Guidelines

On

Risk Based Capital Adequacy for Banks

(Revised Regulatory Capital Framework in line with Basel II)

(December *2008)*

Banking Regulation & Policy Department
(Basel II Implementation Cell)
Bangladesh Bank
Head Office
Dhaka

Preface

In accordance with the roadmap /action plan (Ref. BRPD Circular no. 14, Dated 30-12-2007), it has been decided to start implementation of Risk Based Capital Adequacy for Banks prepared in line with the "International Convergence of Capital Measurement and Capital Standards" as recommended by Basel Committee on Banking Supervision (BCBS) from January, 2009. Both the existing capital requirement rules on the basis of Risk Weighted Assets (Ref. BRPD Circular no. 10, dated 25-11-2002) and revised Risk Based Capital Adequacy Framework for Banks will be followed simultaneously initially for one year. For the purpose of statutory compliance during the period of parallel run i.e. 2009, the computation of capital adequacy requirement under existing rules will prevail. On the other hand, revised Risk Based Capital Adequacy Framework shall be practiced by the banks during 2009 so that Basel II recommendation can effectively be adopted from 2010.

The implementation of revised risk based regulatory capital adequacy framework for banks will be followed on the basis of instructions that are articulated in this guideline. This guideline contains 3 parts, viz.

A) Introduction, definition, clarifications and measurement methodology for:

i) Capital Base

ii) Minimum Capital Requirement

iii) Supervisory Review Process

iv) Market Discipline

B) The set of reporting formats for computation of the capital adequacy and

C) Appendices and examples used for different computation

All reporting computations made by the banks in line with this Risk Based Capital Adequacy framework during parallel run period should reach Department of Offsite Supervision (DOS) quarterly by the end of the month following the end of each quarter.

A.T.M Nasiruddin
Executive Director and Chairman
Coordination Committee on Basel II implementation

CONTENTS	Page
1. Introduction	1
2. Scope of Application	1
3. Capital Base	1-3
a) Regulatory Capital	1
b) Conditions for maintaining Regulatory Capital	3
c) Eligible Regulatory Capital	3
4. Minimum Capital Requirement	4
5. Calculation of Risk Weighted Assets (RWA) for Credit Risk	5-22
(1) Definitions and clarifications	5
(2) Measurement Methodology of RWA for Credit Risk	8
(3) Risk Weighted Asset (RWA) for Balance Sheet Exposure	9
(4) Risk Weighted Asset for Off-Balance Sheet (OBS) Exposures	11
(5) Credit Risk Mitigation (CRM)	15-22
6. Capital Charge against Market Risk	23-37
(1) Definitions and clarifications:	23
(2) Scope and Coverage of the Capital Charges	23
(3) Measurement Methodology	24
I) Capital Charges for Interest Rate Risk	25
II) Capital Charges for Equity Position Risk	36
III) Capital Charges for Foreign Exchange Risk	36
7. Capital Charge against Operational Risk	38-40
(1) Definitions and clarifications	38
(2) Measurement Methodology	38
(3) Calculation of Capital charge against Operational Risk: An Example	39
8. Supervisory Review Process of the Banks	41-48
(1) Importance of supervisory review	41
(2) Main features of a rigorous review process	42
9. Market Discipline	49-54
(1) Scope and Purpose	49
(2) Relations with accounting disclosure	49
(3) Materiality of disclosure	49
(4) Frequency of disclosure	50
(5) Effective date of disclosure	50
(6) Disclosure Framework	50-54
9. Reporting Formats	i-xiv
10. Appendices	xv-xxxi
(1) Appendix-1, Conditionality of subordinated debt instruments for inclusion in the supplementary capital	xv
(2) Appendix-2, A worked out example on Credit risk mitigation(CRM)	xvi
(3) Appendix-3, Prudent valuation guidance	xvii
(4) Appendix-4, Government & other Public Sector Entities (PSEs)	xix-xxviii
(5) Appendix-5, Capital Charge against Operational Risk: Mapping of Business Lines	xxix-xxxii

List of Acronyms

AFS	Available For Sale
ASA	Alternative Standardized Approach
BB	Bangladesh Bank
BCA	Bank Company Act
BCBS	Basel Committee on Banking Supervision
BDT	Bangladesh Taka
BIA	Basic Indicator Approach
BOD	Board of Directors
CAR	Capital Adequacy Ratio
CCF	Credit Conversion Factor
CF	Commodities Finance
CRM	Credit Risk Mitigation
CSE	Chittagong Stock Exchange
DFI	Development Financial Institution
DSE	Dhaka Stock Exchange
ECA	Export Credit Agency
ECAI	External Credit Assessment Institution
EL	Expected Loss
FRA	Forward Rate Agreement
ICAAP	Internal Capital Adequacy Assessment Process
IRB	Internal Ratings Based
MDB	Multilateral Development Bank
MTB	Market Treasury Bills
NPA	Non Performing Asset
NPL	Non Performing Loan
OBS	Off Balance Sheet
OECD	Organization for Economic Co-operation and Development
OTC	Over The Counter
PSE	Public Sector Entity
RWA	Risk Weighted Assets
SME	Small and Medium Enterprise
SRP	Supervisory Review Process
TSA	The Standardized Approach
UCITS	Undertakings for Collective Investments in Transferable Securities
UL	Unexpected Loss

Risk Based Capital Adequacy for Banks
(Revised Regulatory Capital Framework in line with Basel II)

1. Introduction

Being supervisory authority, Bangladesh Bank (BB) has decided to adopt the Risk Based Capital Adequacy for Banks in line with capital adequacy framework devised by the Basel Committee on Banking Supervision (BCBS) popularly known as 'Basel II'.

Banks operating in Bangladesh are maintaining capital since 1996 on the basis of risk weighted assets in line with BCBS capital framework published in 1988. Considering present complexity and diversity in the banking industry and to make the banks' capital requirement more risk sensitive, BB has prepared this guideline to be followed by all scheduled banks from January 2009. This is an endeavor towards more improved and risk sensitive capital requirement than the current regulation. This guideline is structured around the following three aspects:

i. **Minimum capital requirements** to be maintained by a bank against credit, market and operational risk.
ii. Process for assessing overall **capital adequacy** in relation to a bank's risk profile and a strategy for maintaining its capital at an adequate level.
iii. To make public **disclosure of information** on the bank's risk profiles, capital adequacy and risk management.

2. Scope of Application:

This Risk Based Capital Adequacy framework applies to all Banks on 'Solo' as well as on 'Consolidated' basis where-

-'*Solo Basis*' refers to all position of the bank and its local and overseas branches/offices.

-'*Consolidated Basis'* refers to all position of the bank (including its local and overseas branches/offices) and its subsidiary company(s) like brokerage firms, discount houses, etc (if any).

3. Capital Base

a) Regulatory capital: For the purpose of calculating regulatory capital requirement, capital is categorized into the following three tiers;

Tier 1 Capital:

Tier 1 capital, also called **'Core Capital',** comprises of highest quality capital elements and shall include:

a. Paid up capital/capital deposited with BB[1]
b. Non-repayable share premium account
c. Statutory Reserve
d. General Reserve
e. Retained Earnings
f. Minority Interest in subsidiaries
g. Non-Cumulative irredeemable Preference Shares
h. Dividend Equalization Account

Tier 2 Capital:

Tier 2 capital, also called **'Supplementary Capital',** represents other elements which fall short of some of the characteristics of the Core capital but contribute to the overall strength of a bank and shall include:

a. General Provision[2]
b. Asset Revaluation Reserves[3]
c. All other Preference Shares
d. Perpetual Subordinated Debt
e. Exchange Equalization Account
f. Revaluation Reserves for Securities

Tier 3 Capital

Tier 3 capital, also called **'Additional Supplementary Capital',** consisting of short-term subordinated debt (original/residual maturity less than or equal to five years but greater than or equal to two years) is meant solely for the purpose of meeting a proportion of the capital requirements for market risk.

---

1 In the case of foreign banks operating as branches in Bangladesh.

2 Maintained against Unclassified Loans/Advances, Special Mention Account & Off-balance sheet exposures

3 Asset Revaluation Reserves is created through revaluation of fixed assets:: Ref: BRPD Circular letter no.10/2002, dated 25 Nov, 2002

b) Conditions for maintaining Regulatory Capital

The computation of the amount of Core (Tier 1) and Supplementary (Tier 2 and Tier 3) Capitals shall be subject to the following conditions: -

1) Eligible Tier 2 plus Tier 3 capital shall not exceed total Tier 1 capital.
2) Fifty percent (50%) of Asset Revaluation Reserves shall be eligible for Tier 2 i.e. Supplementary Capital.
3) A minimum of about 20% of market risk needs to be supported by Tier 1 capital. Supporting of Market Risk from Tier 3 capital shall be limited up to a maximum of 250% of a bank's Tier 1 capital that is available after meeting credit risk capital requirement[4].
4) Up to 50% of Revaluation Reserves for Securities shall be eligible for Supplementary Capital.
5) Subordinated debt (definition & qualification is stated in appendix-1) shall be limited to a maximum of 30% of the amount of Tier 1 capital and shall also include rated and listed subordinated debt instruments/bonds raised in the capital market.

c) Eligible Regulatory Capital

In order to obtain the Eligible Regulatory Capital for the purpose of calculating Minimum Capital Requirements (MCR), banks are required to make following deductions from their Tier-1 capital;

i) Book value of goodwill.
ii) Shortfall in provisions required against classified assets
iii) Remaining deficit on account of revaluation of investments in securities after netting off any other surplus on the securities.

Eligible tier-2 capital will be derived after deducting components, if any, qualified for deduction.

Total Eligible Regulatory Capital will be calculated adding the eligible tier-1, eligible tier-2 and tier-3 capital i.e.

Total Eligible Regulatory Capital = (Eligible tier1 Capital + Eligible tier2 Capital + Eligible tier3 Capital)

---

[4] Example: Suppose a bank requires BDT 90 crore for capital charge against market risk, 20% of that amount i.e. (20%of 90) = BDT 18 crore needs to be supported from tier-1 capital. Again, suppose the bank has Tier-1 Capital of BDT 120 crore and the capital requirement for credit risk is BDT 110 crore, the remaining Tier-1 Capital BDT 10 crore is available for market risk and thus the bank can have maximum eligible Tier-3 Capital is BDT (250% of 10) = 25 crore.

4. Minimum Capital Requirements (MCR)

a) No Scheduled Bank in Bangladesh shall commence and carry on its business unless it has a minimum **Paid up Capital/**Capital deposited with BB (applicable for foreign bank branches) as fixed by BB[5] from time to time.

b) Banks shall also maintain a minimum Capital Adequacy Ratio (CAR) of at least 10% of Risk Weighted Assets (RWA) with core capital (Tier-1) not less than 5% of RWA[*]. CAR would be derived dividing total Eligible Regulatory Capital by RWA and multiplied by 100.

$$\text{CAR} = \frac{\text{Eligible Regulatory Capital}}{\text{RWA}} \times 100$$

c) **Total Risk weighted Assets (RWA):** Total Risk Weighted Assets (RWA) will be determined by multiplying capital charge for market risk and operational risk by a factor of 10 (i.e., the reciprocal of the minimum capital adequacy ratio of 10%) and adding the resulting figures to the sum of risk weighted assets for credit risk

i.e., Total RWA = RWA for Credit Risk + 10 × (Capital Charge for Market Risk + Capital Charge for Operational Risk)

MCR = 10% of Total RWA

---

[5] Ref. BRPD Circular Letter No. 11 dated August 14, 2008

[*] Ref. BRPD Circular No. 05 dated May14, 2007

5. Calculation of Risk Weighted Assets (RWA) for Credit Risk :

This section is concerned with the calculation of Risk Weighted Assets (RWA) for **Banking Book** exposures excluding foreign exchange & gold holding. Banking book comprises asset components intent of which is not trading.

(1) Definitions and clarifications:

a) Credit Risk: Probability of violation of commitment by an obligor.

b) Claims: All exposures such as deposit, placement, investments, loans and advances underlying with counterparties.

c) Claims on Sovereign and Central Bank: All exposures including loans and advances given to the Government of the Peoples Republic of Bangladesh and investments i.e. holdings of Bangladesh Government securities and Bangladesh Bank securities, holdings of Development Bonds including Foreign Currency Bonds. The statutory reserve maintained with the Bangladesh Bank under section 33 of Bank Company Act - 1991 (Revised in 2003) and clearing balances (both in local & foreign currencies) in the name of the bank. The part of capital maintained as a reserve in foreign currency with BB (if any).

d) Claims on other Sovereigns and their Central Banks: Loans and advances provided with Governments and Central Banks of countries other than Bangladesh as well as investments in securities issued by them.

e) Claims on the Bank for International Settlements (BIS), the International Monetary Fund (IMF), and the European Central Bank: All exposures including loans and advances to and investments in the Bank for International Settlements, the International Monetary Fund and European Central Bank.

f) Claims on Multilateral Development Banks (Specific) : All exposures including loans and advances given to and investments by the following:

- The World Bank Group comprising of the International Bank for Reconstruction and Development (IBRD) and the International Finance Corporation (IFC)
- The Asian Development Bank (ADB)

- The African Development Bank (AfDB)
- The European Bank for Reconstruction and Development (EBRD)
- The Inter-American Development Bank (IADB)
- The European Investment Bank (EIB)
- The European Investment Fund (EIF)
- The Nordic Investment Bank (NIB)
- The Caribbean Development Bank (CDB)
- The Islamic Development Bank (IDB)
- The Council of Europe Development Bank (CEDB)

g) Claims on Multilateral Development Banks (Others): All exposures including loans and advances to and investments in Multilateral Developments Banks (MDBs) other than those specified in 'f' above.

h) Claims on Government/ Public Sector Entities (PSE): All exposures including loans and advances to and investments in all public corporations, statutory boards and authorities, local government bodies etc. owned or controlled by Government of Bangladesh or any entity is categorized by BB as PSE (See appendix-4).

i) Claims on Banks & Non-bank Financial Institutions (NBFIs): All exposures including loans and advances, placements, deposits, debentures (which are not treated as capital of the issuing bank or NBFI) and investments in all scheduled and non-scheduled banks including NBFIs incorporated in Bangladesh and foreign bank branches operating in Bangladesh and abroad.

j) Claims on Corporate: This includes all exposures including loans and advances to and investments in corporate. "Corporate" refers to any proprietorship, partnership or limited company that is neither a PSE, Bank, Non bank financial Institutions (NBFIs) nor borrower within the definition of retail portfolio and Small Enterprises.

k) Retail Portfolio: This includes all exposures including loans and advances to entities qualifying as Retail Portfolio. Qualifying Criteria for the Retail Portfolio are as follows:

- **Orientation criterion**: The exposure should be to an individual person or persons.

