separate underlying. The capital charge for *options on foreign exchange and gold positions* will be based on the method set out in paragraph 8.5 of this Master Circular. For delta risk, the net delta-based equivalent of the foreign currency and gold options will be incorporated into the measurement of the exposure for the respective currency (or gold) position.

7. In addition to the above capital charges arising from delta risk, there will be further capital charges for *gamma* and for *Vega risk.* Banks using the delta-plus method will be required to calculate the gamma and Vega for each option position (including hedge positions) separately. The capital charges should be calculated in the following way:

(i) for ***each individual option*** a "gamma impact" should be calculated according to a

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[67] Reserve Bank of India may wish to require banks doing business in certain classes of exotic options (e.g. barriers, digitals) or in options "at-the-money" that are close to expiry to use either the scenario approach or the internal models alternative, both of which can accommodate more detailed revaluation approaches.

[68] Two-months call option on a bond future, where delivery of the bond takes place in September, would be considered in April as being long the bond and short a five-month deposit, both positions being delta-weighted.

[69] The rules applying to closely-matched positions set out in paragraph 2 (a) of this Appendix will also apply in this respect.

Taylor series expansion as:

Gamma impact = ½ x Gamma x VU^2

where VU = Variation of the underlying of the option.

(ii) VU will be calculated as follows:

- for interest rate options if the underlying is a bond, the price sensitivity should be worked out as explained. An equivalent calculation should be carried out where the underlying is an interest rate.
- for options on equities and equity indices; which are not permitted at present, the market value of the underlying should be multiplied by 9 per cent[70];
- for foreign exchange and gold options: the market value of the underlying should be multiplied by 9 per cent;

(iii) For the purpose of this calculation the following positions should be treated as ***the same underlying***:

- for interest rates,[71] each time-band as set out in Table 17 of the guidelines;[72]
- for equities and stock indices, each national market;
- for foreign currencies and gold, each currency pair and gold;

(iv) Each option on the same underlying will have a gamma impact that is either positive or negative. These individual gamma impacts will be summed, resulting in a net gamma impact for each underlying that is either positive or negative. Only those net gamma impacts that are negative will be included in the capital calculation.

(v) The total gamma capital charge will be the sum of the absolute value of the net negative gamma impacts as calculated above.

(vi) For ***volatility risk,*** banks will be required to calculate the capital charges by multiplying the sum of the Vegas for all options on the same underlying, as defined above, by a proportional shift in volatility of ± □25 per cent.

(vii) The ***total capital charge*** for Vega risk will be the sum of the absolute value of the individual capital charges that have been calculated for Vega risk.

(b) Scenario approach

8. More sophisticated banks will also have the right to base the market risk capital charge for options portfolios and associated hedging positions on *scenario matrix analysis*. This will be accomplished by specifying a fixed range of changes in the option portfolio's risk factors

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[70] The basic rules set out here for interest rate and equity options do not attempt to capture specific risk when calculating gamma capital charges. However, Reserve Bank may require specific banks to do so.

[71] Positions have to be slotted into separate maturity ladders by currency.

[72] Banks using the duration method should use the time-bands as set out in Table 18 of the guidelines.

and calculating changes in the value of the option portfolio at various points along this "grid". For the purpose of calculating the capital charge, the bank will revalue the option portfolio using matrices for simultaneous changes in the option's underlying rate or price and in the volatility of that rate or price. A different matrix will be set up for each individual underlying as defined in paragraph 7 above. As an alternative, at the discretion of each national authority, banks which are significant traders in options for interest rate options will be permitted to base the calculation on a minimum of six sets of time-bands. When using this method, not more than three of the time-bands as defined in paragraph 8.3 of this Master Circular should be combined into any one set.

9. The options and related hedging positions will be evaluated over a specified range above and below the current value of the underlying. The range for interest rates is consistent with the assumed changes in yield in Table - 17 of paragraph 8.3 of this Master Circular. Those banks using the alternative method for interest rate options set out in paragraph 8 above should use, for each set of time-bands, the highest of the assumed changes in yield applicable to the group to which the time-bands belong.[73] The other ranges are ±9 per cent for equities and ±9 per cent for foreign exchange and gold. For all risk categories, at least seven observations (including the current observation) should be used to divide the range into equally spaced intervals.

10. The second dimension of the matrix entails a change in the volatility of the underlying rate or price. A single change in the volatility of the underlying rate or price equal to a shift in volatility of + 25 per cent and - 25 per cent is expected to be sufficient in most cases. As circumstances warrant, however, the Reserve Bank may choose to require that a different change in volatility be used and / or that intermediate points on the grid be calculated.

11. After calculating the matrix, each cell contains the net profit or loss of the option and the underlying hedge instrument. The capital charge for each underlying will then be calculated as the largest loss contained in the matrix.

12. In drawing up these intermediate approaches it has been sought to cover the major risks associated with options. In doing so, it is conscious that so far as specific risk is concerned, only the delta-related elements are captured; to capture other risks would necessitate a much more complex regime. On the other hand, in other areas the simplifying assumptions used have resulted in a relatively conservative treatment of certain options positions.

13. Besides the options risks mentioned above, the RBI is conscious of the other risks

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[73] If, for example, the time-bands 3 to 4 years, 4 to 5 years and 5 to 7 years are combined, the highest assumed change in yield of these three bands would be 0.75.

also associated with options, e.g. rho (rate of change of the value of the option with respect to the interest rate) and theta (rate of change of the value of the option with respect to time). While not proposing a measurement system for those risks at present, it expects banks undertaking significant options business at the very least to monitor such risks closely. Additionally, banks will be permitted to incorporate rho into their capital calculations for interest rate risk, if they wish to do so.

ANNEX-8
(Cf. Para 13.5)

An Illustrative Approach for Measurement of
Interest Rate Risk in the Banking Book (IRRBB) under Pillar II

The Basel-II Framework (Paras 739 and 762 to 764) require the banks to measure the interest rate risk in the banking book (IRRBB) and hold capital commensurate with it. If supervisors determine that banks are not holding capital commensurate with the level of interest rate risk, they must require the bank to reduce its risk, to hold a specific additional amount of capital or some combination of the two. To comply with the requirements of Pillar II relating to IRRBB, the guidelines on Pillar II issued by many regulators contain definite provisions indicating the approach adopted by the supervisors to assess the level of interest rate risk in the banking book and the action to be taken in case the level of interest rate risk found is significant.

In terms of para 764 of the Basel II framework, the banks can follow the indicative methodology prescribed in the supporting document "Principles for the Management and Supervision of Interest Rate Risk" issued by BCBS for assessment of sufficiency of capital for IRRBB.

2. The approach prescribed in the BCBS Paper on "Principles for the Management and Supervision of Interest Rate Risk"

The main components of the approach prescribed in the above mentioned supporting document are as under:

a) The assessment should take into account both the earnings perspective and economic value perspective of interest rate risk.

b) The impact on income or the economic value of equity should be calculated by applying a notional interest rate shock of 200 basis points.

c) The usual methods followed in measuring the interest rate risk are :

a) Earnings perspective

Gap Analysis, simulation techniques and Internal Models based on VaR

b) Economic perspective

Gap analysis combined with duration gap analysis, simulation techniques and Internal Models based on VaR

3. Methods for measurement of the IRRBB

3.1 Impact on Earnings

The major methods used for computing the impact on earnings are the gap Analysis, Simulations and VaR based Techniques. Banks in India have been using the Gap Reports to assess the impact of adverse movements in the interest rate on income through gap method. The banks may continue with the same. However, the banks may use the simulations also. The banks may calculate the impact on the earnings by gap analysis or any other method with the assumed change in yield on 200 bps over one year. However, no capital needs to be allocated for the impact on the earnings.

3.2 Impact of IRRBB on the Market Value of Equity (MVE)

The banks may use the Method indicated in the Basel Committee on Banking Supervision (BCBS) Paper "Principles for the Management and Supervision of Interest rate Risk" (July 2004) for computing the impact of the interest rate shock on the MVE.

3.2.1 Method indicated in the BCBS Paper on "Principles for the Management and Supervision of Interest Rate Risk"

The following steps are involved in this approach:

a) The variables such as maturity/re-pricing date, coupon rate, frequency, principal amount for each item of asset/liability (for each category of asset / liability) are generated.

b) The longs and shorts in each time band are offset.

c) The resulting short and long positions are weighted by a factor that is designed to reflect the sensitivity of the positions in the different time bands to an assumed change in interest rates. These factors are based on an assumed parallel shift of 200 basis points throughout the time spectrum, and on a proxy of modified duration of positions situated at the middle of each time band and yielding 5 per cent.

d) The resulting weighted positions are summed up, offsetting longs and shorts, leading to the net short- or long-weighted position.

e) The weighted position is seen in relation to capital.

For details banks may refer to the captioned paper issued by BCBS. For the sake of convenience, **Annex - 3 and Annex - 4** of the Paper containing the framework and an example of the standardised framework are reproduced in **Annex –9and Annex - 10.**

3.2.2 Other techniques for Interest rate risk measurement

The banks can also follow different versions / variations of the above techniques or entirely different techniques to measure the IRRBB if they find them conceptually sound. In this context, **Annex -1 and Annex - 2** of the BCBS paper referred to above provide broad details of interest rate risk measurement techniques and overview of some of the factors which the supervisory authorities might consider in obtaining and analysing the information on individual bank's exposures to interest rate risk. These Annexes are reproduced in **Annex – 11and Annex - 13**, respectively.

4. Suggested approach for measuring the impact of IRRBB on capital

4.1 As per Basel II Framework, if the supervisor feels that the bank is not holding capital commensurate with the level of IRRBB, it may either require the bank to reduce the risk or allocate additional capital or a combination of the two.

4.2 The banks can decide, with the approval of the Board, on the appropriate level of interest rate risk in the banking book which they would like to carry keeping in view their capital level, interest rate management skills and the ability to re-balance the banking book portfolios quickly in case of adverse movement in the interest rates. In any case, a level of interest rate risk which generates a drop in the MVE of more than 20 per cent with an interest rate shock of 200 basis points, will be treated as excessive and such banks would normally be required by the RBI to hold additional capital against IRRBB as determined during the SREP. The banks which have IRRBB exposure equivalent to less than 20 per cent drop in the MVE may also be required to hold additional capital if the level of interest rate risk is considered, by the RBI, to be high in relation to their capital level or the quality of interest rate risk management framework obtaining in the bank. While the banks may on their own decide to hold additional capital towards IRRBB keeping in view the potential drop in their MVE, the IRR management skills and the ability to re-balance the portfolios quickly in case of adverse movement in the interest rates, the amount of exact capital add-on, if considered necessary, will be decided by the RBI as part of the SREP, in consultation with the bank.

