2014

Guidelines on Risk Based Capital Adequacy

Revised Regulatory Capital Framework for banks in line with Basel III

Bangladesh Bank
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Preface

To cope up with the international best practices and to make the bank's capital shock absorbent 'Guidelines on Risk Based Capital Adequacy (RBCA) for banks' (Revised regulatory capital framework in line with Basel II) was introduced from January 01, 2009 as a parallel run with BRPD Circular No. 10, dated November 25, 2002 (Basel I). At the end of parallel run, Basel II regime started from January 01, 2010 and the guidelines on RBCA came fully into force with its subsequent supplements/revisions. Instructions regarding Minimum Capital Requirement (MCR), Adequate Capital and Disclosure requirement as stated in the guidelines had to be followed by all scheduled banks for the purpose of statutory compliance.

Basel III reforms are the response of Basel Committee on Banking Supervision (BCBS) to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy. "Basel III: A global regulatory framework for more resilient banks and banking systems" (known as Basel III capital regulations) in December 2010. Basel III reforms strengthen the bank-level i.e. micro prudential regulation, with the intention to raise the resilience of individual banking institutions in periods of stress. Besides, the reforms have a macro prudential focus also, addressing system wide risks, which can build up across the banking sector, as well as the procyclical amplification of these risks over time. These new global regulatory and supervisory standards mainly addressed the following areas:

- raise the quality and level of capital to ensure banks are better able to absorb losses on both a going concern and a gone concern basis;
- increase the risk coverage of the capital framework;
- introduce leverage ratio to serve as a backstop to the risk-based capital measure;
- raise the standards for the supervisory review process (Pillar 2); and
- public disclosures (Pillar 3) etc.

The macro prudential aspects of Basel III are largely enshrined in the capital buffers. Both the buffers i.e. the capital conservation buffer and the countercyclical buffer are intended to protect the banking sector from periods of excess credit growth.

With a view to ensuring the implementation of Basel III in a congenial manner, Bangladesh Bank (BB) conducted two consecutive Quantitative Impact Studies (QIS) on the banks.. It had shown a propitious condition in quality and level of capital for phasing in arrangement of Basel-III. Based on

the findings of the last QIS, an Action Plan/Roadmap was issued. Banks have to comply with the regulatory limits and minima as prescribed under Basel III capital regulations, on an ongoing basis. To ensure smooth transition to Basel III, appropriate transitional arrangements have been provided for meeting the minimum Basel III capital ratios, full regulatory adjustments to the components of capital etc. Consequently, Basel III capital regulations would be fully implemented as on January 1, 2019.

These guidelines will continue to be based on three-equally underpinning Pillars, viz. minimum capital requirements, supervisory review of capital adequacy, and market discipline of the Basel II capital adequacy framework. Under Pillar 1, the Basel III framework will continue to offer Standardised Approach for computing capital requirement for credit risk ; Standardized Measure Method for market risk and two other options for computing capital requirement for operational risk are Basic Indicator Approach (BIA) and The Standardised Approach (TSA).

These guidelines will be able to make the regulatory requirements more appropriate and will also assist the banks to follow the instructions more efficiently for smooth implementation of Basel III framework in the banking sector of Bangladesh.

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List of Acronyms

ABCP	Asset-backed commercial paper
ASA	Alternative Standardized Approach
ASF	Available Stable Funding
AVC	Asset value correlation
BB	Bangladesh Bank
BCBS	Basel Committee on Banking Supervision
BIA	Basic Indicator Approach
BIS	Bank for International Settlements
CAR	Capital Adequacy Ratio
CCF	Credit conversion factor
CCPs	Central counterparties
CCR	Counterparty credit risk
CD	Certificate of Deposit
CDS	Credit default swap
CP	Commercial Paper
CRM	Credit risk mitigation
CUSIP	Committee on Uniform Security Identification Procedures
CVA	Credit valuation adjustment
DBPF	Defined Benefit Pension Fund
DTAs	Deferred tax assets
DTLs	Deferred tax liabilities
DVA	Debit valuation adjustment
DvP	Delivery-versus-payment
EAD	Exposure at default
ECAI	External credit assessment institution
EL	Expected Loss
EPE	Expected positive exposure
FIRB	Foundation internal ratings-based approach
FRA	Forward Rate Agreement
GoB	Government of Bangladesh
ICAAP	Internal Capital Adequacy Assessment Process
IMM	Internal model method
IRB	Internal ratings-based
IRRBB	Interest Rate Risk in the Banking Book
IRC	Incremental risk charge
ISIN	International Securities Identification Number
LCR	Liquidity Coverage Ratio
LGD	Loss given default
MCR	Minimum Capital Requirement
MDB	Multilateral Development Bank
MtM	Mark-to-market
NPAs	Non Performing Assets
NSFR	Net Stable Funding Ratio
OBS	Off-balance sheet
PD	Probability of default
PSE	Public sector entity
PvP	Payment-versus-payment
RBA	Ratings-based approach
RBCA	Risk Based Capital Adequacy
RWA	Risk Weighted Asset
RSF	Required Stable Funding
SREP	Supervisory Review Evaluation Process
SRP	Supervisory Review Process
TSA	The Standardized Approach

1. An Overview of Basel III

To strengthen global capital and liquidity rules with the goal of promoting a more resilient banking sector, the Basel Committee on Banking Supervision (BCBS) issued "*Basel III: A global regulatory framework for more resilient banks and banking systems"* in December 2010. The objective of the reforms was to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy. Through its reform package, BCBS also aims to improve risk management and governance as well as strengthen banks' transparency and disclosures. Basel Committee's comprehensive reform package also addressed the lessons of the financial crisis.

One of the main reasons the economic and financial crisis, which began in 2007, became so severe was that the banking sectors of many countries had built up excessive on and off-balance sheet leverage. This was accompanied by a gradual erosion of the level and quality of the capital base. At the same time, many banks were holding insufficient liquidity buffers. The banking system therefore was not able to absorb the resulting systemic trading and credit losses nor could it cope with the reintermediation of large off-balance sheet exposures that had built up in the shadow banking system. The crisis was further amplified by a procyclical deleveraging process and by the interconnectedness of systemic institutions through an array of complex transactions. During the most severe episode of the crisis, the market lost confidence in the solvency and liquidity of many banking institutions. The weaknesses in the banking sector were rapidly transmitted to the rest of the financial system and the real economy, resulting in a massive contraction of liquidity and credit availability. Ultimately the public sector had to step in with unprecedented injections of liquidity, capital support and guarantees, exposing taxpayers to large losses.

To address the market failures revealed by the crisis, the Committee[1] introduced a number of fundamental reforms to the international regulatory framework. The reforms strengthen bank level, or microprudential, regulation, which will help raise the resilience of individual banking institutions to periods of stress. The reforms also have a macroprudential focus, addressing system-wide risks that can build up across the banking sector as well as the procyclical amplification of these risks over time. Clearly these micro and macroprudential approaches to supervision are interrelated, as greater resilience at the individual bank level reduces the risk of system-wide shocks.

1.1 Strengthening the capital framework

The Basel Committee raised the resilience of the banking sector by strengthening the regulatory capital framework, building on the three pillars of the Basel II framework. The reforms raise both the quality and quantity of the regulatory capital base and enhance the risk coverage of the capital framework. To this end, the predominant form of Tier 1 capital must be common shares and retained earnings. This standard is reinforced through a set of principles that also can be tailored to the context of non-joint stock companies to ensure they hold comparable levels of high quality Tier 1 capital. Deductions from capital and prudential filters have been harmonised and generally applied at the level of common equity or its equivalent in the case of non-joint stock companies. The remainders of the Tier 1 capital base must be comprised of instruments that are subordinated, have fully discretionary noncumulative dividends or coupons and have neither a maturity date nor an incentive to redeem. In addition, Tier 2 capital

[1]The Basel Committee on Banking Supervision (BCBS)

instruments will be harmonised and so-called Tier 3 capital instruments, which were only available to cover market risks, eliminated. Finally, to improve market discipline, the transparency of the capital base will be improved, with all elements of capital required to be disclosed along with a detailed reconciliation to the reported accounts.

1.2 Enhancing risk coverage

At present, the counterparty credit risk in the trading book covers only the risk of default of the counterparty. The reform package includes an additional capital charge for Credit Value Adjustment (CVA) risk which captures risk of mark-to-market losses due to deterioration in the credit worthiness of a counterparty. In addition, the guidelines on counterparty credit risk management with regard to collateral, margin period of risk and central counterparties and counterparty credit risk management requirements have been strengthened.

1.3 Supplementing the Risk-based Capital Requirement with a Leverage Ratio

One of the underlying features of the crisis was the build-up of excessive on and off-balance sheet leverage in the banking system. In many cases, banks built up excessive leverage while still showing strong risk based capital ratios. Subsequently, the banking sector was forced to reduce its leverage in a manner that not only amplified downward pressure on asset prices, but also exacerbated the positive feedback loop between losses, declines in bank capital and contraction in credit availability. Therefore, under Basel III, a simple, transparent, non-risk based regulatory leverage ratio has been introduced to achieve the following objectives:

- constrain leverage in the banking sector, thus helping to mitigate the risk of the destabilising deleveraging processes which can damage the financial system and the economy; and
- introduce additional safeguards against model risk and measurement error by supplementing the risk-based measure with a simple, transparent, independent measure of risk.

The Committee has designed the leverage ratio to be a credible supplementary measure to the risk-based requirement with a view to migrating to a Pillar 1 treatment based on appropriate review and calibration.

1.4 Reducing procyclicality and promoting countercyclical buffers

One of the most destabilising elements of the crisis has been the procyclical amplification of financial shocks throughout the banking system, financial markets and the broader economy. The tendency of market participants to behave in a procyclical manner has been amplified through a variety of channels, including through accounting standards for both mark-to-market assets and held-to-maturity loans, margining practices, and through the build up and release of leverage among financial institutions, firms, and consumers. The Basel Committee introduced a number of measures to make banks more resilient to such procyclical dynamics. These measures will help ensure that the banking sector serves as a shock absorber, instead of a transmitter of risk to the financial system and broader economy. These measures have the following key objectives:

- dampen any excess cyclicality of the minimum capital requirement;
- promote more forward looking provisions;

- conserve capital to build buffers at individual banks and the banking sector that can be used in stress; and
- achieve the broader macroprudential goal of protecting the banking sector from periods of excess credit growth.

1.5 Addressing systemic risk and interconnectedness

While procyclicality amplified shocks over the time dimension, excessive interconnectedness among systemically important banks also transmitted shocks across the financial system and economy. Systemically important banks should have loss absorbing capacity beyond the minimum standards and the work on this issue is ongoing. The Basel Committee developed a proposal on a methodology comprising both quantitative and qualitative indicators to assess the systemic importance of financial institutions at a global and domestic level. Several of the capital requirements introduced by the Committee to mitigate the risks arising from firm-level exposures among global financial institutions will also help to address systemic risk and interconnectedness. These include:

- capital incentives for banks to use central counterparties for over-the-counter derivatives;
- higher capital requirements for trading and derivative activities, as well as complex securitisations and off-balance sheet exposures (e.g. structured investment vehicles);
- higher capital requirements for inter-financial sector exposures; and
- the introduction of liquidity requirements that penalise excessive reliance on short term, interbank funding to support longer dated assets.

1.6 Introducing a global liquidity standard

Strong capital requirements are a necessary condition for banking sector stability but by themselves are not sufficient. A strong liquidity base reinforced through robust supervisory standards is of equal importance. To date, however, there have been no internationally harmonised standards in this area. The Basel Committee is therefore introducing internationally harmonised global liquidity standards. As with the global capital standards, the liquidity standards will establish minimum requirements and will promote an international level playing field to help prevent a competitive race to the bottom.

The difficulties experienced by some banks during the financial crisis were due to lapses in basic principles of liquidity risk management. In response, as the foundation of its liquidity framework, the Committee in 2008 published Principles for Sound Liquidity Risk Management and Supervision. The Sound Principles provide detailed guidance on the risk management and supervision of funding liquidity risk and should help promote better risk management in this critical area.

To complement these principles, the Committee has further strengthened its liquidity framework by developing two minimum standards for funding liquidity. An additional component of the liquidity framework is a set of monitoring metrics to improve cross-border supervisory consistency. These standards have been developed to achieve two separate but complementary objectives. The first objective is to promote short-term resilience of a bank's liquidity risk profile by ensuring that it has sufficient high quality liquid resources to survive an acute stress scenario lasting for one month. The Committee developed the Liquidity Coverage Ratio (LCR) to achieve this objective. The second objective is to promote resilience over a longer time horizon by creating additional incentives for a bank to fund its activities with more stable sources of funding on an ongoing structural basis. The Net Stable Funding

Ratio (NSFR) has a time horizon of one year and has been developed to provide a sustainable maturity structure of assets and liabilities.

At present, supervisors use a wide range of quantitative measures to monitor the liquidity risk profiles of banking organisations as well as across the financial sector, for a macroprudential approach to supervision. To introduce more consistency internationally, the Committee has developed a set of common metrics that should be considered as the minimum types of information which supervisors should use. In addition, supervisors may use additional metrics in order to capture specific risks in their jurisdictions.

1.7 Transitional arrangements

The Committee introduced transitional arrangements to implement the new standards that help ensure that the banking sector can meet the higher capital standards through reasonable earnings retention and capital raising, while still supporting lending to the economy. In line with the Basel framework, Bangladesh Bank issued transitional arrangements for Basel III implementation in Bangladesh. The phase-in arrangements for Basel III implementation in Bangladesh will be as follows:

Table 1: Phase-in arrangements for Basel III implementation in Bangladesh

	2015	**2016**	**2017**	**2018**	**2019**
Minimum Common Equity Tier-1 (CET-1) Capital Ratio	4.50%	4.50%	4.50%	4.50%	4.50%
Capital Conservation Buffer	-	0.625%	1.25%	1.875%	2.50%
Minimum CET-1 plus Capital Conservation Buffer	4. 50%	5.125%	5.75%	6.375%	7.00%
Minimum T-1 Capital Ratio	5.50%	5.50%	6.00%	6.00%	6.00%
Minimum Total Capital Ratio	10.00%	10.00%	10.00%	10.00%	10.00%
Minimum Total Capital plus Capital Conservation Buffer	10.00%	10.625%	11.25%	11.875%	12.50%
Phase-in of deductions from CET1					
Excess Investment over 10% of a bank's equity in the equity of banking, financial and insurance entities[2]	20%	40%	60%	80%	100%
Phase-in of deductions from Tier 2 Revaluation Reserves (RR)[3]					
RR for Fixed Assets, Securities and Equity Securities	20%	40%	60%	80%	100%
Leverage Ratio	3%	3%	3% Readjustment	Migration to Pillar 1	
Liquidity Coverage Ratio	≥100% (From Sep.)	≥100%	≥100%	≥100%	≥100%
Net Stable Funding Ratio	> 100% (From Sep.)	>100%	>100%	>100%	>100%

[2] During this transition period, the remainder not deducted from capital will continue to be subject to existing treatments.
[3] During the phasing in arrangement of (i) RR for fixed assets, (ii) RR for securities, and (iii) RR for equity securities, the remaining portion after regulatory adjustments will continue to be subject to existing treatments.

2. General Instructions on Capital Adequacy Framework

2.1 Capital to Risk-weighted Asset Ratio

The Capital to Risk-weighted Asset Ratio (CRAR) is calculated by taking eligible regulatory capital as numerator and total RWA as denominator.

$$\text{CRAR} = \frac{\text{Total Eligible Capital}}{\text{Credit RWA + Market RWA + Operational RWA}}$$

2.2 Measurement of Risk-weighted Asset

In order to calculate Capital to Risk-weighted Asset Ratio (CRAR), banks are required to calculate their Risk Weighted Assets (RWA) on the basis of credit, market, and operational risks. Total RWA will be determined by multiplying the amount of capital charge for market risk and operational risk by the reciprocal of the minimum CRAR and adding the resulting figures to the sum of risk weighted assets for credit risk. The methodologies to calculate RWA for each of these risk categories are described in detail in relevant chapters.

2.3 Scope of Application

These guidelines apply to all scheduled banks on 'Solo' basis as well as on 'Consolidated' basis where-

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

'**Consolidated Basis**' refers to all position of the bank (including its local and overseas branches/offices) and its subsidiary company/companies engaged in financial (excluding insurance) activities like merchant banks, brokerage firms, discount houses, etc (if any).

2.4 Reporting Requirement

CRAR Reporting: All banks are required to submit the CRAR report quarterly (according to the prescribed formats of Department of Off-site Supervision (DOS) under EDW) on consolidated as well as on solo basis by the end of the month following the end of each quarter to DOS of BB.

ICAAP Reporting: Each bank must submit its ICAAP report to Banking Regulation and Policy Department (BRPD) of BB in both hard and soft format within May 31 of every year based on the latest audited financial report[4]. The ICAAP reporting must be approved by the Board of Directors of the banks before submitting to BB.

[4] The banks that close their account at the end of June, they should submit its ICAAP report to Banking Regulation and Policy Department (BRPD) of BB in both hard and soft format within November 30 of every year based on the latest audited financial report.

2.5 Penalty for Non-compliance

i. BB may impose restrictions on Bank's business as well as impose penalty and/or punishment as per Section 13(7) of the Bank Company Act 1991 (revised up to 2013), if a bank fails to meet minimum capital or CRAR within the stipulated period.

ii. If a bank's employee willfully/knowingly furnishes false information in reporting to BB, such an offense is punishable under section 109(2) of the Bank Company Act 1991 (revised up to 2013).

iii. BB may impose penalty as per Section 109(7) of the Bank Company Act 1991 (revised up to 2013), if a bank fails to submit the RBCA report within stipulated time without any acceptable/satisfactory reason.

3. Constituents of Capital and Minimum Requirement

3.1 Components of Capital

For the purpose of calculating capital under capital adequacy framework, the capital of banks shall be classified into two tiers. The total regulatory capital will consist of sum of the following categories:

1) Tier 1 Capital (going-concern capital[5])
   a) Common Equity Tier 1
   b) Additional Tier 1
2) Tier 2 Capital (gone-concern capital[6])

3.1.1 Common Equity Tier 1 Capital

For the local banks, Common Equity Tier 1 (CET1) capital shall consist of sum of the following items:

a) Paid up capital
b) Non-repayable share premium account
c) Statutory reserve
d) General reserve
e) Retained earnings
f) Dividend equalization reserve
g) Minority interest in subsidiaries[7]

Less: Regulatory adjustments applicable on CET1 as mentioned in paragraph**3.4**.

For the foreign banks operating in Bangladesh, Common Equity Tier 1 (CET1) capital shall consist of sum of the following items:

i. Funds from Head Office for the purpose of meeting the capital adequacy;
ii. Statutory reserves kept in books in Bangladesh;
iii. Retained earnings;
iv. Actuarial gain/loss kept in books in Bangladesh
v. Non-repatriable interest-free funds from Head Office for the purpose of acquisition of property and held in a separate account and have the ability to absorb losses regardless of their source;

Less: Regulatory adjustments applicable on CET1 as mentioned in paragraph**3.4**.

[5] From regulatory capital perspective, going-concern capital is the capital which can absorb losses without triggering bankruptcy of the bank.
[6] Gone-concern capital is the capital which will absorb losses only in a situation of liquidation of the bank.
[7]Minority Interest (in case of CRAR calculated on a consolidated basis) i.e. common shares issued by consolidated subsidiaries of the bank and held by third parties meeting eligibility criteria, as mentioned in Annex 2.

Eligibility criteria for the inclusion in CET1 capital for local and foreign banks have been specified in Annex 1.

3.1.2 Additional Tier 1 Capital

For the local banks, Additional Tier 1 (AT1) capital shall consist of the following items:

a) Instruments issued by the banks that meet the qualifying criteria for AT1 as specified at **Annex4**.

b) Minority Interest i.e. AT1 issued by consolidated subsidiaries to third parties (for consolidated reporting only); Refer to **Annex 2** for further details.

Less: Regulatory adjustments applicable on AT1 Capital as mentioned in paragraph **3.4**.

For the foreign banks operating in Bangladesh, Additional Tier 1 (AT1) capital shall consist of the following items:

i. Head Office borrowings in foreign currency by foreign banks operating in Bangladesh for inclusion in Additional Tier 1 capital which comply with the regulatory requirements as specified in **Annex4**;

ii. Any other item specifically allowed by BB from time to time for inclusion in Additional Tier 1 capital;

Less: Regulatory adjustments regulatory adjustments applicable on AT1 Capital as mentioned in paragraph **3.4**.

3.1.3 Tier 2 Capital

Tier 2 capital, also called 'gone-concern 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. For the local banks, Tier 2 capital shall consist of the following items:

a) General Provisions; [8]

b) Subordinated debt / Instruments issued by the banks that meet the qualifying criteria for Tier 2 capital as specified at **Annex4**;

c) Minority Interest i.e. Tier-2 issued by consolidated subsidiaries to third parties as specified at **Annex2**.

Less: Regulatory adjustments applicable on Tier-2 capital as mentioned at **paragraph 3.4;**

For the foreign banks operating in Bangladesh, Tier 2 capital shall consist of the following items:

i. General Provisions;

ii. Head Office (HO) borrowings in foreign currency received that meet the criteria of Tier 2 debt capital;

Less: Regulatory adjustments applicable on Tier-2 capital as mentioned at **paragraph 3.4.**

[8] General provisions/general loan-loss reserve eligible for inclusion in Tier 2 will be limited to a maximum 1.25 percentage points of credit risk-weighted assets calculated under the standiardised approach.

3.2 Limits (Minima and Maxima)

These instructions will be adopted in a phased manner starting from the January 2015, with full implementation of capital ratios from the beginning of 2019, as per Table 2below. All banks will be required to maintain the following ratios on an ongoing basis:

i. Common Equity Tier 1 of at least 4.5% of the total RWA.

ii. Tier-1 capital will be at least 6.0% of the total RWA.

iii. Minimum CRAR of 10% of the total RWA.

iv. Additional Tier 1 capital can be admitted maximum up to 1.5% of the total RWA or 33.33% of CET1, whichever is higher.[9]

v. Tier 2 capital can be admitted maximum up to 4.0% of the total RWA or 88.89% of CET1, whichever is higher.

vi. In addition to minimum CRAR, Capital Conservation Buffer (CCB) of 2.5% of the total RWA is being introduced which will be maintained in the form of CET1.