- **Product criterion** : The exposure should be of one of the following product types:
  - Revolving credit and lines of credit including overdrafts and credit cards
  - Personal term loans and leases (e.g. installment loans, vehicle loans and leases, student and educational loans, personal finance)
- **Granularity criterion**: The retail portfolio must be sufficiently diversified to a degree that reduces the risks in the portfolio. In order to meet this criterion, no aggregate exposure without considering Credit Risk Mitigation (CRM), to one counterpart should exceed 0.2% of the overall retail portfolio excluding any non-performing loans.
- **Maximum value of individual exposures**: 0.2% of the overall retail or BDT 75,00,000 (Seventy five lac) , which ever is lower.

l) Small and Medium Enterprises (SME)[7]:

i) Small Enterprise: Small enterprise means that enterprise which is ideally not any public limited company and fulfills the following criteria:

- ***Trading Concern:*** In this case total fixed assets excluding land and building amount to BDT 50,000.00 to BDT 50,00,000.00 and/or working manpower does not exceed 25 persons.
- ***Service Sector:*** In this case total fixed assets excluding land and building amount to BDT 50,000.00 to BDT 50,00,000.00 and/or working manpower does not exceed 25 persons.
- ***Manufacturing Concern:*** In this case total fixed assets excluding land and building amount to BDT 50,000.00 to BDT 1,50,00,000.00 and/or working manpower does not exceed 25 persons.

ii) Medium Enterprise: Medium enterprise means that enterprise which is ideally not any public limited company and fulfills the following criteria:

- ***Trading Concern:*** In this case total fixed assets excluding land and building amount to BDT 50,00,000.00 to BDT 10,00,00,000.00 and/or working manpower does not exceed 50 persons.

[7] Definition of SME:Ref. ACSPD Circular No. 8 dated 26/05/2008

- ***Service Sector:*** In this case total fixed assets excluding land and building amount to BDT 50,00,000.00 to BDT 10,00,00,000.00 and/or working manpower does not exceed 50 persons.
- ***Manufacturing Concern:*** In this case total fixed assets excluding land and building amount to BDT 1,50,00,000.00 to BDT 20,00,00,000.00 and/or working manpower does not exceed 150 persons.

m) Claims secured by Residential Property: Lending fully secured by mortgages on residential property that is or will be occupied by the borrower or that is rented.

n) Claims secured by Commercial Real Estate: Lending fully secured by mortgages on commercial real estate mortgages will be used for office and /or multi-purpose commercial premises and/or multi-tenanted commercial premises etc. except residential property.

o) Past Due Claims: All claims including all exposures such as investments, loans and advances classified as per the prudential regulations issued by BB and as amended from time to time, net of specific provisions should be considered as past due claims.

p) Cash items in Process of Collection: Cheques, drafts and other cash items, such as money orders, postal orders drawn on the banks and other authorized institutions and payable immediately on presentation. Trade Bills, such as import bills and export bills, in the process of collection should be excluded from this item.

(2) Measurement Methodology of RWA for Credit Risk

According to the standardized approach of Basel II framework, the risk weight will be based on the risk assessment (hereinafter called credit rating) made by External Credit Assessment Institutions (ECAIs) duly recognized by BB. Risk weights are based on external rating or a fixed weight that is broadly aligned with the likelihood of counterparty default.

(3) Risk Weighted Asset (RWA) for Balance Sheet Exposure

a) Banks shall use ratings of ECAIs recognized by BB for capital adequacy purposes under Standardized Approach. ECAIs' various rating category are mapped with that of BB rating grade expressed in numerals 1 to 6, 1 being the best. (Table no. 1). Exposure wise risk weights (RWs) against different rating of BB rating category is given in Table 2. Bangladeshi banks, having exposures abroad, may use the ratings assigned by ECAIs recognized by BB.

b) Where an exposure is secured by guarantee or eligible financial collateral, it may reduce its capital charge by taking benefit of the risk mitigation described in section (5) below.

BB Rating Grade	Equivalent Rating of ------ **	Equivalent Rating of --------- -------**
1		
2		
3		
4		
5		
6		
Short-Term Rating Category Mapping		
S1		
S2		
S3		
S4		
S5		
S6		

** Notches/Notations of ECAIs will be mentioned after recognition process is completed.

Table - 2
Risk Weights against BB Rating Category

Sl.	Exposure Type	BB's Rating Grade	Risk Weight (%)
a.	Cash and Cash Equivalents		**0**
b.	Claims on Bangladesh Government (other than PSEs) and BB		**0**
c.	Claims on other Sovereigns & Central Banks[8]		
d	Claims on Bank for International Settlements, International Monetary Fund and European Central Bank		**0**
e	Claims on Multilateral Development Banks (MDBs)		
	i) IBRD , IFC, ADB, AfDB, EBRD, IADB, EIB, EIF, NIB, CDB, IDB, CEDB		**0**
	ii) Other MDBs	**1**	**20**
		2,3	**50**
		4,5	**100**
		6	**150**
		Unrated	**50**
f	Claims on Public Sector Entities (other than Government) in Bangladesh	**1**	**20**
		2,3	**50**
		4,5	**100**
		6	**150**
		Unrated	**50**
g	Claims on Banks:		
	i) Maturity over 3 months	**1**	**20**
		2,3	**50**
		4,5	**100**
		6	**150**
		Unrated	**100**
	ii) Maturity less than 3 months		**20**
h	Claims on Corporate (excluding equity exposures)	**1**	**20**
		2	**50**
		3,4	**100**
		5,6	**150**
		Unrated	**125**

Continued to next page

[8] For the purpose of risk weighting claims on other Sovereigns & Central Banks, Banks may use the rating & risk weight as recognized by their home supervisors(if any) or risk-scores published by the consensus risk scores of ECAs participating in the "Arrangement on Officially Supported Export Credits". These scores are available on the OECD's website (http://www.oecd.org).

Note: Unrated : Counterparty/Instruments not rated by any recognized ECAI

Sl.	Exposure Type	Risk Weight (%)
Fixed Risk Weight Groups:		
i	Claims categorized as retail portfolio & Small Enterprise (excluding consumer finance)	**75**
j	Consumer Finance	**100**
k	Claims fully secured by residential property	**50**
l	Claims fully secured by commercial real estate	**100**
m	Past Due Claims (Risk weights are to be assigned to the amount net of specific provision):	
	1. The claim (other than claims secured by eligible residential property) that is past due for more than 90 days and/or impaired will attract risk weight as follows:	
	- Where specific provisions are less than 20 per cent of the outstanding amount of the past due claim ;	**150**
	- Where specific provisions are no less than 20 per cent of the outstanding amount of the past due claim.	**100**
	- Where specific provisions are more than 50 per cent of the outstanding amount of the past due claim.	**50**
	2. Claims fully secured against residential property that are past due for more than 90 days and/or impaired specific provision held there-against is less than 20% of outstanding amount	**100**
	3. Loans and claims fully secured against residential property that are past due by 90 days and /or impaired and specific provision held there-against is more than 20% of outstanding amount	**75**
n	Investments in venture capital	**150**
o	Investments in premises, plant and equipment and all other fixed assets	**100**
p	Claims on all fixed assets under operating lease	**100**
q	All other assets	**100**

(4) Risk Weighted Asset for Off-Balance Sheet (OBS) Exposures:

a) Banks are required to calculate their risk-weighted assets for all off–balance sheet (OBS) exposures. The total risk weighted assets with respect to credit risk of OBS exposure will be the sum of risk-weighted assets for market related and non-market related OBS transactions.

The **Market-related OBS transactions** include the following:

i) Interest rate contracts - this includes single currency interest rate swaps, basis swaps, forward rate agreements, interest rate futures, interest rate options purchased and any other instruments of a similar nature;

ii) Foreign exchange contracts - this includes cross currency swaps (including cross currency interest rate swaps), forward foreign exchange contracts, currency futures, currency options purchased, hedge contracts and any other instruments of a similar nature;

iii) Equity contracts - this includes swaps, forwards, purchased options and similar derivative contracts based on individual equities or equity indices;

iv) Other market-related contracts - this includes any contracts covering other items, which give rise to credit risk.

The **Non-market related** OBS exposure includes

i) Direct credit substitutes

ii) Trade and performance related contingent items and

iii) Other commitments.

b) Credit Conversion Process: The risk-weighted amount of the OBS transaction that gives rise to credit exposure is generally calculated by means of a two-step process:

- First, the notional amount of the transaction is converted into a balance sheet equivalent (i.e. credit equivalent amount) by multiplying the amount by a specified credit conversion factor (CCF). Tables 3, 4 & 5 below give the CCF associated with various types of OBS transactions; and
- Second, the resulting credit equivalent amount will be multiplied by the risk-weight associated with that counterparty credit rating [as described in Table 2].

c) Market-related OBS transactions: In calculating risk-weighted OBS credit exposures arising from market-related transactions for capital adequacy purposes, the bank must include all its market-related transactions held in the banking and trading

books which give rise to OBS credit risk. The credit risk on OBS market-related transactions is the cost to a bank of replacing the cash flow specified by the contract in the event of counterparty default. This will depend, among other things, on the maturity of the contract and on the volatility of rates underlying that type of instrument. Exemption from capital charge is permitted for:

- Foreign exchange contracts with BB.
- Foreign exchange contract which have an original maturity of 14 calendar days or less; and
- Instruments traded on futures and options exchanges, which are subject to daily mark-to-market and margin payments.

The credit equivalent amount of an OBS market-related transaction, whether held in the banking or trading book, shall be determined as follows:

i) In the case of interest rate and foreign exchange contracts:

a) by mark-to-market (also known as current exposure) method; or

b) by the original exposure (Notional amount) method (with BB's prior approval) ; and

ii) In all other cases, by mark-to-market (current exposure) method.

Current exposure method: In current exposure method, credit equivalent amount would be calculated by multiplying current market value of each of the contracts by the relevant credit conversion factor specified in Table 3 according to the nature and residual maturity of the instrument.

Table 3

Credit Conversion Factor under current exposure method.

Residual Maturity	Interest rate contracts	Foreign exchange contracts	Equity
1 year or less	0.0%	1.0%	6.0%
> 1 year to 5 years	0.5%	5.0%	8.0%
>5 year	1.5%	7.5%	10.0%

Original exposure method: Where the original exposure method is used, the credit equivalent amount of an OBS market-related contract is determined by multiplying the

notional principal amount of the contract by the appropriate credit conversion factor specified in Table 4;

Table 4

Credit Conversion Factor Original Exposure method

Original maturity	Interest rate contracts	Foreign exchange contracts
1 year or less	0.5%	2.0%
> 1 year to 2 years	1.0% (i.e. 0.5%+0.5%)	5.0% (i.e. 2% + 3%)
For each additional year	1.0%	3.0%

d) Non-market-related OBS transactions: Credit Conversion Factor for non-market-related OBS transactions are stated below in the table no. 15

Table 5
Credit Conversion Factor for non-market-related OBS transactions

Nature of transaction	Credit Conversion Factor (CCF)
Direct credit substitutes Any irrevocable off-balance sheet obligation which carries the same credit risk as a direct extension of credit, such as an undertaking to make a payment to a third party in the event that a counterparty fails to meet a financial obligation or an undertaking to a counterparty to acquire a potential claim on another party in the event of default by that party, constitutes a direct credit substitute (i.e. the risk of loss depends on the creditworthiness of the counterparty or the party against whom a potential claim is acquired). This includes potential credit exposures arising from the issue of guarantees and credit derivatives (selling credit protection), confirmation of letters of credit, issue of standby letters of credit serving as financial guarantees for loans, securities and any other financial liabilities, and bills endorsed under bill endorsement lines (but which are not accepted by, or have the prior endorsement of, another bank).	100 %
Performance-related contingencies Contingent liabilities, which involve an irrevocable obligation to pay a third party in the event that counterparty fails to fulfill or perform a contractual non-monetary obligation, such as delivery of goods by a specified date etc (i.e. the risk of loss depends on a future event which need not necessarily be related to the creditworthiness of the counterparty involved). This includes issue of performance bonds, bid bonds, warranties, indemnities, and standby letters of credit in relation to a non-monetary obligation of counterparty under a particular transaction.	50%

Continued to next page

Nature of transaction	Credit Conversion Factor (CCF)
Trade-related contingencies Contingent liabilities arising from trade-related obligations, which are secured against an underlying shipment of goods for both issuing and confirming bank. This includes documentary letters of credit issued, acceptances on trade bills, shipping guarantees issued and any other trade-related contingencies.	20 %
Lending of securities or posting of securities as collateral The lending or posting of securities as collateral by banks. This includes repurchase/reverse repurchase agreements and securities lending/ borrowing transaction.	100 %
Other commitments (a) Commitments with certain drawdown. (b) Commitments (e.g. undrawn formal standby facilities and credit lines) with an original maturity of: (i) one year or less. (ii) over one year. (c) Commitments that can be unconditionally cancelled at any time without notice (e.g. undrawn overdraft and credit card facilities providing that any outstanding unused balance is subject to review at least annually) or effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness.	 100 % 20 % 50% 0%

(5) Credit Risk Mitigation (CRM):

Banks use a number of techniques to reduce the credit risk to which they are exposed. This framework considers that effect in calculating risk based capital requirement by a bank. These effects may be considered under two aggregate heads i.e.,

A) Collateral for Credit Risk Mitigation

B) Guarantee for Credit Risk Mitigation

A) Credit Risk Mitigation: Collateral

Where a transaction is secured by eligible financial collateral and meets the eligibility criteria and minimum requirements, banks are allowed to reduce their exposure under that particular transaction by taking into account the risk mitigating effect of the collateral for the calculation of capital charge.

a) Eligible financial Collateral:

i) Cash (as well as certificates of deposit or Fixed Deposit or comparable instruments of same bank) on deposit with the bank, which is incurring the counterparty exposure

ii) Gold

iii) Debt securities rated by a recognized external credit assessment institution where these are either:

a) at least rated '4' when issued by sovereigns or PSEs that are treated as sovereigns by BB

b) at least rated '3' when issued by other entities (including banks and securities firms); or

c) at least rated 'S3' for short-term debt instruments.

iv) Debt securities not rated by a recognized external credit assessment institution where these are:

a) Issued by a bank; and

b) Listed on a recognized exchange; and

c) Classified as senior debt[9]; and

d) All rated issues of the same seniority by the issuing bank which are rated at least '3'/'S3' by a recognized ECAI; and

e) The bank holding the security as collateral has no information to suggest that issue justifies a rating below '3'/'S3' and BB views such securities as liquid and marketable.

v) Equities (including convertible bonds) which are included in a DSE/CSE-20.

vi) Undertakings for Collective Investments in Transferable Securities (UCITS) and mutual funds where a price for the units is publicly quoted daily and

vii) Equities (including convertible bonds) which are not included in a DSE/CSE-20 but which are listed on a recognized exchange.