5. Limit setting

The banks would be well advised to consider setting the internal limits for controlling their IRRBB. The following are some of the indicative ways for setting the limits:

a) Internal limits could be fixed in terms of the maximum decline in earnings (as a percentage of the base-scenario income) or decline in capital (as a percentage of the base-scenario capital position) as a result of 200 or 300 basis point interest-rate shock.

b) The limits could also be placed in terms of PV01 value (present value of a basis point) of the net position of the bank as a percentage of net worth/capital of the bank.

ANNEX -9
(Cf. Para 3.2.1 of Annex -10)

Annex 3 to the BCBS Paper on Principles for Management and Supervision of IRR, July 2004

The Standardised Interest Rate Shock

1. To facilitate supervisors' monitoring of interest rate risk exposures across institutions, banks would have to provide the results of their internal measurement systems, expressed in terms of the change in economic value relative to capital, using a standardised interest rate shock. This annex gives the technical background to the selection of the standardised rate shock. In selecting the shock, the following guiding principles were followed:

- The rate shock should reflect a fairly uncommon and stressful rate environment;
- The magnitude of the rate shock should be significant enough to capture the effects of embedded options and convexity within bank assets and liabilities so that underlying risk may be revealed;
- The rate shock should be straightforward and practical to implement, and should be able to accommodate the diverse approaches inherent in single-rate-path simulation models and statistically driven value-at-risk models for banking book positions;
- The underlying methodology should provide relevant shocks for both G10 and material non-G10 currency exposures; and
- The underlying methodology should be adaptable for those non-G10 supervisors who wish to implement this approach in their own countries.

2. With these principles in mind, the proposed rate shock should in principle be determined by banks, based on the following:

- For exposures in G10 currencies, either:
  - (a) An upward and downward 200 basis point parallel rate shock; or
  - (b) 1st and 99th percentile of observed interest rate changes using a one-year (240 working days) holding period and a minimum five years of observations.
- For exposures in non-G10 currencies, either:
  - (a) A parallel rate shock substantially consistent with 1st and 99th percentile of observed interest rate changes using a one-year (240 working days) holding period and a minimum five years of

observations for the particular non-G10 currency; or

(b) 1st and 99th percentile of observed interest rate changes using a one-year (240 working days) holding period and a minimum five years of observations.

3. In considering potential rate shocks, historical rate changes among a number of G10 countries were analysed. A one-year holding period (240 business days) was selected both for practical purposes and in recognition that within a one-year period most institutions have the ability to restructure or hedge their positions to mitigate further losses in economic value should rates appear to be exceptionally volatile. Five years worth of rate change observations require a minimum of six years of historical data to calculate rate differences for a one-year holding period on a rolling basis. For example, the first observation from five years ago must look back to the rate environment six years ago to calculate the first rate change.

4. A five-year historical observation period (six years of data) was thought to be long enough to capture more recent and relevant interest rate cycles. That time period also appears to offer a reasonably manageable set of data for institutions that wish to incorporate such data into their statistically driven value-at-risk models or in their own evaluations of a suitable parallel rate shock for non-G10 currencies. In defining uncommon and stressful scenarios, rate shocks of a magnitude that would not be expected to be exceeded with a 99 percent confidence interval were considered adequate.

5. In evaluating the data for G10 shocks, rate moves at the 1st and 99th percentile were roughly comparable across most currencies, especially for longer maturities. A 200 basis point up and down rate shock appears to adequately cover volatilities across G10 currencies. The appropriateness of the proposed shock will need to be monitored on an ongoing basis, and recalibrated should the rate environment shift materially. Importantly, by calibrating the parallel shock to be roughly consistent with shocks that would be implemented through more sophisticated, statistically driven approaches using standard parameters (99 percent confidence interval, one-year holding period, five years of observations), this approach does not foreclose the use of more innovative risk measurement systems. It also allows institutions to use these parameters for calculating appropriate shocks themselves when they have material exposures outside G10 countries and for supervisors in emerging market and other non-G10 countries to derive simple shocks that are appropriate for their own countries.

6. The analysis so far has implicitly assumed that banks only carry interest rate risk in their home currency. However, many banks will be exposed to interest rate risk in more than one currency. In such cases, banks should carry out a similar analysis for each currency accounting for 5 per cent or more of either their banking book assets or liabilities, using an interest rate shock calculated according to one of the methodologies set out above. To ensure complete coverage of the banking book, remaining exposures should be aggregated and subjected to a 200 basis point shock.

7. The relative simplicity of a 200 basis point parallel rate shock has the disadvantage of ignoring exposures that might be revealed through scenarios that include yield curve twists, inversions, and other relevant scenarios. Such alternative scenarios are a necessary component of the overall management of interest rate risk as noted elsewhere in this paper. Supervisors will continue to expect institutions to perform multiple scenarios in evaluating their interest rate risk as appropriate to the level and nature of risk they are taking.

8. While more nuanced rate scenarios might tease out certain underlying risk characteristics, for the more modest objectives of supervisors in detecting institutions with significant levels of interest rate risk, a simple parallel shock is adequate. Such an approach alsorecognises the potential for spurious precision that occurs when undue attention to fine detail is placed on one aspect of a measurement system without recognition that assumptions employed for certain asset and liability categories, such as core deposits, are by necessity blunt and judgmental. Such judgmental aspects of an interest rate risk model often drive the resulting risk measure and conclusion, regardless of the detailed attention paid to other aspects of the risk measure.

ANNEX -10
(Cf. Para 3.2.1 of Annex - 10)

Annex 4 to the BCBS Paper on Principles for Management and Supervision of IRR, July 2004

An Example of a Standardised Framework

1. This annex contains an example setting out the methodology and calculation process in one version of a standardised framework. Other methodologies and calculation processes could be equally applicable in this context, depending on the circumstances of the bank concerned. Such a framework is intended for supervisory reporting purposes only, and is not intended to represent an adequate framework for internal risk management purposes.

A. Methodology

2. Positions on the bank's balance sheet would be slotted into the maturity approach according to the following principles:

(a) All assets and liabilities belonging to the banking book and all OBS items belonging to the banking book which are sensitive to changes in interest rates (including all interest rate derivatives) are slotted into a maturity ladder comprising a number of time bands large enough to capture the nature of interest rate risk in a national banking market. Annex 2 discusses issues relating to the selection of appropriate time bands. Separate maturity ladders are to be used for each currency accounting for more than 5 per cent of either banking book assets or liabilities.

(b) On-balance-sheet items are treated at book value.

(c) Fixed-rate instruments are allocated according to the residual term to maturity and floating-rate instruments according to the residual term to the next repricing date.

(d) Exposures which create practical processing problems because of their large number and relatively small individual amount (e.g. instalment or mortgage loans) may be allocated on the basis of statistically supported assessment methods.

(e) Core deposits are slotted according to an assumed maturity of no longer than five years.

(f) National supervisors will provide guidance on how other items with a behavioural maturity or repricing that differ from contractual maturity or repricing are to be slotted into the time band structure.

(g) Derivatives are converted into positions in the relevant underlying. The amounts considered are the principal amount of the underlying or of the notional underlying.

(h) Futures and forward contracts, including forward rate agreements (FRA), are treated as a combination of a long and a short position. The maturity of a future or a FRA will

be the period until delivery or exercise of the contract, plus - where applicable - the life of the underlying instrument. For example, a long position in a June three-month interest rate future (taken in April) is to be reported as a long position with a maturity of five months and a short position with a maturity of two months.

(i) Swaps are treated as two notional positions with relevant maturities. For example, an interest rate swap under which a bank is receiving floating-rate interest and paying fixed-rate interest will be treated as a long floating-rate position of maturity equivalent to the period until the next interest fixing and a short fixed-rate position of maturity equivalent to the residual life of the swap. The separate legs of cross-currency swaps are to be treated in the relevant maturity ladders for the currencies concerned.

(j) Options are considered according to the delta equivalent amount of the underlying or of the notional underlying.

B. Calculation process

3. The calculation process consists of five steps.

(a) The first step is to offset the longs and shorts in each time band, resulting in a single short or long position in each time band.

(b) The second step is to weight these resulting short and long positions by a factor that is designed to reflect the sensitivity of the positions in the different time bands to an assumed change in interest rates. The set of weighting factors for each time band is set out in Table 1 below. These factors are based on an assumed parallel shift of 200 basis points throughout the time spectrum, and on a proxy of modified duration of positions situated at the middle of each time band and yielding 5 per cent.

(c) The third step is to sum these resulting weighted positions, offsetting longs and shorts, leading to the net short- or long-weighted position of the banking book in the given currency.

(d) The fourth step is to calculate the weighted position of the whole banking book by summing the net short- and long-weighted positions calculated for different currencies.

(e) The fifth step is to relate the weighted position of the whole banking book to capital.