Following is the phase-in arrangement for the implementation of minimum capital requirements:

Table 2: Phase-in arrangement of minimum capital requirements

	2015	2016	2017	2018	2019
Minimum Common Equity Tier-1 Capital Ratio	4.5%	4.50%	4.50%	4.50%	4.50%
Capital Conservation Buffer	-	0.625%	1.25%	1.875%	2.50%
Minimum CET-1 plus Capital Conservation Buffer	4. 5%	5.125%	5.75%	6.375%	7.00%
Minimum T-1 Capital Ratio	5.50%	5.50%	6.00%	6.00%	6.00%
Minimum Total Capital Ratio	10.00%	10.00%	10.00%	10.00%	10.00%
Minimum Total Capital plus Capital Conservation Buffer	10.00%	10.625%	11.25%	11.875%	12.50%

3.3 Capital Conservation Buffer

Banks are required to maintain a capital conservation buffer of 2.5%, comprised of Common Equity Tier 1 capital, above the regulatory minimum capital requirement of 10%. Banks should not distribute capital (i.e. pay dividends or bonuses in any form) in case capital level falls within this range. However, they will be able to conduct business as normal when their capital levels fall into the conservation range as they experience losses. Therefore, the constraints imposed are related to the distributions only and are not

[9] For the purpose of calculating Tier 1 capital and CRAR, the excess Additional Tier 1 capital and Tier-2 capital can only be recognized if the bank has CET1 ratio in excess of the minimum requirement of 7.0% (i.e. 4.5% plus capital conservation buffer of 2.5%). Further, any excess Additional Tier 1 and Tier 2 capital will be recognized in the same proportion as stipulated above i.e. the recognition of excess Additional Tier 1 (above 1.5%) is limited to the extent of 33.3% (1.5/4.5) of the CET1 in excess of 7.0% requirement. Similarly, the excess Tier 2 capital (above 4.0%) shall be recognized to the extent of 88.89% (4.0/4.5) of the CET1 in excess of 7.0% requirement.

related to the operations of banks. The distribution constraints imposed on banks when their capital levels fall into the range increase as the banks' capital levels approach the minimum requirements. The Table below shows the minimum capital conservation ratios a bank must meet at various levels of the Common Equity Tier 1 capital ratios.

Table 3: Individual bank's minimum capital conservation standards

CET-1 Ratio	Minimum Capital Conservation Ratio (expressed as percentage of earnings)
4.5% - 5.125%	100%
>5.125% - 5.75%	80%
>5.75% - 6.375%	60%
>6.375% - 7.0%	40%
>7.0%	0%

For example, a bank with a Common Equity Tier 1 capital ratio in the range of 5.125% to 5.75% is required to conserve 80% of its earnings in the subsequent financial year (i.e. payout no more than 20% in terms of dividends, share buybacks and discretionary bonus payments is allowed).

The following represents other key aspects of the capital conservation buffer requirements:

The Common Equity Tier 1 ratio includes amounts used to meet the minimum Common Equity Tier 1 capital requirement of 4.5%, but excludes any additional Common Equity Tier 1 needed to meet the 7% Tier 1 and 10% Total Capital requirements. For example, a bank maintains Common Equity Tier 1 capital of 8%, Additional Tier 1 of 1% and Tier 2 capital of 1%. Therefore, the bank would meet all minimum capital requirements, but would have a zero conservation buffer and therefore, the bank would be subjected to 100% constraint on distributions of capital by way of dividends, share-buybacks and discretionary bonuses[10].

If a bank does not have positive earnings and has a Common Equity Tier 1 ratio less than 7%, it should not make positive net distributions.

Capital conservation buffer is applicable both at the solo level as well as at the consolidated level, i.e. restrictions would be imposed on distributions at the level of both the solo bank and the consolidated group. In all cases where the bank is the parent of the group, it would mean that distributions by the bank can be made only in accordance with the lower of its Common Equity Tier 1 Ratio at solo level or consolidated level. For example, if a bank's Common Equity Tier 1 ratio at solo level is 5.8% and that at consolidated level is 6.4%. It will be subject to a capital conservation requirement of 60% consistent with the Common Equity Tier 1 range of >5.75% - 6.375% as per Table 3 above. Suppose, a bank's Common Equity Tier 1 ratio at solo level is 5.6% and that at consolidated level is 5%. It will be subject to a capital conservation requirement of 100% consistent with the Common Equity Tier I range of >4.5% - 5.125% as per Table on minimum capital conservation standards for individual bank.

[10] In this scenario a bank may distribute stock dividend subject to prior approval from Bangladesh bank.

Banks which already meet the minimum ratio requirement during the transition period as indicated in Table 3, but remain below the target of 7% Common Equity Tier 1 capital ratio (minimum of 4.5% plus conservation buffer of 2.5%) should maintain prudent earnings retention policies with a view to meeting the conservation buffer as soon as possible.

3.4 Regulatory Adjustments / Deductions

In order to arrive at the eligible regulatory capital for the purpose of calculating CRAR, banks are required to make the following deductions from CET1/Capital:

3.4.1 Shortfall in provisions against NPLs and Investments

Shortfall in provisions against Non Performing Loans (NPLs) and investments in shares will be deducted from CET1.

3.4.2 Goodwill and all other Intangible Assets

The book value of goodwill and other intangible assets like software, brand value etc., will be deducted net of any associated deferred tax liabilities which will be extinguished if the intangible assets become impaired or derecognized under the relevant accounting standards. This includes any goodwill in the valuation of significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation.

3.4.3 Deferred tax assets (DTA)

Banks in Bangladesh will be required to deduct DTAs recognized on the provisions against classified loan, advances or investments (in case off operating under Islamic Shariah) all DTAs, irrespective of their origin from the Common Equity Tier 1 capital as a prudent measure. Application of these rules at consolidated level would mean deduction of DTAs from the consolidated Common Equity which is attributed to the subsidiaries, in addition to deduction of DTAs which pertain to the solo bank.

3.4.4 Defined benefit pension fund assets

Defined benefit pension fund liabilities, as included on the balance sheet, must be fully recognized in the calculation of CET1 (i.e. CET1 cannot be increased through derecognizing these liabilities). For each defined benefit pension fund that is an asset on the balance sheet, the asset will be deducted from CET1 net of any associated deferred tax liability which would extinguish if the asset becomes impaired or derecognized under the relevant accounting standards. However, from a regulatory perspective it has been decided that the expenditure, may, if not fully charged to the Profit and Loss Account, be amortised over a period of five years beginning with the financial year January, 2015 subject to a minimum of 1/5th of the total amount involved every year

3.4.5 Gain on sale related to securitization transactions

Bank will derecognize in the calculation of CET1, any increase in equity capital resulting from securitization transactions, such as that associated with expected future margin income resulting in a gain on sale.

3.4.6 Investment in own shares

All of a bank's investment in its own common shares held directly or indirectly will be deducted from CET1 to avoid the double counting of a bank's own capital. The treatment described will apply irrespective of the location of the exposure in the banking book or the trading book. Moreover, banks should look through holdings of index/ mutual fund securities to deduct exposures to own shares. Following the same approach, bank must deduct any investment in their own additional tier 1 or tier 2 instruments.

3.4.7 Investments in the Capital of Banking, Financial and Insurance Entities

Reciprocal crossholdings in the Capital of Banking, Financial and Insurance Entities

Reciprocal crossholdings of capital that are designed to artificially inflate the capital position of banks will be deducted in full. For this purpose, a holding is considered to be a reciprocal crossholding if the investee entity has also invested in any type of bank's capital instrument which may necessarily not be the same instrument as the bank is holding.

Corresponding Deduction Approach

Under the corresponding deduction approach, banks will deduct investments in the capital of other banks, financial institutions and insurance entities from the respective tier of their own capital. This means the deduction will be applied to the same component of capital for which the capital will qualify if it was issued by the bank itself.

If, under the corresponding deduction approach, a bank is required to make a deduction from a particular tier of capital and it does not have enough of that tier of capital to satisfy the deduction, the shortfall will be deducted from the next higher tier of capital (e.g. if a bank does not have enough additional tier-1 capital to satisfy the deduction, the shortfall will be deducted from CET1).

Banks will make the following corresponding deductions:

Investments in the equity and or other capital instruments of Banking, Financial & Insurance Entities [outside the scope of regulatory consolidation[11] (where the bank does not own more than 10% of the paid up capital of the investee entity)]

The regulatory adjustments described in this paragraph applies to investment in the equity and or other capital instruments of banking, financial and insurance entities that are outside the scope of regulatory consolidation and where the bank does not own more than 10% of the paid up capital of the investee. In addition:

a) Investments include all holdings i.e. in shares, bonds, debentures, mutual funds, and all other capital market related instruments (i.e. bank will look through holdings of mutual fund/ index securities to determine their underlying holdings of capital). Holdings in both the banking book and the trading book are to be included. Capital includes common stock and all other types of cash and synthetic

[11] Investments in entities that are outside of the scope of regulatory consolidation refers to investments in entities that have not been consolidated at all or have not been consolidated in such a way as to result in their assets being included in the calculation of consolidated risk-weighted assets of the group.

capital instruments (e.g. subordinated debt). BB may consider requests to exclude temporarily certain investments where these investments are made in the context of resolving or providing support to a distressed institution.

b) If the total of all holdings [mentioned at point-(a) above] in aggregate exceed 10% of the bank's equity[12] (after applying all other regulatory adjustments in full) then the amount above 10% of a bank's equity will be deducted in line with the corresponding deduction approach.

c) The amount to be deducted from Common Equity Tier 1 will be calculated as the total of all holdings which in aggregate exceed 10% of a bank's equity multiplied by the common equity holdings as a percentage of the total capital holdings. This would result in a common equity deduction which corresponds to the proportion of total capital holdings held in common equity. Similarly, the amount to be deducted from Additional Tier1 or Tier 2 capital will be calculated as the total of all holdings which in aggregate exceed 10% of the bank's equity multiplied by the Additional Tier 1 or Tier 2 capital holdings as a percentage of the total capital holdings.

d) Amounts below the threshold, which are not deducted, will continue to be risk weighted. Thus, instruments in the trading book will be treated as per the market risk rules and instruments in the banking book will be treated as per the standardized approach or internal ratings-based approach (as applicable). For the application of risk weighting the amount of the holdings will be allocated on a pro rata basis between those below and those above the threshold.

e) Detailed illustration is provided at **Annex 3**.

3.4.8 Transitional Arrangements for Capital Deductions

Currently, 10% of revaluation reserves for equity instruments and 50% of revaluation reserves for fixed assets and securities are eligible for Tier 2 capital. However, Bangladesh Bank, in the light of Basel III proposals, has harmonized deductions from capital which will mostly be applied at the level of Tier 2. The regulatory capital adjustment will start in a phased manner from January, 2015 in the following manner:

Table 6: Transitional Arrangements for Capital Deductions

Phase-in of deductions from Tier 2	**2015**	**2016**	**2017**	**2018**	**2019**
RR for Fixed Assets	20%	40%	60%	80%	100%
RR for Securities	20%	40%	60%	80%	100%
RR for Equity Securities	20%	40%	60%	80%	100%

[12] Banks' equity refers to the items mentioned in the Section 26Ka of the Bank Company Act 1991 revised up to 2013

4. Leverage Ratio

In order to avoid building-up excessive on- and off-balance sheet leverage in the banking system, a simple, transparent, non-risk based leverage ratio has been introduced. The leverage ratio is calibrated to act as a credible supplementary measure to the risk based capital requirements. The leverage ratio is intended to achieve the following objectives:

a) constrain the build-up of leverage in the banking sector which can damage the broader financial system and the economy; and
b) reinforce the risk based requirements with an easy to understand and a non-risk based measure.

4.1 Definition and Calculation of Leverage Ratio

A minimum Tier 1 leverage ratio of 3% is being prescribed both at solo and consolidated level.

The banks will maintain leverage ratio on quarterly basis. The calculation at the end of each calendar quarter will be submitted to BB showing the average of the month end leverage ratios based on the following definition of capital and total exposure.

$$\text{Leverage Ratio} = \frac{\text{Tier 1 Capital (after related deductions)}}{\text{Total Exposure (after related deductions)}}$$

4.2 Capital Measure

The capital measure for the leverage ratio will be based on the new definition of Tier 1 capital as specified in Chapter 3.

Items which are deducted completely from capital do not contribute to leverage and will therefore also be deducted from the measure of exposure. This means that deductions from Tier 1 capital specified in paragraph 3.5 will also be made from the exposure measure.

4.3 Exposure Measure

General Measurement Principles

The exposure measure for the leverage ratio will generally follow the accounting measure of exposure. In order to measure the exposure consistently with financial accounts, the following will be applied by the bank:

i. On balance sheet, non-derivative exposures will be net of specific provisions and valuation adjustments (e.g. surplus/ deficit on Available for sale (AFS)/ Held-for-trading (HFT) positions).
ii. Physical or financial collateral, guarantee or credit risk mitigation purchased is not allowed to reduce on-balance sheet exposure.
iii. Netting of loans and deposits is not allowed.

On-Balance Sheet Items

Banks will include items using their accounting balance sheet for the purposes of the leverage ratio. In addition, the exposure measure will include the following treatments for Securities Financing Transactions (e.g. repo, reverse repo etc.) and derivatives:

a) Repurchase Agreements and Securities Financing:

Securities Financing Transactions (SFT) are a form of secured funding and therefore an important source of balance sheet leverage that will be included in the leverage ratio. Therefore banks should calculate SFT for the purposes of leverage ratio by applying

- The accounting measure of exposure; and
- Without netting various long and short positions with the same counterparty

b) Derivatives:

Derivatives create two types of exposures: an on-balance sheet present value reflecting the fair value of the contract (often zero at the outset but subsequently positive or negative depending on the performance of the contract), and a notional economic exposure representing the underlying economic interest of the contract. Banks will calculate derivatives exposure, including where a bank sells protection using a credit derivative, for the purposes of leverage ratio by applying:

- The accounting measure of exposure (positive mark to market value) plus an add-on for potential future exposure calculated according to the Current Exposure Method as per instructions prescribed in the Chapter for Credit Risk (Chapter 5).
- Without netting the mark to market values and potential future exposure regarding long and short positions with the same counterparty.

Off-Balance Sheet Items

Banks will calculate the off-balance sheet (OBS) items specified in Credit Risk chapter (Table 14) under the section of "Risk Weights Off-Balance Sheet Exposure" by applying a uniform 100% credit conversion factor (CCF). For any commitments that are unconditionally cancellable at any time by the bank without prior notice, a CCF of 10% will be applied.

4.4 Transitional Arrangements

The parallel run period for leverage ratio will commence from January, 2015 and run until December 31, 2016. During this period, the leverage ratio and its components will be tracked to assess whether the design and calibration of the minimum tier 1 leverage ratio of 3% is appropriate over a credit cycle and for different types of business models, including its behavior relative to the risk based requirements.

Bank level disclosure of the leverage ratio and its components will start from January 1, 2015. However, banks should report their Tier 1 leverage ratio to the BB (Department of Off-Site Supervision) along with CRAR report from the quarter ending March, 2015.Based on the results of the parallel run period, any final adjustments to the definition and calibration of the leverage ratio will be made by BB in 2017, with a view to setting the leverage ratio requirements as a separate capital standard from January 1, 2018.

5. Measurement of Risk Weighted Assets: Credit Risk

5.1 Introduction

Credit risk is the potential that a bank borrower or counterparty fails to meet its obligation in accordance with agreed term.

5.2 Definitions

5.2.1 Claims: Exposures such as deposits (including foreign currency), placements, investments, loans and advances underlying with counterparties.

5.2.2 Claims on sovereign and central bank: Loans and advances to the Government of Bangladesh (GoB), and investments in GoB securities, BB securities, and Development Bonds including Foreign Currency Bonds. All deposit and reserves (including foreign currency) maintained with BB.

5.2.3 Claims on other sovereigns and central banks: Loans and advances to and investments in securities of governments and central banks except GoB and BB.

5.2.4 Claims on the Bank for International Settlements (BIS), the International Monetary Fund (IMF), European Central Bank and the European Community: Loans and advances to and investments in BIS, IMF, European Central Bank, and the European Community.

5.2.5 Claims on multilateral development banks (specific): Loans and advances to and investments in the following:

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

b) The Asian Development Bank (ADB)

c) The African Development Bank (AfDB)

d) The European Bank for Reconstruction and Development (EBRD)

e) The Inter-American Development Bank (IADB)

f) The European Investment Bank (EIB)

g) The European Investment Fund (EIF)

h) The Nordic investment Bank (NIB)

i) The Caribbean Development Bank (CDB)

j) The Islamic Development Bank (IDB)

k) The Council of Europe Development Bank (CEDB)

5.2.6 Claims on multilateral development banks (Others): Loans and advances to and investments in Multilateral Developments Banks (MDBs) other than those specified in 5.2.5 above.

5.2.7 Claims on government/ public sector entities (PSE): Loans and advances to and investments (excluding equity exposure) in all public corporations, statutory boards and authorities, local government bodies etc. owned or controlled by GoB or any entity categorized as PSE (See Latest guidelines to fill in the Banking Statistics Returns, SBS-1,SBS-2 & SBS-3 published by Statistics Department of Bangladesh bank.)

5.2.8 Claims on banks and non-bank financial institutions (NBFIs): Loans and advances, placements, deposits (including Nostro Accounts), debentures (which are not treated as capital of the issuing bank or NBFI), dues on various trade bills, repurchase agreement and investments (excluding equity exposure) in all scheduled banks, NBFIs, and foreign banks.

5.2.9 Claims on corporate: Loans and advances to and investments (excluding equity exposure) in corporate. "Corporate" refers to any proprietorship, partnership and limited company that is neither PSE, bank, NBFI nor borrower within the definition of retail portfolio. This definition will also include the loans/advances to the Exchange Houses by the banks.

5.2.9.1Claims on SME: *Small and Medium Enterprises* (SMEs) will be defined in line with the Industrial policy 2010 and Bangladesh Bank's SME & SPD circular no.1 dated 19th June, 2011 or any changes thereof made from time to time.

Exposure limit: Any exposure will fall under this category but the risk weight of 75% will be applicable in case of unrated small enterprise clients having the exposure limit of BDT 10,000 to BDT 30,00,000 and 100% for exposure of BDT 30,00,000 and above. Any exposure against medium enterprise may be considered for credit rating and risk weight of 100% will be assigned against unrated medium enterprise clients.

5.2.10 Claims categorized as retail portfolio: Claims (including both fund and non-fund based) that meet all the four criteria listed below may be considered as retail claims for regulatory capital purposes and included in a regulatory retail portfolio.

Qualifying criteria

Orientation criterion: The exposure to an individual person or persons.

Product criterion: The exposure takes the form of any of the following product types:

a) Revolving credit and lines of credit (including overdrafts)

b) Term loans and leases (e.g. installment loans, vehicle loans for manufacturing/production and leases, student and educational loans, micro business facilities and commitments)

The following claims, both fund based and non fund based, will be excluded from retail portfolios:

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

b. Mortgage loans to the extent that they qualify for treatment as claims secured by residential property (section 5.2.12) or claims secured by commercial real estate (section 5.2.13);

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

d. Consumer finance;

e. Capital market exposures; and

f. Venture capital funds.

Granularity criterion: Exposures under this category must be sufficiently diversified to a degree that reduces the risks. In order to meet this criterion, aggregate exposure without considering Credit Risk Mitigation (CRM), to one counterpart should not exceed 0.2% of the overall exposures under this category excluding past due loans. 'To one counterpart' means one or several entities that may be considered as a single beneficiary.

Exposure limit: The maximum aggregate exposure to a person(s) or entity (ies) will be limited to BDT 1.00(One) crore.

5.2.11 Consumer finance: Loans and advances to individuals for meeting their personal, family or household needs that includes credit cards, auto/vehicle loans for personal use, personal loans, and any purpose loan etc.

5.2.12 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 or will be rented. Loans for the purpose of constructing/purchasing/renovating of house/apartment provided to individuals will fall under this category. Loans secured by residential real estate for business purpose will not fall under this category.

5.2.13 Claims secured by commercial real estate: Lending fully secured by mortgages on commercial real estate that will be occupied or rented or sold by the borrower. The mortgages may be used for office and/or multipurpose commercial premises and/or multi-tenanted commercial premises etc. Industrial or warehouse space, hotels, land acquisition for/development/construction of residential real estate by real estate companies, and exposures to entities for setting up special economic zones will also be treated as commercial real estate.

5.2.14 Past due claims: The unsecured portion of any claim or exposure (other than claims secured by residential property) that is past due for 60 days or more, net of specific provisions (including partial write-off) will be risk weighted as per Table 9. For the purpose of defining the net exposure of the past due loan, eligible financial collateral (if any) may be considered for Credit Risk Mitigation. General provision maintained against Special Mention Account (SMA) loan will not be eligible for such net off.

5.2.15 Capital market exposures: Claims against investor account holder or margin account holder of the subsidiary companies (Merchant banking/Brokerage house) and Loans and Advances to Merchant Bank/Brokerage Houses of the bank will fall under this category.

5.2.16 Venture capital: Venture capital is provided as funding to early-stage, high-potential, growth companies in the interest of generating a return through an eventual realization event. Venture capital

investments are generally made in cash in exchange for shares in the invested company. Investment in equity of unlisted entities other than PSEs includes in this category.

5.2.17 All other assets:

a) Claims on GoB and BB other than those specified in 'section 5.2.2' above;

b) All staff loan secured by residential property/and superannuation benefit;

c) 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 paid immediately on presentation. Trade Bills, such as import bills and export bills, in the process of collection should be excluded from this item.

d) Claims on Off-shore Banking Units (OBU);

e) Other asset (if any other items which are not specified above).

5.3 Methodology

The capital requirement for credit risk is based on the risk assessment made by external credit assessment institutions (ECAIs) recognized by BB for capital adequacy purposes. Banks are required to assign a risk weight to all their on-balance sheet and off-balance sheet exposures. Risk weights are based on external credit rating (solicited) which mapped with the BB rating grade or a fixed weight that is specified by BB.

5.3.1 External credit rating

Bangladesh Bank has recognized eight credit rating agencies i. e. Credit Rating Agency of Bangladesh (CRAB) Ltd., Credit Rating Information and Services Limited (CRISL), National Credit Ratings Ltd. (NCRL), Emerging Credit Rating Ltd. (ECRL), ARGUS Credit Rating Services Limited (ACRSL), Alpha Credit Rating Limited (ACRL), WASO Credit Rating Company (BD) Limited and The Bangladesh Rating Agency Limited(BDRAL) which met the eligibility criteria of ECAIs guidelines (BRPD Circular no. 35/2010) of BB. BB has developed a 'Credit Rating Methodology for Small and Medium Enterprises' (**Annex 13**) which will ensure uniformity, larger levels of transparency of external credit assessment and thereby determine the relative creditworthiness of entities belonging to this segment and thus establish credit discipline in the banking industry.
In addition to this, surveillance manual has been developed in order to review eligibility and justify assigned notch/notations with BB rating grade. Through this ECAIs have been brought under rigorous surveillance for recognition purpose.

