

# Capital Adequacy Norms

## Basel II norms

# Introduction

- 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.

# Introduction

- 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.
- 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 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.

# Introduction

- 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.
- 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.

# Introduction

- 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, Standardised Approach and Advanced Measurement Approach.
- 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 (SA) for credit risk and Basic Indicator Approach (BIA) for operational risk. Banks shall continue to apply the Standardised Duration Approach (SDA) for computing capital requirement for market risks.

# Introduction

- **Effective Date:** Foreign banks operating in India and Indian banks having operational presence outside India should migrate 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) are encouraged to migrate to these approaches under the Revised Framework in alignment with them but in any case not later than **March 31, 2009**.
- **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.

# Introduction

- **Migration to other approaches under the Revised Framework:** Banks are required to obtain the prior approval of the Reserve Bank to migrate to the Internal Rating Based Approach (IRBA) for credit risk and the Standardised Approach (TSA) or the Advanced Measurement Approach (AMA) for operational risk.
- 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. a consolidated bank may exclude group companies which are engaged in insurance business and businesses not pertaining to financial services.

# Capital Funds

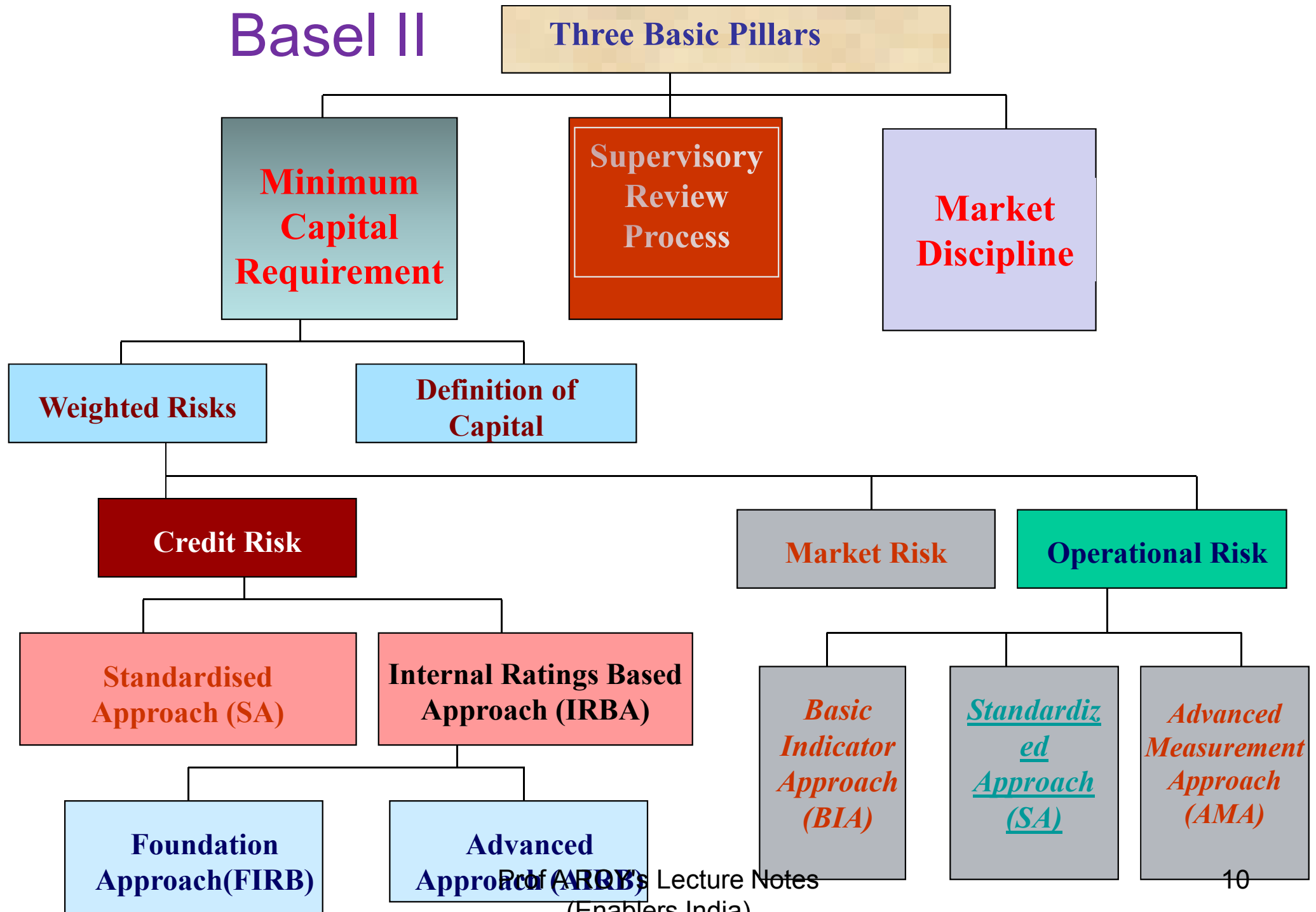
- Banks are required to maintain a minimum Capital to Risk-weighted Assets Ratio (CRAR) of 9 percent on an ongoing basis. The RBI will take into account the relevant risk factors and the internal capital adequacy assessments of each bank to ensure that the capital held by a bank is commensurate with 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.
- 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 requirement.