Table 1
Weighting factors per time band (second step in the calculation process)

Time band	Middle of time band	Proxy of modified duration	Assumed change in yield	Weighting factor
Up to 1 month	0.5 months	0.04 years	200 bp	0.08%
1 to 3 months	2 months	0.16 years	200 bp	0.32%
3 to 6 months	4.5 months	0.36 years	200 bp	0.72%
6 to 12 months	9 months	0.71 years	200 bp	1.43%
1 to 2 years	1.5 years	1.38 years	200 bp	2.77%
2 to 3 years	2.5 years	2.25 years	200 bp	4.49%
3 to 4 years	3.5 years	3.07 years	200 bp	6.14%
4 to 5 years	4.5 years	3.85 years	200 bp	7.71%
5 to 7 years	6 years	5.08 years	200 bp	10.15%
7 to 10 years	8.5 years	6.63 years	200 bp	13.26%
10 to 15 years	12.5 years	8.92 years	200 bp	17.84%
15 to 20 years	17.5 years	11.21 years	200 bp	22.43%
Over 20 years	22.5 years	13.01 years	200 bp	26.03%

ANNEX -11

(Cf. Para 3.2.2 of Annex -8)

Annex 1 to the BCBS Paper on Principles for Management and Supervision of IRR, July 2004

Interest Rate Risk Measurement Techniques

1. This annex provides a brief overview of the various techniques used by banks to measure the exposure of earnings and of economic value to changes in interest rates. The variety of techniques ranges from calculations that rely on simple maturity and re-pricing tables, to static simulations based on current on- and off-balance-sheet positions, to highly sophisticated dynamic modelling techniques that incorporate assumptions about the behaviour of the bank and its customers in response to changes in the interest rate environment. Some of these general approaches can be used to measure interest rate risk exposure from both an earnings and an economic value perspective, while others are more typically associated with only one of these two perspectives. In addition, the methods vary in their ability to capture the different forms of interest rate exposure: the simplest methods are intended primarily to capture the risks arising from maturity and re-pricing mismatches, while the more sophisticated methods can more easily capture the full range of risk exposures.

2. As this discussion suggests, the various measurement approaches described below have their strengths and weaknesses in terms of providing accurate and reasonable measures of interest rate risk exposure. Ideally, a bank's interest rate risk measurement system would take into account the specific characteristics of each individual interest sensitive position, and would capture in detail the full range of potential movements in interest rates. In practice, however, measurement systems embody simplifications that move away from this ideal. For instance, in some approaches, positions may be aggregated into broad categories, rather than modelled separately, introducing a degree of measurement error into the estimation of their interest rate sensitivity. Similarly, the nature of interest rate movements that each approach can incorporate may be limited: in some cases, only a parallel shift of the yield curve may be assumed or less than perfect correlations between interest rates may not be taken into account. Finally, the various approaches differ in their ability to capture the optionality inherent in many positions and instruments. The discussion in the following sections will highlight the areas of simplification that typically characterise each of the major interest rate risk measurement techniques.

A. Re-pricing Schedules

3. The simplest techniques for measuring a bank's interest rate risk exposure begin with a maturity/re-pricing schedule that distributes interest-sensitive assets, liabilities, and OBS positions into a certain number of predefined time bands according to their maturity (if fixed-rate) or time remaining to their next re-pricing (if floating-rate). Those assets and liabilities lacking definitive re-pricing intervals (e.g. sight deposits or savings accounts) or actual maturities that could vary from contractual maturities (e.g. mortgages with an option for early repayment) are assigned to re-pricing time bands according to the judgement and past experience of the bank.

I. Gap Analysis

4. Simple maturity/re-pricing schedules can be used to generate simple indicators of the interest rate risk sensitivity of both earnings and economic value to changing interest rates. When this approach is used to assess the interest rate risk of current earnings, it is typically referred to as gap analysis. Gap analysis was one of the first methods developed to measure a bank's interest rate risk exposure, and continues to be widely used by banks. To evaluate earnings exposure, interest rate-sensitive liabilities in each time band are subtracted from the corresponding interest rate-sensitive assets to produce a re-pricing “gap” for that time band. This gap can be multiplied by an assumed change in interest rates to yield an approximation of the change in net interest income that would result from such an interest rate movement. The size of the interest rate movement used in the analysis can be based on a variety of factors, including historical experience, simulation of potential future interest rate movements, and the judgment of bank management.

5. A negative, or liability-sensitive, gap occurs when liabilities exceed assets (including OBS positions) in a given time band. This means that an increase in market interest rates could cause a decline in net interest income. Conversely, a positive, or asset-sensitive, gap implies that the bank's net interest income could decline as a result of a decrease in the level of interest rates.

6. These simple gap calculations can be augmented by information on the average coupon on assets and liabilities in each time band. This information can be used to place the results of the gap calculations in context. For instance, information on the average coupon rate could be used to calculate estimates of the level of net interest income arising from positions maturing or repricing within a given time band, which would then provide a “scale” to assess the changes in income implied by the gap analysis.

7. Although gap analysis is a very commonly used approach to assessing interest rate

risk exposure, it has a number of shortcomings. First, gap analysis does not take account of variation in the characteristics of different positions within a time band. In particular, all positions within a given time band are assumed to mature or re-price simultaneously, a simplification that is likely to have greater impact on the precision of the estimates as the degree of aggregation within a time band increases. Moreover, gap analysis ignores differences in spreads between interest rates that could arise as the level of market interest rates changes (basis risk). In addition, it does not take into account any changes in the timing of payments that might occur as a result of changes in the interest rate environment. Thus, it fails to account for differences in the sensitivity of income that may arise from option-related positions. For these reasons, gap analysis provides only a rough approximation of the actual change in net interest income which would result from the chosen change in the pattern of interest rates. Finally, most gap analyses fail to capture variability in non-interest revenue and expenses, a potentially important source of risk to current income.

II. Duration

8. A maturity/re-pricing schedule can also be used to evaluate the effects of changing interest rates on a bank's economic value by applying sensitivity weights to each time band. Typically, such weights are based on estimates of the duration of the assets and liabilities that fall into each time band. Duration is a measure of the percentage change in the economic value of a position that will occur given a small change in the level of interest rates.[74]It reflects the timing and size of cash flows that occur before the instrument's contractual maturity. Generally, the longer the maturity or next re-pricing date of the instrument and the smaller the payments that occur before maturity (e.g. coupon payments), the higher the duration (in absolute value). Higher duration implies that a given change in the level of interest rates will have a larger impact on economic value.

9. Duration-based weights can be used in combination with a maturity/re-pricing schedule to provide a rough approximation of the change in a bank's economic value that would occur given a particular change in the level of market interest rates. Specifically, an “average” duration is assumed for the positions that fall into each time band. The average durations are then multiplied by an assumed change in interest rates to construct a weight

[74]Modified duration - which is standard duration divided by 1 + r, where r is the level of market interest rates – is an elasticity. As such, it reflects the percentage change in the economic value of the instrument for a given percentage change in 1 + r. As with simple duration, it assumes a linear relationship between percentage changes in value and percentage changes in interest rates. The second form of duration relaxes this assumption, as well as the assumption that the timing of payments is fixed. Effective duration is the percentage change in the price of the relevant instrument for a basis point change in yield.

for each time band. In some cases, different weights are used for different positions that fall within a time band, reflecting broad differences in the coupon rates and maturities (for instance, one weight for assets, and another for liabilities). In addition, different interest rate changes are sometimes used for different time bands, generally to reflect differences in the volatility of interest rates along the yield curve. The weighted gaps are aggregated across time bands to produce an estimate of the change in economic value of the bank that would result from the assumed changes in interest rates.

10. Alternatively, an institution could estimate the effect of changing market rates by calculating the precise duration of each asset, liability, and OBS position and then deriving the net position for the bank based on these more accurate measures, rather than by applying an estimated average duration weight to all positions in a given time band. This would eliminate potential errors occurring when aggregating positions/cash flows. As another variation, risk weights could also be designed for each time band on the basis of actual percentage changes in market values of hypothetical instruments that would result from a specific scenario of changing market rates. That approach - which is sometimes referred to as effective duration - would better capture the non-linearity of price movements arising from significant changes in market interest rates and, thereby, would avoid an important limitation of duration.

11. Estimates derived from a standard duration approach may provide an acceptable approximation of a bank's exposure to changes in economic value for relatively non-complex banks. Such estimates, however, generally focus on just one form of interest rate risk exposure - repricing risk. As a result, they may not reflect interest rate risk arising, for instance, from changes in the relationship among interest rates within a time band (basis risk). In addition, because such approaches typically use an average duration for each time band, the estimates will not reflect differences in the actual sensitivity of positions that can arise from differences in coupon rates and the timing of payments. Finally, the simplifying assumptions that underlie the calculation of standard duration means that the risk of options may not be adequately captured.

B. Simulation Approaches

12. Many banks (especially those using complex financial instruments or otherwise having complex risk profiles) employ more sophisticated interest rate risk measurement systems than those based on simple maturity/repricing schedules. These simulation techniques typically involve detailed assessments of the potential effects of changes in interest rates on earnings and economic value by simulating the future path of interest rates and their impact on cash flows.

13. In some sense, simulation techniques can be seen as an extension and refinement of the simple analysis based on maturity/repricing schedules. However, simulation approaches typically involve a more detailed breakdown of various categories of on- and off balance-sheet positions, so that specific assumptions about the interest and principal payments and non-interest income and expense arising from each type of position can be incorporated. In addition, simulation techniques can incorporate more varied and refined changes in the interest rate environment, ranging from changes in the slope and shape of the yield curve to interest rate scenarios derived from Monte Carlo simulations.

I. Static Simulation

14. In static simulations, the cash flows arising solely from the bank's current on- and off-balance-sheet positions are assessed. For assessing the exposure of earnings, simulations estimating the cash flows and resulting earnings streams over a specific period are conducted based on one or more assumed interest rate scenarios. Typically, although not always, these simulations entail relatively straightforward shifts or tilts of the yield curve, or changes of spreads between different interest rates. When the resulting cash flows are simulated over the entire expected lives of the bank's holdings and discounted back to their present values, an estimate of the change in the bank's economic value can be calculated.[75]

II. Dynamic Simulation

15. In a dynamic simulation approach, the simulation builds in more detailed assumptions about the future course of interest rates and the expected changes in a bank's business activity over that time. For instance, the simulation could involve assumptions about a bank's strategy for changing administered interest rates (on savings deposits, for example), about the behaviour of the bank's customers (e.g. withdrawals from sight and savings deposits), and/or about the future stream of business (new loans or other transactions) that the bank will encounter. Such simulations use these assumptions about future activities and reinvestment strategies to project expected cash flows and estimate dynamic earnings and economic value outcomes. These more sophisticated techniques allow for dynamic interaction of payments streams and interest rates, and better capture the effect of embedded or explicit options.

16. As with other approaches, the usefulness of simulation-based interest rate risk measurement techniques depends on the validity of the underlying assumptions and the accuracy of the basic methodology. The output of sophisticated simulations must be

[75] The duration analysis described in the previous section can be viewed as a very simple form of static.

assessed largely in the light of the validity of the simulation's assumptions about future interest rates and the behaviour of the bank and its customers. One of the primary concerns that arises is that such simulations do not become “black boxes” that lead to false confidence in the precision of the estimates.