[9] A bond or other form of debt that takes priority over other debt securities sold by the issuer. In the event the issuer goes bankrupt, senior debt must be repaid before other creditors receive any payment.

b) Eligibility Criteria and Minimum Requirements

For recognizing eligible financial collateral, the following criteria and minimum requirements should be met:

i) 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.

ii) In order for collateral to provide protection between the counterparty and issuer of collateral must not have a material positive correlation.

iii) Banks must have clear and robust procedures for the timely liquidation of collateral.

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.

v) Mismatches in the maturity of the underlying exposure and the collateral will be considered as CRM only when residual maturity of the collateral is greater than or equal to one year

c) Calculation of capital charge:

Where transactions are secured by eligible collateral, banks need to first calculate the net exposure amount by taking into account the effect of collateral. The net exposure amount (if positive) is then weighted according to risk-weight of the counterparty to obtain the risk-weighted asset amount for the collateralized transaction.

In calculating the adjusted exposure amount after risk mitigation, adjustments (hereinafter called **"haircuts"**) are applied to both the collateral and the exposure to take into account possible future price fluctuations. Where the exposure and collateral are held in different currencies an additional downward haircut must be made to the volatility-adjusted collateral amount to take account of possible future fluctuations in exchange rates.

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 these calculations is as follows:

E* = max [0, E x (1 + He) - C x (1 - Hc - Hfx)]

Where:

E* = the exposure value after risk mitigation

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

He = haircut weight appropriate to the exposure

C = the current value of the collateral received

Hc = haircut weight appropriate to the collateral

Hfx = haircut weight 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 collateralized transaction.

Where the collateral is a basket of assets, the haircut on the basket will be: $H = \sum a_i H_i$

Where a_i is the weight of the asset (as measured by unit of currency) in the basket and H_i is the haircut applicable to that asset.

A worked out example for calculating the effect of Credit Risk Mitigation is provided in Appendix **2.**

d) 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 Bangladesh shall use only the standard supervisory haircuts for both the exposure as well as the collateral.

(ii) The Standard Supervisory Haircuts expressed as percentages are as under:

Table 6: Haircut weights for exposures

Counterparty Rating (BB Rating Grade)	Maturity	Sovereigns (%)	Others (%)
1	≤ 1 year	0.5	1
	>1 year, ≤ 5 years	2	4
	> 5 years	4	8
2, 3	≤ 1 year	1	2
	>1 year, ≤ 5 years	3	6
	> 5 years	6	12
4	≤ 5 years	9	12
	> 5 years	12	15
5,6 & Unrated	all	15	25

Table 7: Haircut weights for Collaterals

Issue rating for debt securities (BB Rating Grade)	Maturity	Sovereigns (%)	Other Issuers (%)
1 & S1	≤ 1 year	0.5	1
	>1 year, ≤ 5 years	2	4
	> 5 years	4	8
2, 3 , S2 & S3	≤ 1 year	1	2
	>1 year, ≤ 5 years	3	6
	> 5 years	6	12
4, 5,6, S4 & Unrated	all	15	
Equities included in DSE 20		12	
Other than DSE 20 & Gold		15	
Undertaking in collective Investment and transferable Securities (UCITS)/Mutual funds		Highest haircut applicable to any security in which the fund can invest	
Cash in same currency (as well as certificates of deposit or comparable instruments issued by the lending bank)		0	
The standard supervisory haircut for currency risk where exposure and collateral are denominated in different currencies		10%	

(B) Credit Risk Mitigation: Guarantee

To reduce credit risk, transactions may be secured by guarantees. Where guarantees are direct, explicit, irrevocable and unconditional banks may consider such credit protections in calculating capital requirements through a substitution approach e.g., lower rating/risk weight of guarantor than the counterparty will lead to reduced capital charges.

a) Guarantees eligible for being treated as a CRM:

(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 realizable value of eligible collaterals / credit risk mitigants will attract the appropriate risk weight.

iii) The legal certainty requirements to be recognized in case of guarantee for CRM. 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.

b) Range of eligible guarantors/counter-guarantors: Credit protection given by the following entities will be recognized as eligible guarantor:

i) Sovereigns, sovereign entities (including BIS, IMF, European Central Bank and European Community as well as MDBs), PSEs, and banks with a lower risk weight than the counterparty.

(ii) Other entities rated equivalent to 1 and 2. This would include guarantee cover provided by parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor.

iii) 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:

- the sovereign counter-guarantee covers all credit risk elements of the claim;
- 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
- 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.

c) Risk weights: The protected portion is assigned the risk weight of the protection provider. Exposures covered by Government guarantees will attract a risk weight of 20%. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.

d) 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.

(2) 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 Hfx, i.e.,

$GA = G \times (1 - H_{fx})$

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 10% for currency mismatch.

(3) Maturity Mismatch

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 collateral has a residual maturity of less than one

year, the CRM is not recognized 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 in the following paragraphs.

a) Definition of maturity

Both the maturity of the underlying exposure and the maturity of the collateral should be defined conservatively. The effective maturity of the underlying exposure should be measured as the longest possible remaining time before the counterparty is scheduled to fulfill its obligation, taking into account any applicable grace period. The maturity relevant here is the residual maturity.

(4) 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.

6. Capital Charge against Market Risk

This section is concerned with the calculation of capital charges for market risk on **Trading Book** exposures.

(1) Definitions and clarifications:

a) Trading book consists of positions in financial instruments held with trading intent or in order to hedge other elements of the Trading Book. A capital charge will be applicable for financial instruments which are free from any restrictive covenants on tradability, or able to be hedged completely. Generally, investments in 'Held for Trading' portfolios are focal parts of the Trading Book. In addition, positions should be valued prudently. For valuation guidelines see Appendix 3.

b) Market risk is the possibility of losing assets in balance sheet and off-balance sheet positions arising out of volatility in market variables i.e. interest rate, exchange rate and price.

c) Financial instrument is any contract that provides financial asset of one entity and a financial liability or equity instrument of another entity. Financial instruments include primary financial instruments or cash instruments and derivative financial instruments.

d) Financial asset is any asset that is cash, the right to receive cash or another financial asset; or the contractual right to exchange financial assets on potentially favorable terms, or an equity instrument.

e) **Financial liability** is the contractual obligation to deliver cash or another financial asset or to exchange financial liabilities under conditions that are potentially unfavorable.

f) **Hedge** is a position that materially or entirely offset the risk elements of another position in the trading book portfolio.

(2) Scope and Coverage of the Capital Charges

Allocation of capital is required in respect of the exposure to risks deriving from changes in interest rates and equity prices, in the banks' **trading book**, in respect of exposure to

risks deriving from changes in foreign exchange rates and commodity price in the overall banking activity.

The total capital requirement for banks against their market risk shall be the sum of capital charges against

i. interest rate risk
ii. equity position risk
iii. foreign exchange (including gold) position risk throughout the bank's balance sheet; and

Thus,

Capital Charge for Market Risk = Capital charge for (Interest Rate Risk + Equity Position Risk + Foreign Exchange Risk + Commodity Position Risk)

(3) Measurement Methodology

As banks in Bangladesh are now in a stage of developing risk management models, banks using Standardized Approach for credit risk capital requirement for banking book should use Standardized (rule based) Approach for market risk capital charge in their trading book.

In Standardized (rule based) Approach the capital requirement for various market risks (interest rate risk, price, and foreign exchange risk) is determined separately. The total capital requirement in respect of market risk is the sum of capital requirement calculated for each of these market risk sub-categories. e.g.,

a) Capital Charge for Interest Rate Risk = Capital Charge for Specific Risk + Capital Charge for General Market Risk
b) Capital Charge for Equity Position Risk = Capital Charge for Specific Risk + Capital Charge for General Market Risk
c) Capital Charge for Foreign Exchange Risk = Capital Charge for General Market Risk
d) Capital Charge for Commodity Position Risk = Capital Charge for General Market Risk

The methodology to calculate capital requirement under Standardized (rule based) Approach for each of these market risk categories is as follows.

I) Capital Charges for Interest Rate Risk

A. Capital charges for Specific risk

Capital charge for specific risk against interest related instruments designed to protect against an adverse movement in the price of an individual security owing to factors related to the individual issuer. The charge for Specific risk is graduated in the following categories and the weights are given in Table-8.

(a) **Government category**: This category will include all the existing government securities. All BDT denominated government securities will carry zero percent capital charge weight as well as for foreign currency denominated securities whether issued by domestic or foreign governments.

(b) **Qualifying category**: The qualifying category includes :

i) Debt securities issued by public sector entities and multilateral development banks, and other securities that are recognized by BB for including in this category.

ii) A debt security rated by at least two credit rating agencies of the approved panel of BB, neither rating to be worse than an equivalent BB Ratings Grade 3.

(c) Other category: This covers those instruments which are not included in 'Government' or 'Qualifying category' above.

Table - 8
Capital Charge Weight for Specific risk

Categories	BB rating grade	particulars	Capital Charge Weights (%)
Government (Domestic Currency)	--	--	0
Government (Other than Domestic Currency)	1		0
	2 , 3	Residual term to final maturity 6 months or less	0.25
		Residual term to final maturity greater than 6 and up to and including 24 months	1
		Residual term to final maturity exceeding 24 months	1.60
	4 , 5	--	10
	6	--	12
	Unrated	--	10
Qualifying	--	Residual term to final maturity 6 months or less	0.25
		Residual term to final maturity greater than 6 and up to and including 24 months	1
		Residual term to final maturity exceeding 24 months	1.60
Other	1	--	2
	2 , 3	--	6
	4	--	10
	Below 4	--	12
	Unrated	--	10

B. Capital charge for General market risk:

The capital requirement for general market risk is designed to capture the risk of loss arising from changes in market interest rates. In this regard the capital charge will be calculated on the basis of the following considerations:

I. Bank's underlying trading issues may exist in long or both in long and short position (i.e., relate to interest rate derivative/hedge). Where trading issues relate to only long position then total capital charge is to be calculated using the capital

charge weight as stated in the Maturity Method(Table -9) or Duration Method (Table-10), and

II. Where any transaction relates to both long and short position (i.e., relate to interest rate derivative/hedge) capital charge will be computed for horizontal disallowances (Table-11) using either Maturity Method or Duration Method.

Maturity Method: In the maturity method, long or short positions in debt securities and other sources of interest rate exposures, including derivative instruments, are slotted into a maturity ladder comprising 13 time-bands (or 15 time-bands in case of low coupon instruments). Fixed-rate instruments should be allocated according to the residual term to maturity and floating-rate instruments according to the residual term to the next repricing date.

The capital charge for the securities is the resultant figure found by multiplying market value of the securities by the capital charge weight set out in Table 9 below. Zero-coupon bonds and deep-discount bonds (defined as bonds with a coupon of less than 3%) should be slotted according to the time-bands set out in the second column of Table 9.

Table 9
Maturity method: time-bands and weights

Time-bands for Coupon 3% or more	Time-bands for Coupon less than 3%	Risk weight	Estimated Change in yield
1	2	3	4
1 month or less	1 month or less	0.00%	1.00
1 to 3 months	1 to 3 months	0.20%	1.00
3 to 6 months	3 to 6 months	0.40%	1.00
6 to 12 months	6 to 12 months	0.70%	1.00
1 to 2 years	1.0 to 1.9* years	1.25%	0.90
2 to 3 years	1.9 to 2.8 years	1.75%	0.80
3 to 4 years	2.8 to 3.6 years	2.25%	0.75
4 to 5 years	3.6 to 4.3 years	2.75%	0.75
5 to 7 years	4.3 to 5.7 years	3.25%	0.70
7 to 10 years	5.7 to 7.3 years	3.75%	0.65
10 to 15 years	7.3 to 9.3 years	4.50%	0.60
15 to 20 years	9.3 to 10.6 years	5.25%	0.60
Over 20 years	10.6 to 12 years	6.00%	0.60
	12 to 20 years	8.00%	0.60
	Over 20 years	12.50%	0.60
* Time bands after decimal represents months i.e. 1.9 to be read as 1 year 9 months			

Duration Method: Under the duration method, banks may use a more accurate method of measuring all of their general market risk by calculating the price sensitivity of each position separately. The banks that decide to use this approach must do so on continuous basis. In this method instead of the standard capital charge weights as given in Table 9, bank shall calculate the capital charge for each position on the basis of estimated change in yield given in Table 10. Techniques of calculating capital charge under Duration Method are as follows:

i) First, calculate the price sensitivity of each instrument in terms of a change in interest rates of between 0.6 and 1.0 percentage points depending on the maturity of the instrument (see Table 10);

ii) Slot the resulting sensitivity measures into a duration-based ladder with the fifteen time-bands set out in Table 10, where trading issues relate to only long position. Then, total capital charge would be the aggregate of the price sensitivity measures.