# Pillar 1

- Calculation of the total minimum capital requirements for credit, market and operational risks.
- The minimum capital requirements are composed of three fundamental elements:
  - ✓ a definition of regulatory capital,
  - ✓ risk weighted assets and
  - ✓ the minimum ratio of capital to risk weighted assets (CRAR/CAR).

# Basel II



# Capital Funds

The minimum capital maintained by banks on implementation of the Revised Framework shall be subjected to a prudential floor, which shall be the higher of the following amounts:

a) Minimum capital required to be maintained as per the Revised Framework;

b) A specified per cent of the minimum capital required to be maintained as per the Basel I framework for credit and market risks.

The specified per cent will progressively decline as indicated in Table.

Financial year ending*	March 2008	March 2009	March 2010
Prudential Floor (as % of minimum capital requirement computed as per current (Basel I) framework for credit and market risks)	100	90	80
* The relevant periods shall be March 2009, 2010, and 2011 for banks implementing the Revised Framework with effect from March 31, 2009			

# Capital Funds

Banks are encouraged to maintain, at both solo and consolidated level, a Tier 1 CRAR of at least 6 per cent. Banks which are below this level must achieve this ratio on or before March 31, 2010.

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.

A bank should compute its Tier 1 CRAR and Total CRAR as follows:

Tier 1 CRAR =	$\frac{\text{Eligible Tier 1 capital funds}^2}{\text{Credit Risk RWA}^* + \text{Market Risk RWA} + \text{Operational Risk RWA}}$
---------------	----------------------------------------------------------------------------------------------------------------------------------

\* RWA = Risk weighted Assets

Total CRAR =	$\frac{\text{Eligible total capital funds}^3}{\text{Credit Risk RWA} + \text{Market Risk RWA} + \text{Operational Risk RWA}}$
--------------	-------------------------------------------------------------------------------------------------------------------------------

# Elements of Tier 1 capital

- For Indian banks, Tier 1 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 1 capital, which comply with the regulatory requirements as specified;
- iv) Perpetual Non-Cumulative Preference Shares (PNCPS), which comply with the regulatory requirements as specified; and
- v) Any other type of instrument generally notified by the Reserve Bank from time to time for inclusion in Tier 1 capital.

# Elements of Tier 1 capital: Foreign Banks

- For foreign banks in India, Tier 1 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 1 capital which comply with the regulatory requirements as specified, and
- (vii) Any other item specifically allowed by the Reserve Bank from time to time for inclusion in Tier 1 capital

# Limits on Eligible Tier I Capital

- (i) The Innovative perpetual debt instruments(IPDIs), eligible to be reckoned as Tier 1 capital, will be limited to 15 percent of total Tier 1 capital as on March 31 of the previous financial year.
- (ii) The outstanding amount of Tier 1 preference shares i.e. Perpetual Non-Cumulative Preference Shares along with Innovative Tier 1 instruments shall not exceed 40 per cent of total Tier 1 capital at any point of time.
- (iii) Innovative instruments / PNCPS, in excess of the limit shall be eligible for inclusion under Tier 2, subject to limits prescribed for Tier 2 capital.

# Elements of Tier 2 capital

- (i) 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. As there may be subsequent deterioration in value on account of difficult market conditions or forced sale, revaluation reserves is considered at a discount of 55 percent while determining their value for inclusion in Tier 2 capital. Such reserves will have to be reflected on the face of the Balance Sheet as revaluation reserves.



# Elements of Tier 2 capital

- (ii) 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 2 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 2 capital.
- Banks are allowed to include the 'General Provisions on Standard Assets', 'Floating Provisions', 'Provisions held for Country Exposures', and 'Investment Reserve Account' in Tier 2 capital.
- However, these four items will be admitted as Tier 2 capital up to a maximum of 1.25 per cent of the total risk-weighted assets.

# Elements of Tier 2 capital

- (iii) 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. 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 2 capital provided the instrument complies with the regulatory requirements specified.
- 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 2 Capital, subject to extant legal provisions as per guidelines.