C. Additional issues

17. One of the most difficult tasks when measuring interest rate risk is how to deal with those positions where behavioural maturity differs from contractual maturity (or where there is no stated contractual maturity). On the asset side of the balance sheet, such positions may include mortgages and mortgage-related securities, which can be subject to prepayment. In some countries, borrowers have the discretion to prepay their mortgages with little or no penalty, which creates uncertainty about the timing of the cash flows associated with these instruments. Although there is always some volatility in prepayments resulting from demographic factors (such as death, divorce, or job transfers) and macroeconomic conditions, most of the uncertainty surrounding prepayments arises from the response of borrowers to movements in interest rates. In general, declines in interest rates result in increasing levels of prepayments as borrowers refinance their loans at lower yields. In contrast, when interest rates rise unexpectedly, prepayment rates tend to slow, leaving the bank with a larger than anticipated volume of mortgages paying below current market rates.

18. On the liability side, such positions include so-called non-maturity deposits such as sight deposits and savings deposits, which can be withdrawn, often without penalty, at the discretion of the depositor. The treatment of such deposits is further complicated by the fact that the rates received by depositors tend not to move in close correlation with changes in the general level of market interest rates. In fact, banks can and do administer the rates on the accounts with the specific intention of managing the volume of deposits retained.

19. The treatment of positions with embedded options is an issue of special concern in measuring the exposure of both current earnings and economic value to interest rate changes. In addition, the issue arises across the full spectrum of approaches to interest rate measurement, from simple gap analysis to the most sophisticated simulation techniques. In the maturity/re-pricing schedule framework, banks typically make assumptions about the likely timing of payments and withdrawals on these positions and “spread” the balances across time bands accordingly. For instance, it might be assumed that certain percentages of a pool of 30-year mortgages prepay in given years during the life of the mortgages. As a result, a large share of the mortgage balances that would have been assigned to the time band containing 30-year instruments would be spread among nearer-term time bands. In a

simulation framework, more sophisticated behavioural assumptions could be employed, such as the use of option-adjusted pricing models to better estimate the timing and magnitude of cash flows under different interest rate environments. In addition, simulations can incorporate the bank's assumptions about its likely future treatment of administered interest rates on non-maturity deposits.

20. As with other elements of interest rate risk measurement, the quality of the estimates of interest rate risk exposure depends on the quality of the assumptions about the future cash flows on the positions with uncertain maturities. Banks typically look to the past behaviour of such positions for guidance about these assumptions. For instance, econometric or statistical analysis can be used to analyse the behaviour of a bank's holdings in response to past interest rate movements. Such analysis is particularly useful to assess the likely behaviour of non-maturity deposits, which can be influenced by bank-specific factors such as the nature of the bank's customers and local or regional market conditions. In the same vein, banks may use statistical prepayment models - either models developed internally by the bank or models purchased from outside developers - to generate expectations about mortgage-related cash flows. Finally, input from managerial and business units within the bank could have an important influence, since these areas may be aware of planned changes to business or repricing strategies that could affect the behaviour of the future cash flows of positions with uncertain maturities.

ANNEX -12
(Cf. Para 3.2.2 of Annex - 9)

Annex 2 to the BCBS Paper on Principles for Management and Supervision of IRR, July 2004

Monitoring of Interest Rate Risk by Supervisory Authorities

1. This annex provides a brief overview of some of the factors that supervisory authorities might consider in obtaining and analysing information on individual banks' exposures to interest rate risk. As discussed in Section VII, supervisory authorities should obtain information sufficient to assess banks' exposures to interest rate risk in a timely fashion. Such information may be obtained through on-site examinations, through reports that are submitted by banks on a regular basis, or through other means.

2. While the precise information that is obtained will differ across supervisory authorities, one approach that some may adopt is a reporting framework that collects information on a bank's positions by remaining maturity or time to next re-pricing. Under such an approach, a bank would categorise its interest-sensitive assets, liabilities, and OBS positions into a series of re-pricing time bands or maturity categories. The two sections that follow discuss the considerations that a supervisor should take into account in specifying the number of time bands and the grouping of positions in the reporting framework. The final section of this annex describes some general approaches that supervisory authorities may wish to consider in analysing the information that is obtained through such a reporting framework.

A. Time Bands

3. If a reporting framework is used in which information is collected by time to next re-pricing, the number and specific categories of time bands chosen should be sufficient to provide supervisors with a reasonable basis for identifying potentially significant re-pricing mismatches. The bands, however, could vary materially across countries, both in number and in range, depending on the lending and investing practices and experiences of banks in individual markets.

4. The usefulness of supervisory analysis crucially depends on the precision with which maturities of the positions and cash flows are recorded in the system. In analysing interest rate sensitivities, it is not enough to know when an instrument matures. Rather, the critical factor is when the instrument re-prices. Therefore, the emphasis of this section is on re-pricing rather than maturity. For cash flows whose re-pricing is unambiguous, the most precise approach is to use the exact re-pricing date. Any aggregation of positions/cash flows

in time bands or zones necessarily implies a loss of information and a lower degree of precision. For this reason, the number of time bands in a re-pricing ladder framework always reflects a decision regarding the necessary level of precision and the cost of pursuing greater accuracy. Supervisory authorities could use the re-pricing ladder in the standardised approach of the Market Risk Amendment as a starting point when developing a reporting framework that meets their particular needs. The breakdown can, of course, be modified by supervisors either in a general way or in a specific way for banks where the nature of business activities warrants or justifies a different reporting form.

B. Items

5. As with the time bands, the breakdown of assets and liabilities could differ among supervisors. A reporting system should include information for all rate-sensitive assets, liabilities, and OBS positions, and should also identify balances, by specific types of instruments, when those instruments have or may have materially different cash flow characteristics. Specific attention should be given to items whose behavioural re-pricings differ from contractual maturities, such as savings deposits and, in some countries, mortgage-related instruments. Further information on these issues is provided in Annex to our circular DBOD.No.BP.BC.92/21.06.001/2008-09 dated December 4, 2008. If the volume of these positions is significant, they should be reported separately so as to facilitate an assessment of the underlying options risk in the bank's balance sheet structure.

6. The analysis of interest rate risk may be more difficult if a bank is engaged in trading activities. As a general rule, it is desirable for any measurement system to incorporate interest rate risk exposures arising from the full scope of a bank's activities, including both trading and non-trading sources. This does not preclude different measurement systems and risk management approaches being used for different activities; however, management should have an integrated view of interest rate risk across products and business lines. Supervisors may wish to permit banks that manage their interest rate risk exposures on an integrated basis to aggregate trading and non-trading positions in the overall reporting framework. However, it is important to recognise that in many countries different accounting rules may apply to the trading book and the traditional banking book. Under these accounting rules, losses in the trading book may not always be offset by profits in the banking book if the latter are unrealised. Furthermore, unlike the banking book, the composition of the trading portfolio changes significantly from week to week or even day to day because it is managed separately and according to a different (shorter) risk horizon than the banking book. This means that a hedge that is present on a given day may disappear a

few days later. Supervisors should, therefore, review the risk management practices and information systems of banks that conduct material trading activities and should obtain the information necessary to ensure that interest rate risk in both trading and non-trading activities is properly managed and controlled.

C. Supervisory Analysis

7. A reporting framework designed along these lines may provide supervisors with a flexible tool for analysing interest rate risk. Supervisors can use this basic information to perform their own assessments of a bank's exposure and risk profile.

8. Such assessments may provide insights regarding an institution's exposure to parallel shifts, or to a flattening, steepening, or inversion of the yield curve with rate changes of different magnitude based on either statistical probabilities or a worst-case analysis. For banks with important exposures in foreign currencies, analysis investigating different assumptions regarding correlations between interest rates in different currencies can be useful. With respect to instruments with behavioural maturities, supervisors may wish to assess assumptions that differ from those used by the institution.

9. The focus of supervisors' quantitative analysis can be the impact of interest rate changes on either current earnings or the economic value of the bank’s portfolio. In conducting their analysis, information about average yields on assets and liabilities in each time band may be useful and supervisors may wish to collect such information in addition to pure position data.

10. Depending on their overall approach, supervisors may conduct their analysis of interest rate risk either on a case-by-case basis or as part of a broader system designed to identify outliers with apparently excessive risk-taking.

11. By conducting an assessment of interest rate risk using the proposed framework, supervisors may gain more insight into an institution's risk profile than with a reporting system that reduces the complexity of interest rate risk to a single number. In doing so, supervisors can become more familiar with the sensitivity of risk measures to changes in the underlying assumptions, and the evaluation process may produce as many insights as the quantitative result itself.

12. Regardless of the extent of a supervisor's own independent quantitative analysis, a bank's own interest rate risk measure, whether reported as part of a basic supervisory reporting system or reviewed as part of an individual assessment of a bank's risk management, is an important consideration in the supervisory process. Reviewing the

results of a bank's internal model can be highly informative, but can also be a difficult process because of the multitude of important assumptions and modelling techniques which need to be made transparent to supervisors. To be most useful, the information received should indicate the contribution of principal elements of a bank's portfolio to the risk profile under different assumptions with respect to interest rate changes and the market response. Finally, any quantitative analysis should be supplemented by a review of internal management reports in order to gain greater insights into management's evaluation and management of risks, its methods for measuring exposures, and factors not reflected in the information available in the limited reporting to supervisors.

ANNEX-13
(Cf. Para 12.3.3.7)

An illustrative outline of the ICAAP Document

1. What is an ICAAP document?

The ICAAP Document would be a comprehensive Paper furnishing detailed information on the ongoing assessment of the bank's entire spectrum of risks, how the bank intends to mitigate those risks and how much current and future capital is necessary for the bank, reckoning other mitigating factors. The purpose of the ICAAP document is to apprise the Board of the bank on these aspects as also to explain to the RBI the bank's internal capital adequacy assessment process and the banks' approach to capital management. The ICAAP could also be based on the existing internal documentation of the bank.