Table 10
Duration method: time-bands and assumed changes in yield

Time Bands	Time Zones	Estimated Change in yield (y)	Calculation of price sensitivity
1	**2**	3	4
1 month or less	**Time Zone -1**	1.00	Banks may use the following formula to measure price sensitivity of the instrument: △ P/P = -D*[△ (1+y)/(1+y)] Where, △ P = Change in Price (sensitivity measure) P = Current market price y = yield △ (1+y)=Estimated change in yield D=Calculated duration on the basis of residual maturity
1 to 3 months		1.00	
3 to 6 months		1.00	
6 to 12 months		1.00	
1.0 to 1.9 years	**Time Zone -2**	0.90	
1.9 to 2.8 years		0.80	
2.8 to 3.6 years		0.75	
3.6 to 4.3 years		0.75	
4.3 to 5.7 years	**Time Zone -3**	0.70	
5.7 to 7.3 years		0.65	
7.3 to 9.3 years		0.60	
9.3 to 10.6 years		0.60	
10.6 to 12 years		0.60	
12 to 20 years		0.60	
Over 20 years		0.60	
* * Time bands after decimal represents months i.e. 1.9 to be read as 1 year 9 months			

Techniques of calculating capital charge where any transaction relates to both long and short position (e.g. relate to interest rate derivative/hedge):

iii) Carry forward the net positions in each time-band (maturity/duration) for 10% vertical disallowance designed to capture basis risk;

iv) Carry forward the net positions in each time-band (maturity/duration) for horizontal offsetting subject to the disallowances set out in table 11.

Table -11

Horizontal disallowances

	Time-band	Within the Zone	Between Adjacent zones	Between zones 1 and 3
Time Zone 1	0 - 1 month	**40%**		
	1 to 3 months			
	3 to 6 months			
	6 to 12 months			
Time Zone 2	1 to 2 years	**30%**	**40%**	**100%**
	2 to 3 years			
	3 to 4 years			
	4 to 5 years			
	5 to 7 years			
Time Zone 3	7 to 10 years	**30%**	**40%**	
	10 to 15 years			
	15 to 20 years			
	Over 20 years			

Then the capital charge will be a sum of following components:

a) Net weighted position	100% of Net short or long weighted position	…x 100%	---
b) Vertical disallowances	Sum of 10% of Matched weighted positions in each time bands	...x 10%	------
c) Horizontal disallowances (Using table no. 11)	Matched weighted position within Time Zone 1	…..x 40%	-----
	Matched weighted position within Time Zone 2	…..x 30%	------
	Matched weighted position within Time Zone 3	….x 30%	------
	Matched weighted position between Time zone 1 & 2	…..x 40%	-------
	Matched weighted position between Time zone 2 & 3	…..x 40%	-------
	Matched weighted position between Time zone 1 & 3	... x 100%	-------
Total Capital Charge (a+ b + c) :			-------

Repo / Reverse-Repo Transaction:

'Repo' is a repurchase agreement of a security with the issuer/other than issuer with a commitment of buying back at a specified price and date. For this period fund flow from issuer/other than issuer is treated as sale value of securities and related to 0% risk.

Instrument is placed under **'Repo'** and during the repo period the bank lose the ownership of the holding So, securities of HTM/HFT placed under **'Repo'** is not subject to move towards Banking book/Trading book. On the other hand, securities holding under '**Reverse-Repo'** will be treated as HFT category investment and would attract market risk and will be segregated into trading book.

(a) Forward Rate Agreements (FRAs):

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 maturity or duration ladder but should take account of any conversion factor defined by the exchange. In the case of a future on a corporate bond index, positions will be included at the market value of the notional underlying portfolio of securities.

(b) Swaps:

Swaps will be treated as two notional positions in government securities with the relevant maturities. For example, an interest rate swap under which a bank is receiving floating rate and paying fixed rate will be treated as a long position in floating rate instrument of maturity 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. Both legs of swap are to be reported at their market values (or face value of the notional underlying position where market value is not available). The separate legs of cross-currency swaps are to be reported in the relevant maturity ladders for the currencies concerned.

Calculation of capital charge for derivatives

a) 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. 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 mentioned earlier.

b) 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 earlier under allowable offsetting of matched positions. The various categories of instruments should be slotted into the maturity ladder and treated according to the rules identified earlier.

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	
OTC forward				
	Government debt security	No	Yes, as two positions	
	Corporate debt security	Yes	Yes, as two positions	
FRAs, Swaps		No		
Forward foreign exchange		NO	Yes, as one position in each currency	

C. Example of Calculating Capital Charge:

(where no Interest Rate Derivative/ Hedging exist)

The securities shall be subject to specific and general market risk capital charges against different time-bands. In order to calculate the capital charge, the amounts reported should be the market value of the principal amount or the notional amount of the underlying securities.

Example: Suppose a bank has the following interest-sensitive instruments:

Issuer	Maturity	Market Value
Govt.	2 months	200
Govt.	12 years	600
Qualifying	2 months	100
Qualifying	4 years	100
Qualifying	6 years	300
Other (unrated)	3 months	100
Other (unrated)	5 months	100

Total amount:	1500

A. Calculation of Capital Charge for Specific risk

Counter Party	**Maturity**	**Amount (Market Value)** (Tk in cr.)	**Specific Risk Weight** (%) (from Table 8)	**Capital Charge** (Tk in cr.)
Govt.	2 months	200	0	0
Govt.	12 years	600	0	0
Qualifying	2 months	100	0.25	0.25
Qualifying	4 years	100	1.60	1.60
Qualifying	6 years	300	1.60	4.80
Other (unrated)	3 months	100	8	8.00
Other (unrated)	5 months	100	8	8.00
Total amount:		1500		**22.65**

B. Calculation of Capital Charge for General Market risk

Counter Party	**Maturity**	**Amount (Market Value)** (Tk in cr.)	**Weight for General Market risk** (%) (from Table 9)	**Capital Charge** (Tk in cr.)
Govt.	2 months	200	0.20	0.40
Govt.	12 years	600	4.50	27.00
Qualifying	2 months	100	0.20	0.20
Qualifying	4 years	100	2.25	2.25
Qualifying	6 years	300	3.25	9.75
Other (unrated)	3 months	100	0.20	0.20
Other (unrated)	5 months	100	0.40	0.40
Total amount:		1500		**40.20**

Total Capital Charge for Market risk

Particulars	**(Tk in cr.)**
A. Capital Charge for Specific risk	22.65
B. Capital Charge for General Market risk	40.20
Total Capital Charge for Market Risk (A+B) :	62.75

D. Example of calculation of Position and Capital Charge:

(where some Interest Rate Derivatives/ Hedges exists)

The measurement system shall include all instruments and derivatives including off-balance sheet items in the Trading Book, which are interest rate sensitive. These include

forward rate agreement (FRA), interest rate and cross currency swaps and forward foreign exchange contracts etc.

In order to calculate the capital charge, the amounts reported should be the market value of the principal amount or the notional amount of the underlying securities. Then following disallowances for capital charge would be made along with net weighted position:

Vertical Disallowance: Vertical Disallowance will reflect basis risk and gap risk in each time band on the smaller of the offsetting positions - long or short. 10% of that smaller offsetting position shall be maintained as Capital Charge. For example, the sum of the weighted long positions in a time-band is BDT 70 crore and the sum of the weighted short positions is BDT 60 crore, the offsetting position is BDT 60 crore. Thus, the "vertical disallowance" for that time-band would be 10% of offsetting amount, i.e. 10% of BDT 60 crore = BDT 6.0 crore. Vertical disallowance would be measured on absolute amount of offsetting position.

Horizontal Disallowances: The net long or short positions in each time-band [BDT (70-60) = BDT 10 crore appears net long in the example above] shall be calculated. In order to calculate capital charge for horizontal disallowances banks will consider two rounds of "horizontal offsetting", first between the net positions within each of three time zones, and secondly, between the net positions in the three different time zones. The offsetting will be subject to a scale of disallowances as set out in Table 11. The disallowances will be considered as the factors of the capital charge.

Example (Capital Charge for Interest Related Instruments):

Suppose a Trading Book includes following Interest Related Instruments:

Issuer	Maturity	Market Value
Govt.	2 months	200
Govt.	12 years	600
Qualifying	2 months	100
Qualifying	4 years	100
Qualifying	6 years	300
Other (unrated)	3 months	100
Other (unrated)	5 months	100
Total:		1500

Moreover, along with securities above, the book includes the following Interest Rate Derivatives /Hedges:

1) An interest swap (Tk. 150 crore), where the banking company receives floating and pays fixed. The next interest repricing will occur in 6 months and the residual life of the swap is 8 years.

2) An interest swap (Tk. 100 crore), where the banking company receives floating and pays fixed. The next repricing will occur in 4 months and the residual life of the swap is 2.5 years.

3) An interest rate future (Taka 50 crore), delivery date in 5 months, where the life of the underlying government security is 7.5 years.

Calculation: Steps for calculating capital charge for the instruments including interest rate derivatives /hedges are following:

Step - A. Capital Charge for Specific Risk

Counter Party	Maturity	Amount (Market Value) (Tk in cr.)	Specific Risk Weight (%)	Capital Charge (Tk in cr.)
Govt.	2 months	200	0	0
Govt.	12 years	600	0	0
Qualifying	2 months	100	0.25	0.25
Qualifying	4 years	100	1.60	1.60
Qualifying	6 years	300	1.60	4.80
Other (unrated)	3 months	100	8	8.00
Other (unrated)	5 months	100	8	8.00
		1500		**22.65**

Step - B. Capital Charge for General Market Risk

(Tk in cr.)

Time Bands	Position	Risk Weights	Weighted Position	Net Weighted Position	Vertical Disallowances (10%)	Horizontal Disallowances (Within Zone)	Horizontal Disallowances (Across the Zones 1&2, 2&3)	Horizontal Disallowances (Across the Zones 1 & 3)
Time Zone -1								
0 - 1 month		0.00%				(0.20*40%) = 0.08	(1.95*40%) = 0.78	(5.825*100) = 5. 825
1 to 3 months	Govt. +200 Bank +100 Other +100	0.20%	+ 0.40 + 0.20 + 0.20	+ 0.80	-			
3 to 6 months	Other +100 Swap +150 Swap +100 Future -50	0.40%	+ 0.40 + 0.60 + 0.40 - 0.20	+ 1.20	0.02			
6 to 12 months		0.70%			-			
Time Zone -2								
1 to 2 years		1.25%			-	(1.75*30%) = 0.525		
2 to 3 years	Swap - 100	1.75%	- 1.75	- 1.75	-			
3 to 4 years	Bank +100	2.25%	+ 2.25	+ 2.25	-			
4 to 5 years		2.75%					(7.375*40%) = 2.95	
5 to 7 years	Bank +300	3.25%	+ 9.75	+ 9.75	-			
Time Zone -3								
7 to 10 years	Future + 50 Swap - 150	3.75%	+ 1.875 - 5.625	- 3.75	0.19	(5.625*30%) = 1.69		
10 to 15 years	Govt.+ 600	4.50%	+ 27.00	+ 27.00	-			
15 to 20 years		5.25%						
Over 20 years		6.00%						
Total:				35.50	0.21	2.295	3.73	5.825
Total capital charge for General Market Risk = (35.50 + 0.21 + 2.295 + 3.73+ 5.825) = 47.56								

Total Capital Charge for Market risk

Particulars	(Tk in cr.)
Step-A. Capital Charge for Specific risk	**22.65**
Step - B. Capital Charge for General Market risk	**47.56**
Total Capital Charge for Market Risk (A+B) :	**70.21**

II) Capital Charges for Equity Position Risk

(a) As with debt securities, the minimum capital standard for equities is expressed in terms of two separately calculated charges the "specific risk" and the "general market risk" for the holdings.

(b) The capital charge, for both specific risk and the general market risk charge will be 10%.

III) Capital Charges for Foreign Exchange Risk

a) The capital charge for foreign exchange risk will be 10% of bank's overall foreign exchange exposure. The bank's net open position in each currency should be calculated by summing:

i) the net spot position (i.e. all asset items less all liability items, including accrued interest, denominated in the currency in question);

ii) 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);

iii) guarantees (and similar instruments) that are certain to be called and are likely to be irrecoverable;

iv) net future income/expenses not yet accrued but already fully hedged (at the discretion of the reporting bank);

v) any other item representing a profit or loss in foreign currencies;

b) The overall foreign exchange exposure is measured by aggregating the sum of the net short positions or the sum of the net long positions; whichever is the greater, regardless of sign. The capital charge will be 10% of the overall net open position. A worked out example on capital charge against foreign exchange risk is shown below:

Example:

Suppose a bank has the following foreign exchange positions in Yen, Euro, GBP, Australian dollar, US dollar etc. extracted from exchange position register of the bank. Long/ Short position have been computed and converted in USD equivalent as well as BDT equivalent. Then, overall foreign exchange exposure/net open position and required capital charge for the foreign exchange exposure has been calculated below:

Currencies	Long/Short position in USD equivalent (mn)	BDT Equivalent (mn)
US dollar USD	- 18	- 1242
Japanese yen JPY	+ 5	+ 345
Swiss franc CHF	-	-
Pound Sterling GBP	+ 15	+ 1035
Euro EUR	+ 10	+ 690
Canadian Dollar CAD	-	-
Australian Dollar AUD	- 2	- 138
Singapore dollar SGD	- 3.5	- 241.5
Other Currencies	-	-
Sum of the net long position	+ 30	+ 2070
Sum of the net short position	- 23.5	- 1621.5
Overall Foreign Exchange exposure/net open position*	30	+ 2070
Risk weight	10%	10%
Capital charge for FX Exposure	3	207

- The **overall net** open position shall be ***greater one*** of the absolute value of net long or short position.

The example assumes a current spot market exchange rate of Taka 69 per US$ 1.

7. Capital Charge against Operational Risk

1) Definitions and clarifications

a) 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.

b) Gross income: Gross Income (GI) is defined as "Net Interest Income" plus "Net non-Interest Income". It is intended that this measure should -

(i) be gross of any provisions

(ii) be gross of operating expenses, including fees paid to outsourcing service providers

(iii) exclude realized profits/losses from the sale of securities held to maturity in the banking book.

(iv) exclude extraordinary or irregular items as well as categorize

(v) exclude income derived from insurance.

Gross income = Net profit (+) Provisions & contingencies (+) operating expenses (–) items (iii) to (v) above.

2) Measurement Methodology

Banks operating in Bangladesh shall compute the capital requirements for operational risk under the Basic Indicator Approach (BIA) [a]. Under BIA, the capital charge for operational risk is a fixed percentage, denoted by **α** (alpha) of average positive annual gross income of the bank over the past three years. 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 [b]. The capital charge may be expressed as follows:

$$\mathbf{K = [(GI_1 + GI_2 + GI_3) \times \alpha]/n}$$

Where:-

K = the capital charge under the Basic Indicator Approach
GI = only positive annual gross income over the previous three years (i.e. negative or zero gross income if any shall be excluded [b])
α = 15%
n = number of the previous three years for which gross income is positive.