BB has also decided that banks may use the ratings (if available) of the following international credit rating agencies for the purposes of risk weighting their exposure at abroad:

a) Fitch,

b) Moody, and

c) Standard & Poor.

5.3.1.1 Mapping of ECAI's Rating Grade:

Rating categories of ECAIs both for corporate and SME's are mapped with the rating grades of BB as per Table 7and Table 8 respectively. For risk weighting purpose, the rating of a client by any recognized ECAI is valid for one year. Credit rating for one entity within a corporate group cannot be used to risk weight other entities within the same group i.e. each entity within a same corporate group needs to get credit rating individually

5.3.1.2 Short term assessments: For risk-weighting purposes, short-term assessments may only be used for short-term claims against banks (local as well as foreign) and corporate. Otherwise, it will be considered as 'unrated' status.

5.3.1.3 Multiple assessments: If there are two assessments by ECAIs chosen by a bank which map into different risk weights, the higher risk weight will be applied. If there are three or more assessments with different risk weights, the assessments corresponding to the two lowest risk weights should be referred to and the higher of those two risk weights will be applied.

5.3.1.4 Issuer vs. issue assessment: Where a bank invests in a particular issue that has an issue-specific assessment the risk weight of the claim will be based on this assessment. Otherwise, bank may use issuer rating for that specific issue.

Table 7: ECAI's Credit Rating Categories Mapped with BB's Rating Grade

BB Rating Grade	Equivalent Rating of S&P and Fitch	Equivalent Rating of Moody	Equivalent Rating of CRISL	Equivalent Rating of CRAB	Equivalent Rating of NCRL	Equivalent Rating of ECRL	Equivalent Rating of ACRSL	Equivalent Rating of ACRL	Equivalent Rating of WASO
1	AAA to AA	Aaa to Aa	AAA, AA+, AA, AA-	AAA, AA1, AA2, AA3	AAA, AA+, AA, AA-	AAA, AA+, AA, AA-	AAA, AA+, AA, AA-	AAA, AA+, AA, AA-	AAA AA1, AA2, AA3
2	A	A	A+, A, A-	A1, A2, A3	A+, A, A-	A+, A, A-	A+, A, A-	A+, A, A-	A1, A2, A3
3	BBB	Baa	BBB+, BBB, BBB-	BBB1, BBB2, BBB3	BBB+, BBB, BBB-	BBB+, BBB, BBB-	BBB+, BBB, BBB-	BBB+, BBB, BBB-	BBB1, BBB2, BBB3
4	BB to B	Ba to B	BB+, BB, BB-	BB1, BB2, BB3	BB+, BB, BB-	BB+, BB, BB-	BB+, BB, BB-	BB+, BB, BB-	BB1, BB2, BB3
5	Below B	Below B	B+, B, B-, CCC+, CCC, CCC-, CC+, CC, CC-	B1, B2, B3, CCC1, CCC2, CCC3, CC	B+, B, B-	B+, B, B-	B+, B, B-, CC+,CC,CC-	B+, B, B-, CCC	B1, B2, B3, CCC
6			C+, C, C-, D	C, D	C+, C, C-, D	D	C+, C, C-, D	CC+,CC,CC-, C+, C, C-, D	CC1, CC2, CC3, C+, C, C-, D
Short-Term Rating Category Mapping									
S1	F1+	P1	ST-1	ST-1	N1	ECRL-1	ST-1	AR-1	P-1
S2	F1	P2	ST-2	ST-2	N2	ECRL-2	ST-2	AR-2	P-2
S3	F2	P3	ST-3	ST-3	N3	ECRL-3	ST-3	AR-3	P-3
S4	F3	NP	ST-4	ST-4	N4	ECRL-4	ST-4	AR-4	P-4
S5,S6	B,C, D		ST-5, ST-6	ST-5, ST-6	N5	D	ST-5, ST-6	AR-5, AR-6	P-5, P-6

Table 8: ECAI's Credit Rating Categories Mapped with BB's SME Rating Grade

BB SME Rating Grade	Equivalent Rating of BDRAL	Equivalent Rating of CRISL	Equivalent Rating of CRAB	Equivalent Rating of ECRL	Equivalent Rating of ARGUS	Equivalent Rating of ALPHA	Equivalent Rating of NCRL	Equivalent Rating of WASO
01					**03**	**04**	**05**	**06**
SME 1	SE1, ME 1	CRISL Me-1/Se-1	CRAB-ME 1/SE 1	ESME 1	AQSE 1/AQME 1	ARSME-1	NSME-1	WCR SE 1/ME 1
SME 2	SE2,ME 2	CRISL Me-2/Se-2	CRAB-ME 2/SE 2	ESME 2	AQSE 2/AQME 2	ARSME-2	NSME-2	WCR SE 2/ME 2
SME 3	SE3,ME 3	CRISL Me-3/Se-3	CRAB-ME 3/SE 3	ESME 3	AQSE 3/AQME 3	ARSME-3	NSME-3	WCR SE 3/ME 3
SME 4	SE4,ME 4	CRISL Me-4/Se-4	CRAB-ME 4/SE 4	ESME 4	AQSE 4/AQME 4	ARSME-4	NSME-4	WCR SE 4/ME 4
SME 5	SE5,ME 5	CRISL Me-5/Se-5	CRAB-ME 5/SE 5	ESME 5	AQSE 5/AQME 5	ARSME-5	NSME-5	WCR SE 5/ME 5
SME 6	SE6, SE7, SE8,ME 6 ME7,ME 8	CRISL Me-6,7,8,9,10 /Se-6,7, 8,9.10	CRAB-ME 6,7,8/ SE 6,7,8	ESME 6,7,8	AQSE6,7,8/AQME 6,7,8	ARSME-6,7,8	NSME-6,7,8	WCR SE 6,7,8/ME 6,7,8

5.4 Risk weight for balance sheet exposure

Exposure wise risk weights against different rating grades of BB are given in Table 9. Where an exposure is secured by guarantee or eligible financial collateral, it may reduce its capital charge by taking benefit of credit risk mitigation.

Table 9: Risk Weights for Balance Sheet Exposure

Sl.	Exposure Type	BB's Rating Grade	Risk Weight (%)
a.	Cash		0
b.	Claims on Bangladesh Government (other than PSEs) and BB (denominated in domestic and foreign currency)		0
c.	Claims on other Sovereigns & Central Banks[13]		
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 (excluding equity exposure)	1	20
		2,3	50
		4,5	100

[13]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 export credit agencies(ECAs) participating in the "Arrangement on Officially Supported Export Credits". These scores are available on the OECD's website (http://www.oecd.org) and extracted in the table 11 below.

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

Sl.	Exposure Type	BB's Rating Grade	Risk Weight (%)
		6	150
		Unrated	50
g	Claims on Banks and NBFIs (denominated in domestic as well as foreign currency)		
	i) Original maturity over 3 months	1	20
		2,3	50
		4,5	100
		6	150
		Unrated	100
	ii) Original maturity up to 3 months		20
h	Claims on Corporate (excluding equity exposures)	1	20
		2	50
		3, 4	100
		5, 6	150
		Unrated	125
h1	Claims on SME	SME 1	20
		SME 2	40
		SME 3	60
		SME 4	80
		SME 5	120
		SME 6	150
		Unrated(Small Enterprise &<BDT 3.00m	75
		Unrated(Small Enterprise having ≥BDT 3.00m & Medium enterprise)	100

Sl.	Exposure Type	Risk Weight(%)
Fixed Risk Weight Groups:		
i	Claims categorized as retail portfolio (excluding consumer finance and Staff loan)	75
j	Consumer Finance	100
k	Claims fully secured by residential property (excluding Staff loan/investment)	50
l	Claims fully secured by commercial real estate	100
m	Past Due Claims[14]	
	The claim (other than claims secured by eligible residential property) that is past due for 60 days or more and/or impaired will attract risk weight as follows (Risk weights are to be assigned to the amount net of specific provision):	
	Where specific provisions are less than 20 percent of the outstanding amount of the past due claim ;	150
	Where specific provisions are no less than 20 percent of the outstanding amount of the past due claim.	100
	Where specific provisions are more than 50 percent of the outstanding amount of the past due claim.	50
	Claims fully secured against residential property that are past due for 60 days or more and/or impaired (Net of specific provision) -where specific provision held there-against is less than 20 percent of outstanding amount	100
	Loans and claims fully secured against residential property that are past due for 60 days or more and /or impaired (gross of specific provision) -where specific provision held there-against is no less than 20 percent of outstanding amount	75
n	Capital Market Exposures	125
o	Investments in venture capital	150

[14]Past due for 60 days or more, this will include SMA, SS, DF& BL.

Sl.	Exposure Type	Risk Weight(%)
p	Investment in equity and other regulatory capital instruments issued by other banks and Merchant Banks/Brokerage Houses/Exchange Houses which are not listed in the Stock Exchanges (other than those deducted from capital) held in banking book	125
q	Investments in premises, plant and equipment and all other fixed assets	100
r	Claims on all fixed assets under operating lease	100
s	All other assets	
	i) Claims on GoB& BB (eg. advanced income tax, reimbursement of patirakkha/shadharonshanchaypatra, etc.)	0
	ii) Staff loan/Investment	20
	iii) Cash items in Process of Collection	20
	iv) Claims on Off-shore Banking Units (OBU)	100
	v) Other assets (net off specific provision, if any)	100
t	Risk Weighted Assets Calculated under Credit Risk Mitigation	

Table 10: Risk Weight for Short Term Exposures

BB's Rating Grade	S1	S2, S3	S4	S5, S6
Risk Weight (%)	20	50	100	150

Table 11: Risk Weight against ECA Score (Published by OECD)

ECA Score	1	2, 3	4, 5 & 6	7
Risk Weight (%)	20	50	100%	150%

5.5 Risk weight for off-balance sheet exposure

The total risk weighted assets for off-balance sheet (OBS) exposure will be the sum of risk-weighted assets for market related and non-market related OBS transactions. The risk-weighted amount of the OBS transaction that gives rise to credit exposure is generally calculated by means of a two-step process:

a) First, the notional amount of a transaction is converted into a balance sheet equivalent (i.e. credit equivalent amount or potential exposure) by multiplying the amount with an appropriate credit conversion factor (CCF).
b) Second, the resulting credit equivalent amount will be multiplied by the risk weight (as per Table 2) associated with the credit rating of that counterparty.

Where OBS item is secured by eligible collateral or guarantee, the credit risk mitigation facility may be applied.

The Market-related OBS transactions include the following:

- Interest rate contracts - these include 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;
- Foreign exchange contracts - these include 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 similar nature;
- Equity contracts - these include swaps, forwards, purchased options and similar derivative contracts based on individual equities or equity indices;
- Other market-related contracts - these include any contracts covering other items, which give rise to credit risk.

The Non-market related OBS exposure includes direct credit substitutes, trade and performance related contingent items, and other commitments.

5.5.1 Risk weights for market-related OBS transactions: To calculate the risk weighted assets for market related OBS, a bank must include all of their 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:

a) Foreign exchange contracts with BB;
b) Foreign exchange contract which have an original maturity of 14 calendar days or less; and
c) Instruments traded on future and option exchanges, which are subject to daily mark-to-market and margin payment.

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

a) In the case of interest rate and foreign exchange contracts:
   - by mark-to-market (also known as current exposure) method; or
   - by the original exposure (notional amount) method (with BB's prior approval); and

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

5.5.1.2 Current exposure method: In current exposure method, credit equivalent amount would be calculated by multiplying current market value of each of the contracts with the appropriate credit conversion factor specified in Table 12 according to the nature and residual maturity of the instrument.

Table 12: 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%

5.5.1.3 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 with an appropriate credit conversion factor specified in Table 13.

Table 13: Credit Conversion Factor under 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%

5.5.2 Risk weight for non-market-related OBS transactions: The exposure amount of non-market related OBS transaction is to be converted into credit equivalent by multiplying it with an appropriate credit conversion factor (CCF) for calculating the risk weighted assets. Table 14 gives the CCF associated with various types of non-market related OBS transactions. Once the credit equivalent amount is obtained, it will be multiplied with the risk weight of respective counterparty.

Table 14: Credit Conversion Factor for Non-market-related OBS transactions

Nature of transaction	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%
Short-term self-liquidating trade letters of credit arising from the movement of goods (e.g. documentary credits collateralized by the underlying shipment), for both issuing and confirming banks.	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. (See **Annex 5**)	100 %
Commitments with certain drawdown	100 %
Other commitments (a) Commitments (e.g. undrawn formal standby facilities and credit lines) with an original maturity of: (i) one year or less. (ii) over one year. (b) Commitments that can be unconditionally cancelled at any time without notice or effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness.	 20 % 50% 0%

Where the non-market-related OBS transaction is an un-drawn or partially un-drawn facility, the amount of un-drawn commitment to be included in calculating a bank's off-balance sheet non-market-related credit exposures is the maximum unused portion of the commitment that could be drawn during the remaining period to maturity. Any drawn portion of a commitment forms part of on-balance sheet credit exposure and will be subject to the requirements laid down earlier in this chapter.

With regard to irrevocable commitments to provide OBS facilities, the original maturity will be measured from the commencement of the commitment until time of the associated facility expires. For example, an irrevocable commitment, with an original maturity of six months, to provide finance with a nine-month term, is deemed to have an original maturity of 15 months.

Irrevocable commitments to provide OBS facilities should be assigned the lower of the two applicable credit conversion factors. For example, an irrevocable commitment with an original maturity of six months to provide a guarantee in support of counterparty for a period of nine months attracts the 50 per cent credit conversion factor applicable to the commitment.

For example: (a) A bank sanctioned a cash credit facility for Tk.10 lac (which is not unconditionally cancelable) where the drawn portion is Tk. 6 lac, the undrawn portion of Tk. 4 lac will attract a CCF of 20 per cent (since the CC facility is subject to review / renewal normally once a year). The credit equivalent amount of Tk 0.8 lac (20 % of Tk. 4 lac) will be assigned the appropriate risk weight as applicable to the counterparty / rating to arrive at the risk weighted asset for the undrawn portion. The drawn portion (Tk. 6 lac) will attract a risk weight as applicable to the counterparty / rating.

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

5.6 Credit risk mitigation (CRM)

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

a) Collateral for Credit Risk Mitigation

b) Guarantee for Credit Risk Mitigation

5.6.1 Collateral for credit risk mitigation

Where a transaction is secured by eligible financial collateral and meets the eligibility criteria and minimum requirements, banks are allowed to reduce their credit exposure or potential credit exposure to cover exposure under that particular transaction (except claims against investor account/margin account holder) by taking into account the risk mitigating effect of the collateral for the calculation of capital charge.

5.6.1.1 Eligible financial Collateral

a) Cash (as well as certificate of deposit or fixed deposit or comparable instruments of lending bank) on deposit with the bank, which is incurring the counterparty exposure[15]

b) Gold

c) Securities rated by a recognized ECAI where these are either:

- at least rated '4' when issued by sovereigns or PSEs that are treated as sovereigns by BB
- at least rated '3' when issued by other entities (including banks and securities firms); or
- at least rated 'S3' for short-term debt instruments.

d) Debt securities not rated by a recognized ECAI where these are:

- issued by a bank;
- listed on a recognized exchange;
- classified as senior debt[16];
- all rated issues of the same seniority by the issuing bank are rated at least '3'/'S3' by a recognized ECAI; and
- 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.

e) Equities (including convertible bonds) those are enlisted and regularly traded in Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE). The value of the equity will be computed on the basis of last 6 months daily average price.

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

5.6.1.2 Eligibility criteria and minimum requirements

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

[15]The exposure amount covered by cash on deposit, certificates of deposit or fixed deposit or comparable instruments issued by third party bank as collateral (after any necessary haircuts for currency risk) will receive the risk weight of the third-party bank.

[16]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.

a) 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.
b) In order for collateral to provide protection, between the counterparty and issuer of collateral must not have a material positive correlation.
c) Banks must have clear and robust procedures for the timely liquidation of collateral.
d) 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.
e) Mismatches in the maturity of the underlying exposure and the collateral will be considered as CRM only when residual maturity of the collateral are greater than or equal to one year.

5.6.1.3 Calculation of capital charge

Where transactions 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 haircuts 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), bank will calculate their risk-weighted assets with the difference between the two multiplied by the risk weight of the counterparty. The framework for performing these calculations is as follows:

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

Where:

E* = the exposure value after risk mitigation
E = current value of the exposure for which the collateral qualifies as a risk mitigate
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 for the collateralized transactions.

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 CRM is furnished in **Annex 6**.

Haircuts: Banks will use the standard supervisory haircuts for both the exposure as well as the collateral. The standard supervisory haircuts expressed as percentages are as follows:

Table 15: Supervisory Haircut weights

Counterparty Rating /Issue rating for debt securities (excluding convertible bonds) (BB Rating Grade)	Residual Maturity	Haircut (%)
Securities issued by GoB/ BB		
-	≤ 1 year	0.5
	>1 year, ≤ 5 years	2
	> 5 years	4
Counterparty rating/Debt Securities issued by other than GoB/BB		
1 & S1	≤ 1 year	1
	>1 year, ≤ 5 years	4
	> 5 years	8
2, 3 , S2 & S3	≤ 1 year	2
	>1 year, ≤ 5 years	6
	> 5 years	12
4, 5,6, S4 & Unrated	All	15
Equities listed in DSE /CSE		25
Convertible bonds		15
Undertaking in collective Investment and transferable Securities (UCITS)/Mutual funds		15
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		Same as minimum CRAR

5.6.1.4 On balance sheet netting

On-balance sheet netting may be allowed where a bank,

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

b) is able at any time to determine those assets and liabilities with the same counterparty that are subject to the netting agreement;

c) monitors and controls its roll-off risks and

d) monitors and controls the relevant exposures on a net basis, it may use the net exposure of loans and deposits as the basis for its capital adequacy calculation.

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

5.6.2 Guarantee for credit risk mitigation

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. Only guarantees issued by or protection provided by entities with a lower risk weight than the counterparty will lead to reduced capital charges since the protected portion of the counterparty exposure is assigned the risk weight of the guarantor or protection provider, whereas the uncovered portion retains the risk weight of the underlying counterparty.

5.6.2.1 Guarantees eligible for being treated as a CRM

a) 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 indisputable. 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.

b) 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 CRM 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.

c) 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.

5.6.2.2 Range of eligible guarantors/counter-guarantors

Credit protection given by the following entities will be recognized eligible guarantor:

a) 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.

b) 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.

c) 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.

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

5.6.3 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.

5.6.4 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.

$$G_A = G \times (1 - Hfx)$$

Where: G = nominal amount of the credit protection

H_{fx} = haircut appropriate for currency mismatch between the credit protection and underlying obligation. For currency mismatch, the rate of supervisory haircut will be the same as minimum CRAR.

5.6.5 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 except those instruments holding under auto renewal instructions. 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.

When there is a maturity mismatch with recognized credit risk mitigates (collateral, on-balance sheet netting, guarantees) the following adjustment will be applied.

$$P_a = P \times (t - 0.25) / (T - 0.25)$$

Where:

P_a = value of the credit protection adjusted for maturity mismatch

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

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

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

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.

5.6.6 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 RWA 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.

5.6.7 CRM techniques for off balance sheet transaction: In case of non-market related OBS transactions in foreign currency, the notional amount will be adjusted by an add-on factor of 5% for exchange rate fluctuation. The CRM will be applicable on the notional amount (will be adjusted by the exchange rate add-on factor). The notional amount is converted into a balance sheet equivalent by multiplying the amount by the specified CCF (see Table14).

For example, in case of a short term self liquidating letter of credit in USD equivalent to BDT 50 lac with cash margin BDT 5 lac, the notional amount will be BDT 52.5 lac [i.e. BDT 50 lac × (1+5%)], and the net notional amount will be BDT 47.5 lac [i.e. BDT 52.5 lac - BDT 5 lac]. So the on balance sheet equivalent will be BDT 9.5 lac [i.e. BDT 47.5 lac × 20%] as the CCF for this transaction is 20%.

6. Measurement of Risk Weighted Assets: Market Risk

6.1 Introduction

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

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

b) Foreign exchange risk and commodities risk throughout the bank (both in the banking and in the trading book).

6.2 Definitions

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 which are held for trading and readily available for sale are major parts of the trading book. To be mentioned that all listed shares have to be included in the trading book. In addition, positions should be prudently and accurately valued, and the portfolio should be actively managed. For valuation guidelines see **Annex 10**.

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.

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.

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

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

6.3 Scope and coverage of the capital charges

The requirement to allocate capital is 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.

a. On balance sheet assets held in the trading book are subject to only market risk capital requirements and will not be subject to credit risk capital requirement.

b. On balance sheet assets funded in foreign currency will be subject to both credit and market risk capital requirement.

c. Derivatives, unless they are contracted to hedge positions in the banking book will be considered part of trading book and will be subject to both credit and market risk capital requirement.

d. Repurchase/reverse repurchase, securities lending held in trading book will be subject to both credit and market risk capital requirement.

For the purpose of capital charge for market risk will include:

a) Securities included under the HFT category

b) Equity position and commodity position

c) Overall foreign exchange exposure

d) Trading positions in derivatives and

e) Derivatives for the purpose of hedging trading book exposures

6.4 Methodology

In Standardized Approach, the capital requirement for various market risks (interest rate risk, equity price risk, commodity price risk, 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. The methodology to calculate capital requirement under Standardized Approach for each of these market risk categories is as follows.

6.5 Capital charges for interest rate risk

The minimum capital requirement is expressed in terms of two separately calculated capital charges for "specific risk" and "general market risk". Specific risk is applicable for each security, whether it is a short or a long position, and general market risk is applicable for the interest rate risk in the portfolio where long and short positions in different securities or instruments can be offset.

6.5.1 Capital charges for specific risk

Capital charge for specific risk is designed to protect against an adverse movement in the price of an individual security owing to factors related to the individual issuer. It will be calculated on gross position. The capital charges for following categories are set out in Table 16.

a. Government category: This category will include all the securities of GoB and foreign government.

b. Qualifying category: The qualifying category will include :

- debt securities issued by public sector entities and multilateral development banks, and other securities that are recognized by BB for including in this category.
- debt securities 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 category will include those instruments which are not included in 'Government' or 'Qualifying category' above.