# Elements of Tier 2 capital

- (iv) Subordinated debt
- To be eligible for inclusion in Tier 2 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 2 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 2 capital.

# Elements of Tier 2 capital

- (v) Innovative Perpetual Debt Instruments (IPDI) and Perpetual Non-Cumulative Preference Shares (PNCPS)
- IPDI in excess of 15 per cent of Tier 1 capital may be included in Tier 2, and PNCPS in excess of the overall ceiling of 40 per cent ceiling may be included under Upper Tier 2 capital.
- (vi) Any other type of instrument generally notified by the Reserve Bank from time to time for inclusion in Tier 2 capital.

# Capital Charge for Credit Risk

- **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.

# Rating is applicable to exposures on

- Foreign Sovereigns
- Foreign Banks
- Domestic Public Sector Entities
- Foreign Public Sector Entities
- Domestic Primary Dealers
- Non-Resident Primary Dealers
- Domestic Corporate Exposures
- Non-Resident Corporate Exposures

# Claims on Domestic Sovereigns

- 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.
- 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

# Claims on Domestic Sovereigns

- The risk weight applicable to claims on central government exposures will also apply to the claims on the Reserve Bank of India, DICGC and Credit Guarantee Fund Trust for Small Industries (CGTSI). The claims on ECGC will attract a risk weight of 20 per cent.
- 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.



# Claims on Foreign Sovereigns

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

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

# Claims on public sector entities (PSEs)

Claims on domestic public sector entities will be risk weighted in a manner similar to claims on Corporates. Claims on foreign PSEs will be risk weighted as per the rating assigned by the international rating agencies as under:

<b>S&amp;P/ Fitch Ratings</b>	AAA To AA	A	BBB to BB <sup>11</sup>	Below BB	Unrated
<b>Moody's ratings</b>	Aaa to Aa	A	Baa to Ba	Below Ba	Unrated
<b>RW (%)</b>	20	50	100	150	100

# 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.

# 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 cent) per	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 1 and Tier 2 capital.

# Claims on Foreign Banks

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

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 %

# Claims on corporate – Risk weights

## Long term claims on corporate - Risk weights

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

## Short Term Claims on Corporate - Risk Weights<sup>1</sup>

Short Term Ratings				Risk Weights
CARE	CRISIL	Fitch	ICRA	
PR1+	P1+	F1+(ind)	A1+	20 %
PR1	P1	F1(ind)	A1	30 %
PR2	P2	F2(ind)	A2	50 %
PR3	P 3	F3 (ind)	A3	100 %
PR4 & PR5	P 4 & P5	F4/F5 (ind)	A4 / A5	150 %
Unrated	Unrated	Unrated	Unrated	100 %

# Claims on corporate – Risk weights

- 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.
- To begin with, for the financial year 2008-09, all fresh sanctions or renewals in respect of unrated claims on corporates in excess of Rs.50 crore will attract a risk weight of 150 per cent. With effect from April 1, 2009, all fresh sanctions or renewals in respect of unrated claims on corporates in excess of Rs. 10 crore will attract a risk weight of 150 per cent. The threshold of Rs. 50 crore (and Rs. 10 crore) will be with reference to the aggregate exposure on a single counterparty for the bank as a whole.

# Claims on non-resident corporates

- The claims on non-resident corporates will be risk weighted as under as per the ratings assigned by international rating agencies. For the financial year 2008-09, all fresh sanctions or renewals in respect of unrated claims on non-resident corporates in excess of Rs.50 crore will attract a risk weight of 150 per cent.
- With effect from April 1, 2009, all fresh sanctions or renewals in respect of unrated claims on non-resident corporates in excess of Rs. 10 crore will attract a risk weight of 150 per cent. The threshold of Rs. 50 crore (and Rs. 10 crore) will be with reference to the aggregate exposure on a single counterparty for the bank as a whole.



# Claims on non-resident corporates – Risk weights

<b>S&amp;P/ Fitch Ratings</b>	AAA to AA	A	BBB to BB <sup>18</sup>	Below BB	Unrated
<b>Moody's ratings</b>	Aaa to Aa	A	Baa to Ba	Below Ba	Unrated
<b>RW (%)</b>	20	50	100	150	100

# Claims included in the regulatory retail portfolios

- Retail claims (including both fund-based and non-fund based) shall be **assigned a risk-weight of 75 per cent**, except for non performing assets.
- The maximum aggregated retail exposure to one counterpart should not exceed the absolute threshold limit of Rs.5 crores.
- 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 or claims secured by commercial real estate;
  - (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.