[a] As envisaged in the roadmap issued by BB vide BRPD circular no. 14/2007

[b] If all of the three years gross income become negative, BB will consider appropriate action under Supervisory Review Process

An Example

XYZ Bank Limited
Profit and Loss Account
For the year ended 31 December

(Figure in Crore Taka)

Item	Dec 31, 2007	Dec 31, 2006	Dec 31, 2005
i. Interest Income	368.00	303.00	295.00
ii. Interest paid on Deposits and Borrowings etc	336.00	283.00	245.00
iii. Net Interest Income (i-ii)	**32.00**	**20.00**	**50.00**
Non Interest Income:			
Net Income from investment **	50.00	15.00	35.00
Net Commission, Exchange earnings and Brokerage	80.00	10.00	55.00
Other net operating Income	32.00	12.00	30.00
iv Total Non Interest Income:	**162.00**	**37.00**	**120.00**
Total Operating Income (a) = (iii+iv)	**194.00**	**57.00**	**170.00**
Total Operating Expenses			
Salaries and Allowance	30.00	20.00	19.00
Rent, Taxes, Insurance, Lighting etc.	5.00	4.00	4.00
Legal expenses	0.05	0.04	0.05
Postage, stamps, Telecommunication etc.	1.00	1.00	1.00
Stationary, Printing, Advertisement etc.	2.34	2.23	1.15
Managing Directors Salary and Fees	0.50	0.50	0.50
Director's Fees and Meeting Expenses	0.30	0.25	0.20
Depreciation and Repair of Bank's Assets	1.89	1.59	0.96
Other Expenses	11.32	28.97	8.51
Total Operating Expenses (b)	**52.40**	**58.58**	**35.37**
Profit/Loss before Provision (c) = (a-b)	**141.60**	**(1.58)**	**134.63**
Provision for Loan	20.00	0	30.00
Provision for diminution in value of Investments	5.00	0	8.00
Other provision	4.00	0	7.00
Total Provision (d)	**29.00**	**0.00**	**45.00**
Total Profit/Loss before taxes	**112.60**	**(1.58)**	**89.63**
**** Note -1**			
Net Income from Investment (net of charges & taxes, etc. if any)	**50.00**	**15.00**	**35.00**
Interest/Profit on Bills and Bonds	37.00	11.00	23.00
Interest /Profit on Bills & Bonds- HTM	20.00	5.00	15.00
Interest /Profit on Bills & Bonds- HFT	17.00	6.00	8.00
Interest on Debenture	10.00	3.00	7.00
Dividend Received on Share	3.00	1.00	5.00

Calculation of Gross Income (GI) from the above example:

(Figure in Crore Taka)

Item	Dec 31, 2007	Dec 31, 2006	Dec 31, 2005
Net Interest Income	32.00	20.00	50.00
Total Net Non Interest Income:	162.00	37.00	120.00
Total Operating Income	**194.00**	**57.00**	**170.00**
Less: Realized profits/losses from sale of securities (HTM) from banking book	20.00	5.00	15.00
Less: Extra ordinary/irregular items	0	0	0
Less: Income derived from insurance	0	0	0
Gross Income (GI)	**174.00**	**52.00**	**155.00**

Alternative Calculation:

(Figure in Crore Taka)

Item	Dec 31, 2007	Dec 31, 2006	Dec 31, 2005
Total Profit/Loss before taxes	112.60	(1.58)	89.63
Add: Total Provision	29.00	0.00	45.00
Add: Total Operating Expenses	52.40	58.58	35.37
Less: Realized profits/losses from sale of securities (HTM)	20.00	5.00	15.00
Less: Extra ordinary/irregular items	0	0	0
Less: Income derived from insurance	0	0	0
Gross Income (GI)	**174.00**	**52.00**	**155.00**

Capital charge for Operational Risk:

$$\mathbf{K = [(GI_1 + GI_2 + GI_3) \times \alpha]/n}$$

$$= [(\mathbf{174.00} + \mathbf{52.00} + \mathbf{155.00}) \times 15\%]/3$$

$$= [(381.00) \times 15\%]/3$$

$$= 57.15/3$$

$$= \mathbf{19.05\ Crore}$$

3) Banks may follow the Standardized Approach (TSA) or the Alternative Standardized Approach (ASA) for calculating capital charge against operational risk subject to prior approval of BB. Measurement methodology of computing capital charge against operation risk under TSA and ASA along with qualifying criteria are provided in Appendix-5

8. Supervisory Review Process of the Banks

The key principle of the supervisory review process of the banks is that **"the banks have a process for assessing overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital at an adequate level".** For this banks should have an exclusive body and a process document for assessing their overall risk profile and a strategy for maintaining adequate capital. Adequate capital means enough capital to compensate all the risks in their business, and to develop and practice better risk management techniques in monitoring and managing their risks.

a) Importance of supervisory review:

i) The supervisory review process is planned not only to ensure adequate capital to compensate all the risks in their business, but also to be confident that the banks have better risk management techniques in monitoring and managing their risks.

ii) It sets bank management's responsibility of developing an internal capital assessment process and setting capital targets that are commensurate with the bank's risk profile and control environment. It also encourages bank management to continue and to bear responsibility for ensuring that the bank has adequate capital to support its risks beyond the minimum regulatory requirements.

iii) Maintaining adequate capital should not be regarded as a substitute for addressing fundamentally inadequate control or risk management processes. The process will establish relationship between the planning of adequate capital against all risks and the strength and effectiveness of the bank's risk management and internal control processes.

iv) The process will consider three main areas of risks i.e., a) Risks covered under minimum regulatory capital, b) Other risks which are not captured by minimum regulatory capital, (e.g., credit concentration risk , interest rate risk in the Banking Book, business and strategic risk); and c) Risk factors external to the bank (e.g., business cycle effects).

v) A further important aspect of banks own supervisory review process is that review body will be responsible to move gradually towards more advanced approaches of

calculating risk weighted asset against credit risk, capital charge against market risk and operational risk.

b) Main features of a rigorous review process:

Banks must be able to demonstrate that chosen internal capital targets are well founded and that these targets are consistent with their overall risk profile and current operating environment. In assessing capital adequacy, bank management needs to be mindful of the particular stage of the business cycle in which the bank is operating. Rigorous, forward-looking stress testing that identifies possible events or changes in market conditions that could adversely impact the bank should be performed. Bank management will clearly bear primary responsibility for ensuring that the bank has adequate capital to support its risks. The five main features of a rigorous process are as follows:

1. Board and senior management oversight;
2. Sound capital assessment;
3. Comprehensive assessment of risks;
4. Monitoring and reporting; and
5. Internal control review.

1) Board and senior management oversight

Board and senior management will establish a responsible unit* that will exclusively be assigned the task of reviewing the nature and level of risk relating to banking assets and planning for adequate capital framework. For this the unit may develop their own review process document. A sound risk management process is the foundation of an effective assessment of the adequacy of a bank's capital position. Board and senior management will be responsible for the following factors:

a) *Assessing the nature and level of risk:* Understanding the nature and level of risk being taken by the bank and how this risk relates to adequate capital levels. It is also responsible for ensuring that the formality and sophistication of the risk management processes are appropriate in light of the risk profile and business plan.

* As per BRPD circular no.14/2007 banks have been suggested to form Basel II implementation unit at each bank level in order to establish strategic planning for capital adequacy and own supervisory review as required by pillar-2 of the capital framework.

b) *Setting the strategic planning process:.* The strategic plan should clearly outline the bank's capital needs, anticipated capital expenditures, desirable capital level, and external capital sources. Senior management and the board should view capital planning as a crucial element in being able to achieve its desired strategic objectives.

c) *Setting the bank's tolerance level of risks:* It should also ensure that management establishes a framework for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies. It is likewise important that the board of directors adopt and support strong internal controls and written policies and procedures and ensure that management effectively communicates these throughout the organization.

2) Sound capital assessment

The fundamental elements of sound capital assessment include:

a) Policies and procedures designed to ensure that the bank identifies, measures, and reports all material risks;
b) A process that relates to adequate minimum capital to the level of risk;
c) A process that states capital adequacy goals with respect to risk, taking account of the bank's strategic focus and business plan; and
d) A process of internal controls, reviews and audit to ensure the integrity of the overall management process.

3) Comprehensive assessment of risks

All material risks faced by the bank should be addressed in the capital assessment process. It is recognized that all risks can not be measured precisely but a process should be developed to estimate risks. Therefore, the following risk exposures, which by no means constitute a comprehensive list of all risks, should be taken into consideration:

Credit risk: Banks should have methodologies that enable them to assess adequate capital for the credit risk exposures to individual borrowers or counterparties as well as at the whole portfolio level. For more sophisticated banks, the credit review assessment of capital adequacy, at a minimum, should cover four areas: risk rating systems, portfolio

analysis/ aggregation, securitization/complex credit derivatives, and large exposures and risk concentrations.

a) Internal risk ratings are an important tool in monitoring credit risk. Internal risk ratings should be adequate to support the identification and measurement of risk from all credit exposures, and should be integrated into an institution's overall analysis of credit risk and capital adequacy. The ratings system should provide detailed ratings for all assets, not only for classified or problem assets. Loan loss reserves should be included in the credit risk assessment for capital adequacy. Thus capital adequacy will comprise of:

i) Specific provisions maintained against past due claims,

ii) Minimum regulatory capital maintained against past due claims (net of specific provision) and

iii) Some extra fund may require to be maintained which will make the cushion adequate/equivalent up to the risk profile level.

b) The analysis of credit risk should adequately identify any weaknesses at the portfolio level, including any concentrations of risk. It should also adequately take into consideration the risks involved in managing credit concentrations and other portfolio issues through such mechanisms as securitization programmes and complex credit derivatives.

Market risk: Banks should have methodologies that enable them to assess and actively manage all material market risks, wherever they arise, at position, desk, business line and firm-wide level. For moving towards advance approaches for assessment of internal capital adequacy for market risk, at a minimum, banks will be prepared for both VaR modeling and stress testing, including an assessment of concentration risk and the assessment of illiquidity under stressful market scenarios.

(i) VaR is an important tool in monitoring aggregate market risk exposures and provides a common metric for comparing the risk being run by different desks and business lines. A bank's VaR model should be adequate to identify and measure risks arising from all its trading activities and should be integrated into the bank's overall internal capital

assessment as well as subject to rigorous on-going validation. A VaR model estimates should be sensitive to changes in the Trading Book risk profile.

(ii). Banks must supplement their VaR model with stress tests (factor shocks or integrated scenarios whether historic or hypothetical) and other appropriate risk management techniques. In the bank's internal capital assessment, it must demonstrate that it has enough capital to not only meet the minimum capital requirements but also to withstand a range of severe but plausible market shocks. In particular, it must factor in, where appropriate:

a) Illiquidity/gapping of prices;
b) Concentrated positions (in relation to market turnover);
c) . One-way markets;
d) Non-linear products/deep out-of-the money positions;
e) Events and jumps-to-defaults;
f) Significant shifts in correlations;
g) Other risks that may not be captured appropriately in VaR (e.g. recovery rate uncertainty, implied correlations, or skew risk).

The stress tests applied by a bank and, in particular, the calibration of those tests (e.g. the parameters of the shocks or types of events considered) should be reconciled back to a clear statement setting out the premise upon which the bank's internal capital assessment is based (e.g. ensuring there is adequate capital to manage the traded portfolios within stated limits through what may be a prolonged period of market stress and illiquidity, or that there is adequate capital to ensure that, over a given time horizon to a specified confidence level, all positions can be liquidated or the risk hedged in an orderly fashion). The market shocks applied in the tests must reflect the nature of portfolios and the time it could take to hedge out or manage risks under severe market conditions.

(iii) Concentration risk should be pro-actively managed and assessed by firms and concentrated positions should be routinely reported to senior management.

(iv) Banks should design their risk management systems, including the VaR methodology and stress tests, to properly measure the material risks in instruments they trade as well as

the trading strategies they pursue. As their instruments and trading strategies change, the VaR methodologies and stress tests should also evolve to accommodate the changes.

(v) Banks must demonstrate how they combine their risk measurement approaches to arrive at the overall internal capital for market risk.

Operational risk: Similar rigor should be applied to the management of operational risk, as is done for the management of other significant banking risks. The failure to properly manage operational risk can result in a misstatement of an institution's risk/return profile and expose the institution to significant losses.

A bank should develop a framework for managing operational risk and evaluate the adequacy of capital given this framework. The framework should cover the bank's appetite and tolerance for operational risk, as specified through the policies for managing this risk, including the extent and manner in which operational risk is transferred outside the bank. It should also include policies outlining the bank's approach to identifying, assessing, monitoring and controlling/mitigating the risk.

Interest rate risk in the Banking Book: The measurement process should include all material interest rate positions of the bank and consider all relevant repricing and maturity data. Such information will generally include current balance and contractual rate of interest associated with the instruments and portfolios, principal payments, interest reset dates, maturities, the rate index used for repricing, and contractual interest rate ceilings or floors for adjustable-rate items. The system should also have well-documented assumptions and techniques.

Regardless of the type and level of complexity of the measurement system used, bank management should ensure the adequacy and completeness of the system. Because the quality and reliability of the measurement system is largely dependent on the quality of the data and various assumptions used in the model, management should give particular attention to these items.

Liquidity risk: Liquidity is crucial to the ongoing viability of any banking organization. Banks' capital positions can have an effect on their ability to obtain liquidity, especially in a crisis. Each bank must have adequate systems for measuring, monitoring and controlling liquidity risk. Banks should evaluate the adequacy of capital given their own liquidity profile and the liquidity of the markets in which they operate.

Other risks: Although the Committee recognizes that 'other' risks, such as reputation and strategic risk, are not easily measurable, it expects industry to further develop techniques for managing all aspects of these risks.

4) Monitoring and reporting

The bank should establish an adequate system for monitoring and reporting risk exposures and assessing how the bank's changing risk profile affects the need for capital. The bank's senior management or board of directors should, on a regular basis, receive reports from the responsible unit regarding the bank's branch wise risk profile and capital needs. These reports should allow senior management to:

a) Evaluate the level and trend of material risks and their effect on capital levels;
b) Evaluate the sensitivity and reasonableness of key assumptions used in the capital assessment measurement system;
c) Determine that the bank holds sufficient capital against the various risks and is in compliance with established capital adequacy goals; and
d) Assess its future capital requirements based on the bank's reported risk profile and make necessary adjustments to the bank's strategic plan accordingly.