Table 16: Capital charge weight for specific risk

Categories	BB rating grade	Particulars	Capital Charge Weight (%)
Government	--	--	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

6.5.2 Capital charges for general market risk

Maturity Method: The capital requirement for general market risk is designed to capture the risk of loss arising from changes in market interest rates. Positions are allocated across a maturity ladder and the capital charge is then calculated as a sum of following four components:

a) The net short or long position in the whole trading book;

b) A small proportion of the matched positions in each time-band (the “vertical disallowance”);

c) A larger proportion of the matched positions across different time-bands (the "horizontal disallowance");

d) A net charge for positions in options, where appropriate.

In this regard, the capital charge will be calculated on the basis of the following considerations:

a) Bank's underlying trading issues may exist in long or short and both (i.e., related 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 Table 17; and

b) Where any transaction relates to both long and short position (i.e., related to interest rate derivative/hedge) then total capital charges is to be calculated using Table 17 and Table 19.

Separate maturity ladders should be used for each currency and capital charges should be calculated for each currency separately and then summed with no offsetting between positions of opposite sign. In the case of those currencies in which business is insignificant, separate maturity ladders for each currency are not required. Rather, the bank may construct a single maturity ladder and slot, within each appropriate time-band, the net long or short position for each currency. However, these individual net positions are to be summed within each time-band, irrespective of whether they are long or short positions, to produce a gross position figure.

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 re-pricing 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 17 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 17.

Securities, which have already matured and remain unpaid for more than 60 days should be treated as Non-performing Assets. Therefore, it should attract relevant risk weight.

Table 17: Maturity Method - Time-bands and Weights

Zone	Time-bands for Coupon 3% or more	Time-bands for Coupon less than 3%	Capital charge weight
1	2	3	4
Zone 1	1 month or less	1 month or less	0.00%
	1 to 3 months	1 to 3 months	0.20%
	3 to 6 months	3 to 6 months	0.40%
	6 to 12 months	6 to 12 months	0.70%

Zone 2	1 to 2 years	1.0 to 1.9 years	1.25%
	2 to 3 years	1.9 to 2.8 years	1.75%
	3 to 4 years	2.8 to 3.6 years	2.25%
Zone 3	4 to 5 years	3.6 to 4.3 years	2.75%
	5 to 7 years	4.3 to 5.7 years	3.25%
	7 to 10 years	5.7 to 7.3 years	3.75%
	10 to 15 years	7.3 to 9.3 years	4.50%
	15 to 20 years	9.3 to 10.6 years	5.25%
	Over 20 years	10.6 to 12 years	6.00%
		12 to 20 years	8.00%
		Over 20 years	12.50%
* * Time bands after decimal represents months i.e. 1.9 to be read as 1 year 9 months			

The next step in the calculation is to offset the weighted longs and shorts in each time-band, resulting in a single short or long position for each band. Since, however, each band would include different instruments and different maturities, a 10% capital charge to reflect basis risk and gap risk will be levied on the smaller of the offsetting positions, be it long or short. Thus, if the sum of the weighted longs in a time-band is $100 million and the sum of the weighted shorts BDT 90 million, the so-called "vertical disallowance" for that time band would be 10% of BDT 90 million (i.e. BDT 9.0 million).

The result of the above calculations is to produce two sets of weighted positions, the net long or short positions in each time-band (BDT 10 million long in the example above) and the vertical disallowances, which have no sign. In addition, however, banks will be allowed to conduct two rounds of "horizontal offsetting", first between the net positions in each of three zones (zero to one year, one year to four years and four years and over[17]), and subsequently between the net positions in the three different zones. The offsetting will be subject to a scale of disallowances expressed as a fraction of the matched positions, as set out in the table below. The weighted long and short positions in each of three zones may be offset, subject to the matched portion attracting a disallowance factor that is part of the capital charge. The residual net position in each zone may be carried over and offset against opposite positions in other zones, subject to a second set of disallowance factors.

Calculation of Capital Charge for General Market Risk for Interest Rate Related Instruments with a Worked Example is shown in **Annex 7**.

Duration Method: Under the duration method, banks may use a more accurate method of measuring all of their general market risk by calculating the interest sensitivity of each position separately. The banks that decide to use this approach must do so on continuous basis. Banks shall calculate the capital charge for each position on the basis of estimated change in yield given in Table 18.

[17] The zones for coupons less than 3% are 0 to 1 year, 1 to 3.6 years, and 3.6 years and over.

Table 18: 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 interest rate sensitivity of the instrument: △ MVE = -DGAP*[△i/(1+y)]*Total Assets Where, MVE = Market value of equity y = yield to maturity △i=Change in interest rate DGAP=Calculated duration gap 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			

Table 19: Horizontal disallowances

Zone	Within the Zone	Between Adjacent zones	Between zones 1 and 3
Time Zone 1	40%	}40%	100%
Time Zone 2	30%	}40%	
Time Zone 3	30%		

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

a) Carry forward the net positions in each time-band for 10% vertical disallowance designed to capture basis risk;

b) Carry forward the net positions in each time-band for horizontal offsetting subject to the disallowances set out in Table 19.

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

Table 20: Calculation of general market risk

a) Net weighted position	100% of Net short or long weighted position	100%
b) Vertical disallowances	Sum of 10% of Matched weighted positions in each time bands	10%
c) Horizontal disallowances (Using table no. 19)	Matched weighted position within Time Zone 1	40%
	Matched weighted position within Time Zone 2	30%
	Matched weighted position within Time Zone 3	30%
	Matched weighted position between Time zone 1 & 2	40%
	Matched weighted position between Time zone 2 & 3	40%
	Matched weighted position between Time zone 1 & 3	100%
Total Capital Charge (a+ b + c) :		

6.5.3 Repo / reverse-repo transaction

A security, which is subject to a repurchase, or under securities lending agreement will be treated as if it were still owned by the lender of the security, i.e. it shall be treated in the same manner as other securities positions.

6.5.4 Interest rate derivatives

The measurement system should include all interest rate derivatives and off-balance sheet instruments in the trading book, which are interest rate sensitive. These include forward rate agreement, interest rate and cross currency swaps and forward foreign exchange contracts. Options are also subject to capital charge; however the calculation of capital requirement for options is set out separately in this section.

6.5.4.1 Calculation of positions

The derivatives should be converted into positions in the relevant underlying and become subject to specific and general market risk charges. In order to compute the standard calculations, the amounts reported should be the market value of the principal amount of the underlying or of the notional underlying. For instruments where the apparent notional amount differs from the effective notional amount, banks must use effective notional amount.

6.5.4.2 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.

6.5.4.3 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.

6.5.4.4 Calculation of capital charge for derivatives

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.

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.

Table 11: 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	Yes, as two positions
Forward foreign exchange		No	Yes, as one position in each currency

6.5.5 Capital charges for equity position risk

The capital charge for equities would apply on their current market value in bank's trading book. This capital charge for both specific risk and the general market risk will be at the rate of the required minimum capital adequacy ratio. This is applied to all capital market related holdings by the bank that exhibit market behavior similar to equities. The instruments include equity shares, bonds, debentures, mutual funds, convertible securities and all other capital market related instruments which are listed in the Stock Exchanges.

6.5.6 Capital charges for foreign exchange risk

The capital charge for foreign exchange risk will be at the rate of the required minimum capital adequacy ratio of bank's overall foreign exchange exposure including gold. The calculation of foreign exchange exposure should be done on consolidated basis including subsidiaries. For less than wholly owned subsidiaries the relevant accounting rules will apply.

Two processes are needed to calculate the capital requirement for foreign exchange risk.

a) The first is to measure the exposure in a single currency position.

b) The second is to measure the risks inherent in a bank's mix of long and short positions in different currencies.

6.5.6.1 Measuring the exposure in a single currency

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

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

b) 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);

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

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

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

The treatment of interest, other income and expenses; the measurement of forward currency positions; are described below:

The treatment of interest, other income and expenses: Interest accrued (i.e. earned but not yet received) should be included as a position. Accrued expenses should also be included. Unearned but expected future interest and anticipated expenses may be excluded unless the amounts are certain and banks have taken the opportunity to hedge them. If banks include future income/expenses, they should do so on a consistent basis, and not be permitted to select only those expected future flows, which reduce their position.

The measurement of forward currency positions: Forward currency positions will normally be valued at current spot market exchange rates. Using forward exchange rates would be inappropriate since it would result in the measured positions reflecting current interest rate differentials to some extent.

6.5.6.2 Measuring the foreign exchange risk in a portfolio of foreign currency positions

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 at the rate of the required minimum capital adequacy ratio of the overall net open position. For example, we may assume that a bank has long and short positions in Yen, Euro, GBP, Australian dollar and US dollar and the minimum capital adequacy ratio is 10% as given below in Table 22.

Table 22: Example (foreign exchange risk)

Currency	YEN	Euro	GBP	AUD	USD
Position in BDT	+40	+300	-130	-20	-150
Absolute Value	+340		-300		

The capital charge would be 10% of the higher of either the net long currency positions or the net short currency positions (i.e. 340)

Capital Requirement = 340 x 10% = 3.40

7. Measurement of Risk Weighted Assets: Operational Risk

7.1 Introduction

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[18], but excludes strategic and reputational risk.

7.2 The Measurement methodology

The framework outlined below presents two methods for calculating operational risk capital charges in a continuum of increasing sophistication and risk sensitivity: (i) the Basic Indicator Approach; and (ii) the Standardized Approach.

Banks are encouraged to move along the spectrum of available approaches as they develop more sophisticated operational risk measurement systems and practices. However, a bank will not be allowed to choose to revert to a simpler approach once it has been approved for a more advanced approach without supervisory approval. However, if a supervisor determines that a bank using a more advanced approach no longer meets the qualifying criteria for this approach, it may require the bank to revert to a simpler approach for some or all of its operations, until it meets the conditions specified by the supervisor for returning to a more advanced approach.

7.3 The basic indicator approach

Under the Basic Indicator Approach (BIA), the capital charge for operational risk is a fixed percentage (denoted by alpha) of average positive annual gross income of the bank over the past three years (See Example in **Annex 8**). 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[19]. The capital charge may be expressed as follows:

$$K = [(GI\ 1 + GI2 + GI3) \times \alpha\ ]/n$$

where,

K = 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)

α = 15%

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

Gross income: Gross Income (GI) is defined as “Net interest income” plus “net non-interest income”. It is intended that this measure should.

[18]Legal risk includes, but is not limited to, exposure to fines, penalties, or punitive damages resulting from supervisory actions, as well as private settlements.

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

a) be gross of any provisions (includes interest suspense)

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

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

d) exclude extraordinary or irregular items as well as categorize

e) exclude income derived from insurance.

7.4 The standardized approach

Banks may follow the Standardized Approach (TSA) for calculating capital charge against operational risk subject to prior approval of BB. Measurement methodology of computing capital charge against operation risk under TSA along with qualifying criteria is provided in the **Annex 9**.

8. Supervisory Review Process

8.1 Introduction

Supervisory Review Process (the Second Pillar of Basel-II and III) of Risk Based Capital Adequacy Framework is intended to ensure that banks have adequate capital to support all the risks in their business and at the same time to encourage banks to develop and use better risk management techniques in monitoring and managing their risks. The key principle of the supervisory review process (SRP) is that "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". 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. Bank management will clearly bear primary responsibility and Board of Directors hold the tertiary responsibility for ensuring that the bank has adequate capital to support its risks. There are three main areas that might be particularly suited to treatment under SRP: risks considered under Pillar 1 those are not fully captured by the Pillar 1 process; those factors not taken into account by the Pillar 1 process; and factors external to the bank. A further important aspect of Pillar 2 is the assessment of compliance with the minimum standards and disclosure requirements of the more advanced methods in Pillar 1.

The main aspects of a rigorous SRP are as follows:

- Board and senior management oversight,
- Sound capital assessment,
- Comprehensive assessment of risks,
- Monitoring and reporting and
- Internal control review.

8.1.1 Board and senior management oversight

A sound and vibrant SRP for a bank requires a structure of three layers:

a) Strategic Layer: The Risk Management Committee will be responsible on behalf of the Board of Directors to implement SRP in banks. The committee will monitor the managerial layer. The agenda of each meeting of the committee must include the SRP implementation in bank.

b) Managerial Layer: Banks must have an exclusive body naming SRP team which will be constituted by the concerned departmental heads of a bank and headed by Managing Director. The formation and modification of SRP team and its terms of reference (ToR) must be approved by the Board of Directors and to be notified to Bangladesh Bank. The SRP must meet at least bi-monthly to monitor the implementation of SRP. Banks must have a document (called Internal Capital Adequacy Assessment Process-ICAAP) for assessing their overall risk profile, and a strategy for maintaining adequate capital. This document is also to be approved by the Board of Directors.

c) Operational Layer: The banks must have an operational unit in this respect which will be responsible for collecting information from concerned departments and branches, regulatory correspondences, compiling the required calculations of ICAAP reporting and the tasks assigned by the SRP team.

8.1.2 Sound capital assessment

Each bank must have a document (called Internal Capital Adequacy Assessment Process-ICAAP). This document is also to be approved by the Board of Directors. The ICAAP document should include–

(i) Policies and procedures designed to ensure that the bank identifies, measures, and reports all material risks;

(ii) A process that relates capital to the level of risk;

(iii) A process that states capital adequacy goals with respect to risk, taking account of the bank's strategic focus and business plan; and

(iv) A process of internal control, review and audit to ensure the integrity of the overall management process.

8.1.3 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 could not be measured precisely but a process should be developed to estimate risks. In addition to the risks covered under pillar 1, banks should consider the following risks under SRP:

8.1.3.1 Residual risk

Risk Based Capital Adequacy (RBCA) framework and other supervisory regulations on credit risk management allow banks to offset credit or counterparty risk with collateral along with the legal and financial documents. While banks use different techniques to reduce their credit risk, improper application of these techniques give rise to additional risks that may render the overall risk management less effective. Accordingly, these additional risks (e.g. documentation risk, valuation risk) are termed as Residual Risks. Apart from the capital maintained against credit risk under Pillar 1 (Minimum Capital Requirement) of RBCA, additional capital requirement is to be estimated against different aspects of residual risk related to the loans & advances portfolio of banks.

In the context of Bangladesh, Bangladesh Bank (BB) has observed that Residual Risk arises mainly out of the following situations:

a) Error in Documentation: Banks collect and preserve documents against loans and advances to have legal protection in case of adverse events like default of loan. Lack of required and duly filled-up documents and erroneous or fake or forged documents will lead to the amplification of overall risk aspects of loan portfolio and the reduction in the strength of legal shield that slacks the ownership of the bank on collateral and consequently hinders the recovery of loan.

b) Error in valuation of collateral: Banks require appropriate valuation of collateral (both physical[20] and financial) and guarantee (bank guarantee and personal guarantee) against loans and advances for mitigation of default probability. The improper valuation or overvaluation of collateral can lead to overstated scenario of risk mitigation for collateralized loan. That will raise the default probability of the loan. To avoid duplication in capital calculation, when capital charge is imposed for error in documentation on a loan account, no capital charge is required for error in valuation of collateral on that loan account.

To identify documentation error banks should have a standard documentation checklist. Also, each bank should have its own valuation methodology (board approved) based on which bank will identify valuation error.

For computing capital charge against residual risk, first considerable issue is to determine base for capital charge of a particular loan account. For determining the base for capital charge, following factors are to be adjusted with the outstanding amount of any loan account:

- Provision (general/specific) kept against the loan,
- Minimum capital already maintained under Pillar 1,
- Value of Collateral (Qualified financial collateral)

Capital Requirement against Residual Risk = Base for Capital Charge × Factor weight for documentation error and/or valuation error.

Factor weight for documentation error can vary depending on the materiality of the document. However, it has to be mentioned in the board approved ICAAP document.

Capital requirement for each loan account will have to be summed up for determining total capital charge against residual risk that will be reported during ICAAP reporting.

8.1.3.2 Concentration risk

Concentration risk arises when any bank invests its most or all of the assets to single or few individuals or entities or sectors or instruments. That means when any bank fails to diversify its loan and investment portfolios, concentration risk emerges. Downturn in concentrated activities and/or areas may cause huge losses to a bank relative to its capital and can threaten the bank's health or ability to maintain its core operations. In the context of Pillar-2, concentration risk can be of following two types:

i. Credit Concentration Risk: When the credit portfolio of a bank is concentrated within a few individuals or entities or sectors, credit concentration risk arises.

ii. Market Concentration Risk: When the investment portfolio of a bank is concentrated within a few instruments or any instrument of few companies or any instrument of few sectors, market concentration risk arises.

[20] 'Physical Collateral' refers to land, building, apartment, moving vehicles, machineries.

Assessment of Credit Concentration Risk: To assess the credit concentration risk, following aspects of bank's loan portfolio will be considered:

a. Sector wise exposure,
b. Division wise exposure (Geographic Concentration),
c. Group wise exposure (Outstanding amount more than),
d. Single borrower wise exposure (Outstanding amount more than),
e. Top borrower wise exposure (Top 10-50 borrowers will be counted)

Assessment of Market Concentration Risk: To assess the market concentration risk, following aspects of a bank's investment portfolio will be evaluated:

a. Instrument (financial securities) wise investment ,
b. Sector wise investment in listed instruments,
c. Currency wise investment of foreign exchange portfolio.

As there is no unanimously agreed tools to measure the concentration risk, following indicators can be applied on the above stated aspects (except top borrower wise exposure) for having comparative picture:

i. Herfindahl Hirschman Index (HHI),
ii. Simpson's Equitability Index (SEI),
iii. Shannon's Index (SI),
iv. Gini Coefficients (GC)

Assessing concentration by a single indicator may lead to erroneous alley. Thus, the results of above stated indicator for all aspects of Credit and Market Concentration Risk for any banks should be considered for charging capital.

8.1.3.3 Interest rate risk in the banking book (IRRBB)

IRRBB is the current or potential risk to the interest rate sensitive assets and liabilities of a bank's balance sheet as well as the off-balance sheet items arising out of adverse or volatile movements in market[21] interest rate. Volatile movements of market interest rate adversely affect the value of interest rate sensitive assets and liabilities that consequentially results in the loss of equity value.

In the context of Pillar 2, the assessment of loss of equity value due to IRRBB is vital as this is the outcome of poor asset liability management that shows the inefficiency of the risk management framework of the bank. Although currently in Bangladesh, there is no efficient and active secondary market for any type of debt instrument (interest bearing financial instrument), the evaluation of IRRBB on the basis of hypothetical scenarios is essential for the appraisal of asset-liability management and effectiveness of the risk management framework of a bank.

[21]Market refers to the fully active efficient secondary market of interest bearing instruments like bills, bonds, debentures, commercial paper etc.

The susceptibility of banks to IRRBB can be estimated through *Simple Sensitivity Analysis* and *Duration Gap Analysis*.

The Steps for conducting Simple Sensitivity Analysis:

1. Calculate all on-balance sheet Rate Sensitive Assets (RSA) and Rate Sensitive Liabilities (RSL),
2. Plot the RSA and RSL into different time buckets on the basis of their maturity,
3. Calculate the maturity gap by subtracting RSL from RSA (GAP= RSL-RSA),
4. Calculating the changes in the Net Interest Impact (NII) by multiplying the changes in interest rate with the Gap[22].

The Steps for conducting Duration Gap Analysis:

1. Estimate the market value[23] of all on-balance sheet rate sensitive assets and liabilities of the bank/NBFI to arrive at market value of equity,
2. Calculate the durations of each class of asset and the liability of the on-balance sheet portfolio,
3. Arrive at the aggregate weighted average duration of assets and liabilities,
4. Calculate the duration GAP by subtracting aggregate duration of liabilities from that of assets,
5. Estimate the changes in the economic value of equity due to change in interest rates on on-balance sheet positions along with the three interest rate changes,
6. Calculate surplus/ (deficit) on off-balance sheet items under the interest rate change,
7. Estimate the impact of the net change (both for on-balance sheet and off-balance sheet) in the market value of equity on the capital adequacy ratio (CRAR),

As long as any efficient, vibrant and active secondary market for any debt instrument would be not established, capital charge is not required for the negative change in the value of that debt instrument based on hypothetical assessment against IRRBB. When required capital charge against IRRBB will be **the loss of equity value** due to changes in the market interest rate. The capital charge will be calculated by netting off the capital charge for interest rate related instrument under Market Risk of Pillar-1.

Yet, BB will keenly analyze the result of Simple Sensitivity Analysis and Duration Gap Analysis of banks. If any adverse output would be observed even from hypothetical scenarios, prudent measures will be taken by the Bangladesh Bank.

8.1.3.4 Liquidity risk

Liquidity risk is the risk that a given security or asset cannot be traded quickly enough in the market to prevent a loss (or make the required profit) or when a bank is unable to fulfill its commitments in time when payment falls due. Thus, liquidity risk can be of two types:

[22] $\Delta NII = \Delta i \times Gap$

[23] Market value of the asset or liability shall be assessed by calculating its present value discounted at the prevailing interest rate. The outstanding balances of the assets and Liabilities should be taken along with their respective maturity or re-pricing period, whichever is earlier.

a. Funding liquidity risk: the risk that a firm will be unable to meet its current and future cash flow and collateral needs without affecting its daily operations or its financial condition

b. Market liquidity risk: the risk that a firm cannot easily offset or sell a position without incurring a loss because of inadequate depth in the market

In context of Pillar 2 (Supervisory Review Process) of RBCA, the necessity of proper assessment and management of liquidity risk carries pivotal role in ICAAP of banks. In the perspective of Bangladesh, identifying and monitoring the driving factors of liquidity risk is viewed from the following aspects:

Regulatory Liquidity Indicators (RLIs):

- Cash Reserve Requirement (CRR),
- Statutory Liquidity Ratio (SLR),
- Medium Term Funding Ratio (MTFR),
- Maximum Cumulative Outflow (MCO),
- Advance Deposit Ratio (ADR)/Investment Deposit Ratio (IDR),
- Liquidity Coverage Ratio (LCR),
- Net Stable Funding Raito (NSFR).

Bank's own liquidity monitoring tools:

- Wholesale Borrowing and Funding Guidelines,
- Liquidity Contingency Plan,
- Management Action Trigger (MAT).