The ICAAP document submitted to the RBI should be formally approved by the bank's Board. It is expected that the document would be prepared in a format that would be easily understood at the senior levels of management and would contain all the relevant information necessary for the bank and the RBI to make an informed judgment as to the appropriate capital level of the bank and its risk management approach. Where appropriate, technical information on risk measurement methodologies, capital models, if any, used and all other work carried out to validate the approach (e.g. board papers and minutes, internal or external reviews) could be furnished to the RBI as appendices to the ICAAP Document.

2. Contents

The ICAAP Document should contain the following sections:

I. Executive Summary
II. Background
III. Summary of current and projected financial and capital positions
IV. Capital Adequacy
V. Key sensitivities and future scenarios
VI. Aggregation and diversification
VII. Testing and adoption of the ICAAP
VIII. Use of the ICAAP within the bank

I. Executive Summary

The purpose of the Executive Summary is to present an overview of the ICAAP methodology and results. This overview would typically include:

a) the purpose of the report and the regulated entities within a banking group that are covered by the ICAAP;
b) the main findings of the ICAAP analysis:

i. how much and what composition of internal capital the bank considers it should hold as compared with the minimum CRAR requirement (CRAR) under 'Pillar 1' calculation, and

ii. the adequacy of the bank's risk management processes;

c) a summary of the financial position of the bank, including the strategic position of the bank, its balance sheet strength, and future profitability;

d) brief descriptions of the capital raising and dividend plan including how the bank intends to manage its capital in the days ahead and for what purposes;

e) commentary on the most material risks to which the bank is exposed, why the level of risk is considered acceptable or, if it is not, what mitigating actions are planned;

f) commentary on major issues where further analysis and decisions are required; and

g) who has carried out the assessment, how it has been challenged / validated / stress tested, and who has approved it.

II. Background

This section would cover the relevant organisational and historical financial data for the bank. e.g., group structure (legal and operational), operating profit, profit before tax, profit after tax, dividends, shareholders funds, capital funds held vis-à-vis the regulatory requirements, customer deposits, deposits by banks, total assets, and any conclusions that can be drawn from trends in the data which may have implications for the bank's future.

III. Summary of current and projected financial and capital positions

This section would explain the present financial position of the bank and expected changes to the current business profile, the environment in which it expects to operate, its projected business plans (by appropriate lines of business), projected financial position, and future planned sources of capital.

The starting balance sheet used as reference and date as of which the assessment is carried out should be indicated.

The projected financial position could reckon both the projected capital available and projected capital requirements based on envisaged business plans. These might then provide a basis against which adverse scenarios might be compared.

IV. Capital Adequacy

This section might start with a description of the bank's risk appetite, in quantitative terms, as approved by the bank's Board and used in the ICAAP. It would be necessary to clearly spell out in the document whether what is being presented represents the bank's view of the amount of capital required to meet minimum **regulatory needsor** whether represents the amount of capital that a bank believes it would need **to meet its business plans**. For

instance, it should be clearly brought out whether the capital required is based on a particular credit rating desired by the bank or includes buffers for strategic purposes or seeks to minimise the chance of breaching regulatory requirements. Where economic capital models are used for internal capital assessment, the confidence level, time horizon, and description of the event to which the confidence level relates, should also be enumerated. Where scenario analyses or other means are used for capital assessment, then the basis / rationale for selecting the chosen severity of scenarios used, should also be included.

The section would then include a detailed review of the capital adequacy of the bank.

The information provided would include the following elements:

Timing

- the effective date of the ICAAP calculations together with details of any events between this date and the date of submission to the Board / RBI which would materially impact the ICAAP calculations together with their effects; and
- details of, and rationale for, the time period selected for which capital requirement has been assessed.

Risks Analysed

- an identification of the major risks faced by the bank in each of the following categories:
    a) credit risk
    b) market risk
    c) operational risk
    d) liquidity risk
    e) concentration risk
    f) interest rate risk in the banking book
    g) residual risk of securitisation
    h) strategic risk
    i) business risk
    j) reputation risk
    k) pension obligation risk
    l) other residual risk; and
    m) any other risks that might have been identified
- for each of these risks, an explanation of how the risk has been assessed and o the extent possible, the **quantitative results** of that assessment;
- where some of these risks have been highlighted in the report of the RBI's on-site inspection of the bank, an explanation of how the bank has mitigated these;
- where relevant, a comparison of the RBI-assessed CRAR during on-site inspection with the results of the CRAR calculations of the bank under the ICAAP;

- a clear articulation of the bank's risk appetite, in quantitative terms, by risk category and the extent of its consistency (its 'fit') with the overall assessment of bank's various risks; and
- where relevant, an explanation of any other methods, apart from capital, used by the bank to mitigate the risks.

Methodology and Assumptions

A description of how assessments for each of the major risks have been approached and the main assumptions made.

For instance, banks may choose to base their ICAAP on the results of the CRAR calculation with the capital for additional risks (e.g. concentration risk, interest rate risk in the banking book, etc.) assessed separately and added to the Pillar 1 computations. Alternatively, banks could choose to base their ICAAP on internal models for all risks, including those covered under the CRAR (i.e. Credit, Market and Operational Risks).

The description here would make clear which risks are covered by which modelling or calculation approach. This would include details of the methodology and process used to calculate risks in each of the categories identified and reason for choosing the method used in each case.

Where the bank uses an internal model for the quantification of its risks, this section should explain for each of those models:

- the key assumptions and parameters within the capital modelling work and background information on the derivation of any key assumptions;
- how parameters have been chosen, including the historical period used and the calibration process;
- the limitations of the model;
- the sensitivity of the model to changes in those key assumptions or parameters chosen; and
- the validation work undertaken to ensure the continuing adequacy of the model.

Where stress tests or scenario analyses have been used to validate, supplement, or probe the results of other modelling approaches, then this section should provide:

- details of simulations to capture risks not well estimated by the bank's internal capital model (e.g. non-linear products, concentrations, illiquidity and shifts in correlations in a crisis period);

- details of the quantitative results of stress tests and scenario analyses the bank carried out and the confidence levels and key assumptions behind those analyses, including, the distribution of outcomes obtained for the main individual risk factors;

- details of the range of combined adverse scenarios which have been applied, how these were derived and the resulting capital requirements; and

- where applicable, details of any additional business-unit-specific or business-plan-specific stress tests selected.

Capital Transferability

In case of banks with conglomerate structure, details of any restrictions on the management's ability to transfer capital into or out of the banking business(es) arising from, for example, by contractual, commercial, regulatory or statutory constraints that apply, should be furnished. Any restrictions applicable and flexibilities available for distribution of dividend by the entities in the Group could also be enumerated. In case of overseas banking subsidiaries of the banks, the regulatory restrictions would include the minimum regulatory capital level acceptable to the host-country regulator of the subsidiary, after declaration of dividend.

V. Firm-wide risk oversight and specific aspects of risk management [76]

V.1 Risk Management System in the bank

This section would describe the risk management infrastructure within the bank along the following lines:

- The oversight of board and senior management
- Policies, Procedures and Limits
- identification, measurement, mitigation, controlling and reporting of risks
- MIS at the firm wide level
- Internal controls

V.2 Off-balance Sheet Exposures with a focus on Securitisation

[76] Master Circular DBOD.No.BP.BC.73/21.06.001/2009-10 dated Feb 8, 2010

This section would comprehensively discuss and analyse underlying risks inherent in the off-balance sheet exposures particularly its investment in structured products. When assessing securitisation exposures, bank should thoroughly analyse the credit quality and risk characteristics of the underlying exposures. This section should also comprehensively explain the maturity of the exposures underlying securitisation transactions relative to issued liabilities in order to assess potential maturity mismatches.

V.3 Assessment of Reputational Risk and Implicit Support

This section should discuss the possibilities of reputational risk leading to provision of implicit support, which might give rise to credit, market and legal risks. This section should thoroughly discuss potential sources of reputational risk to the bank.

V. 4 Assessment of valuation and Liquidity Risk

This section would describe the governance structures and control processes for valuing exposures for risk management and financial reporting purposes, with a special focus on valuation of illiquid positions. This section will have relevant details leading to establishment and verification of valuations for instruments and transactions in which it engages.

V. 5 Stress Testing practices

This section would explain the role of board and senior management in setting stress testing objectives, defining scenarios, discussing the results of stress tests, assessing potential actions and decision making on the basis of results of stress tests. This section would also describe the rigorous and forward looking stress testing that identifies possible events or changes in market conditions that could adversely the bank.RBI would assess the effectiveness of banks' stress testing programme in identifying relevant vulnerabilities.

V. 6 Sound compensation practices

This section should describe the compensation practices followed by the bank and how far the compensation practices are linked to long-term capital preservation and the financial strength of the firm. The calculation of risk-adjusted performance

measure for the employees and its link, if any, with the compensation should clearly be disclosed in this section

VI. Key sensitivities and future scenarios

This section would explain how a bank would be affected by an economic recession or downswings in the business cycle or markets relevant to its activities. The RBI would like to be apprised as to how a bank would manage its business and capital so as to survive a recession while meeting the minimum regulatory standards. The analysis would include future financial projections for, say, three to five years based on business plans and solvency calculations.

For the purpose of this analysis, the severity of the recession reckoned should typically be one that occurs only once in a 25 year period. The time horizon would be from the day of the ICAAP calculation to at least the deepest part of the recession envisaged.

Typical scenarios would include:

- how an economic downturn would affect:
    - the bank's capital funds and future earnings; and
    - the bank's CRAR taking into account future changes in its projected balance sheet.
- In both cases, it would be helpful if these projections show separately the effects of management actions to change the bank's business strategy and the implementation of contingency plans.
- projections of the future CRAR would include the effect of changes in the credit quality of the bank's credit risk counterparties (including migration in their ratings during a recession) and the bank's capital and its credit risk capital requirement;
- an assessment by the bank of any other capital planning actions to enable it to continue to meet its regulatory capital requirements throughout a recession such as new capital injections from related companies or new share issues;
- This section would also explain which key macroeconomic factors are being stressed, and how those have been identified as drivers of the bank's earnings. The bank would also explain how the macroeconomic factors affect the key parameters of the internal model by demonstrating, for instance, how the relationship between the two has been established.

Management Actions

This section would elaborate on the management actions assumed in deriving the ICAAP, in particular:

- the quantitative impact of management actions – sensitivity testing of key management actions and revised ICAAP figures with management actions excluded.
- evidence of management actions implemented in the past during similar periods of economic stress.