5) Internal control review

The bank's internal control structure is essential to the capital assessment process. Effective control of the capital assessment process includes an independent review and, where appropriate, the involvement of internal or external audits. The bank's board of directors has a responsibility to ensure that management establishes a system for assessing the various risks, develops a system to relate risk to the bank's capital level, and establishes a method for monitoring compliance with internal policies. The board

should regularly verify whether its system of internal controls is adequate to ensure well-ordered and prudent conduct of business.

The bank should conduct periodic reviews of its risk management process to ensure its integrity, accuracy, and reasonableness. Areas that should be reviewed include:

a) Appropriateness of the bank's capital assessment process given the nature, scope and complexity of its activities;
b) Identification of large exposures and risk concentrations;
c) Accuracy and completeness of data inputs into the bank's assessment process;
d) Reasonableness and validity of scenarios used in the assessment process; and
e) Stress testing and analysis of assumptions and inputs.

9. Market Discipline

1) Scope and purpose

a) The purpose of Market Discipline in the Revised Capital Adequacy Framework is to complement the minimum capital requirements and the supervisory review process. The aim of introducing Market Discipline in the revised framework is to establish more transparent and more disciplined financial market so that stakeholders can assess the position of a bank regarding holding of assets and to identify the risks relating to the assets and capital adequacy to meet probable loss of assets. For the said purpose, banks will develop a set of disclosure containing the key pieces of information on the assets, risk exposures, risk assessment processes, and hence the capital adequacy to meet the risks.

b) Banks should have a formal disclosure framework approved by the Board of Directors/CEO. The process of their disclosures will include validation and frequency.

2) Relations with accounting disclosures

a) It is expected that the disclosure framework does not conflict with requirements under accounting standards as set by Bangladesh Bank from time to time. Moreover, banks' disclosures should be consistent with how senior management and the Board of Directors assess and manage the risks of the bank.

b) Under Minimum Capital Requirement, banks will 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 stakeholders about a bank's exposure to those risks and provides a consistent and comprehensive disclosure framework of risks and its management that enhances comparability

c) The disclosures should be subject to adequate validation. Since information in the annual financial statements would generally be audited, the additional publication of such statements must be consistent with the audited statements.

3) Materiality of Disclosure

A bank should decide which disclosures are relevant for it based on the materiality concept. Information would be considered as material and 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 decision.

4) Frequency of disclosures

a) Banks should provide all required disclosures in both qualitative and quantitative terms, within three months at the end of each financial year along with the annual financial statements. Banks may make their annual disclosures both in their annual reports as well as on their respective web sites. Qualitative disclosures will provide a general summary of a bank's risk management objectives and policies, reporting system and definitions.

b) The disclosure on the websites should be made in a web page titled "Disclosures on Risk Based Capital (Basel II)" 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 4th subsequent annual (as on March 31) disclosure is made.

5) Effective date of disclosures

The first of the disclosures as per these guidelines shall be made as on the effective date viz. March 31, 2010. Banks are, however, encouraged to make the disclosures at an earlier date.

6) Disclosure framework

The following components set out in tabular form are the disclosure requirements:

1. Assets
2. Credit Risk on Banking Book
3. Market risk in Trading Book
4. Operational Risk
5. Specific Provisions
6. Regulatory Capital
7. Capital Adequacy

a) Assets

Qualitative Disclosure

- Views of BOD on assets lying with bank
- Comments on nature of assets i) Earning Assets (Trading book asset, Banking book asset, etc) and ii) Non-earning assets (Cash, Cash reserve with BB, etc.)
- Definition of Default and Classified Assets
- Addition/Reduction on Classified Assets
- Policies and processes for protecting assets against Core Risks inherent with banking activities.

Quantitative Disclosure

A. Banking Book Assets

1. Cash in hand & Balance with BB (excluding FC)
2. Money at call
3. Investment (HTM)

a. Government
b. Qualifying (banks, etc)
c. Others

4. Loans & advances
    a. Classified (SMA. SS, DF & BL to be shown separately)
    b. Unclassified
5. Risk Weighted Assets
    a. Below 100% RW
    b. 100% RW
    c. Above 100% RW
6. Rated Status
    a. Rated Assets
    b. Unrated Assets
7. Other assets (Including Fixed Assets)

A. Total Banking Book Assets (1+2+3+4+7)

B. Trading Book Assets

1. FC held in hand
2. FC held in BB & Nostro account
3. Investment(trading)
    a. Govt.(part of govt. HTM if held above the required SLR amount)
    b. HFT
    c. AFS (if any)

B. Total Trading Book Assets (1+2+3)

Total Assets (A+B

b) Credit Risk on Banking Book

Qualitative Disclosure

Views of BOD on Credit Risk

Methods used to measure credit risk

Credit Risk Management system

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 credit worthiness; and
- information about market or credit risk concentrations with the mitigation measure taken

Quantitative Disclosure

A) Total Exposures of Credit Risk

1. Funded
    a) Domestic
    b) Overseas
2. Non-Funded
    a) Domestic
    b) Overseas

3. Distribution of risk exposure by claims

- A. Claims on sovereigns and central banks
- B. Claims on other official entities
- C. Claims on banks and securities firms
- D. Claims on corporate (Medium Enterprise loans to be shown separately)
- E. Claims included in the retail portfolio & small enterprises (consumer loan to be shown separately)
- F. Claims secured by residential property
- G. Claims secured by commercial real estate
- H. Other Categories:
    - Past due loans/NPL
    - Off-balance sheet items

4. Credit Risk Mitigation

- Claims secured by financial collateral
- Net exposure after the application of haircuts.
- Claims secured by eligible Guarantee

c) Market risk on Trading Book

Qualitative Disclosure Views of BOD on trading/investment activities Methods used to measure Market risk Market Risk Management system Policies and processes for mitigating market risk
Quantitative Disclosure The capital requirements for: • interest rate risk; • equity position risk; • foreign exchange risk; and • Commodity risk

d) Operational risk

Qualitative Disclosure Views of BOD on system to reduce Operational Risk Performance gap of executives and staffs Potential external events Policies and processes for mitigating operational risk Approach for calculating capital charge for operational risk
Quantitative Disclosure The capital requirements for: • Operational Risk

e) Maintenance of Specific Provision

Qualitative Disclosure Views of BOD on system of maintaining specific provision Policies and processes for maintaining specific provision Approach for calculating capital charge for operational risk
Quantitative Disclosure A) Gross Non Performing Assets (NPAs) Non Performing Assets (NPAs) to Outstanding Loans and advances B) Movement of Non Performing Assets (NPAs) 1. Opening balance 2. Additions 3. Reductions 4. Closing balance

C) Movement of specific provisions for NPAs

1. Opening balance
2. Provisions made during the period
3. Write-off
4. Write-back of excess provisions
5. Closing balance

f) Maintenance of Regulatory Capital

Qualitative Disclosure

Capital Structure : 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 1 or in Upper Tier 2.

Quantitative Disclosure

A) Amount of Tier-1 Capital

- Component wise disclosure

B) Amount deducted from Tier-1 Capital

- Good will
- Shortfall
- Others

C) Total amount of Tier 2 capital (net of deductions from Tier 2 capital).
D) Total eligible capital.

g) Capital Adequacy

Qualitative Disclosure

A summary discussion of the bank's approach to assessing the regulatory capital and specific provision

Quantitative Disclosure

A) Amount of Regulatory Capital to meet unforeseen loss

- Amount to meet Credit Risk
- Amount to meet Market Risk
- Amount to meet Operational Risk.

B) Some additional capital over MCR maintained by the banks

Reporting Formats

Reporting Formats.....i

Name of the Bank----------

Minimum Capital Requirement (MCR)
Under Risk Based Capital (Basel II)

As on ----------

Particulars	Tk. In Crore
A. Eligible Capital :	
1. Tier-1 (Core Capital)	
2 .Tier-2 (Supplementary Capital)	
3. Tier-3 (eligible for market risk only)	
4. Total Eligible Capital (1+2+3) :	
B. Total Risk Weighted Assets (RWA):	
C. Capital Adequacy Ratio (CAR) (A_4 / B)*100	
D. Core Capital to RWA (A_1 / B)*100	
E. Supplementary Capital to RWA (A_2 / B)*100	
F. Minimum Capital Requirement (MCR)	10% of RWA = …. ……× 10% = ……. Cr. Tk

Date ---------- Signature ----------

Name of the Bank ----------

Eligible Capital

As on ----------

1. Tier-1 (Core Capital)		Tk. In Crore
1.1	Fully Paid-up Capital/Capital Deposited with BB	
1.2	Statutory Reserve	
1.3	Non-repayable Share premium account	
1.4	General Reserve	
1.5	Retained Earnings	
1.6	Minority interest in Subsidiaries	
1.7	Non-Cumulative irredeemable Preferences shares	
1.8	Dividend Equalization Account	
1.9	Sub-Total: (1.1 to 1.8)	
Deductions from Tier-1 (Core Capital)		
1.10	Book value of Goodwill	
1.11	Shortfall in provisions required against classified assets irrespective of any relaxation allowed	
1.12	Deficit on account of revaluation of investment in AFS category	
1.13	Any increase in equity capital resulting from a securitization transaction	
1.14	Any investment in TFCs of other banks exceeding the prescribed limit	
1.15	Other if any	
1.16	Sub Total (1.10-1.16)	
1.17	Total Eligible Tier-1 Capital (1.9-1.16)	

2 .Tier-2 (Supplementary Capital)		Tk. In Crore
2.1	General Provision (Unclassified loans + off Balance Sheet exposure) Limited to 1.25% of RWA	
2.2	Assets Revaluation Reserves up to 45%	
2.3	All other preference shares	
2.4	Perpetual Subordinated debt up to max. 50% of row 1.17	
2.5	Balance of Exchange Equalization A/C	
2.6	Sub-Total (2.1 to 2.5)	
2.7	Deductions if any	
2.8	Total Eligible Tier-2 Capital (2.6-2.7)	

3. Tier-3 (eligible for market risk only)		
3.1	Short-term subordinated debt	
4. Total Supplementary Capital (2.8+3.1) (Maximum up to 100% of Total eligible tier-1 Capital)		
5. Total Eligible Capital (1.17+4)		

Date ----------

Signature ----------

Name of the Bank----------

Risk Weighted Assets (RWA)

As on ----------

Risk Weighted Assets (RWA) for	Tk in Crore.
A. Credit Risk **On- Balance sheet (From WS-1) ……..** **Off-Balance sheet (From WS-2) ……**	**=…….**
B. Market Risk (From WS-3)	**…… × 10 = ……**
C. Operational Risk (From WS-4)	**…… × 10 = ……**
Total: RWA (A+B+C)	**……**

Date ----------

Signature ----------

Name of the Bank----------

Work Sheet-1: Risk Weighted Asset for Credit Risk
Balance Sheet Exposures

As on ----------

(Tk. In Crore)

Sl.	Exposure Type	BB's Rating Grade *	Risk Weight	Exposure	Risk Weighted Asset
1	*2*	*3*	*4*	*5*	*6 = (4×5)*
a)	Cash and Cash Equivalents		0		
b)	Claims on Bangladesh Government and Bangladesh Bank		0		
c)	Claims on other Sovereigns & Central Banks*				
d)	Claims on Bank for International Settlements, International Monetary Fund and European Central Bank		0		
e)	Claims on Multilateral Development Banks (MDBs):				
	i) IBRD , IFC, ADB, AfDB, EBRD, IADB, EIB, EIF, NIB, CDB, IDB, CEDB		0		
	ii) Other MDBs	1	0.20		
		2,3	0.50		
		4,5	1.00		
		6	1.50		
		Unrated	0.50		
f	Claims on Public Sector Entities (other than Government) in Bangladesh	1	0.20		
		2,3	0.50		
		4,5	1.00		
		6	1.50		
		Unrated	0.50		
g)	Claims on Banks:				
	i) Maturity over 3 months	1	0.20		
		2,3	0.50		
		4,5	1.00		
		6	1.50		
		Unrated	0.50		
	ii) Maturity less than 3 months		0.20		
h)	Claims on Corporate (excluding equity exposure)	1	0.20		
		2	0.50		
		3,4	1.00		
		5,6	1.50		
		Unrated	1.25		

Continued to next page

*For the purpose of risk weighting claims on other Sovereigns & Central Banks, Banks may use the rating & risk weight as recognized by their home supervisors(if any) or risk-scores published by the consensus risk scores of ECAs participating in the "Arrangement on Officially Supported Export Credits". These scores are available on the OECD's website (http://www.oecd.org).

Note: Unrated : Counterparty/Instruments not rated by any recognized ECAI.