Computation of Capital Charge against Liquidity Risk: If annual average of any of RLIs of any bank falls bellow Bangladesh Bank's requirement the bank will be required to maintain additional capital for that RLI (or those RLIs).

8.1.3.5 Reputation risk

Reputation risk is the current or prospective risk to earnings and capital that arise from decline in the customer base, costly litigation due to adverse perception of the stakeholders. It can originate from the lack of compliance with industry service standards or regulation, failure to meet commitments, inefficient and poor quality customer service, lack of fair market practices, unreasonably high costs and inappropriate business conduct. In a nutshell, "reputation risk arises from the failure to meet stakeholders' reasonable expectation of an organization's performance and behavior"

Reputation risk is a subset of operational risk which can adversely affect the capital base if the driving forces of the risk turn worse. Consequentially, ICAAP of bank must include rigorous process to measure and manage the risk. In context of Bangladesh, the key driving forces of reputation risk in banks are the followings:

1. Credit Rating conducted by ECAIs: Credit rating of the bank in the reporting year mapped with the BB rating grade will be assessed. If the rating grade of any bank is below a certain level, bank should maintain additional capital.
2. Internal fraud: Number of internal fraud and the total value in taka will be evaluated. If the case is such that total value in taka from internal fraud in a year (reporting year) cannot be recovered fully or partially by a bank, it will be required to maintain additional capital which will be equal to the unrecovered amount.
3. External fraud: Number of external fraud and the total value in taka will be evaluated. If the total value in taka from external fraud in a year (reporting year) cannot be recovered fully or partially by bank, it will be required to maintain additional capital which will be equal to the unrecovered amount.

   Banks have to formulate their own Fraud (both internal and external) Management Process to prevent measure, manage and treat internal fraud and external fraud properly.
4. Non-payment or delayed payment of accepted bills (foreign & domestic): Number of such cases and the total value in taka will be examined. If the total value in taka from such cases in a year (reporting year) is greater than certain percentage of the total loans and advances, the bank will be required to maintain additional capital.
5. Quality of customer service: BB expects that banks will develop their own methodology to assess the quality of customer service and conduct yearly evaluation based on that methodology. Based on the assessment, bank will apply its prudence to determine capital charge for non assurance of quality customer service.

8.1.3.6 Strategic risk

Strategic risk means the current or prospective risk to earnings and capital arising from imperfection in business strategy formulation, inefficiencies in implementing business strategy, non-adaptability/less adaptability with the changes in the business environment and adverse business decisions. Strategic risk induces operational loss that consequentially hampers the capital base.

In this context, strategic risk possesses a significant space in the ICAAP of the banks. Following aspects should be considered in the calculation of capital charge for strategic risk:

- CAMELS rating
- Operating expenses as % of operating income
- Classified loans as % of total outstanding loans
- Classified loan recovery as % of total classified loans
- Written-off loans as % of total classified loans
- Interest waiver as % of total classified loans

Apart from the quantifiable aspects, strategic risk assessment process requires the following elements:

- Deposit growth plan
- Loans/advances growth plan
- Profit growth plan

Banks must prepare these for at least 3 years time span which will be based on sufficient justification.

8.1.3.7 Settlement risk

Settlement risk arises when an executed transaction is not settled as the standard settlement system suggests or within predetermined method. The banks pose to the risk when it fulfills its contractual obligations (payment or delivery), but the counterparty fails or defaults to do the same. Non-receiving or delayed receiving of receivable bills (foreign & domestic) will be evaluated to assess settlement risk. Number of such cases and the total value in taka will be examined. If total value in taka from such cases in a year (reporting year) is more than certain percentage of the total loans and advances, bank should maintain additional capital for that.

As settlement risk is a part of operational risk, to avoid duplication in capital calculation, if sum of capital charge against settlement risk becomes greater than the capital charge against operational risk under Pillar 1, netting off the capital charge will be required. In this case, capital charge against operational risk will be deducted from the sum of capital charge against settlement risk to calculate additional capital requirement under Pillar 2.

8.1.3.8 Appraisal of core risk management practice

Bangladesh Bank introduced core risk management system for assessing the risk management environment and practices in banks in 2003. In that respect, BB identified 6 (six) risk areas which are termed as core risks through issuing industry best practices framework. Those frameworks provided benchmark to be followed by the banks and suggested the banks to develop own assessment methodology for each core risks as well as to calculate own risk rating at least once a year. Thus, rigorous risk management framework of banks would require own assessment methodology and annual review. To ensure the stability of the business model and the soundness of the operational structural, appraisal of risk management structure of a bank is necessary. In this respect, banks must develop their own methodology for assessing each core risk separately which will be approved by Board of Directors. Based on these approved methodologies, each bank will conduct rigorous review on annual basis and derive rating for each risk. If rating in any of the core risks falls below a certain level bank should maintain additional capital for that/those risk/risks.

8.1.3.9 Environmental and climate change risk

Environmental and climate change risk refers to the uncertainty or probability of losses that originates from any adverse environmental or climate change events (natural or manmade) and/or the non-compliance of the prevailing national environmental regulations. This is a facilitating element of credit risk arising from environmental issues. These can be due to environmental impacts caused by and / or due to the prevailing environmental conditions. These increase risk as they bring an element of uncertainty or possibility of loss in the context of a financing transaction. Environmental and climate change risk can hamper the business stability of the borrowers in respect of both- i) profitability and ii) reputation. Consequentially, the extent of risk for the banks will be higher.

To evaluate this risk, Sector Environmental Due Diligence (EDD) Check List specified in Guidelines on Environmental Risk Management (ERM) issued vide BRPD Circular No. 01/2011 dated 30/01/2011 will be used. For the loans under the sectors specified in the guidelines and which will have EnvRR of 'High (H)'will be considered for the capital charge against this risk.

8.1.3.10 Other material risk

SRP requires that the bank's internal capital allocation process should cover all risks which have not been identified earlier but are material for the institution. The institution needs to consider all risks not specified above but it can be captured in the institution's operation and can be regarded as material. Risks may be appeared which are specific to the institution and derived from its non-standard activities or clientele but fall outside the scope of specified risk definitions under Pillar 1 and 2. The institution is free to use its own terminology and methodology to identify and charging capital for other material risks, although it should be able to explain these to BB in detail, along with the related risk measurement and management procedures. The responsibility of bank is to map out other relevant risk factors to elaborate an adequate risk identification mechanism. The institution needs to examine the materiality of the identified risk and the result of the assessment. In the context of an institution's activities, all risks which affect the achievement of business objectives should be considered material. Other risks (such as Accounting Risk, Human Resources Risk, Natural Disaster Risk) are usually difficult or impossible to quantify, thus their measurement and management typically call for qualitative methods. Therefore, institutions are advised to elaborate detailed methodologies for their evaluation and management which enable the revealing of risks and help to keep them under control.

8.2 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:

i. Evaluate the level and trend of material risks and their effect on capital levels;

ii. Evaluate the sensitivity and reasonableness of key assumptions used in the capital assessment measurement system;

iii. Determine that the bank holds sufficient capital against the various risks and is in compliance with established capital adequacy goals; and

iv. Assess its future capital requirements based on the bank's reported risk profile and make necessary adjustments to the bank's strategic plan accordingly.

8.3 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:

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

8.4 Stress testing

Stress testing is an important risk management tool that provides an indication of how much capital might be needed to absorb losses in different stressed situations. A rigorous and comprehensive stress-testing program must be in place. It will measure the vulnerability or exposure to the impacts of exceptional, rare but potentially occurring events like - interest rate changes, exchange rate fluctuations, changes in credit rating, events which influence liquidity, etc. The following methods can be employed for measuring the impact of the above factors in an SRP context:

a. Simple sensitivity tests determine the short-term sensitivity to a single risk factor,
b. Scenario analyses involve risk parameters (with low but positive probability) which change along a pre-defined scenario and examine the impact of these parameters.

Stress test shall be carried out assuming three different hypothetical scenarios:

a. Minor level shocks: These represent small shocks to the risk factors. The level for different risk factors can, however, vary.
b. Moderate level shocks: It envisages medium level of shocks and the level is defined in each risk factor separately.
c. Major level shocks: It involves big shocks to all the risk factors and is also defined separately for each risk factor.

The results of the stress test will contribute directly to the expectation that a bank will operate above the Pillar 1 minimum regulatory capital ratios. These results should also be portrayed in the capital plan of the bank.

8.5 Capital planning

Capital planning is a dynamic and ongoing process that, in order to be effective, is forward-looking in incorporating changes in a bank's strategic focus, risk tolerance levels, business plans, operating environment, or other factors that materially affect capital adequacy. Capital planning assists the bank's Board of Directors and senior management to:

i. identify risks, improve their understanding of the bank's overall risks, set risk tolerance levels, and assess strategic choices in longer-term planning,

ii. identify vulnerabilities such as concentrations and assess their impact on capital,

iii. integrate business strategy, risk management, capital and liquidity planning decisions, including due diligence for a merger or acquisition, and

iv. have a forward-looking assessment of the bank's capital needs, including capital needs that may arise from rapid changes in the economic and financial environment.

The most effective capital planning considers both short-term and long-term capital needs and is coordinated with a bank's overall strategy and planning cycles, usually with a forecast horizon of at least five years. Banks need to factor events that occur outside of the normal capital planning cycle into the capital planning process; for example, a natural disaster could have a major impact on future capital needs.

The capital planning process should be tailored to the overall risk, complexity, and corporate structure of the bank. The bank's range of business activities, overall risks and operating environment have a significant impact on the level of detail needed in a bank's capital planning. A more complex institution with higher overall risk is expected to have a more detailed planning process than an institution with less complex operations and lower risks. While the exact content, extent, and depth of the capital planning process may vary, an effective capital planning process includes the following components:

a. Identifying and evaluating risks

b. Setting and assessing capital adequacy goals that relate to risk

c. Maintaining a strategy to ensure capital adequacy and contingency planning

d. Ensuring integrity in the internal capital planning process and capital adequacy assessments.

9. Supervisory Review Evaluation Process

9.1 Introduction

ICAAP includes regulations of a bank's own supervisory review of capital positions aiming to reveal whether it has prudent risk management and sufficient capital to cover its risk profile. Supervisory Review Evaluation Process (SREP) of BB includes dialogue between BB and the bank's SRP team followed by findings/evaluation of the bank's ICAAP.

9.2 Principles of SREP of BB

BB will review and evaluate banks' ICAAP and strategies, as well as their ability to monitor and ensure their compliance with CRAR. BB will take appropriate supervisory action if they are not satisfied with the result of this process.

BB expects banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.

BB will intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk profile of a particular bank and will take rapid remedial action if capital is not maintained or restored.

9.3 SRP – SREP dialogue

SRP – SREP dialogue stands for an exclusive meeting between the SREP team of BB and SRP team of a bank. The objective of the dialogue is to determine the adequate level of capital needed for a bank by reviewing the ICAAP and strategies of the bank. The dialogue target to review the process by which a bank assesses its capital adequacy, risk position, resulting capital levels, and quality of capital held. The intensity and frequency of the dialogue depends on the level of complexity and magnitude of the banks' activities as well as the difference between the capital requirements assessed by the bank and BB.

Prior to the dialogue, BB also evaluates the degree to which a bank has in place a sound internal process to assess capital adequacy. The emphasis of the review should be on the quality of the bank's risk management and controls and should not result in supervisors functioning as bank management. The periodic review can involve some combination of:

- On-site examinations or inspections;
- Off-site review;
- Discussions with bank management;
- Review of work done by external auditors (provided it is adequately focused on the necessary capital issues); and
- Periodic reporting.

9.3.1 SREP Team

A SREP team is headed by the Executive Director of Banking Regulation and Policy Department, and other members of the team are General Managers of Banking Regulation and Policy Department, Department of Off-site Supervision, Department of Banking Inspection 1, 2, 3 & 4, Foreign Exchange Inspection Department and Foreign Exchange Policy Department. Deputy General Manager of Basel II Implementation Cell officiates as the Member Secretary of the team.

9.3.2 Terms of reference of the dialogue

a) Minimum capital requirement against credit, market and operational risks.

b) Risks to be covered under SRP e.g. residual risk of credit risk deriving from risk mitigation techniques, securitization risk, evaluation of core risk management, credit concentration risk, interest rate risk in the banking book, liquidity risk, settlement risk, reputation risk, strategic risk, and other material risks etc.

c) External factors e.g. risks deriving from the economic and regulatory environment, risks resulting from the business performance of the institution.

d) Adequate capital against comprehensive risks.

e) Stress testing exercises and results

In course of SRP-SREP dialogue, BB will review the bank's internal governance after the examination of the above elements. BB will also evaluate the bank's SRP findings and may require additional capital under supervisory actions in respect of the bank's financial position.

9.4 Methodology in reviewing SRP

9.4.1 Review of adequacy of risk assessment

BB assesses the degree to which internal targets and processes incorporate the full range of material risks faced by the bank. BB also reviews the adequacy of risk measures used in assessing internal capital adequacy and the extent to which these risk measures are also used operationally in setting limits, evaluating business line performance, and evaluating and controlling risks more generally. BB may consider the results of sensitivity analyses and stress tests conducted by the bank and how these results relate to capital plans.

9.4.2 Assessment of capital adequacy

BB will review the bank's processes to determine that:

a) Target levels of capital chosen are comprehensive and relevant to the current operating environment;

b) These levels are properly monitored and reviewed by senior management; and

c) The composition of capital is appropriate for the nature and scale of the bank's business.

BB will also consider the extent to which the bank has provided for unexpected events in setting its capital levels. This analysis should cover a wide range of external conditions and scenarios, and the sophistication of techniques and stress tests used should be commensurate with the bank's activities.

9.4.3 Assessment of the control environment

BB will consider the quality of the bank's management information reporting and systems, the manner in which business risks and activities are aggregated, and management's record in responding to emerging or changing risks.

In all instances, the capital level of a bank may be determined according to its risk profile and adequacy of its risk management process and internal controls. External factors such as business cycle effects and the macroeconomic environment may also be considered.

9.4.4 Supervisory review of compliance with minimum standards

Bank needs to include risk management standards, credit risk mitigation techniques to meet its capital requirement and disclosures. In particular, bank will be required to disclose features of its internal methodologies used in calculating minimum capital requirements. BB will ensure that these conditions are being met on an ongoing basis.

BB will focus on capital calculation methodologies and the size of capital as well as on the assessment of the adequacy of internal procedures. BB's assessment will emphasize on the harmony and effectiveness of internal limits, control procedures, risk management and internal governance.

9.5 Supervisory response

Having carried out the review process described above, BB may take appropriate action if banks are not satisfied with the results of the bank's own risk assessment and capital allocation. BB will consider the following actions:

a. intensifying the monitoring of the bank e.g. monitoring under early warning system, problem bank category;

b. restricting the payment of dividends;

c. restrictions on the bank's activities;

d. the bank must prepare and implement a satisfactory capital adequacy restoration plan;

e. the bank has to raise additional capital immediately; and

f. imposing other restrictions suited to the circumstances of the bank and its operating environment.

The permanent solution to banks' difficulties is not always increased capital. However, some of the required measures (such as improving systems and controls) may take a period of time to implement. Therefore, increased capital might be used as an interim measure while permanent measures to improve the bank's position are being put in place. Once these permanent measures have been put in place and have been seen by BB to be effective, the interim increase in capital requirements can be removed.

10. Market Discipline

10.1 Scope and purpose

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.

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

10.2 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 additionally published with such statements must be consistent with the audited statements.

10.3 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.

10.4 Frequency of disclosure

a) Banks should provide all required disclosures in both qualitative and quantitative form, as at end March of each year along with the annual financial statements[24]. Banks have to submit a copy of their disclosures to Department of Off-site Supervision of BB. Banks may make their annual disclosures both in their annual reports as well as their respective web sites. Qualitative

[24] The banks who close their account at the end of June, they should provide all required disclosures in both qualitative and quantitative form, as at end September of each year along with the annual financial statements.

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 III)" 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.

10.5 Disclosure framework

The general qualitative disclosure requirement:

For each separate risk area (e.g. credit, market, operational, banking book interest rate risk, equity) banks must describe their risk management objectives and policies, including:

- strategies and processes;
- the structure and organization of the relevant risk management function;
- the scope and nature of risk reporting and/or measurement systems;
- policies for hedging and/or mitigating risk and strategies and processes for monitoring the continuing effectiveness of hedges/mitigants.

In addition to the above, Banks are required to disclose the following:

- a full reconciliation of all regulatory capital elements back to the balance sheet in the audited financial statements;
- separate disclosure of all regulatory adjustments and the items not deducted from Common Equity Tier 1 according to paragraphs 3.5;
- a description of all limits and minima, identifying the positive and negative elements of capital to which the limits and minima apply;
- a description of the main features of capital instruments issued;
- banks which disclose ratios involving components of regulatory capital (eg "Equity Tier 1", "Core Tier 1" or "Tangible Common Equity" ratios) must accompany such disclosures with a comprehensive explanation of how these ratios are calculated.
- banks are also required to make available on their websites the full terms and conditions of all instruments included in regulatory capital.
- during the transition phase banks are required to disclose the specific components of capital, including capital instruments and regulatory adjustments that are benefiting from the transitional provisions.

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

a) Scope of application

b) Capital structure

c) Capital adequacy

d) Credit Risk

e) Equities: disclosures for banking book positions

f) Interest rate risk in the banking book (IRRBB)

g) Market risk
h) Operational risk
i) Leverage Ratio
j) Liquidity Ratio
k) Remuneration

Table 23: a) Scope of application

Qualitative Disclosures	(a)	The name of the top corporate entity in the group to which this guidelines applies.
	(b)	An outline of differences in the basis of consolidation for accounting and regulatory purposes, with a brief description of the entities[25] within the group (a) that are fully consolidated; (b) that are given a deduction treatment; and (c) that are neither consolidated nor deducted (e.g. where the investment is risk-weighted).
	(c)	Any restrictions, or other major impediments, on transfer of funds or regulatory capital within the group.
Quantitative Disclosures	(d)	The aggregate amount of surplus capital[26] of insurance subsidiaries (whether deducted or subjected to an alternative method) included in the capital of the consolidated group.

Table 24: b) Capital structure

Qualitative Disclosures	(a)	Summary information on the terms and conditions of the main features of all capital instruments, especially in the case of capital instruments eligible for inclusion in CET 1,Additional Tier 1 or Tier 2.
Quantitative Disclosures	(b)	The amount of Regulatory capital, with separate disclosure of: CET 1 Capital Additional Tier 1 Capital Total Tier 1 Capital Tier 2 Capital
	(c)	Regulatory Adjustments/Deductions from capital
	(e)	Total eligible capital

[25] Entity = securities, insurance and other financial subsidiaries, commercial subsidiaries, significant minority equity investments in insurance, financial and commercial entities.
[26] Surplus capital in unconsolidated regulated subsidiaries is the difference between the amount of the investment in those entities and their regulatory capital requirements.

Table25: c) Capital Adequacy

Qualitative Disclosures	(a)	A summary discussion of the bank's approach to assessing the adequacy of its capital to support current and future activities.
Quantitative Disclosures	(b)	Capital requirement for Credit Risk
	(c)	Capital requirement for Market Risk
	(d)	Capital requirement for Operational Risk
	(e)	Total capital, CET 1 capital, Total Tier 1 capital and Tier 2 capital ratio: • For the consolidated group; and • For stand alone
	(f)	Capital Conservation Buffer
	(g)	Available Capital under Pillar 2 Requirement

Table 26: d) Credit Risk

Qualitative Disclosures	(a)	The general qualitative disclosure requirement with respect to credit risk, including: • Definitions of past due and impaired (for accounting purposes); • Description of approaches followed for specific and general allowances and statistical methods; • Discussion of the bank's credit risk management policy; and
Quantitative Disclosures	(b)	Total gross credit risk exposures broken down by major types of credit exposure.
	(c)	Geographica1 distribution of exposures, broken down in significant areas by major types of credit exposure.
	(d)	Industry or counterparty type distribution of exposures, broken down by major types of credit exposure.
	(e)	Residual contractual maturity breakdown of the whole portfolio, broken down by major types of credit exposure.
	(f)	By major industry or counterparty type: • Amount of impaired loans and if available, past due loans, provided separately; • Specific and general provisions; and • Charges for specific allowances and charge-offs during

		the period.
	(g)	Gross Non Performing Assets (NPAs) Non Performing Assets (NPAs) to Outstanding Loans & advances **Movement of Non Performing Assets (NPAs)** Opening balance Additions Reductions Closing balance **Movement of specific provisions for NPAs** Opening balance Provisions made during the period Write-off Write-back of excess provisions Closing balance

Table 27: e) Equities: Disclosures for Banking Book Positions

Qualitative Disclosures	(a)	The general qualitative disclosure requirement with respect to equity risk, including: • differentiation between holdings on which capital gains are expected and those taken under other objectives including for relationship and strategic reasons; and • discussion of important policies covering the valuation and accounting of equity holdings in the banking book. This includes the accounting techniques and valuation methodologies used, including key assumptions and practices affecting valuation as well as significant changes in these practices.
Quantitative Disclosures	(b)	Value disclosed in the balance sheet of investments, as well as the fair value of those investments; for quoted securities, a comparison to publicly quoted share values where the share price is materially different from fair value.
	(c)	The cumulative realized gains (losses) arising from sales and liquidations in the reporting period.
	(d)	• Total unrealized gains (losses) • Total latent revaluation gains (losses)

		• Any amounts of the above included in Tier 2 capital.
	(e)	Capital requirements broken down by appropriate equity groupings, consistent with the bank's methodology, as well as the aggregate amounts and the type of equity investments subject to any supervisory provisions regarding regulatory capital requirements.

Table 28: f) Interest rate risk in the banking book (IRRBB)

Qualitative Disclosures	(a)	The general qualitative disclosure requirement including the nature of IRRBB and key assumptions, including assumptions regarding loan prepayments and behaviour of non-maturity deposits, and frequency of IRRBB measurement.
Quantitative Disclosures	(b)	The increase (decline) in earnings or economic value (or relevant measure used by management) for upward and downward rate shocks according to management's method for measuring IRRBB, broken down by currency (as relevant).

Table 29: g) Market risk

Qualitative Disclosures	(a)	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 Disclosures	(b)	The capital requirements for: interest rate risk; equity position risk; foreign exchange risk; and Commodity risk.