# Claims secured by residential property

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 below. 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.

Amount of loan	Applicable Risk Weights (%)	
	LTV up to 75 per cent	LTV more than 75 per cent
Up to ₹ 30 lakh	50	100
Above ₹ 30 lakh but below ₹ 75 lakh	75	100
₹ 75 lakh and above	125	125

# Claims secured by commercial real estate

- Claims secured by commercial real estate is defined as “fund based and non-fund based exposures secured by mortgages on commercial real estates (office buildings, retail space, multi-purpose commercial premises, multi-family residential buildings, multi-tenanted commercial premises, industrial or warehouse space, hotels, land acquisition, development and construction etc.)” Exposures to entities for setting up Special Economic Zones (SEZs) or for acquiring units in SEZs which includes real estate would also be treated as commercial real estate exposure.
- Claims secured by commercial real estate as defined above will attract a risk weight of 100 per cent.

# Specified categories

- 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.
- 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.
- '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.

# Off-balance sheet items

- 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 may be applied.

# External credit assessments

- Eligible Credit Rating Agencies
- Reserve Bank has undertaken the detailed process of identifying the eligible credit rating 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.
- *Domestic credit rating agencies:*
- a) Credit Analysis and Research Limited; b) CRISIL Limited; c) FITCH India; and d) ICRA Limited.
- *International credit rating agencies:*
- a) Fitch; b) Moodys; and c) Standard & Poor's

# Credit Risk Mitigation

- **General principles**
- 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.



# Eligible financial collateral

- (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.
- (iii) Securities issued by Central and State Governments
- (iv) Kisan Vikas Patra and National Savings
- (v) Life insurance policies
- (vi) Debt securities rated by a chosen Credit Rating Agency
- (vii) Debt securities not rated by a chosen Credit Rating Agency subject to conditions
- (viii) Units of Mutual Funds

# Capital Charge (allocation) under Basel II

## - RBI Guidelines

- **Net adjusted exposure=  $E^* = \{E - C(1 - H_c - H_{fx})\}$**  or Zero, whichever is higher, that is,  **$E^*$  cannot be negative.**
- **C= Eligible financial collateral (*cash or, cash equivalent, TDR/NSC/KVP/LIP, gold, rated bonds, etc.*) [IVP not eligible]**
- **$H_c$  = Haircut for Collateral [*varies from 0% (for cash or, cash equivalent) to 25%*]**
- **$H_{fx}$  = Haircut for currency mismatch between collateral and exposure (8%).**

# Capital charge for Market Risk

- 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).
- 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.

# Capital charge for Market Risk

- 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.

# Measurement of capital charge for interest rate risk

- 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.
- 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.

# Measurement of capital charge for interest rate risk

- 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 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.

# Specific Risk Capital Charge for Sovereign Securities Issued by Indian Sovereigns – Held by Banks under the HFT Category

Sr. No.	Nature of Investment	Residual Maturity	Specific risk capital (as % of exposure)
<b>A.</b>	<b>Indian Central Government and State Governments</b>		
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

# Specific Risk Capital Charge for Bonds Issued by Indian Sovereigns – 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



# General Market Risk

- The Basel 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.

# General Market Risk

- 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
- (iii) slot the resulting capital charge measures into a maturity ladder with the fifteen time bands

# Duration method – time bands and assumed changes in yield

Time Bands	Assumed Change in Yield	Time Bands	Assumed Change in Yield
<b>Zone 1</b>		<b>Zone 3</b>	
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
<b>Zone 2</b>		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

# Measurement of capital charge for equity risk

- 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.

# Measurement of capital charge for equity risk

- Capital charge for banks' capital market investments 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.

# Measurement of capital charge for foreign exchange risk

- 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.

# Capital Charge for 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.
- 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).
- Banks are encouraged to move along the spectrum of available approaches as they develop more sophisticated operational risk measurement systems and practices.

# Capital Charge for Operational risk

- 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 (i) to (vi) listed below*
  - c) Alpha = 15 per cent



# Capital Charge for Operational risk

- i) Exclude reversal during the year in respect of provisions and write-offs made during the previous year(s);
- ii) Exclude income recognised from the disposal of items of movable and immovable property;
- iii) Exclude realised profits/losses from the sale of securities in the “*held to maturity*” category;
- iv) Exclude income from legal settlements in favour of the bank;
- v) Exclude other extraordinary or irregular items of income and expenditure; and
- vi) Exclude income derived from insurance activities (i.e. income derived by writing insurance policies) and insurance claims in favour of the bank.