Sl.	Exposure Type	Risk Weight	Exposure	Risk Weighted Asset
i)	Claims under Credit Risk Mitigation [From Work Sheet -1(a)]:			
Fixed Risk Weight Groups:				
j)	Claims categorized as retail portfolio & Small Enterprise (excluding consumer loan)	0.75		
k)	Consumer Loan	1.00		
l)	Claims fully secured by residential property	0.50		
m)	Claims fully secured by commercial real estate	1.00		
n)	Past Due Claims (Risk weights are to be assigned net of specific provision):			
	1.The claim (other than claims secured by eligible residential property) that is past due for more than 90 days and/or impaired will attract risk weight as follows:			
	- Where specific provisions are less than 20 per cent of the outstanding amount of the past due claim ;	1.50		
	- Where specific provisions are no less than 20 per cent of the outstanding amount of the past due claim.	1.00		
	- Where specific provisions are more than 50 per cent of the outstanding amount of the past due claim.	0.50		
	2. Claims fully secured against residential property that are past due for more than 90 days and/or impaired specific provision held there-against is less than 20% of outstanding amount	1.00		
	3. Loans and claims fully secured against residential property that are past due by 90 days and /or impaired and specific provision held there-against is more than 20% of outstanding amount	0.75		
o)	Investments in venture capital	1.50		
p)	Investments in premises, plant and equipment and all other fixed assets	1.00		
q)	Claims on all fixed assets under operating lease	1.00		
r)	All other assets	1.00		
Total:				

Name of the Bank----------

Work Sheet-1(a): Worksheet on
Credit Risk Mitigation (CRM)

As on ---------- (Tk. in Crore)

Sl.	Claims on ----	**Exposure**					**Collateral**						E* = Net Exposure = (EAH – CAH)
		Exposure Amount (E)	Maturity	Rating of Counter Party	Haircut of exposure (He)	Exposure after haircut (EAH)= E × (1 + He)	Nature of Collateral (C)	Maturity	Rating of issuer/ Issue	Haircut of collateral (Hc)	Haircut on currency mismatch (H_{fx})	Collateral after haircut (CAH)= C × (1 – Hc- Hfx)	
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
Total:													

Name of the Bank----------

Work Sheet-2: Risk Weighted Amount for Credit Risk
Off-Balance Sheet Exposures
As on ----------

(Tk. In Crore)

Sl.	Exposure Type	BB's Rating Grade *	Risk Weight	Exposure	Risk Weighted Asset
1	2	3	4	5	6 = (4×5)
a)	Claims on Bangladesh Government and Bangladesh Bank		0		
b)	Claims on other Sovereigns & Central Banks*				
c)	Claims on Bank for International Settlements, International Monetary Fund and European Central Bank		0		
d)	Claims on Multilateral Development Banks (MDBs):				
	i) IBRD , IFC, ADB, AfDB, EBRD, IADB, EIB, EIF, NIB, CDB, IDB, CEDB		0		
	ii) Other MDBs	1	0.20		
		2,3	0.50		
		4,5	1.00		
		6	1.50		
		Unrated	0.50		
e)	Claims on Public Sector Entities (other than Government) in Bangladesh	1	0.20		
		2,3	0.50		
		4,5	1.00		
		6	1.50		
		Unrated	0.50		
f)	Claims on Banks:				
	i) Maturity over 3 months	1	0.20		
		2,3	0.50		
		4,5	1.00		
		6	1.50		
		Unrated	0.50		
	ii) Maturity less than 3 months		0.20		
g)	Claims on Corporate (excluding equity exposure)	1	0.20		
		2	0.50		
		3,4	1.00		
		5,6	1.50		
		Unrated	1.25		

Continued to next page

*For the purpose of risk weighting claims on other Sovereigns & Central Banks, Banks may use the rating & risk weight as recognized by their home supervisors(if any) or risk-scores published by the consensus risk scores of ECAs participating in the "Arrangement on Officially Supported Export Credits". These scores are available on the OECD's website (http://www.oecd.org).

Note: Unrated : Counterparty/Instruments not rated by any recognized ECAI.

Sl.	Exposure Type	BB's Rating Grade *	Risk Weight	Exposure	Risk Weighted Asset
h)	Against retail portfolio & Small Enterprise (excluding consumer loan)		0.75		
i)	Consumer Loan		1.00		
j)	All other assets		1.00		
Total:					

Name of the Bank----------

Work Sheet-2(a): Credit Conversion Factors
Off-Balance Sheet Exposures

As on ----------

(Tk. In Crore)

Exposure Types:	**CCF**	**BB's Rating grade**	**Risk Weight**	**Notional Amount**	**Credit Exposure**
1	**2**	**3**	**4**	**5**	**6 = (5×CCF)**
a)Direct Credit Substitutes d) Lending of Securities or posting of securities as collateral c) Other commitments with certain drawdown	100%				
d) Performance related contingencies e) Commitments with original maturity of over one year	50%				
f) Trade related contingencies g) Commitments with original maturity of over one year	20%				
h) Other commitments that can be unconditionally cancelled by any time	0%				

Name of the bank----------

Work Sheet-3: Capital Charge for Market Risk
(Balance Sheet Exposures)

As on ----------

(Tk in Crore)

Details	Capital Charge for Specific Risk	Capital Charge for General Market Risk	Total Capital Charge for Market Risk
1	2	3	4 = (2+3)
A. Interest Rate Related instruments	-------- From Work Sheet -3(a)	-------- From Work Sheet - 3(b)	
B. Equities	-------- From Work Sheet -3(c)	-------- From Work Sheet - 3(c)	
C. Foreign Exchange Position		-------- From Work Sheet - 3(d)	
Total (A+B+C):			

Name of the bank----------

Work Sheet-3(a): Specific Risk on Interest Rate Related Instruments

As on ----------

(Tk in Crore)

Counter Party	Maturity	Amount (Market Value)	Weight	Capital Charge

Name of the bank----------

Work Sheet- 3(b): General Market Risk on Interest Rate Related Instruments

As on ----------

(Tk in Crore)

Counter Party	Maturity	Amount (Market Value)	Weight	Capital Charge

Name of the bank----------

Work Sheet- 3(c): Capital Charge on Equities

As on ----------

(Tk in Crore)

Capital charge for	Market Value	Weight	Required Capital Charge
1	2	3	4= (2×3)
a) Specific Risk :		**10%**	
b) General Market Risk:		**10%**	

Name of the bank----------

Work Sheet- 3(d): Capital Charge on Foreign Exchange Position (General Market Risk)

As on ----------

Currency		Exchange Rate	Net Long (+) /Short (-) position in USD equivalent (million)	Taka Equivalent (in Crore Tk).
US dollar	USD			
Japanese yen	JPY			
Swiss franc	CHF			
Pound Sterling	GBP			
Euro	EUR			
Canadian Dollar	CAD			
Australian Dollar	AUD			
Singapore dollar	SGD			
Other Currencies				
Sum of the net LONG position				
Sum of the net SHORT position				
Overall net position*				
Risk weight				
Capital charge for Foreign Exchange Exposure				

The **overall net** position shall be ***greater one*** of the absolute value of the sum of the net long or the sum of short position.
Current spot market exchange rate is Taka ------ per US$ 1.

Name of the bank----------

Work Sheet- 4: Capital Charge for Operational Risk
Basic Indicator Approach

As on ----------

(Tk in Crore)

Year	Gross Income (GI)	Average GI*	15% of Average GI
2007	---------		
2006	----------		
2005	----------		
Total GI			

* Only positive annual gross income over the previous three years (i.e., Negative or zero gross income if any shall be excluded)

Gross Income (GI) is defined as "Net Interest Income" plus "Net non-Interest Income". It is intended that this measure should -

(i) be gross of any provisions

(ii) be gross of operating expenses, including fees paid to outsourcing service providers

(iii) exclude realized profits/losses from the sale of securities held to maturity in the banking book.

(iv) exclude extraordinary or irregular items as well as categorize

(v) exclude income derived from insurance.

Appendix -1

Conditionality of subordinated debt instruments for inclusion in the supplementary capital.

To be eligible for inclusion in supplementary capital the conditionality of the subordinated debt instruments should be in conformity with the following:

a) Amount

The amount of subordinated debt to be raised should be decided by the Board of Directors of the bank.

b) Maturity Period:

The subordinated debt instruments should have a minimum original fixed term to maturity of over 5 years to be eligible for Tier 2 capital and 2 years for being eligible for Tier 3 capital.

For the purpose of counting the subordinated debt towards supplementary capital, during the last five years to maturity, a discount factor of 20 % per year will be applied as follows:

Less than or equal to one year	100%
More than one year but less than or equal to two years	80%
More than two years but less than or equal to three years	60%
More than three years but less than or equal to four years	40%
More than four years but less than or equal to five years	20%

In case a subordinated debt has staggered principal repayments, the outstanding amount included in supplementary capital must be discounted by 20% a year (20% of the original amount less any redemption) during the last five years to maturity.

c) Rating:

The instruments should be rated separately – Minimum rating should be equivalent to '2' (as defined in Table 1) by a credit rating agency recognized by BB

d) Rate of Profit:

The instruments should be 'vanilla'. The issuer shall decide rate of profit.

e) Minimum Disclosure Requirements:

The issuing bank must clearly disclose in the offer documents that the instrument is unsecured, subordinated as to payment of principal and profit to all other indebtedness of the bank, including deposits and is not redeemable before maturity without prior approval of BB.

f) Other conditions

i) Sponsor shareholders of the issuing bank shall not be allowed to participate in or hold the subordinated debt instruments of the issuing bank directly or through their affiliates. The same restriction will also apply to the employees' retirement benefit funds of the issuing bank.

ii) Bank should indicate the amount/details of subordinated debt raised as supplementary capital by way of explanatory notes in their annual audited accounts and quarterly Statement of Minimum Capital Requirement, submitted to BB.

2 - Grant of advances against Subordinated Debt Instruments.

Bank should not grant loans/advances against the security of their own subordinated debt issue. The bank shall not provide any accommodation to finance purchase of its subordinated debt instrument.

3 - Other Requirements

The issuing bank should submit a report to BB giving details of the subordinated debt, such as amount raised maturity of the instrument, rate of profit etc. within one month from the date of issue.

Appendix- 2

A worked out example on Credit risk mitigation(CRM)

$E^* = [E \times (1 + He) - C \times (1 - Hc - Hfx) \geq 0$

Where,
E* = Exposure value after risk mitigation
E = Current value of the exposure
He = Haircut weight appropriate to the exposure
C = Current value of the collateral received
Hc = Haircut weight appropriate to the collateral
Hfx = Haircut weight appropriate for currency mismatch between the collateral and exposure

	Cases						
	1	**2**	**3**	**4**	**5**	**6**	**7**
Credit Exposures (E)	100	120	90	100	70	100	100
Maturity of exposures (years)	2	3	6	2	3	3	3
Nature of exposure	Corp	Corp	Corp	PSE	NBFI	Corp	Corp
Currency	BDT	BDT	USD	BDT	BDT	BDT	BDT
Rating of Exposure (BB rating grade)	4	2	3	Unrated	1	5	5
Haircut Weight (He)	0.12	0.06	0.12	0.25	0.04	0.25	0.25
Collaterals:							
Value of Collateral (C)	100	130	100	100	125	100	100
Maturity of collateral (years)	2	3	6	-	-	12	0.5
Nature of collateral	T.Bill	Bank Bonds	Corp Bonds	Equity - other than DSE-20	Equity - in DSE-20	T&T Bond	Corp Bonds
Currency	BDT	BDT	BDT	BDT	BDT	BDT	BDT
Rating of collateral (BB rating grade)	1	3	1	-	-	1	4
Haircut Weight (Hc)	0.02	0.06	0.08	0.15	0.12	0.08	-
Haircut for currency mismatch (Hfx)			0.10				
Exposure after haircut $E \times (1 + He)$	112	126	102	125	74	125	100
Collateral after haircut $C \times (1 – Hc- Hfx)$	98	122.2	82	85	110	92	-
Net Exposure (E*)	14	3.80	30	40	0	33	100
Case 5 : As value of the collateral is higher than the exposure after haircuts, the exposure is zero. Case 7: Ineligible for CRM since the maturity of the collateral is less than one year, so the exposure is 100.							

Appendix 3
Prudent valuation guidance

A framework for prudent valuation practices may at a minimum include the following:

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 practices within the organization (such as credit analysis). Such systems must include:

- 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, frequency of independent valuation, timing of closing prices, procedures for adjusting valuations, end of the month and ad-hoc verification procedures; and
- Clear and independent (i.e. independent of front office) reporting lines for the department accountable for the valuation process. The reporting line should ultimately be to a competent authority.

2. Valuation methodologies

(i) Marking to market

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

Banks must do marking-to-market as much as possible. The more prudent side of bid/offer must be used unless the bank is a significant market maker in a particular position type and it can close out at mid-market.

(ii) Marking to model

Where marking-to-market is not possible, banks may mark-to-model, where this can be demonstrated to be prudent. Marking-to-model is defined as any valuation which has to be benchmarked, extrapolated or otherwise calculated from a market input. When marking to model, an extra degree of conservatism is appropriate. BB 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 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. The appropriateness of the market inputs for the particular position being valued should be reviewed daily.

(Continued to next page)

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

• Where the model is developed by the bank itself, it should be based on appropriate assumptions, which have been assessed and vetted 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 (e.g., assessing continued appropriateness of the assumptions, analysis of Profit and Loss versus risk factors, comparison of actual close out values to model outputs).

(iii) Independent price verification

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.

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, e.g., only one available broker quotes, prudent measures such as valuation adjustments may be appropriate.

Appendix- 4

Government & other Public Sector Entities (PSEs)

The domestic sectors of the economy are grouped into the following mutually exclusive institutional units.

A . GOVERNMENT

The Government sector is divided into three categories

a) Food Ministry (Including directorate of food)

b)Government other than Food Ministry

(i) President and PM's offices, Parliament, Judiciary, All other Ministries and related Directorates/Departments and All other govt. offices .