Table 30: h) Operational risk

Qualitative Disclosures	(a)	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 Disclosures	(b)	The capital requirements for operational risk

Table 31: i) Liquidity Ratio

Qualitative Disclosures	(a)	Views of BOD on system to reduce liquidity Risk Methods used to measure Liquidity risk Liquidity risk management system Policies and processes for mitigating liquidity risk
Quantitative Disclosures	(b)	Liquidity Coverage Ratio Net Stable Funding Ratio (NSFR) Stock of High quality liquid assets Total net cash outflows over the next 30 calendar days Available amount of stable funding Required amount of stable funding

Table 32: j) Leverage Ratio

Qualitative Disclosures	(a)	Views of BOD on system to reduce excessive leverage Policies and processes for managing excessive on and off-balance sheet leverage Approach for calculating exposure
Quantitative Disclosures	(b)	Leverage Ratio On balance sheet exposure Off balance sheet exposure Total exposure

Table 32: k) Remuneration

The following are the main disclosures on remuneration that banks should include in their Pillar 3 document. Banks are strongly encouraged not only to disclose the required information, but to articulate as far as possible how these factors complement and support their overall risk management framework.

The requested quantitative disclosures detailed below should only cover senior management and other material risk takers and be broken down between these two categories.

Qualitative Disclosures	(a)	Information relating to the bodies that oversee remuneration. Disclosures should include: Name, composition and mandate of the main body overseeing remuneration. External consultants whose advice has been sought, the body by which they were commissioned, and in what areas of the remuneration process. A description of the scope of the bank's remuneration policy (eg by regions, business lines), including the extent to which it is applicable to foreign subsidiaries and branches. A description of the types of employees considered as material risk takers and as senior managers, including the number of employees in each group.
	(b)	Information relating to the design and structure of remuneration processes. Disclosures should include: An overview of the key features and objectives of remuneration policy. Whether the remuneration committee reviewed the firm's remuneration policy during the past year, and if so, an overview of any changes that were made. A discussion of how the bank ensures that risk and compliance employees are remunerated independently of the businesses they oversee.
	(c)	Description of the ways in which current and future risks are taken into account in the remuneration processes. Disclosures should include: An overview of the key risks that the bank takes into account when implementing remuneration measures. An overview of the nature and type of the key measures used to take account of these risks, including risks difficult to measure (values need not be disclosed).

		A discussion of the ways in which these measures affect remuneration. A discussion of how the nature and type of these measures has changed over the past year and reasons for the change, as well as the impact of changes on remuneration.
	(d)	Description of the ways in which the bank seeks to link performance during a performance measurement period with levels of remuneration. Disclosures should include: An overview of main performance metrics for bank, top-level business lines and individuals. A discussion of how amounts of individual remuneration are linked to bank-wide and individual performance. A discussion of the measures the bank will in general implement to adjust remuneration in the event that performance metrics are weak.[27]
	(e)	Description of the ways in which the bank seek to adjust remuneration to take account of longer-term performance. Disclosures should include: A discussion of the bank's policy on deferral and vesting of variable remuneration and, if the fraction of variable remuneration that is deferred differs across employees or groups of employees, a description of the factors that determine the fraction and their relative importance. A discussion of the bank's policy and criteria for adjusting deferred remuneration before vesting and (if permitted by national law) after vesting through clawback arrangements.
	(f)	Description of the different forms of variable remuneration that the bank utilises and the rationale for using these different forms. Disclosures should include: An overview of the forms of variable remuneration offered (ie cash, shares and share-linked instruments and other forms[28]. A discussion of the use of the different forms of variable remuneration and, if the mix of different forms of variable remuneration differs across employees or groups of employees), a description the factors that determine the mix and their relative importance.
Quantitative Disclosures	(g)	Number of meetings held by the main body overseeing remuneration during the financial year and remuneration paid to its member.

[27] This should include the bank's criteria for determining "weak" performance metrics.
[28] A description of the elements corresponding to other forms of variable remuneration (if any) should be provided

	(h)	Number of employees having received a variable remuneration award during the financial year. Number and total amount of guaranteed bonuses awarded during the financial year. Number and total amount of sign-on awards made during the financial year. Number and total amount of severance payments made during the financial year..
	(i)	Total amount of outstanding deferred remuneration, split into cash, shares and share-linked instruments and other forms. Total amount of deferred remuneration paid out in the financial year.
	(j)	Breakdown of amount of remuneration awards for the financial year to show: - fixed and variable. - deferred and non-deferred. - different forms used (cash, shares and share linked instruments, other forms).
	(k)	Quantitative information about employees' exposure to implicit (eg fluctuations in the value of shares or performance units) and explicit adjustments (eg clawbacks or similar reversals or downward revaluations of awards) of deferred remuneration and retained remuneration: Total amount of outstanding deferred remuneration and retained remuneration exposed to ex post explicit and/or implicit adjustments. Total amount of reductions during the financial year due to ex post explicit adjustments. Total amount of reductions during the financial year due to ex post implicit adjustments.

Annex 1: Eligibility Criteria for the Inclusion in Common Equity Tier 1 Capital

A. Criteria for classification as common equity tier 1 capital for the local banks are as follows:

1. Represents the most subordinated claim in liquidation of the bank.
2. Entitled to a claim on the residual assets that is proportional with its share of issued capital, after all senior claims have been repaid in liquidation (i.e. has an unlimited and variable claim, not a fixed or capped claim).
3. Principal is perpetual and never repaid outside of liquidation (setting aside discretionary repurchases or other means of effectively reducing capital in a discretionary manner that is allowable under relevant law).
4. The bank does nothing to create an expectation at issuance that the instrument will be bought back, redeemed or cancelled nor do the statutory or contractual terms provide any feature which might give rise to such an expectation.
5. Distributions are paid out of distributable items (retained earnings included). The level of distributions is not in any way tied or linked to the amount paid in at issuance and is not subject to a contractual cap (except to the extent that a bank is unable to pay distributions that exceed the level of distributable items).
6. There are no circumstances under which the distributions are obligatory. Nonpayment is therefore not an event of default.
7. Distributions are paid only after all legal and contractual obligations have been met and payments on more senior capital instruments have been made. This means that there are no preferential distributions, including in respect of other elements classified as the highest quality issued capital.
8. It is the issued capital that takes the first and proportionately greatest share of any losses as they occur. Within the highest quality capital, each instrument absorbs losses on a going concern basis proportionately and paripassu with all the others.
9. The paid in amount is recognized as equity capital (i.e. not recognized as a liability) for determining balance sheet insolvency.
10. The paid in amount is classified as equity under the relevant accounting standards.
11. It is directly issued and paid-in and the bank can not directly or indirectly have funded the purchase of the instrument.
12. The paid in amount is neither secured nor covered by a guarantee of the issuer or related entity or subject to any other arrangement that legally or economically enhances the seniority of the claim.

13. It is only issued with the approval of the owners of the issuing bank, either given directly by the owners or, if permitted by applicable law, given by the Board of Directors or by other persons duly authorized by the owners.
14. It is clearly and separately disclosed on the bank's balance sheet.

B. Criteria for classification as common equity tier 1 capital for the foreign banks operating in Bangladesh are as follows:

1. Represents the most subordinated claim in liquidation of the operations of the bank in Bangladesh.
2. Entitled to a claim on the residual assets which is proportional to its share of paid up capital, after all senior claims have been repaid in liquidation (i.e. has an unlimited and variable claim, not a fixed or capped claim).
3. Principal is perpetual and never repaid outside of liquidation (except with the approval of BB).
4. Distributions to the Head Office of the bank are paid out of distributable items (retained earnings included). The level of distributions is not in any way tied or linked to the amount paid up at issuance and is not subject to a contractual cap (except to the extent that a bank is unable to pay distributions that exceed the level of distributable items).
5. Distributions to the Head Office of the bank are paid only after all legal and contractual obligations have been met and payments on more senior capital instruments have been made. This means that there are no preferential distributions, including in respect of other elements classified as the highest quality issued capital.
6. This capital takes the first and proportionately greatest share of any losses as they occur.
7. It is clearly and separately disclosed in the bank's balance sheet.

Annex 2: Minority Interest (for Consolidated Reporting Only)

Banks should recognize minority interests that arise from consolidation of less than wholly owned banks, financial institution, merchant bank or securities firm in CRAR on consolidated basis to the extent specified below:

A-1-1: Common shares issued by consolidated subsidiaries

Minority interest arising from the issue of common shares by a fully consolidated subsidiary of a bank may receive recognition in CET1 only if: (1) the instrument giving rise to minority interest is common share, and (2) the subsidiary that issued the instrument is itself a bank, financial institution, merchant bank or securities firm. The amount of minority interest recognized in CET1 capital will be calculated as follows:

a. Total minority interest meeting the two criteria above minus the amount of the surplus CET1 of the subsidiary attributable to the minority shareholders.

b. Surplus CET1 of the subsidiary is calculated as the CET1 of the subsidiary minus the lower of:

- The minimum CET1 requirement of the subsidiary plus the capital conservation buffer (i.e. 7% of risk weighted assets).
- The portion of the consolidated minimum CET1 requirement plus the capital conservation buffer (i.e. 7% of consolidated risk weighted assets) that relates to the subsidiary.

c. The amount of the surplus CET1 that is attributable to the minority shareholders is calculated by multiplying the surplus CET1 by the percentage of CET1 that is held by minority shareholders.

A-1-2:Tier 1 qualifying capital issued by consolidated subsidiaries

Tier 1 capital instruments issued by a fully consolidated subsidiary of a bank to third party investors (including amounts under the previous paragraph) may receive recognition in Tier 1 capital only if the instruments, if issued by the bank, meet the criteria for classification as Tier 1 capital.

The amount of capital that will be recognized in Tier 1 capital will be calculated as follows:

a. Total Tier 1 capital of the subsidiary issued to third parties minus the amount of surplus Tier 1 capital of the subsidiary attributable to the third party investors.

b. Surplus Tier 1 capital of the subsidiary is calculated as Tier 1 capital of the subsidiary minus lower of:

- The minimum Tier 1 requirement of the subsidiary plus the capital conservation buffer (i.e. 10.0% of risk weighted assets)
- The portion of consolidated minimum Tier 1 capital requirement plus the capital conservation buffer (i.e. 10.0% of consolidated risk weighted assets) that relates to the subsidiary.

c. The amount of surplus Tier 1 capital that is attributable to third party investors is calculated by multiplying the surplus Tier 1 capital by the percentage of Tier 1 capital that is held by third party investors.

The amount of Tier 1 capital that will be recognized in Additional Tier 1 will exclude the amounts recognized in CET1 as mentioned above.

Tier 1 and Tier 2 qualifying capital issued by consolidated subsidiaries

Total capital instruments (i.e. Tier 1 and Tier 2 capital instruments) issued by a fully consolidated subsidiary of the bank to third party investors (including amounts under paragraph A-1-1 and A-1-2) may receive recognition in Total Capital only if the instruments would, if issued by the bank, meet all of the criteria for classification as Tier 1 or Tier 2 capital.

The amount of this capital that will be recognized in consolidated Total Capital will be calculated as follows:

a. Total capital instruments of the subsidiary issued to third parties minus the amount of the surplus Total Capital of the subsidiary attributable to the third party investors.

b. Surplus Total Capital of the subsidiary is calculated as the Total Capital of the subsidiary minus the lower of:

   - the minimum Total Capital requirement of the subsidiary plus the capital conservation buffer (i.e. 12.5% of risk weighted assets)
   - the portion of the consolidated minimum Total Capital requirement plus the capital conservation buffer (i.e. 12.5% of consolidated risk weighted assets) that relates to the subsidiary.

c. The amount of the surplus Total Capital that is attributable to the third party investors is calculated by multiplying the surplus Total Capital by the percentage of Total Capital that is held by third party investors.

The amount of the Total Capital that will be recognized in Tier 2 will exclude amounts recognized in CET1 and amounts recognized in Additional Tier 1.

An illustrative example for calculation of minority interest and other capital issued out of consolidated subsidiaries that is held by third parties is given in the next page:

An illustrative example for calculation of minority interest

A banking group consists of two legal entities that are both banks. Bank A is the parent and Bank B is the subsidiary and their unconsolidated balance sheets are as given below:

Balance Sheet of Bank A		**Balance Sheet of Bank B**	
Assets		**Assets**	
Loan to Customers	725	Loan to Customers	500
Other Assets	125	Other Assets	100
Investment in CET1 of Bank B	80		
Investment in AT1 of Bank B	30		
Investment in the T2 of Bank B	40		
Total	1000	**Total**	600
Liabilities and Equity		**Liabilities and Equity**	
Depositors	750	Depositors	400
Tier 2	70	Tier 2	60
Additional T 1	60	Additional T 1	40
Common Equity	120	Common Equity	100
Total	1000	**Total**	600

The balance sheet of Bank A shows that in addition to loans to its customers, it owns 80% of the common shares of Bank B, 75% of the additional Tier 1 capital of Bank B and 66.67% of the Tier 2 capital of Bank B. The ownership of the capital of Bank B is therefore as follows:

Capital Issue by Bank B			
	Amount issued to Parent (Bank A)	Amount issued to third parties (Minority Interest)	Total
Common Equity	80	20	100
Additional Tier 1	30	10	40
Tier 1	**110**	**30**	**140**
Tier 2	40	20	60
Total Capital	**150**	**50**	**200**

Consolidated Balance Sheet	
Assets	
Loan to customers	1225
Other Assets	225
Total Assets	**1450**
Liabilities and equity	

Depositors	1150
Tier 2 issued by subsidiary to third party	20
Tier 2 issued by parent	70
Additional Tier 1 issued by subsidiary to third party	10
Additional Tier 1 issued by parent	60
Common Equity issued by subsidiary to third party	20
Common equity issued by parent	120
Total Liabilities and equity	**1450**

In consolidated accounts, the CET1 of Tk. 80, AT1 of Tk. 30 and Tier 2 of Tk. 40 of Bank B issued to Parent A netted against similar amount of investment reflected in the asset side of Parent A's balance sheet.

For illustrative purposes Bank B is assumed to have risk weighted assets of 1000 against the assets valuing 1000. In this example, the minimum capital requirements of Bank B and the subsidiary's contribution to the consolidated requirements are the same since Bank B does not have any loans to Bank A. This means that it is subject to the following minimum plus capital conservation buffer requirements and has the following surplus capital.

Minimum and surplus capital of Bank B			
	Minimum plus capital conservation buffer	**Capital available**	**Surplus**
CET1 (4.5%+2.5%=7%)	70 (=7% of 1000)	100	30 (=100-70)
T1 (6%+2.5%=8.5%)	85 (=8.5% of 1000)	140 (= 100+40)	55 (=140-85)
Total capital (10%+2.5%=12.5%)	125 (= 12.5% of 1000)	200 (=100+40+60)	75 (=200-125)

The following table illustrates how to calculate the amount of capital issued by the Bank B is to be included in consolidated capital, following the calculation procedure set out above.

Bank B: Amount of capital issued to third parties included in consolidated capital					
	Total Amount issued	Amount issued to third parties	Surplus	Surplus attributable to third parties (i.e. amount excluded from consolidated capital)	Amount included in consolidated capital
	(a)	(b)	(c)	d=(c)*(b)/(a)	e= (b) – (d)
CET1	100	20	30	6.00	14.00
T1	140	30	55	11.79	18.21
TC	200	50	75	18.75	31.25

The following table summarizes the components of capital for the consolidated group based on the amounts calculated in the table above. Additional Tier 1 is calculated as the difference between CET1 and Tier 1, while Tier 2 is the difference between total capital and Tier 1.

	Total amount issued by parent (all of which is to be included in consolidated capital)	Amount issued by subsidiaries to third parties to be included in consolidated capital	Total issued amount (by parent and subsidiary) to be included in consolidated capital
CET1	120	14.00	134.00
Additional Tier 1	60	4.21	64.21
Tier 1	180	18.21	198.21
Tier 2	70	13.04	83.04
Total capital	250	31.25	281.25

Annex 3: Investment not more than 10% (illustration)

Investment in the equity and or other capital instruments of banking, financial and insurance entities (that are outside the scope of regulatory consolidation) where the bank does not own more than 10% of the paid up capital of the investee entity.

For example,

A. Regulatory Capital Structure of a Bank (BDT in crore)

Paid-up capital	400
Share Premium (non repayable)	50
Statutory Reserve	100
Retained Earnings	50
Others	00
Total common equity Tier 1 capital	**600**
Eligible Additional Tier 1capital	25
Total Tier 1 capital	**625**
Eligible Tier 2 capital	125
Total Eligible capital	**750**

B. Bank Investment in Entity A & B (where the bank does not own more than 10% of the paid up capital of the entity

Entity	Capital Structure of the Investee entity					Investment of bank in the entity			
	Paid up capital[29]	Common Equity Tier 1	Additional Tier 1	Tier 2	Total	Common Equity	Additional Tier 1	Tier 2	Total Investment
A	450	500	15	35	550	25	5	10	40
B	350	400	0	50	450	20	0	10	30
Total investment of bank in other entities						45	5	20	70

[29] Paid up capital is the component of Common Equity Tier 1 capital

Working:

Check-1: Bank's total holding of capital instruments is not more than 10% of the paid up capital of the entity.

Entity A - total investment of 40 is less than 45 (10% of 450)

Entity B - total investment of 30 is less than 35 (10% of 350)

Check-2: Total of all holdings in aggregate exceed 10% of the bank's Equity

- Bank's Equity (Total of Paid up capital, Share premium, Statutory reserve and Retained earnings) = (400+50+100+50) = 600

The aggregate of the total investment is 70; which is more than 60 (10% of 600, i.e. total Bank's equity of the bank). Hence the excess amount from 10% of banks equity i.e. 10 (70 minus 60) is required to be deducted.

In order to calculate proportional deductions, we need to calculate the following:

i. Proportion of total capital holdings held in common equity, additional tier 1 and tier 2.

The proportion of bank's investment in the common equity of these entities = 45/70 = 0.6428

The deduction from common equity Tier 1 of bank = 0.643 * 10 = 6.43

Similarly,

The proportional deduction from Additional tier 1 = 5/70*10 = 0.71

The proportional deduction from tier 2 = 20/70*10 = 2.86

ii. Proportion of investment held in the banking book and the trading book

Supposing that the bank has kept its investment into the trading book and banking book in the following manner;

	Common Equity	Additional Tier 1	Tier 2	Total
Total investment in A & B held in the banking book	35	5	15	55
Total investment in A & B held in the trading book	10	0	5	15
Total	45	5	20	70

Common equity investments of the bank in A & B which are to be risk weighted = 45-6.43 = 38.57

Banking book exposure subject to risk weight = (35/45)*38.57 = 30

Trading book exposure to be risk weighted = (10/45) * 38.57 = 8.57

Similarly Additional tier 1 and Tier 2 capital investments would be risk weighted i.e.

For Additional Tier 1 investment to be risk weighted = 5-0.71 = 4.29

Banking book exposure subject to risk weight = (5/5)*4.29 = 4.29

Trading book exposure to be risk weighted = (0/5) * 4.29 = 0

For Tier 2 investment to be risk weighted = 20-2.86 = 17.14

Banking book exposure subject to risk weight = (15/20)*17.14 = 12.86

Trading book exposure to be risk weighted = (5/20) * 17.14 = 4.28

Annex 4: Criteria for Inclusion of Instruments in Regulatory Capital

The scheduled banks in Bangladesh may issue instrument (i.e. bond) to qualify as regulatory capital (Additional Tier 1 or Tier 2) subject to the prior approval of Bangladesh Bank (BB).

General Eligibility Criteria of to Qualify As Regulatory Capital

1. The instruments should be issued by the bank (i.e. not by any 'SPV' etc. set up by the bank for this purpose) and fully paid up.
2. The amount of the instrument to be raised may be decided by the Board of Directors of banks.
3. The rate of dividend payable to the investors may be either a fixed rate or a floating rate referenced to a market determined Taka interest benchmark rate.
4. The instrument shall not be issued with a 'put option'. However, banks may issue the instruments with a call option at a particular date subject to following conditions:
    a. The call option on the instrument is permissible after the instrument has run for at least ten years;
    b. To exercise a call option a bank must receive prior approval of BB(Banking Regulation and Policy Department); and
    c. A bank must not do anything which creates an expectation that the call will be exercised; and
    d. Banks must not exercise a call unless:
        i. They replace the called instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank; or
        ii. The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised.

    The use of tax event and regulatory event calls may be permitted. However, exercise of the calls on account of these events is subject to the requirements set out in points (b) to (d). BB will permit the bank to exercise the call only if the BB is convinced that the bank was not in a position to anticipate these events at the time of issuance of the instrument.
5. The coupon or dividend payment policy must be well articulated in the debt indenture in such a manner that there will no scope to arise any conflict of interest between or among the ordinary shareholders and the holders of the instrument.
6. The instrument cannot have a credit sensitive coupon feature, i.e. a dividend that is reset periodically based in whole or in part on the banks' credit standing. For this purpose, any reference rate including a broad index which is sensitive to changes to the bank's own

creditworthiness and / or to changes in the credit worthiness of the wider banking sector will be treated as a credit sensitive reference rate. Banks desirous of offering floating reference rate may take prior approval of the BB (BRPD) as regard permissibility of such reference rates.

7. In the event of the liquidation or winding up of the issuer's business, the claims of the investors in this instrument shall be

   (i) Superior to the claims of investors in equity shares;

   (ii) Subordinated to the claims of depositors and general creditors of the bank; and

   (iii) is neither secured nor covered by a guarantee of the issuer nor related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis bank creditors.

8. The instrument cannot contribute to liabilities exceeding assets if such a balance sheet test forms part of a requirement to prove insolvency under any law or otherwise.
9. Neither the bank nor a related party over which the bank exercises control or significant influence (as defined under relevant Accounting Standards) should purchase the instrument, nor can the bank directly or indirectly should fund the purchase of the instrument. The same restriction will also apply to the employees' retirement benefit funds of the issuing bank. Banks should also not grant advances against the security of the instrument issued by them.
10. The instrument cannot have any features that hinder re-capitalization, such as provisions which require the issuer to compensate investors if a new instrument is issued at a lower price during a specified time frame.
11. Banks should comply with the terms and conditions, if any, stipulated by BSEC / other regulatory authorities in regard to issue of the instruments.