**Table IV.13: Capital to Risk Weighted Assets Ratio under Basel I and II – Bank Group-wise**  
(As at end-March)

(Per cent)

Bank group	Basel I		Basel II	
	2010	2011	2010	2011
1	2	3	4	5
<b>Public sector banks</b>	<b>12.1</b>	<b>11.8</b>	<b>13.3</b>	<b>13.1</b>
Nationalised banks*	12.1	12.2	13.2	13.5
SBI group	12.1	11.0	13.5	12.3
<b>Private sector banks</b>	<b>16.7</b>	<b>15.1</b>	<b>17.4</b>	<b>16.5</b>
Old private sector banks	13.8	13.3	14.9	14.6
New private sector banks	17.3	15.5	18.0	16.9
<b>Foreign banks</b>	<b>18.1</b>	<b>17.7</b>	<b>17.3</b>	<b>17.0</b>
<b>Scheduled commercial banks</b>	<b>13.6</b>	<b>13.0</b>	<b>14.5</b>	<b>14.2</b>

\* : Include IDBI Bank Ltd.

# The Enhanced Basel II Regime

- At its meeting held in September 2010, the Group of Governors and Heads of Supervision of BIS announced a substantial strengthening of existing capital requirements.
- The revised capital standard will be implemented in a phased manner allowing long transition period. With a supervisory monitoring period up to end December 2012, the phased implementation would start from January 1, 2013.
- Along with the global liquidity standards, these reforms are expected to fully meet the core requirements of the global financial reform agenda.

# The Enhanced Basel II Regime

- In the case of Indian banks, with CRAR at 14.5 per cent including 10.1 per cent of Tier I capital as on end-March, 2010, the enhanced capital norms are lower than this level.
- However, there may be some negative impact arising from shifting some deductions from Tier I and Tier II capital to common equity. Further, changes relating to the counterparty credit risk framework are likely to have capital adequacy implications.

# Strengthened Capital Framework: From Basel II to enhanced Basel II

In percentage of risk-weighted assets	Capital requirements								Additional macro-prudential overlay
	Common equity			Tier 1 capital		Total capital		Counter-cyclical buffer	
	Minimum	Conservation buffer	Required	Minimum	Required	Minimum	Required		
	1	2	3	4	5	6	7		8
Basel II	2				4		8		
Enhanced Basel II definition and calibration	4.5	2.5	7.0	6	8.5	8	10.5	0-2.5	

**Source:** Bank for International Settlements.

# Countercyclical Capital Buffer

- A countercyclical capital buffer within a range of 0 – 2.5% of RWAs in form of Common Equity or other fully loss absorbing capital will be implemented according to national circumstances.
- The purpose of countercyclical capital buffer is to achieve the broader macro-prudential goal of protecting the banking sector from periods of excess aggregate credit growth. For any given country, this buffer will only be in effect when there is excess credit growth that results in a system-wide build-up of risk.

# RBI Guidelines on Basel III

	<b>Regulatory Capital</b>	<b>As % to RWAs</b>
(i)	Minimum Common Equity Tier 1 ratio	5.5
(ii)	Capital conservation buffer (comprised of Common Equity)	2.5
(iii)	Minimum Common Equity Tier 1 ratio plus capital conservation buffer [(i)+(ii)]	8.0
(iv)	Additional Tier 1 Capital	1.5
(v)	Minimum Tier 1 capital ratio [(i) +(iv)]	7.0
(vi)	Tier 2 capital	2.0
(vii)	Minimum Total Capital Ratio (MTC) [(v)+(vi)]	9.0
(viii)	Minimum Total Capital Ratio plus capital conservation buffer [(vii)+(ii)]	11.5

# RBI Guidelines on Basel III

- The final guidelines on Basel III capital regulations would become effective from January 1, 2013 in a phased manner. The Basel III capital ratios will be fully implemented as on March 31, 2018.
- Elements of Common Equity Tier 1 capital will remain the same under Basel III.
- Elements of Additional Tier 1 capital will remain the same.



## Transitional Arrangements - Scheduled Commercial Banks (excluding LABs and RRBs)

(% of RWAs)

Minimum capital ratios	January 1, 2013	March 31, 2014	March 31, 2015	March 31, 2016	March 31, 2017	March 31, 2018
Minimum Common Equity Tier 1 (CET1)	4.5	5	5.5	5.5	5.5	5.5
Capital conservation buffer (CCB)	-	-	0.625	1.25	1.875	2.5
Minimum CET1+ CCB	4.5	5	6.125	6.75	7.375	8
Minimum Tier 1 capital	6	6.5	7	7	7	7
Minimum Total Capital*	9	9	9	9	9	9
Minimum Total Capital +CCB	9	9	9.625	10.25	10.875	11.5