VII. Aggregation and Diversification

This section would describe how the results of the various separate risk assessments are brought together and an overall view taken on capital adequacy. At a technical level, this would, therefore, require some method to be used to combine the various risks using some appropriate quantitative techniques. At the broader level, the overall reasonableness of the detailed quantification approaches might be compared with the results of an analysis of capital planning and a view taken by senior management as to the overall level of capital that is considered appropriate.

- In enumerating the process of technical aggregation, the following aspects could be covered:
    - i) any allowance made for diversification, including any assumed correlations within risks and between risks and how such correlations have been assessed, including in stressed conditions;
    - ii) the justification for any credit taken for diversification benefits between legal entities, and the justification for the free movement of capital, if any assumed, between them in times of financial stress;
    - iii) the impact of diversification benefits with management actions excluded. It might be helpful to work out revised ICAAP figures with all correlations set to '1' i.e., no diversification; and similar figures with all correlations set to '0' i.e. assuming all risks are independent i.e., full diversification.
- As regards the overall assessment, this should describe how the bank has arrived at its overall assessment of the capital it needs taking into account such matters as:
    - i) the inherent uncertainty in any modelling approach;
    - ii) weaknesses in the bank's risk management procedures, systems or controls;

iii) the differences between regulatory capital and internal capital; and

iv) the differing purposes that capital serves: shareholder returns, rating objectives for the bank as a whole or for certain debt instruments the bank has issued, avoidance of regulatory intervention, protection against uncertain events, depositor protection, working capital, capital held for strategic acquisitions, etc.

VIII. Testing and Adoption of the ICAAP

This section would describe the extent of challenging and testing that the ICAAP has been subjected to. It would thus include the testing and control processes applied to the ICAAP models and calculations. It should also describe the process of review of the test results by the senior management or the Board and the approval of the results by them. A copy of any relevant report placed before the senior management or the Board of the bank in this regard, along with their response, could be attached to the ICAAP Document sent to the RBI.

Details of the reliance placed on any external service providers or consultants in the testing process, for instance, for generating economic scenarios, could also be detailed here.

In addition, a copy of any report obtained from an external reviewer or internal audit should also be sent to the RBI.

IX. Use of the ICAAP within the bank

This section would contain information to demonstrate the extent to which the concept of capital management is embedded within the bank, including the extent and use of capital modelling or scenario analyses and stress testing within the bank's capital management policy. For instance, use of ICAAP in setting pricing and charges and the level and nature of future business, could be an indicator in this regard.

This section could also include a statement of the bank's actual operating philosophy on capital management and how this fits in to the ICAAP Document submitted. For instance, differences in risk appetite used in preparing the ICAAP Document vis-à-vis that used for business decisions might be discussed.

Lastly, the banks may also furnish the details of any anticipated future refinements envisaged in the ICAAP (highlighting those aspects which are work-in-progress) apart from any other information that the bank believes would be helpful to the RBI in reviewing the ICAAP Document.

ANNEX - 14

GLOSSARY

Asset	An asset is anything of value that is owned by a person or business
Available for Sale	The securities available for sale are those securities where the intention of the bank is neither to trade nor to hold till maturity. These securities are valued at the fair value which is determined by reference to the best available source of current market quotations or other data relative to current value.
Balance Sheet	A balance sheet is a financial statement of the assets and liabilities of a trading concern, recorded at a particular point in time.
Banking Book	The banking book comprises assets and liabilities, which are contracted basically on account of relationship or for steady income and statutory obligations and are generally held till maturity.
Basel Capital Accord	The Basel Capital Accord is an Agreement concluded among country representatives in 1988 to develop standardised risk-based capital requirements for banks across countries. The Accord was replaced with a new capital adequacy framework (Basel II), published in June 2004. Basel II is based on three mutually reinforcing pillars that allow banks and supervisors to evaluate properly the various risks that banks face. These three pillars are: ▪ minimum capital requirements, which seek to refine the present measurement framework ▪ supervisory review of an institution's capital adequacy and internal assessment process; ▪ market discipline through effective disclosure to encourage safe and sound banking practices
Basel Committee on Banking Supervision	The Basel Committee is a committee of bank supervisors consisting of members from each of the G10 countries. The Committee is a forum for discussion on the handling of specific supervisory problems. It coordinates the sharing of supervisory responsibilities among national authorities in respect of banks' foreign establishments with the aim of ensuring effective supervision of banks' activities worldwide.
Basic Indicator Approach	An operational risk measurement technique permitted under Basel II. The approach sets a charge for operational risk as a fixed percentage ("alpha factor") of a single indicator. The indicator serves as a proxy for the bank's risk exposure.
Basis Risk	The risk that the interest rate of different assets, liabilities and off-balance sheet items may change in different magnitude is termed as basis risk.
Capital	Capital refers to the funds (e.g., money, loans, equity, etc.) which are available to carry on a business, make an investment, and generate future revenue. Capital also refers to physical assets which can be used to generate future returns.

Capital adequacy	A measure of the adequacy of an entity's capital resources in relation to its current liabilities and also in relation to the risks associated with its assets. An appropriate level of capital adequacy ensures that the entity has sufficient capital to support its activities and that its net worth is sufficient to absorb adverse changes in the value of its assets without becoming insolvent. For example, under BIS (Bank for International Settlements) rules, banks are required to maintain a certain level of capital against their risk-adjusted assets.
Capital reserves	That portion of a company's profits not paid out as dividends to shareholders. They are also known as undistributable reserves.
Convertible Bond	A bond giving the investor the option to convert the bond into equity at a fixed conversion price or as per a pre-determined pricing formula.
Core Capital	Tier I capital is generally referred to as Core Capital
Credit risk	Risk that a party to a contractual agreement or transaction will be unable to meet their obligations or will default on commitments. Credit risk can be associated with almost any transaction or instrument such as swaps, repos, CDs, foreign exchange transactions, etc. Specific types of credit risk include sovereign risk, country risk, legal or force majeure risk, marginal risk and settlement risk.
Debentures	Bonds issued by a company bearing a fixed rate of interest usually payable half yearly on specific dates and principal amount repayable on a particular date on redemption of the debentures.
Deferred Tax Assets	Unabsorbed depreciation and carry forward of losses which can be set-off against future taxable income which is considered as timing differences result in deferred tax assets. The deferred Tax Assets are accounted as per the Accounting Standard 22. Deferred Tax Assets have an effect of decreasing future income tax payments, which indicates that they are prepaid income taxes and meet definition of assets. Whereas deferred tax liabilities have an effect of increasing future year's income tax payments, which indicates that they are accrued income taxes and meet definition of liabilities
Delta (∆)	The delta of an option / a portfolio of options is the rate of change in the value of the option / portfolio with respect to change in the price of the asset(s) underlying the option(s).
Derivative	A derivative instrument derives much of its value from an underlying product. Examples of derivatives include futures, options, forwards and swaps. For example, a forward contract can be derived from the spot currency market and the spot markets for borrowing and lending. In the past, derivative instruments tended to be restricted only to those products which could be derived from spot markets. However, today the term seems to be used for any product that can be derived from any other.
Duration	Duration (Macaulay duration) measures the price volatility of fixed income securities. It is often used in the comparison of the interest rate risk between securities with different coupons and different maturities. It is the weighted average of the present value of all the cash flows associated with a fixed income security. It is expressed in years. The duration of a fixed income security is always shorter than its term to maturity, except in the case of zero coupon securities where they are the same.
Foreign Institutional Investor	An institution established or incorporated outside India which proposes to make investment in India insecurities; provided that a domestic asset management company or domestic portfolio manager who manages funds raised or collected or brought from outside India for investment in India on behalf of a sub-account, shall

	be deemed to be a Foreign Institutional Investor.
Forward Contract	A forward contract is an agreement between two parties to buy or sell an agreed amount of a commodity or financial instrument at an agreed price, for delivery on an agreed future date. In contrast to a futures contract, a forward contract is not transferable or exchange tradable, its terms are not standardized and no margin is exchanged. The buyer of the forward contract is said to be long the contract and the seller is said to be short the contract.
Gamma(Γ)	The gamma of an option / portfolio of options is the rate of change of the option's / portfolio's delta with respect to the change in the price of the asset(s) underlying the option (s).
General provisions & loss reserves	Such reserves, if they are not attributable to the actual diminution in value or identifiable potential loss in any specific asset and are available to meet unexpected losses, can be included in Tier II capital.
General market risk	Risk that relates to overall market conditions while specific risk is risk that relates to the issuer of a particular security
Hedging	Taking action to eliminate or reduce exposure to risk
Held for Trading	Securities where the intention is to trade by taking advantage of short-term price / interest rate movements.
Horizontal Disallowance	A disallowance of offsets to required capital used the BIS Method for assessing market risk for regulatory capital. In order to calculate the capital required for interest rate risk of a trading portfolio, the BIS Method allows offsets of long and short positions. Yet interest rate risk of instruments at different horizontal points of the yield curve are not perfectly correlated. Hence, the BIS Method requires that a portion of these offsets be disallowed.
Hybrid debt capital instruments	In this category, fall a number of capital instruments, which combine certain characteristics of equity and certain characteristics of debt. Each has a particular feature, which can be considered to affect its quality as capital. Where these instruments have close similarities to equity, in particular when they are able to support losses on an ongoing basis without triggering liquidation, they may be included in Tier II capital.
Interest rate risk	Risk that the financial value of assets or liabilities (or inflows/outflows) will be altered because of fluctuations in interest rates. For example, the risk that future investment may have to be made at lower rates and future borrowings at higher rates.
Long Position	A long position refers to a position where gains arise from a rise in the value of the underlying.
Market risk	Risk of loss arising from movements in market prices or rates away from the rates or prices set out in a transaction or agreement.
Modified Duration	The modified duration or volatility of an interest bearing security is its Macaulay duration divided by one plus the coupon rate of the security. It represents the percentage change in a securities' price for a 100 basis points change in yield. It is generally accurate for only small changes in the yield. $MD = -\frac{dP}{dY}\cdot\frac{1}{P}$ where: MD = Modified duration P = Gross price (i.e. clean price plus accrued interest). dP = Corresponding small change in price.