Specific Eligibility Criteria of to Qualify As Additional Tier 1 Capital

a. Maturity Period

The instrument shall be perpetual i.e. there is no maturity date and there are no step-ups or other incentives to redeem.

b. Repurchase / Buy-back / Redemption

i) Principal of the instruments may be repaid (e.g. through repurchase or redemption) only with prior approval of BB and banks should not assume or create market expectations that supervisory approval will be given (this repurchase / buy-back /redemption of the principal is in a situation other than in the event of exercise of call option by the bank. One of the major differences is that in the case of the former, the option to offer the instrument for repayment on announcement of the decision to repurchase / buy-back /redeem the instrument, would lie with the investors whereas, in case of the latter, it lies with the bank).

ii) Banks may repurchase / buy-back / redeem the instruments only if:

a) They replace such instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank; or

b) The bank demonstrates that its capital position is well above the minimum capital requirements after the repurchase / buyback / redemption.

c. Dividend Discretion

i) The bank must have full discretion at all times to cancel distributions/payments;

ii) Cancellation of discretionary payments must not be an event of default;

iii) Banks must have full access to cancelled payments to meet obligations as they fall due;

iv) Cancellation of distributions/payments must not impose restrictions on the bank except in relation to distributions to common stakeholders; and

v) Dividends must be paid out of distributable items;

vi) The dividend shall not be cumulative. i.e., dividend missed in a year will not be paid in future years, even if adequate profit is available and the level of CRAR conforms to the regulatory minimum. When dividend is paid at a rate lesser than the prescribed rate, the unpaid amount will not be paid in future years, even if adequate profit is available and the level of CRAR conforms to the regulatory minimum.

vii) The instrument cannot have a credit sensitive coupon feature, i.e. a dividend that is reset periodically based in whole or in part on the banks' credit standing. For this purpose, any reference rate including a broad index which is sensitive to changes to the bank's own creditworthiness and / or to changes in the credit worthiness of the wider banking sector will be treated as a credit sensitive reference rate. Banks desirous of offering floating reference rate may take prior approval of the BB as regard permissibility of such reference rates.

viii) In general, it may be in order for banks to have dividend stopper arrangement that stop dividend payments on common shares in the event the holders of Additional Tier 1 instruments are not paid dividend/coupon. However, dividend stoppers must not impede the full discretion that bank must have at all times to cancel distributions/payments on the Additional Tier 1 instrument, nor must they act in a way that could hinder the re-capitalization of the bank. For example, it would not be permitted for a stopper on an Additional Tier 1 instrument to:

- attempt to stop payment on another instrument where the payments on this other instrument were not also fully discretionary;
- prevent distributions to shareholders for a period that extends beyond the point in time that dividends/coupons on the Additional Tier 1 instrument are resumed;
- impede the normal operation of the bank or any restructuring activity (including acquisitions/disposals).

A stopper may act to prohibit actions that are equivalent to the payment of a dividend, such as the bank undertaking discretionary share buybacks, if otherwise permitted.

d. Loss Absorption Features

The instrument should have principal loss absorption through either (i) conversion to common shares at an objective pre-specified trigger point or (ii) a write-down mechanism which allocates losses to the instrument at a pre-specified trigger point.

The write-down will have the following effects:

a. Reduce the claim of the instrument in liquidation;

b. Reduce the amount re-paid when a call is exercised; and

c. Partially or fully reduce dividend payments on the instrument.

e. Limits

While complying with minimum Tier 1 of 6% of risk weighted assets, a bank cannot admit, Perpetual Non-Cumulative Preference Shares (PNCPS) together with Perpetual Debt Instruments (PDI) in Additional Tier 1 Capital, more than 1.5% of risk weighted assets. However, once this minimum total Tier 1 capital has been complied with, any additional PNCPS and PDI issued by the bank can be included in Total Tier 1 capital reported. Excess PNCPS and PDI can be reckoned to comply with Tier 2 capital if the latter is less than 4% of RWAs.

Specific Eligibility Criteria for Subordinated Debt to Qualify as Tier 2 Capital

1. Introduction

The scheduled banks in Bangladesh may issue Subordinated Debt to qualify as regulatory capital (Tier 2 or Tier 3) subject to the prior approval of Bangladesh Bank (BB).

2. Definition

- **Debt:** Debt will be defined as 'the selling or issuing debt securities by a banking company through public issue or private placement or combination of both, to collect fund on a long term basis. A debt will be generally a fixed interest-bearing debt instruments, implying that the issuer or borrower will pay the interest on predetermined time schedules but the principal will be repaid on maturity. The amount that will be repaid on maturity is called the bond's face value or par value. The number of years until the face value is paid will be called the bond's time to maturity. The debt can also be a 'zero-coupon debt' which will be issued at discount and redeemed at par value or face value.

- **Subordinated debt:** The Subordinated will be referred to the debt instruments which will be subordinated to deposits and other liabilities of the bank. It implies that the

claims of the subordinated debt holders will be junior to the claims of the depositors and the other creditors.

- **Convertible subordinated debt:** Convertible bonds will be the bonds which will have a conversion provision. The conversion provision will give the holder the option to exchange the part or full of the bond for a number of ordinary shares of the issuing company according to the conversion ratio after a certain period. When first issued, they act just like regular subordinated debt with the promise to pay its obligation to its holders.

3. Qualifying criteria as regulatory capital

The subordinated debts must meet the following eligibility criteria of hybrid capital instruments to qualify as the Tier-2 Capital component:

Basic criteria:

(i) The debt will be unsecured and fully paid-up;

(ii) CAMELS rating of the banks should be at least '2' ; Issue/Debt/Instrument rating and Issuer's entity rating will be at least '3';

(iii) The debt may be convertible into Ordinary Shares in part or full according to the conversion ratio subject to the prior approval of BB;

(iv) It will be ineligible as collateral for a loan made by the issuing bank;

(v) This instrument will not be insured by the deposit insurance scheme.

Permanence:

(i) The debt must have a maturity of at least 05 (five)years;

(ii) The amount of subordinated debt in the regulatory capital will have to be reduced (amortized) in the last five (05) of the bond's life by 20% (Twenty percent) from the amount of the instrument at the beginning of each of the last five (05) years of the instrument's life.

(iii) In the last year of the instrument's life, the amount of subordinated debt will not be included bank's regulatory capital (Tier 2 or Tier 3).

(iv) Once any scheduled payments of principal begin, all payments shall be made at least annually and the amount repaid each year shall be no less than in the prior year;

(v) The approved redemption plan cannot be altered without the prior approval of BB.

Ranking among the claimants:

(i) The interest and the dividend payment policy must be well articulated in the debt indenture in such a manner that there will no scope to arise any conflict of interest between or among the ordinary shareholders and the subordinated debt holders;

(ii) In the event of the liquidation or winding up of the issuer's business and distribution of return on investment, the bond holders will be ranked after claims of the depositors and other creditors, i.e. it will be ranked immediately ahead of ordinary share holders;

Quantitative limits:

(i) Eligibility limit: The total amount of subordinated debt that a bank may consider as Tier 2 capital will be limited to a maximum of 30% of the amount of Tier 1 capital. The total amount of Tier 2 capital (supplementary capital) elements will be limited to a maximum of 100% of the total amount of Tier 1 capital (core capital);

(ii) Coupon/Interest Rate: Coupon/Interest rate and yield of the debt will be well-matched/compatible with the prevailing market condition.

(iii) BB may set any other quantitative limits if deem necessary applicable to the convertible bonds.

In addition to Tier 2 capital, certain subordinated debt may qualify as Tier 3 capital. Tier 3 capital will be limited to 250% of a bank's Tier 1 capital that is available after meeting credit risk capital requirement to support market risk. This means that a minimum of about 28.5% of market risk to be supported by Tier-1 capital. To be considered as Tier 3 capital, subordinated debt must:

- be unsecured and fully paid up;
- have an original maturity of at least 02 (two) years;
- will not redeemable before maturity without prior BB approval;
- include a lock-in clause precludes payment of either interest or principal (even at maturity), if the payment would cause the issuing bank's risk-based capital ratio to fall or remain below the minimum as required under Risk Based Capital Adequacy for bank (RBCA).
- neither contains nor is covered by any covenant, terms, or restrictions that are inconsistent with safe and sound banking practices.

4. Application process

The scheduled banks are required to comply the following procedures for obtaining approval to issue subordinated debt:

- **The application of issuing subordinated debt should include the following documents:**
    - Term sheet on the complete structure of subordinated debt by specifying the salient features of the bond,
    - Full version of bond indenture/agreement with prospective debt holders. The indenture will include:
        - Issue size
            - Amount of Issue,
            - Formation of lot,
            - Number of issuing units.
        - Coupon/Interest rate
        - Coupon/Interest payment schedule
        - Coupon determination methodology
        - Yield/Effective rate of return
        - Yield determination methodology
        - Maturity (Life) of the instrument and
        - Redemption schedule and redemption procedure
        - Transferability/Tradability
        - Tax aspects
        - Lock-in provision (in case of public issue)
        - Conversion
            - Date of conversion,
            - Detailed conversion methodology,
            - Conversion schedule,
    - Credit rating report of the instrument and the issuer
    - Trust deed (agreement document with trustee)
    - Agreement document with the manager to the issue (in case of IPO issue)/lead arranger (in case of private placement)

- Agreement document with the underwriter (if there is any)
- Audited financial statements of the issuer for the previous 5 (five) years,
- Plan for the utilization of the proceeds collected from the issue/Capital plan
- Statement of changes in the bank's capital structure due to the issue of the debt
- SEC clearance certificate to issue the instrument

- The issuer must submit the list of the subscribers of the instrument to BB within 07 (seven) working days after closing of subscription of the debt.

- The issue of the debt must not violate the Bank Companies Act 1991.

5. Reciprocal holdings

In case of reciprocal holding/issue of subordinated debt by banks the amount of such holding/issuance will not be eligible for capital treatment.

6. Restriction on holdings

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.

7. Mandatory provisions of the instrument

The following language, which has been drafted to comply with the requirements of applicable rules, regulations, and policies, must appear in every note, debenture, or note agreement.

A. On the face of the note: "THIS OBLIGATION IS NOT A DEPOSIT AND IS NOT INSURED BY ANY DEPOSIT INSURANCE SCHEME."

B. On the face of the note: "THIS OBLIGATION IS SUBORDINATED TO CLAIMS OF DEPOSITORS AND OTHER CREDITORS, IS UNSECURED, AND IS INELIGIBLE AS COLLATERAL FOR A LOAN BY THE (NAME OF ISSUING BANK)."

(Note: This clause may be combined with the required language set forth in (A), above.)

C. A general subordination clause must be added that specifies the subordination of the note. The clause must be in substantially the following form:

"The indebtedness of the bank evidenced by this note, including the principal and premium, if any, and interest shall be subordinate and junior in right of payment to its obligations to its

depositors, its obligations under bankers' acceptances and letters of credit, and its obligations to its other creditors, including its obligations to the Bangladesh Bank, Deposit Insurance Trust Fund (DITF). In the event of any insolvency, receivership, conservatorship, reorganization, readjustment of debt or similar proceedings or any liquidation or winding up of or relating to the bank, whether voluntary or involuntary, all such obligations shall be entitled to be paid in full before any payment shall be made on account of the principal of, or premium, if any, or interest, on the note. In the event of any such proceedings, after payment in full of all sums owing on such prior obligations, the holder, of the note, together with any obligations of the bank ranking on a parity with the note, shall be entitled to be paid from the remaining assets of the bank the unpaid principal thereof and any unpaid premium, if any, and interest before any payment or other distribution, whether in cash, property, or otherwise, shall be made on account of any capital stock or any obligations of the bank ranking junior to the notes. Nothing herein shall impair the obligation of the bank, which is absolute and unconditional, to pay the principal of and any premium and interest on the note according to its terms."

8. Provision of protection and covenants

Subordinate debt will be supported by agreement of trust or warranties stating that the bank is a duly organized banking company, that there has been no material adverse change in its condition since the date of the agreement and is not in default on any agreement or in violation of its charter or by laws. The agreement will assure repayment of the benefit of the instrument holders. By their nature, subordinated debt must be subordinate to all but equity holders.

9. Reserve requirements

The total amount of subordinated debt is to be reckoned as liability for the calculation of net demand and time liabilities for the purpose of reserve requirements and, as such, will attract CRR/SLR requirements.

10. Disclosure

The total amount of subordinated debt shall be disclosed in the balance sheet under the head 'subordinated debt' in the nature of long term borrowings.

11. Head Office borrowings in foreign currency by Foreign Banks operating in Bangladesh

Foreign banks operating in Bangladesh may raise subordinated debt with prior approval of BB in the form of (i) subordinated debt in foreign currency and (ii) subordinated debt in the form of foreign currency borrowings from Head office for inclusion in Tier-2 capital.

a) Amount of borrowing: The total amount of HO borrowing in foreign currency will be at the discretion of the foreign bank. However, the amount eligible for inclusion in Tier-2 capital as subordinated debt will be subject to a maximum ceiling as stated above.

b) Maturity period: Head Office borrowings should have a minimum initial maturity of 5(five) years. If the borrowing is in tranches, each tranche will have to be retained in Bangladesh for a minimum period of five years.

c) Features: The HO borrowings should be fully paid up, i.e. the entire borrowing or each tranche of the borrowing should be available in full to the branch in Bangladesh. It should be unsecured, subordinated to the claims of other creditors of the foreign bank in Bangladesh, free of restrictive clauses and should not redeemable at the instance of the HO.

d) Rate of interest: The rate of interest on HO borrowings should not exceed the on-going market rate. Interest should be paid at yearly basis.

e) Withholding tax: The interest payments to the HO will be subject to applicable withholding tax.

f) Repayment: All repayments of the principal amount will be subject to prior approval of BB

g) Documentation: The bank should obtain a letter from its HO agreeing to give the loan for supplementing the capital base for the Bangladesh operations of the foreign bank. The loan documentation should confirm that the loan given by Head Office would be subordinated to the claims of all other creditors of the foreign bank in Bangladesh. The loan agreement will be governed by, and construed in accordance with the Bangladesh law. Prior approval of the BB should be obtained in case of any material changes in the original terms of issue.

Annex 5: Example of Charge for Repo Transactions

Computation of total capital charge for a repo transaction comprising the capital charge for CCR and Credit/Market risk for the underlying security is furnished below:

A. Particulars of Repo Transaction :

Type of Security	GOB Treasury Bill
Residual Maturity	>1 year, ≤ 5 years (1 & S1)
Coupon	6%
Current Market Value	Tk. 1050
Cash Borrowed	Tk. 1000
Haircut for security	2%
Haircut on cash	0
Minimum holding period	5 Business day
Capital charges for general market risk (Refer to Table 17)	3.25%

B. Computation of total capital charge comprising the capital charge for Counterparty Credit Risk (CCR) and credit /Market risk for the underlying security

In the book of the borrower of funds (for the off-balance sheet exposure due to lending of the security under repo)

(In this case, the security lent is the exposure of the security lender while cash borrowed is the collateral)

Sl no	Items	Particulars	Amount (in Tk)
A	**Capital Charge for CCR**		
1.	Exposure	Current market value of the security	1050
2.	CCF *(Refer to Table 14)*	100%	
3.	On balance sheet credit equivalent	1050 × 100%	1050
4.	Haircut	2%	

5.	Exposure adjusted for haircut *(Refer to Table 15)*	1050 × 1.02	1071
6.	Collateral	Cash	1000
7.	Haircut for exposure	0%	
8.	Collateral adjusted for haircut	1000 × 1.00	1000
9.	Net exposure *(row 5 – row 8)*	1071 - 1000	71
10.	Risk weight (for bank)	20%	
11.	Risk weighted assets for CCR *(row 9 × row 10)*	71 × 20%	14.2
12.	Capital Charge for CCR *(row 11 × 10%)*	14.20 × 10%	1.42
Sl no	Items	Particulars	Amount (in Tk)
B.	**Capital charge for credit/market risk of security**		
1.	Capital for credit risk *(if the security is held under HTM)*	Credit risk	Zero *(Being Govt. security)*
2.	Capital charge for market risk *(if the security is held under HFT)*	Specific risk	Zero *(Being Govt. security)*
		General Market risk *(Risk weight × market value of security)* (3.25% × 1050)	34.13
Total capital charge (for CCR + Credit risk + specific risk + general market risk) (1.42+0+0+34.13)			35.55

Annex 6: A Worked Out Example on Credit Risk Mitigation (CRM)

E* = [E x (1 + He) - C x (1 - Hc - Hfx) ≥ 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	3
Haircut Weight (He)	0	0	0	0	0	0	0
Collaterals:							
Value of Collateral (C/Pa)	100	130	100	100	125	100	100 /27.27
Maturity of collateral (years)	2	3	6	-	-	12	1
Nature of collateral	T.Bill	Bank Bonds	Corp Bonds	Equity Listed in DSE & CSE	Equity Listed in DSE & CSE	T&T Bond	Corp Bonds
Currency	BDT	BDT	BDT	BDT	BDT	BDT	BDT
Rating of collateral (BB rating grade)	-	3	1	-	-	1	1
Haircut Weight (Hc)	0.02	0.06	0.08	0.25	0.25	0.08	0.01
Haircut for currency mismatch (Hfx)			0.10				
Exposure after haircut E × (1 + He)	100	120	90	100	70	100	100
Collateral after haircut C × (1 – Hc- Hfx)	98	122.2	82	75	93.75	92	27
Net Exposure (E*)	2	0	8	25	0	8	73
Case 5: As value of the collateral is higher than the exposure after haircuts, the exposure is zero. Case 7: Maturity mismatch between exposure and collateral. So the protecting value of exposure is calculated as per function Pa = P × (t – 0.25) / (T – 0.25).							

Annex 7: Calculation of Capital Charge for General Market Risk for Interest Rate Related Instruments: A Worked Example

Bank ABC has the following positions:

- Qualifying bond: BDT 13.33 crore market value, residual maturity 8 years, coupon 8%;
- Government bond: BDT 75 crore market value, residual maturity 2 months, coupon 7%;
- Interest rate swap, BDT 150 crore , bank receives floating rate interest and pays fixed, next interest fixing after 9 months, residual life of swap 8 years;
- Long position in interest rate future, BDT 50 crore, delivery date after 6 months, life of underlying government security 3.5 years.

The calculation under the maturity method is as follows:

a) The overall net position (+ 0.15 - 0.20 + 1.05 + 1.125 - 5.625 + 0.5) is -3.00 leading to a capital charge of 3.00.

b) The *vertical disallowance* in time-band 7-10 years has to be calculated. The matched position in this time-band is 0.5 (the lesser of the absolute values of the added (weighted) long and (weighted) short positions in the same time band), which leads to a capital charge of 10% of 0.5 = 0.05 (BDT50,000). The remaining net (short) position is -5.125. Since there are no positions in other zone 3 time -bands, this is the net position in zone 3.

c) The *horizontal disallowances within the zones* have to be calculated. As there is more than one position in zone 1 only, a horizontal disallowance need only be calculated in this zone. In doing this, the matched position is calculated as 0.2 (the lesser of the absolute values of the added long and short positions in the same zone). The capital charge for the horizontal disallowance within zone 1 is 40% of 0.2 = 0.08 = BDT 80,000. The remaining net (long) position in zone 1 is +1.00.

d) The *horizontal disallowances between adjacent zones* have to be calculated. After calculating the net position within zone 1 the following positions remain: zone 1 +1.00, zone 2 +1.125, zone 3 -5.125. The matched position between zones 2 and 3 is 1.125 (the lesser of the absolute values of the long and short positions between adjacent zones). The capital charge in this case is 40% of 1.125 = 0.45.

e) The horizontal disallowance between zones 1 and 3 has to be calculated. After offsetting the +1.125 in zone 2 against the -5.125 in zone 3, this leaves -4.00 in zone 3 which can be offset against the +1.00 in zone 1. The horizontal disallowance between the two zones is 100 per cent of the matched position, which leads to a capital charge of 100 per cent of 1.00 = 1.00. The total capital charge (BDT crore) in this example is:

   - for the overall net open position = 3.00
   - for the vertical disallowance = 0.05
   - for the horizontal disallowance in zone 1 = 0.08
   - for the horizontal disallowance between adjacent zones = 0.45
   - for the horizontal disallowance between zones 1 and 3 = 1.00

Total Capital Charge = 4.58

Calculation of Capital Charge for General Market Risk on Interest Rate Related Instruments

(Amount in crore taka)

	Time band		Individual positions							Weighted positions		By band		By zone		Between zones
Zone	Coupon 3% or more	Coupon less than 3%	Debt securities & debt derivatives		Interest rate derivatives		Total		Risk Weight							
			Long	Short	Long	Short	Long	Short		Long	Short	Matched	Unmatched	Matched	Unmatched	Matched
1	1 month or less	1 month or less							0.00%							
	1 to 3 months	1 to 3 months	75.00				75.00		0.20%	0.15		0.00	0.15	0.20	1.00	0.00
	3 to 6 months	3 to 6 months				50.00		50.00	0.40%		0.20	0.00	-0.20			
	6 to 12 months	6 to 12 months			150.00		150.00		0.70%	1.05		0.00	1.05			
2	1 to 2 years	1.0 to 1.9 years							1.25%							
	2 to 3 years	1.9 to 2.8 years			50.00		50.00		1.75%					0.00	1.13	1.13
	3 to 4 years	2.8 to 3.6 years							2.25%	1.13		0.00	1.13			
3	4 to 5 years	3.6 to 4.3 years							2.75%							
	5 to 7 years	4.3 to 5.7 years							3.25%							
	7 to 10 years	5.7 to 7.3 years	13.33			150.00	13.33	150.00	3.75%	0.50	5.63	0.50	-5.13	0.00	-5.13	1.00
	10 to 15 years	7.3 to 9.3 years							4.50%							
	15 to 20 years	9.3 to 10.6 years							5.25%							
	Over 20 years	10.6 to 12 years							6.00%							
		12 to 20 years							8.00%							
		over 20 years							12.50%							
TOTAL			88.33		200.00	200.00	288.33	200.00		2.83	5.83	0.50			3.00	
OVERALL NET OPEN POSITION										**3.00**						

Calculation	Vertical disallowance	Horizontal Disallowance in			Horizontal Disallowance between			Overall net open position	TOTAL GENERAL MARKET RISK CAPITAL CHARGE
		Zone 1	Zone 2	Zone 3	Zones 1 & 2	Zones 2 & 3	Zones 1 & 3		
GENERAL MARKET RISK CAPITAL CHARGE	**0.05**	**0.08**	**0.00**	**0.00**	**0.00**	**0.45**	**1.00**	**3.00**	**4.58**

Annex 8: An Example of Calculation of Capital Charge on Operational Risk

(Basic Indicator Approach)

XYZ Bank Limited

Profit and Loss Account

For the year ended 31 December

(Figure in Crore Taka)

Item	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010
i. Interest Income[30]	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 (c-d)	**112.60**	**(1.58)**	**89.63**

[30] Including interest suspense

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 Interest /Profit on Bills & Bonds- HFT	20.00 17.00	5.00 6.00	15.00 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, 2008	Dec 31, 2009	Dec 31, 2010
Net Interest Income[31]	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 from banking book (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**

Alternative Calculation:

(Figure in Crore Taka)

Item	Dec 31, 2008	Dec 31, 2009	Dec 31, 2010
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**

[31] Including interest suspense

Capital charge for Operational Risk:

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

= [(**174.00**+ **52.00+155.00**) x15%]/3

= [(381.00) x15%]/3

= 57.15/3

= **19.05 Crore**

Annex 9: Capital charge against operational risk

The Standardized Approach: All the business activities of the banks in the Standardized Approach (TSA**)** will be divided into following eight business lines.