All Directorates, Directorate General and Departments etc. of the Government which are not stated in any other sectors should be included under this head. Detail names of the above are given in Establishment Ministries Memo No.BA: SA: MU: 2002/2003-4407KA MA(B). A list of Directorate, Directorate General and Departments are given below: -

1. Office of the Divisional/ District Commissioner
2. Directorate of Government Transport
3. Directorate of Relief and Rehabilitation
4. Anti-Corruption Commission
5. Directorate of Armed Forces Medical Service
6. Marine Academy
7. Directorate of Primary Education
8. Office of the Comptroller and Auditor-General of Bangladesh
9. National Board of Revenue
10. Department of National Savings
11. Office of the Commissioner of Taxes
12. Bangladesh Bureau of Statistics
13. Bangladesh Civil Service (Administration) Academy
14. Bangladesh Diplomatic Mission
15. Directorate of Health Services
16. Directorate of Jute
17. Directorate of Textiles
18. Department of Labour
19. National Broadcasting Authority
20. Directorate of Land Records and Survey

21. Directorate of Bangladesh Geological Survey
22. Directorate of Public Works
23. Department of Women's Affairs
24. Directorate of Registration
25. Directorate of Agricultural Expansion
26. Directorate of Public Health Engineering
27. Directorate of Co-operatives
28. Department of Railroad Inspector
29. Directorate of Roads & Highways
30. Office of the Boiler Inspection
31. Bangladesh Post Office
32. Directorate of Insurance
33. Directorate of Social Welfare
34. Directorate of Police
35. Directorate of Secondary & Higher Secondary Education
36. Directorate of Livestock
37. Hajj Office
38. Department of Sports
39. Directorate of Archaeology
40. Office of the Dhaka Malaria Eradication
41. Directorate of Bangladesh Family Planning
42. Department of Printing, Stationary, Forms and Publications
43. Department of Local Government Engineering
44. Office of the Thana Executive Officer
45. Other Directorates/Departments and Government Offices

(**ii) Bangladesh Post Office (excluding Savings Bank Scheme)**

(iii) Bangladesh Post Office (Savings Bank Scheme)

c) Autonomous and Semi autonomous bodies

The sector of Autonomous and Semi autonomous bodies used by the Ministry of Finance for presentation of Government accounts has, for the purpose of this return, been redefined. **The bodies that are substantially financed by the Government and do not produce goods or services for sale are defined as** Autonomous and Semi-Autonomous bodies. List of different institutions as defined as Autonomous & Semi-Autonomous bodies are given below: -

1. Bangla Academy
2. Bangladesh Agricultural Development Corporation
3. Bangladesh Atomic Energy Commission
4. Bangladesh Agricultural Research Council
5. Bangladesh Agricultural Research Institute
6. Bangladesh Agricultural University, Mymensingh
7. Bangladesh College of Physicians and Surgeons
8. Bangladesh Council of Scientific and Industrial Research
9. Bangladesh Export Processing Zone Authority
10. Bangladesh Folk Art and Crafts foundation, Sonargaon
11. Bangladesh Homeopathic Board
12. Bangladesh Handloom Board
13. Bangladesh Sericulture Board
14. Bangladesh Insurance Academy
15. Bangladesh Institute of Development Studies
16. Bangladesh Institute of International and Strategic Studies
17. Bangladesh Institute of Technology (Engineering Colleges)
18. Bangladesh Industrial Technical Assistance Centre
19. Bangladesh Jatiya Jadughar
20. Bangladesh Jute Research Institute
21. Bangladesh Medical and Dental Council
22. Bangladesh Madrasa Education Board
23. Bangladesh Institute of Management
24. Bangladesh Medical Research Council
25. Bangladesh National Book Centre
26. Bangladesh Nursing Council
27. Bangladesh Rice Research Institute
28. Bangladesh Shilpakala Academy
29. Bangladesh Shishu Academy

30. Bangladesh Standard Testing Institutions
31. Bangladesh Sangbad Sangstha
32. Bangladesh Technical Education Board
33. Bangladesh University of Engineering and Technology
34. Bangladesh Sugar Research & Training Institute
35. Pharmacy Council of Bangladesh
36. Press Institute of Bangladesh
37. Bangladesh Nuclear Agricultural Research Institute, Mymensingh
38. Office of the Waqf Administration
39. Bangladesh National Medical Board.
40. Bangladesh Tea Garden Staff Providend Fund Trust Board
41. Bangladesh Rural Development Academy, Comilla
42. Bangladesh Rural Development Training Institute, Sylhet
43. Bangladesh National Science & Technical Data Collection & Distribution Centre
44. Bangladesh Institute of Livestock Research,Savar
45. Bangladesh Girls Guide
46. Bangladesh Scouts
47. Bangladesh Computer Council
48. Board of Intermediate and Secondary Education
49. Bangladesh Unani and Ayurvedic Board
50. Cadet colleges
51. Chittagong Development Authority
52. Chittagong Hill Tracts Development Board
53. Export Promotion Bureau
54. House Building Research Institute
55. Privatisation Commission
56. River Research Institute
57. Water Resources Planning Corporation
58. Institute of Chartered Accountants of Bangladesh
59. Institute of Cost and Management Accountants of Bangladesh
60. Bangladesh National Social Welfare Council
61. Institute of National Sports Education, Savar
62. Nazrul Institute
63. Islamic Foundation, Bangladesh
64. Islamic University, Kushtia
65. Jahangir Nagar University,Savar

66. Khulna Development Authority
67. National Museum of Science and Technology
68. National Curriculum and Text Book Board
69. National Institute of Local Government
70. National Sports Council
71. Public Administration Training Centre, Savar & Iskaton
72. Press Council
73. Rajdhani Unnayan Katripakha (RAJUK)
74. Bangladesh Rural Development Board
75. Rajshahi Town Development Authority
76. Rajshahi University
77. Space Research and Remote Sensing Organisation (SPARSO), Agargaon, Dhaka
78. Tribal Curtural Academy, Birisiri
79. Tribal Culture Institute, Rangamati
80. Tribal Culture Institute, Bandarban
81. Hindu Welfare Trust
82. Buddist Welfare Trust
83. Government Medical Colleges
84. Jamuna Multipurpose Bridge Authority
85. National Mohila Sangstha
86. Fisheries Research Institute, Mymensingh
87. Marine Fisheries Academy, Chittagong
88. Council of Bangladesh Institute of Technology
90. Residential Model College
91. Planning and Development Academy
92. University of Chittagong
93. University of Dhaka
94. Bangladesh University Grants Commission
95. Shah Jalal University of Science & Technology
96. University of Khulna
97. Bangladesh National University
98. Bangladesh Open University
99. Government School & Colleges (including University colleges)
100. Barendra Multinational Development Authority, Rajshahi
101. Security Printing Press Corporation
102. Bangabandhu Medical University

103. Fund, Benevolent
104. Fund, Prime Minister's Relief
105. Bangladesh Forest Research Institute
106. Non Government BEPZA Executive Cell
107. Hortex Foundation
108. Bangladesh Applied Nutrition and Human Resource Development Board
109. Bangladesh Tariff Commission
110. Bangladesh Veterinary Council
111. Bangladesh Pally Unnayan Board
112. Foreign Service Academy
113. Chittagong Hill Tracts Local Council
114. Cox's Bazar Cultural Centre
115. Bangladesh Overseas Employment Services Ltd.(BOESEL)
116. Other Autonomous and Semi-Autonomous Institutions

B. PUBLIC SECTOR ENTITIES (Other than Government)

a) Public Non financial Corporations;

Public non financial corporations are resident non financial corporations. These corporations /enterprises **owned or controlled by the Government that produce goods or services for sale to the public .**These corporations have a complete set of accounts that allow operating surpluses, savings, assets and liabilities to be separately identified. . The following corporations / enterprises should be included in this sector

1. Bangladesh Textile Mills Corporation
2. Bangladesh Sugar & Food Industries Corporation
3. Bangladesh Chemical Industries Corporation
4. Bangladesh Steel & Engineering Corporation
5. Bangladesh Petroleum Corporation
6. Bangladesh Power Development Board
7. Bangladesh Biman Corporation
8. Trading Corporation of Bangladesh
9. Bangladesh Oil, Gas and Mineral Corporation comprising of
   i) Petrobangla
   ii) Others
10. Bangladesh Jute Mills Corporation
11. Bangladesh Road Transport Corporation
12. Bangladesh Forest Industries Development Corporation
13. Bangladesh Water Transport Corporation

14. Bangladesh Railway
15. Bangladesh Telecommunication Company Limited (BTCL)
16. Bangladesh Shipping Corporation
17. Bangladesh Fisheries Development Corporation
18. Bangladesh Tea Board
19. Bangladesh Parjatan Corporation
20. Bangladesh Inland Water Transport Corporation
21. Bangladesh Inland Water Transport Authority
22. Bangladesh Water Development Board
23. Dhaka WASA
24. Chittagong WASA
25. Rural Electrification Board
26. Dhaka Electric Supply Authority (DESA)
27. Chittagong Port Authority
28. Mongla Port Authority
29. Civil Aviation Authority of Bangladesh
30. Bangladesh Small & Cottage Industries Corporation
31. Bangladesh Film Development Corporation
32. Bangladesh Freedom Fighters' Welfare Trust
33. Telephone Shilpa Sangstha
34. Bangladesh Cable Industries Limited
35. Dock Labour Management Board, Chittagong
36. Mongla Dock Labour Management Board, Bagerhat
37. Bangladesh Services Limited
38. Hotels International Limited. (Hotels having status three star and above)
39. Others

b) Local Authorities

1. City Corporations
2. Zila Parisad
3. Municipalities
4. Thana/Upazila Parishad
5. Union Parishad
6. Gram Parishad

c) Non Bank Depository Corporation - Public

Government owned financial institutions that take term deposits and takes part in deposit mobilisation is specified as Public Non bank Depository Corporations. List of such institutions is given below :

1. Ansar-VDP Development Bank
2. Karmasangsthan Bank
3. Others.

d) Other Financial Intermediaries -Public (OFIs-Public)

Other financial intermediaries (Public) comprise of bank-like institutions other than Deposit Money Banks, that are deemed to create liquidity. The following institutions should be included in this sector.

1. House Building Finance Corporation
2. Investment Corporation of Bangladesh
3. Infrastructure Development Company Ltd.
4. Saudi-Bangladesh Industrial and Agricultural Investment Company Ltd. (SABINCO)
5. Others.

e) Insurance Companies and Pension Funds-Public

1. Jiban Bima Corporation
2. Sadharan Bima Corporation etc.

Appendix-5

Capital Charge against Operational Risk

a) The Standardized Approach (TSA): All the business activities of the banks in the Standardized Approach (TSA**)** will be divided into following eight business lines (details of which are furnished in Appendix 4):

1. Corporate finance,
2. Trading & sales,
3. Retail banking,
4. Commercial banking,
5. Payment & settlement,
6. Agency services,
7. Asset management, and
8. Retail brokerage.

Within each business line, gross income is a broad indicator that serves as a proxy for the scale of business operations and thus the likely scale of operational risk exposure within each of these business lines.

The capital charge for each business line is calculated by multiplying gross income by a factor (denoted Beta) assigned to that business line. The values of Beta for the eight business lines are given in Table 12 below:

Table 12

Business Lines Beta Factors		
Business Lines	**Beta Factors**	
1. Corporate finance	β_1	0.18
2. Trading and sales	β_2	0.18
3. Retail banking	β_3	0.12
4. Commercial banking	β_4	0.15
5. Payment and settlement	β_5	0.18
6. Agency services	β_6	0.15
7. Asset management	β_7	0.12
8. Retail brokerage	β	0.12

Beta serves as a proxy for the industry-wide relationship between the operational risk loss experience for a given business line and the aggregate level of gross income for that business line.

(Continued to next page)

The total capital charge may be expressed as:

1. Corporate finance	$K_1 = [(GI_1 + GI_2 + GI_3) \times \beta_1]/n$
2. Trading and sales	$K_2 = [(GI_1 + GI_2 + GI_3) \times \beta_2]/n$
3. Retail banking	$K_3 = [(GI_1 + GI_2 + GI_3) \times \beta_3]/n$
4. Commercial banking	$K_4 = [(GI_1 + GI_2 + GI_3) \times \beta_4]/n$
5. Payment and settlement	$K_5 = [(GI_1 + GI_2 + GI_3) \times \beta_5]/n$
6. Agency services	$K_6 = [(GI_1 + GI_2 + GI_3) \times \beta_6]/n$
7. Asset management	$K_7 = [(GI_1 + GI_2 + GI_3) \times \beta_7]/n$
8. Retail brokerage	$K_8 = [(GI_1 + GI_2 + GI_3) \times \beta_8]/n$
Total capital charge	$K_{TSA} = \sum k_{1-8}$
	Where K_{TSA} = Total capital charge under TSA K_{1-8} = the capital charge under TSA for the specified business line GI_{1-3} = only positive annual gross income over the previous three years (i.e. negative or zero gross income if any shall be excluded) β_{1-8} = as declared in Table 12 **n** = number of the previous three years for which gross income is positive

b) Under the Alternative Standardized Approach (ASA), the operational risk capital charge and measurement methodology is the same as stated in TSA except for two business lines i.e. retail banking and commercial banking. For these business lines, loans and advances to be multiplied by a fixed factor '**m**' which will replace gross income as the exposure indicator. The **β**s for retail and commercial banking will remain unchanged declared in the TSA. The ASA operational risk capital charge for retail banking can be expressed as:

Retail banking	$K_{RB} = \beta_3 \text{ x } m \text{ x } LA_{RB}$
Commercial banking	$K_{CB} = \beta_4 \text{ x } m \text{ x } LA_{CB}$

Where:-

K_{RB} is the capital charge for the retail banking business line

K_{CB} is the capital charge for the commercial banking business line

LA_{RB} is total outstanding retail loans and advances (non-risk weighted and gross of provisions), averaged over the past three years

LA_{CB} is total outstanding commercial loans and advances (non-risk weighted and gross of provisions), averaged over the past three years and

m is constant the value of which is **0.035**

For the purposes of the ASA, total loans and advances in the retail banking business line consists of the total drawn amounts in the following credit portfolios: retail and SMEs. For commercial banking, total

loans and advances consist of the drawn amounts in the following credit portfolios: corporate, sovereign, bank and specialized lending. The book value of securities held in the banking book should also be included.

Under the ASA, banks may aggregate retail and commercial banking subject to using a beta of 15%. Similarly, those banks that are unable to separate their gross income into the other six business lines can aggregate the total gross income for these six business lines subject to using a beta of 18%. Negative or zero gross income if any shall be excluded.

c) Qualifying criteria for TSA/ASA

In order to qualify for use of the TSA or ASA, a bank must satisfy BB that, at a minimum:

a) Its board of directors and senior management, as appropriate, are actively involved in the oversight of the operational risk management framework;

b) It has an operational risk management system with clear responsibilities assigned to an operational risk management function. The operational risk management function is responsible for developing strategies to identify, assess, monitor and control/mitigate operational risk; implementation of the firm's operational risk assessment methodology; and for the design and implementation of a risk-reporting system for operational risk.

c) As part of the internal operational risk assessment system, the bank has a system to systematically track relevant operational risk data including material losses by business line. Its operational risk assessment system must be closely integrated into the risk management processes.

d) It has a system of reporting of operational risk exposures, including material operational losses, to business unit management, senior management, and to the board of directors. The bank must have procedures for taking appropriate action according to the information within the management reports.

e) Its operational risk management systems are well documented. The bank must have a routine in place for ensuring compliance with a documented set of internal policies, controls and procedures concerning the operational risk management system, which must include policies for the treatment of noncompliance issues.

f) Its operational risk management processes and assessment system are subject to validation and regular independent review. These reviews must include both the activities of the business units and of the operational risk management function.

g) Its operational risk assessment system (including the internal validation processes) is subject to regular review by external auditors.

BB, before granting permission to use TSA or ASA, may require a parallel run for a period of at least one year during which it will closely monitor the capital allocation under intended approach.