	dY = Small change in yield compounded with the frequency of the coupon payment.
Mortgage-backed security	A bond-type security in which the collateral is provided by a pool of mortgages. Income from the underlying mortgages is used to meet interest and principal repayments.
Mutual Fund	Mutual Fund is a mechanism for pooling the resources by issuing units to the investors and investing funds in securities in accordance with objectives as disclosed in offer document. A fund established in the form of a trust to raise monies through the sale of units to the public or a section of the public under one or more schemes for investing in securities, including money market instruments.
Net Interest Margin	Net interest margin is the net interest income divided by average interest earning assets
Net NPA	Net NPA = Gross NPA – (Balance in Interest Suspense account + DICGC/ECGC claims received and held pending adjustment + Part payment received and kept in suspense account + Total provisions held)‘
Nostro accounts	Foreign currency settlement accounts that a bank maintains with its overseas correspondent banks. These accounts are assets of the domestic bank.
Off-Balance Sheet exposures	Off-Balance Sheet exposures refer to the business activities of a bank that generally do not involve booking assets (loans) and taking deposits. Off-balance sheet activities normally generate fees, but produce liabilities or assets that are deferred or contingent and thus, do not appear on the institution's balance sheet until or unless they become actual assets or liabilities.
Open position	It is the net difference between the amounts payable and amounts receivable in a particular instrument or commodity. It results from the existence of a net long or net short position in the particular instrument or commodity.
Option	An option is a contract which grants the buyer the right, but not the obligation, to buy (call option) or sell (put option) an asset, commodity, currency or financial instrument at an agreed rate (exercise price) on or before an agreed date (expiry or settlement date). The buyer pays the seller an amount called the premium in exchange for this right. This premium is the price of the option.
Rho(ρ)	Rho of an option / a portfolio of options is the rate of change in the value of an option / portfolio with respect to change in the level of interest rates.
Risk	The possibility of an outcome not occurring as expected. It can be measured and is not the same as uncertainty, which is not measurable. In financial terms, risk refers to the possibility of financial loss. It can be classified as credit risk, market risk and operational risk.
Risk Asset Ratio	A bank's risk asset ratio is the ratio of a bank's risk assets to its capital funds. Risk assets include assets other than highly rated government and government agency obligations and cash, for example, corporate bonds and loans. The capital funds include capital and undistributed reserves. The lower the risk asset ratio the better the bank's 'capital cushion'
Risk Weights	Basel II sets out a risk-weighting schedule for measuring the credit risk of obligors. The risk weights are linked to ratings given to sovereigns, financial institutions and corporations by external credit rating agencies.
Securitis-ation	The process whereby similar debt instruments/assets are pooled together and repackaged into marketable securities which can be sold to investors. The process of loan securitisation is used by banks to move their assets off the balance sheet in order to improve their capital asset ratios.
Short	A short position refers to a position where gains arise from a decline in the value of the underlying. It also refers to the sale of a security in which the seller does not

position	have a long position.
Specific risk	Within the framework of the BIS proposals on market risk, specific risk refers to the risk associated with a specific security, issuer or company, as opposed to the risk associated with a market or market sector (general risk).
Subordinated debt	Refers to the status of the debt. In the event of the bankruptcy or liquidation of the debtor, subordinated debt only has a secondary claim on repayments, after other debt has been repaid.
Theta(θ)	The theta of an option / a portfolio of options is the rate of change in the value of the option / portfolio with respect to passage of time, with all else remaining the same. It is also called the "time decay" of the option.
Tier one (or Tier I) capital	A term used to refer to one of the components of regulatory capital. It consists mainly of share capital and disclosed reserves (minus goodwill, if any).Tier I items are deemed to be of the highest quality because they are fully available to cover losses. The other categories of capital defined in Basel II are Tier II (or supplementary) capital and Tier II (or additional supplementary) capital.
Tier two (or Tier II) capital	Refers to one of components of regulatory capital. Also known as supplementary capital, it consists of certain reserves and certain types of subordinated debt.Tier II items qualify as regulatory capital to the extent that they can be used to absorb losses arising from a bank's activities. Tier II's capital loss absorption capacity is lower than that of Tier I capital.
Trading Book	A trading book or portfolio refers to the book of financial instruments held for the purpose of short-term trading, as opposed to securities that would be held as a long-term investment. The trading book refers to the assets that are held primarily for generating profit on short-term differences in prices/yields. The price risk is the prime concern of banks in trading book.
Underwrite	Generally, to underwrite means to assume a risk for a fee. Its two most common contexts are: a) Securities: a dealer or investment bank agrees to purchase a new issue of securities from the issuer and distribute these securities to investors. The underwriter may be one person or part of an underwriting syndicate. Thus the issuer faces no risk of being left with unsold securities. b) Insurance: a person or company agrees to provide financial compensation against the risk of fire, theft, death, disability, etc., for a fee called a premium.
Value at risk (VAR)	It is a method for calculating and controlling exposure to market risk. VAR is a single number (currency amount) which estimates the maximum expected loss of a portfolio over a given time horizon (the holding period) and at a given confidence level.
Vega (v)	The Vega of an option / a portfolio of options is the rate of change in the value of the option / portfolio with respect to volatility of the asset(s) underlying the option(s).
Venture capital Fund	A fund with the purpose of investing in start-up businesses that is perceived to have excellent growth prospects but does not have access to capital markets.
Vertical Disallowance	In the BIS Method for determining regulatory capital necessary to cushion market risk, a reversal of the offsets of a general risk charge of a long position by a short position in two or more securities in the same time band in the yield curve where the securities have differing credit risks.

ANNEX -15
(Cf. Para 3 of the covering circular)

List of circulars consolidated in the Master Circular

(The original circular DBOD.No.BP.BC.90/20.06.001/2006-07 dated April 27, 2007

Sl. No	Circular No.	para / provision of the circular consolidated	Subject	Para No. of the Master Circular
1	DBOD.No.BP.BC.42/21.01.002/2007-08 dated Oct 29, 2007	Annex Para 1.1	Guidelines for issuing Preference Shares as part of Regulatory Capital	4.2.5 (ii) and (iii)
2	-- do --	Para 1	-- do --	4.3.3
3	DBOD.No.BP. BC. 67/20.06.001/2007-08 dated March 31, 2008	Sl.No.1 of Annex	Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation of NCAF - Amendments	4.3.5
4	DBOD.No.BP.BC.88/21.06.001/2007-08 dated May 30, 2008	2.2	Capital Adequacy Norms – Treatment of Banks' investments in Subsidiaries/ Associates and of the Subsidiaries'/ Associates' Investments in Parent Banks	4.4.10
5	DBOD.No.BP. BC. 67/20.06.001/2007-08 dated March 31, 2008	Sl. No.3 of Annex	Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation of NCAF - Amendments	5.2.2
6	-- do --	Sl. No. 4 of Annex	-- do --	5.4.2, 5.8.1 Tables
7	-- do --	Sl. No 5 of Annex	-- do --	5.6.1
8	Mail Box Clarification dated May 21, 2008		Claims on banks – Exposures of the Indian branches of foreign bank guaranteed/counter-guaranteed by HOs/Overseas branches	5.6.2
9	Mail Box Clarification dated. May 21, 2008		Risk weights and provisioning norms - AFCs	5.8.1
10	DBOD.No.BP. BC. 67/20.06.001 /2007-08 dated March 31, 2008	Sl. No. 6 Annex.	Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation of NCAF - Amendments	5.8.1 Table 6: Part - B
11	Mail box clarification dated May 21, 2008		Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation	7.3.7 (ii) Table 14 (D)
12	DBOD.No.BP.BC.83/21.06.001/2007-08 dated May 14, 2008	Para 2	Claims secured by Residential Property – Change in limits for Risk Weights	5.10
13	DBOD.No.BP. BC. 67/20.06.001 /2007-08 dated March 31, 2008	Sl.No 7 in the Annex	Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation of NCAF - Amendments	5.13.3
14	Mail Box clarification dated May 21, 2008		Risk Weights and Provisioning Norms – AFCs	5.13.5
15	DBOD.No.BP. BC. 67/20.06.001 /2007-08 dated March 31, 2008	Sl. No. 8 Annex	Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation of NCAF - Amendments	5.15.2 (v).
16	-- do --	Sl. No. 9 Annex	-- do --	7.3.4 (i)
17	-- do --	Sl. No. 11 Annex	-- do --	Existing paragraph 7.3.5 (viii)

				relating to 'equity' index dropped
18	-- do --	Sl. No. 12 Annex	-- do --	7.3.7
19	-- do --	Sl. No.13 of Annex	-- do --	7.3.8
20	-- do --	Sl. No. 14 Annex	-- do --	7.6.1
21	-- do --	Sl. No. 15 Annex	-- do --	Existing para 8.2.2 deleted
22	-- do --	Sl. No. 16 Annex	-- do --	8.3
23	-- do --	Sl. No. 17 Annex	-- do --	8.4.1
24	DBOD.No.BP.BC.66 /21.06.001/2007-08 dated March 31, 2008	Entire circular	Supervisory Review Process under the New Capital Adequacy Framework - Guidelines for Pillar 2	10.0, 11 and Annex -9 to 14
25	DBOD.No.BP. BC. 67/20.06.001 /2007-08 dated March 31, 2008	Sl No. 18 Annex	Prudential Guidelines on Capital Adequacy and Market Discipline – Implementation of NCAF - Amendments	Annex – 7
26	DBOD.No.BP.BC.31/21.04.157/2008-09 dated August 8, 2008	Annexure II	Prudential Norms for Off-balance sheet exposures of banks	Existing paragraph 5.15.4 replaced
27	DBOD.No.BP. BC. 76/21.04.132/2008-09 dated November 3, 2008	Para 4	Prudential Guidelines on Restructuring of Advances by Banks	5.10.4
28	DBOD.No.BP.BC.83/21.01.002/2008-09 dated November 15, 2008	Para 2 (a), 2(b)	Review of Prudential Norms – Provisioning for Standard Assets and Risk Weights for Exposures to Corporates, Commercial Real Estate and NBFC-ND-SI	5.8.1, 5.11.2, and 5.13.5
29	DBOD.No.BP.BC. 92/21.06.001/2008-09 dated December 4, 2008	3	Implementation of NCAR – Parallel run reporting format.	2.4
30	DBOD.No.BP. BC. 118/21.01.002/2008-09 dated March 25, 2009	Para (ii) and (iii)	Prudential Treatment of different Types of Provisionsin respect of Loan Portfolios	4.3.2
31	DBOD.No.BP. BC. 120/21.01.002/2008-09 dated April 2, 2009	Annex I and Annex 2	Guidelines for issuing Preference Shares as part of Regulatory Capital	Annex -4 Para (vii) and Annex - 6para (vii)
32	DBOD.No.BP.BC. 134/21.06.001/2008-09 dated May 26, 2009	Para 3	Capital Adequacy Norms for Banks' Exposures to Central Counter Parties	Para 5.14.3 and 5.15.3 (vi)
33	DBOD.No.BP.BC. 23/21.06.001/2009-10 dated July 7, 2009	Para 2,3,4,5	Introduction to Advanced Approaches of Basel II in India- Time schedule	Para 2.5 and 2.5.1 to 2.5.3
34	DBOD.No.BP.BC. 29/21.06.001/2009-10 dated August 12, 2009	Para 3	Prudential Guidelines on Capital Adequacy and Market Discipline – New Capital Adequacy Framework (NCAF)	Para 10.7 and para 12.3.3.7
35	Mail box clarification dated August 24, 2009	Entire Mailbox clarification	Capital Adequacy Norms for Securitisation Exposures(credit enhancements)	Para 12 and 13 of Annex - 7
36	DBOD.No.BP. BC.33/21.04.048/2009-	Para 3	Prudential treatment in respect of floating provisions	Foot note 7 to

	10 dated August 27, 2009			para 4.3.4
37	DBOD.No.BP.BC. 38 /21.01.002/2009-10 dated September 7, 2009	Sr. no 1 to 6 of Part 1 of Annex to the circular	Issue of Subordinated Debt for Raising Tier II Capital	Annex – 6
38	DBOD.No.BP.BC.69/21.01.002/2009-10 dated January 13, 2010	Sr. No. 2 of the circular	Retail issue of Subordinated Debt for Raising Tier II capital	Annex - 6
39	Mail box clarification dated January 18, 2010		Specific risk capital charge on Security Receipts	Para 8.4.3
40	Mail box clarification dated January 25, 2010		Guaranteeing of returns of capital instruments of banks	Para 4.2.4 (v)
41	Mail box clarification dated January 28, 2010		Inclusion of quarterly un-audited profits for computation of capital adequacy	Para 4.4.11
42	DBOD.No.BP.BC.74/21.06.001/2009-10 dated February 12, 2010 Para.2		Risk Weights and Exposure Norms in respect of Bank Exposure to NBFCs categorised as 'Infrastructure Finance Companies'	Para 5.8.1
43	DBOD.No.BP.BC.87/21.06.001/2009-10 dated April 7, 2010 Para 2		Prudential Guidelines on Capital Adequacy and Market Discipline – New Capital Adequacy Framework (NCAF) – Parallel Run and Prudential Floor	Para 4.1.2
44	DBOD.No.BP.BC.No.81/21.01.002/2009-10		Classification in the Balance Sheet – Capital Instruments	
45	DBOD.No.BP.BC.48/21.06.001/2010-11 Dated October 1, 2010		Prudential Norms for Off-Balance Sheet Exposures of Banks - Bilateral Netting of Counterparty Credit Exposures	Para 5.15.4 (viii)
46	DBOD.No.BP.BC.69/08.12.001/2010-11 Dated December 23, 2010		Housing Loans by Commercial Banks - LTV Ratio, Risk Weight and Provisioning	Para 5.10.1, 5.10.2 and 5.10.3
47	DBOD.BP.BC.No.71/21.06.001/2010-11 Dated December 31, 2010		Prudential Guidelines on Capital Adequacy and Market Discipline - New Capital Adequacy Framework (NCAF) - Parallel Run and Prudential Floor	Para 4.1.2
48	DBOD.BP.BC.No.75/21.06.001/2010-11 Dated January 20, 2011		Regulatory Capital Instruments - Step up Option	Annex 1 Annex 3 Annex 4 Annex 5
49	DBOD.BP.BC.No.3/21.01.002/2004-05 Dated July 06, 2004		Prudential Norms on Capital Adequacy - Cross holding of Capital among Banks / Financial Institutions	Para 4.4.8 and 4.4.10
50	DBOD.No.BP.BC.80/21.04.018/2010-11 Dated February 9, 2011		Re-opening of Pension Option to Employees of Public Sector Banks and Enhancement in Gratuity Limits - Prudential Regulatory Treatment	Para 4.4.13
51	Mail-box clarification Dated November 19, 2010		Banks' Exposure to Capital Market - Issue of Irrevocable Payment Commitments (IPCs)	Para 5.15.2 (vi)
52	DBOD.No.BP.BC.39/21.06.007/2011-12 Dated October 13, 2011		Prudential Guidelines on Capital Adequacy and Market Discipline - New Capital Adequacy Framework (NCAF) – Revision of rating Symbols and Definitions of Credit Rating Agencies	Para 6.4.1 Para 6.5.4 Para 6.5.5 Para 7.3.5
53	DBOD.BP.BC.No.61/21.06.203/2011-12 Dated November 30, 2011		Prudential Guidelines on Credit Default Swaps (CDS)	Para 5.17 Para 8.6
54	DBOD.No.BP.BC.69/21.06.001/2011-		Capital Requirement for Banks'	Para 5.13.7

	12 Dated December 27, 2011	Investments in Financial Entities exempted from Capital Market Exposure	Para 8.4.2
55	DBOD.No.BP.BC.92/21.06.007/2011-12 Dated April 13, 2012	Prudential Guidelines on Capital Adequacy and Market Discipline - New Capital Adequacy Framework (NCAF) – Rating Agencies – Brickwork Ratings India Pvt. Ltd. (Brickwork)	Para 6.1.2
56	DBOD.No.BP.BC.103/21.04.177/2011-12 Dated May 07, 2012	Revision to the Guidelines on Securitisation Transactions	Para 5.16.1(i) & (iii), Para 5.16.2(iii), Para 5.16.5(v)-(viii) Para 5.16.9
57	DBOD Mail-Box Clarification Dated April 17, 2012	Deletion of the term Overseas Corporate Bodies (OCBs)	Para 1(f)(ii) of Annex 5
58	DBOD.BP.BC.No.28/ 21.06.001/2012-13 dated July 9, 2012	Prudential Guidelines on Capital Adequacy Treatment of Head Office Debit Balance – Foreign Banks	Para 4.2.3 Notes (iv)
59	DBOD.No.BP.BC.41/ 21.06.009/2012-13 dated September 13, 2012	Prudential Guidelines on Capital Adequacy and Market Discipline – New Capital Adequacy Framework (NCAF) – Eligible Credit Rating Agencies – SME Ratings Agency of India Ltd. (SMERA)	Table 6 Part B Para 6.1.2 Table 13 Para 7.3.5
60	DBOD.No.BP.BC.54/ 21.06.007/2012-13 dated November 5, 2012	Prudential Guidelines on Capital Adequacy and Market Discipline – New Capital Adequacy Framework (NCAF) – Change of Name of Fitch Ratings to India Ratings and Research Private Limited (India Ratings)	Table 6 Part B Para 6.1.2 Table 13 Para 7.3.5
61	DBOD.BP.BC.No.72/ 21.01.002/2012-13 dated January 24, 2013	Retail Issue of Subordinated Debt for Raising Tier II Capital	Footnote to Para 6 of Annex 5
62	DBOD.BP.BC.No.89. 21.04.009/2012-13 dated April 2, 2013	New Capital Adequacy Framework – Non-market related Off-balance sheet items – Bank Guarantees	Para 5.15.2 (vii)
63	DBOD.No.BP.BC-90/ 21.04.048/2012-13 dated April 16, 2013	Advances Guaranteed by Credit Risk Guarantee Fund Trust for Low Income Housing (CRGFTLIH) - Risk Weights and Provisioning	Para 5.2.3 Para 7.3.7
64	DBOD.BP.BC.No.95/ 21.06.001/2012-13 dated May 27, 2013	Prudential Guidelines on Capital Adequacy and Market Discipline – New Capital Adequacy Framework (NCAF) – Parallel Run and Prudential Floor	Para 2.4
65	DBOD.BP.BC.No.103/ 21.06.001/2012-13 dated June 20, 2013	Risk Weights on Deposits Placed with NABARD/SIDBI/NHB in lieu of Shortfall in Achievement of Priority Sector Lending Targets/Sub-targets	Para 6.8.2
66	DBOD.BP.BC.No.104/ 08.12.015/2012-13 dated June 21, 2013	Housing Sector : New Sub-sector CRE (Residential Housing) within CRE & Rationalisation of Provisioning, Risk-weight and LTV Ratios	Para 5.10.1 Para 5.11.3 Para 5.11.4
67	DBOD.No.BP.BC- 25/21.04.177 /2013-14 dated July 1, 2013	Revision to the Guidelines on Securitisation Transactions-Reset of Credit Enhancement'	Para 5.16.1
68	DBOD.BP.BC.No.57/21.06.007/2013-14 dated October 17, 2013	Change of name of SME Rating Agency of India Limited to SMERA Ratings Limited (SMERA)	Tables 6-Part B, 12 and 13 Paras 6.1.2

			and 7.3.5
69	DBOD.BP.BC.No.75/21.04.103/2013-14 dated December 2, 2013	Guidelines on Stress Testing	Para 12.10
70	DBOD.No.BP.BC.85/ 21.06.200/2013-14 dated January 15, 2014 and DBOD.No.BP.BC.116/ 21.06.200/2013-14 dated and June 3, 2014	Capital and Provisioning Requirements for Exposures to entities with Unhedged Foreign Currency Exposure and Capital and Provisioning Requirements for Exposures to entities with Unhedged Foreign Currency Exposure	Added para5.13.9 Para 10.4 and 12.2.4
71	DBOD Mailbox Clarification dated October 18, 2013	Master Circular – Basel III Capital Regulations – Applicable Risk Weights for ECGC Guaranteed Exposures	Para 7.5.11 inserted