Mapping of Business Lines

LEVEL 1	LEVEL 2	ACTIVITY GROUPS
Corporate finance	Corporate finance	Mergers and acquisitions, underwriting, privatizations, securitization, research, debt (government, high yield), equity, syndications, IPO, secondary private placements
Finance	Municipal/government	
	Merchant banking	
	Advisory services	
Trading and sales	Sales	Fixed income, equity, foreign exchanges, commodities, credit, Funding, own position securities, lending and Repos, brokerage, debt, prime brokerage
	Market making	
	Proprietary positions	
	Treasury	
Retail banking	Retail banking	Retail lending and deposits, banking services, trust and estates
	Private banking	Private lending and deposits, banking services, trust and estates, investment advice
	Card services	Merchant/commercial/corporate cards, private labels and retail
Commercial banking	Commercial banking	Project finance, real estate, export finance, trade finance, factoring, leasing, lending, guarantees, bills of exchange
Payment and settlement[32]	External clients	Payments and collections, funds transfer, clearing and settlement
Agency services	Custody	Escrow, depository receipts, securities lending (customers) corporate actions
	Corporate agency	Issuer and paying agents
	Corporate trust	
Asset management	Discretionary fund management	Pooled, segregated, retail, institutional, closed, open, private equity
	Non-discretionary fund management	Pooled, segregated, retail, institutional, closed, open
Retail brokerage	Retail brokerage	Execution and full service

[32]Payment and settlement losses related to a bank's own activities would be incorporated in the loss experience of the affected business line

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 31 below:

Principles for business line mapping

a. All activities must be mapped into the eight level-1 business lines in a mutually exclusive and jointly exhaustive manner.

b. Any banking or non-banking activity which cannot be readily mapped into the business line framework, but which represents an ancillary function to an activity included in the framework, must be allocated to the business line it supports. If more than one business line is supported through the ancillary activity, an objective mapping criteria must be used.

c. When mapping gross income, if an activity cannot be mapped into a particular business line then the business line yielding the highest charge must be used. The same business line equally applies to any associated ancillary activity.

d. Banks may use internal pricing methods to allocate gross income between business lines provided that total gross income for the bank (as would be recorded under the Basic Indicator Approach) still equals the sum of gross income for the eight business lines.

e. The mapping of activities into business lines for operational risk capital purposes must be consistent with the definitions of business lines used for regulatory capital calculations in other risk categories, i.e. credit and market risk. Any deviations from this principle must be clearly motivated and documented.

f. The mapping process used must be clearly documented. In particular, written business line definitions must be clear and detailed enough to allow third parties to replicate the business line mapping. Documentation must, among other things, clearly motivate any exceptions or overrides and be kept on record.

g. Processes must be in place to define the mapping of any new activities or products.

h. Senior management is responsible for the mapping policy (which is subject to the approval by the board of directors).

i. The mapping process to business lines must be subject to independent review.

Business Lines Beta Factors

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.

The total capital charge may be expressed as:

Table 21 :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_8	0.12

1. Corporate finance	$\mathbf{K_1 = [(GI_1 + GI_2 + GI_3) \times \beta_1]/n}$
2. Trading and sales	$\mathbf{K_2 = [(GI_1 + GI_2 + GI_3) \times \beta_2]/n}$
3. Retail banking	$\mathbf{K_3 = [(GI_1 + GI_2 + GI_3) \times \beta_3]/n}$
4. Commercial banking	$\mathbf{K_4 = [(GI_1 + GI_2 + GI_3) \times \beta_4]/n}$
5. Payment and settlement	$\mathbf{K_5 = [(GI_1 + GI_2 + GI_3) \times \beta_5]/n}$
6. Agency services	$\mathbf{K_6 = [(GI_1 + GI_2 + GI_3) \times \beta_6]/n}$
7. Asset management	$\mathbf{K_7 = [(GI_1 + GI_2 + GI_3) \times \beta_7]/n}$
8. Retail brokerage	$\mathbf{K_8 = [(GI_1 + GI_2 + GI_3) \times \beta_8]/n}$
Total capital charge	$\mathbf{K_{TSA}} = \Sigma K_{1-8}$
	Where $\mathbf{K_{TSA}}$ = Total capital charge under TSA $\mathbf{K_{1-8}}$ = the capital charge under TSA for the specified business line $\mathbf{GI_{1-3}}$ = only positive annual gross income over the previous three years (i.e. negative or zero gross income if any shall be excluded) $\boldsymbol{\beta_{1-8}}$ = as declared in Table 24 **n** = number of the previous three years for which gross income is positive

Alternative standardized approach

Bank may use the Alternative Standardized Approach (ASA) provided the bank is able to satisfy BB that this alternative approach provides an improved basis by, for example, avoiding double counting of risks. Once a bank has been allowed to use the ASA, it will not be allowed to revert to use of the Standardized Approach without the permission of its supervisor. It is not envisaged that large diversified banks in major markets would use the ASA.

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

Where:-

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

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

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

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

m is constant and its value 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.

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.

Annex 10: 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.

- 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 challenged by suitably qualified parties independent of the development process. The model should be developed or approved independently of the front office. It should be independently tested. This includes validating the mathematics, the assumptions and the software implementation.

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

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

- The model should be subject to periodic review to determine the accuracy of its performance (e.g. assessing continued appropriateness of the assumptions, analysis of P&L 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 quote, prudent measures such as valuation adjustments may be appropriate.

Annex 11: Risk Factors Relating to Islamic Mode of Investment

Introduction

All Islamic banks and Islamic branches of conventional banking are required to measure and apply capital charges against credit, market and operational risk**.**

Features of Islamic mode of investment

Islamic modes of investments are asset-based. Gross return of these investments is the spread between the cost of the asset to the bank and the amount that can be recovered from selling or leasing it. Some investments can be categorized as equity participation and based on profit and loss sharing. Quards are beneficence financing based on service charge only.

Bai-Murabaha : The seller informs the buyer of his cost of acquiring a specified product; then the profit margin (or mark up) is negotiated between the buyer and the seller. The total cost is usually paid in installments.

Bai-Salam: Purchase with deferred delivery. The buyer pays the seller the full negotiated price of a product that the seller promises to deliver at a future date. This mode only applies products whose quality and quantity can be fully specified at the time the contact is made. Usually, it applies to agricultural or manufactured product.

Bai-Istisna: The Istisna'a sale is a contract in which the price is paid in advance at the time of the contract and the objects of sale is manufactured and delivered later. The majority of the jurists consider Istisna'a as one of the division of 'Salam Sale'.

BaiMuajjal: Deferred payment sales. The seller can sell a product on the basis of a deferred payment in installments or in a lump sum payment. The price of the product is agreed upon between the buyers and the seller at the same time of the sale and cannot include any charge for deferring payments.

Ijārah: Leasing or lease purchase, A party leases a particular product for a specific sum and a specific period of time. In the case of a lease purchase, cash payment includes a portion that goes towards the final purchase and transfer of ownership of the product.

Higher Purchase under Sirkatul Melk : In this mode of investment Bank and borrower on the basis of contract purchase transport, machine & plant, building, apartment etc. Borrower uses it on the basis of rent and repays part of principal amount of bank. Thus borrower becomes owner of the property. In this process borrower deposit his equity to bank. Borrower pays the agreed rent and after full repayment bank handover the title to the borrower.

Quards al-Hasana: Beneficence loans. These are zero return loans that the Islamic principles exhort Muslims to make 'to those who need them'. Banks are allowed to charge the borrowers a service charge

to cover the administrative expenses of handling the loan, provided that the charge is not related to the amount or maturity of the loan.

Jo'alah: Service charge. A party under take to pay another party a specified amount of money as a fee for rendering a specified service in accordance to the terms of the contract stipulated between the two parties. This mode usually applies to transactions such as consultations, and professional services, fund placements, and trust services.

Mushārakah: Equity participation contract. The bank is not the sole provider of funds to finance a project. Two or more partners contribute to the joint capital of an investment. Profit and losses are shared strictly in relation to the respective capital contributions. The kind of contract is usually employed to finance long-term projects.

Mudārabah : Trustee finance contract. Under this kind of contract, the bank provides the entire capital needed for financing a project, while the entrepreneur offers his labor and expertise. The profit from the project is shared between the bank and entrepreneur at a certain fixed ratio. Financial losses are borne exclusively by the bank. The liability of the entrepreneur is limited only to his time and efforts. However if the negligence or mismanagement of the entrepreneur is proven he may be held responsible for financial losses. Mudarabah is usually employed in investment project with short gestation periods and in trade and commerce.

Islamic banks mobilize funds on a profit sharing and loss bearing i.e. on Mudarabah basis (PLS). On the liability side, the contract between the bank and the depositors is known as unrestricted Mudaraba because depositors agree that their funds be used by the bank, at its discretion, to finance to finance an open ended list of profitable investments and expect to share with the bank the overall profits accruing to the bank business.

Certain risk are associated with such PLS accounts. These risks are referred to as fiduciary and displaced commercial risk.

Fiduciary Risk: The bank shall have in place appropriate mechanisms to safeguard the interests of all fund providers. Where Investment Account holder funds are commingled with the banks own funds, the bank shall ensure that the bases for asset, revenue, expense and profit allocations are established, applied and reported in a manner consistent with the bank's fiduciary responsibilities.

Rate of Return risk and Displaced Commercial Risk: Banks are exposed to rate of return risk in the context of their overall balance sheet exposures. An increase in benchmark rates may result in the investment Account holder having expectations of a higher rate of return. Rate of return risk differs from risk in that banks are concerned with the result of their investment activities at the end of the investment-holding period. Such results cannot be pre-determined exactly.

A consequence of rate of return risk may be displaced commercial risk.Banks may be under market pressure to pay a return that exceeds the rate that has been earned on assets financed by the investment account holder when the return on assets is under-performing as compared with the competitors' rates. In such case, banks may decide to waive their rights to part or its entire Mudarib share of profits in order to satisfy and retain its fund providers and dissuade them from withdrawing their funds.

Calculating risk weighted assets (RWA) for credit risk

Credit risk is defined as the potential that a bank's counterparty will fail to meet its obligations in accordance with agreed terms. Investment (Credit) risk exposures in Islamic financing arise in connection with accounts receivable in Murabaha Contracts, Counterparty risk in Salam Contracts, Account receivable and counterparty risk in Istisna Contracts, and Lease payment receivables in Ijara Contracts, and Sukuk held to maturity (HTM) in the banking book. Bai-muazzal contract and Higher Purchase under SirkatulMelk (HPSM) mode in connection with installment payment receivables under HPSM agreement/contract may be added for credit risk exposure in connection with account receivable. In these investments Credit risk will be measured according to the Standardized Approach of Basel II as discussed bellow except for certain exposures arising from investment by means of Musharaka or Mudaraba contracts in assets in the banking book.

The assignment of risk weight (RW) shall take into consideration the following components :

a) The credit risk rating of a debtor, counterparty, or the obligor, or a security, based on external credit assessment and their RW as stated in Table 9.

b) The credit risk mitigation (CRM)

c) Types of underlying assets that are sold and collateralized or leased by the Islamic banks

d) Amount of specific provisions made for the past-due portion of accounts receivable or leased payments receivables

The Islamic banks will nominate the external credit assessment institutions (ECAIs) recognized by BB.

Credit risk mitigation

The exposure in respect of a debtor, counterparty or other obligor can be further adjusted or reduced by taking into account the credit risk mitigation (CRM) techniques employed by the Islamic Bank while collateral received is eligible financial for mitigation on the basis of adopting haircut formula or a guarantee as described in the guidelines. The Islamic Bank may consider the resultant net exposure applying the haircut formula. The Standard Supervisory Haircuts weight to offset its credit exposure is stated in the guidelines.

Off-balance Sheet Exposures

Off-balance-sheet items under the standardized approach will be converted into credit exposure equivalents through the use of credit conversion factors (CCF) as stated in Table 12, Table 13, and Table 14. The resulting credit equivalent amount will be multiplied by the risk-weight associated with that counterparty credit rating as described in Table 2. Other clarifications and definitions in this regard are described in section 5.5.

Some fixed risk weights based on preference of underlying assets

The RW of a debtor, counterparty or other obligor shall be reduced and has been fixed by BB on the basis of preferential treatment for some underlying assets where counterparties could be categorized as Retail

and Small, or assets could be defined as residential real estate or commercial real estate as clarified in the section 5.2. The RW will be assigned as stated in the Table 9.

Past due receivables

In the event that accounts receivable become past due, the exposure shall be risk-weighted in accordance with the statement of Table 9. The exposures should be risk weighted net of specific provisions.

Calculating capital charge for market risk

Market risk is defined as the risk of losses in on- and off-balance sheet positions arising from movements in market variables i.e. prices, foreign exchange rate etc. The risks in Islamic Bank that are subject to the market risk capital requirement are:

i) Trading positions in *Sukūk (securities)*;

ii) Investment in equity instrument in the trading book, and

iii) Foreign exchange related issues throughout the banking and trading book including gold; and

iv) Commodities /inventory throughout the banking and trading book.

(If there is no commodity/inventory under the ownership of the Bank, Market Risk will not applicable against Commodity/ inventory sold to the Counterparty)

(i) Sukūk (securities) held for trading (HFT) and equity position risk

The capital charge for securities in Banks' trading book comprises two charges that will be separately calculated for the following types of risk:

Specific risk: The capital charge for specific risk is 10% on all equity positions and Sukūk (securities) to be calculated on a mark to market basis.

General market risk: The capital charge for general market risk is 10% on all equity positions andSukūk (securities). The value of the instrument will be calculated on mark to market basis of ***Sukūk*** held for trading**.** In the case of equity investments made by means of a *Mushārakah*or a *Mudārabah*contract where the underlying assets are commodities, the market risk provisions for commodities will be applicable according to statement as described in section (iii) below.

(ii) Measuring the foreign exchange risk in a portfolio

The Islamic Banks are allowed to calculate the risks inherent in mix of long and short foreign exchange positions including gold and silver in different foreign currencies through the banking and trading book. The capital charge is at rate of minimum CRAR on the overall net position as described and calculated in the section 6.5.6.

(iii) Commodities and Inventory Risk

The minimum capital requirements to cover the risks of holding or taking long positions in commodities, including precious metals but excluding gold and silver (which falls under foreign exchange) as well as the inventory risk which results from holding assets with a view to re-selling or leasing them. A commodity is defined as a physical product, which is and can be traded on a secondary market, e.g. agricultural products, minerals (including oil) and precious metals. Inventory risk is defined as arising from holding items in inventory either for resale under a *Murābahah* contract, or with a view to leasing under an *Ijārah*contract. In the case of inventory risk the net position, long or short, in each commodity requires a capital charge of 15% to cater for directional risk plus an additional capital charge of 3% of the gross positions, i.e. long plus short positions, to cater for basis risk. The capital charge of 15% applies to assets held by Islamic Banks in inventory with a view to resale or lease. For Istisnā work-in-process (WIP), WIP inventory belonging to the Islamic bank shall attract a capital charge of 8% (equivalent to a 100% RW). In the case of the balance of unbilled WIP inventory under Istisnā` without parallel Istisnā`, in addition to the RW for credit risk a capital charge of 1.6% is applied (equivalent to a 20% RW) to cater for market risk exposure. The funding of a commodities position that exposes the Islamic Banks to foreign exchange exposure is also subject to capital charge as measured under the foreign exchange risk.

Mode of investment wise clarification for credit and market risks

The minimum capital adequacy requirements for both credit and market risks are set out for each of the following Sharī`ah compliant financing and investment instruments:

a) Murābahah and Murābahah for the Purchase Orderer;

b) Salam and Parallel Salam;

c) Istisnā and Parallel Istisnā;

d) Ijārah and IjārahMuntahiaBittamleek;

e) Mushārakah and Diminishing Mushārakah; and

f) Mudārabah.

a) Murabaha and murabaha for the purchase orderer (MPO)

1. Introduction

In Murābahah and MPO (BaiMurabaha***)***, the capital adequacy requirement for credit risk refers to the risk of a counterparty not paying the purchase price of an asset to the Islamic bank/branch. In the case of market (price) risk, the capital adequacy requirement is with respect to assets in the Islamic bank's possession which are available for sale either on the basis of Murābahah or MPO (BaiMurabaha), or also on assets which are in possession due to cancellation of Purchase Proposal (PP) in non-binding and binding MPO (BaiMurabaha).

***Murābahah*and Non-binding MPO**

In a *Murābahah*transaction, the Islamic bank sells an asset that is already available in its possession, whereas in a MPO transaction the Islamic bank acquires an asset in anticipation that the asset will be purchased by the orderer/customer. This price risk in *Murābahah* contracts ceases and is replaced by credit risk in respect of the amount receivable from the customer following delivery of the asset. Likewise, in a non-binding MPO transaction, the Islamic bank is exposed to credit risk on the amount receivable from the customer when the latter accepts delivery and assumes ownership of the asset.

Binding MPO

In a binding MPO (BaiMurabaha), the Islamic bank has no 'long' position in the asset that is the subject of the transaction, as there is a binding obligation on the customer to take delivery of the asset at a pre-determined price. The Islamic bank is exposed to counterparty risk in the event that the orderer in a binding MPO does not honour his/her obligations under the PP, resulting in the Islamic bank selling the asset to a third party at a selling price which may be lower than the cost to the Islamic bank. The risk of selling at a loss is mitigated by securing a Hamish Jiddiyyah (HJ) (a security deposit held as collateral) upon executing the PP with the customer, as commonly practiced in the case of binding MPO. The Islamic bank would have recourse to the customer for any shortfall in the HJ to compensate for the loss.

2. RW for credit risk in the murābahah contract

Murābahahand Non-binding MPO

The credit exposure shall be measured based on accounts receivable in *Murābahah*(the term used herein includes MPO), which is recorded at their cash equivalent value i.e. amount due from the customers at the end of the financial period less any provision for classified assets. The accounts receivable (net of specific provisions) amount arising from the selling of a Murābahahasset shall be assigned a RW as stated in Table 9 based on the credit standing of the obligor (purchaser or guarantor) as rated by an ECAI that is approved by BB.

Binding MPO

In a binding MPO, an Islamic bank is exposed to default on the purchase orderer's obligation to purchase the commodity in its possession. In the event of the orderer defaulting on its PP, the Islamic bank will dispose of the asset to a third party. The Islamic bank will have recourse to any HJ paid by the orderer, and (a) may have a right to recoup from the orderer any loss on disposing of the asset, after taking account of the HJ, or (b) may have no such legal rights. In both cases, this risk is mitigated by the asset in possession as well as any HJ paid by the purchase orderer. In case (a), the Islamic bank has the right to recoup any loss (as indicated in the previous paragraph) from the orderer, that right constitutes a claim receivable which is exposed to credit risk, and the exposure shall be measured as the amount of the asset's total acquisition cost to the Islamic bank, less the market value of the asset as collateral subject to any haircut, and less the amount of any HJ. The applicable RW as stated in Table 9 shall be based on the standing of the obligor as rated by a recognized ECAI.

3. Capital charge for the market risk in the murābahah contract:

Murābahahand Non-binding MPO

In the case of an asset in possession in a *Murābahah*transaction and an asset acquired specifically for resale to a customer in a non-binding MPO transaction, the asset would be treated as inventory of the Islamic bank and using the simplified approach the capital charge for such a market risk exposure would be 15% of the amount of the position (carrying value). The 15% capital charge is also applicable to assets held by an Islamic bank in respect of incomplete non-binding MPO transactions at the end of a financial period. Assets in possession on a 'sale or return' basis (with such an option included in the contract) are treated as accounts receivable from the vendor and as such would be offset against the related accounts payable to the vendor. If these accounts payable have been settled, the assets shall attract a capital charge of 10% subject to (a) the availability of documentation evidencing such an arrangement with the vendor, and (b) the period for returning the assets to the vendor not having been exceeded.

Binding MPO

In a binding MPO the orderer has the obligation to purchase the asset at the agreed price, and the Islamic bank as the seller is only exposed to credit risk as above.

1) Foreign exchange risk

The funding of an asset purchase or the selling of an asset may well open an Islamic bank to foreign exchange exposures; therefore, the relevant positions should be included in the measures of foreign exchange risk described in the section 6.5.6.

b) Salam and Parallel Salam:

1. Introduction

A Salam contract refers to an agreement to purchase, at a predetermined price, a specified kind of commodity which is to be delivered on a specified future date in a specified quantity and quality. The Islamic bank as the buyer makes full payment of the purchase price upon execution of a Salam contract.

In certain cases, an Islamic bank enters into a back-to-back contract, namely Parallel Salam, to sell a commodity with the same specification as the purchased commodity under a Salam contract to a party other than the original seller. The Parallel Salam allows the Islamic bank to sell the commodity for future delivery at a predetermined price (thus hedging the price risk on the original Salam contract) and protects the Islamic bank from having to take delivery of the commodity and warehousing it.

The non-delivery of commodity by a Salam customer (i.e. counterparty risk) does not discharge the Islamic bank's obligations to deliver the commodity under a Parallel Salam contract, and thus exposes the Islamic bank to potential loss in obtaining the supply elsewhere.

The obligations of an Islamic bank under Salam and Parallel Salam are not inter-conditional or interdependent, which implies that there is no legal basis for offsetting credit exposures between the contracts.

In the absence of a Parallel Salam contract, an Islamic bank may sell the subject-matter of the original Salam contract in the spot market upon receipt, or, alternatively, the Islamic bank may hold the commodity in anticipation of selling it at a higher price. In the latter case, the Islamic bank is exposed to price risk on its position in the commodity until the latter is sold.

2. RW for Credit Risk in the Salam contract:

The receivable amount generated from the purchase of a commodity based on a Salam contract shall be assigned a RW based on the credit standing of a seller/counterparty as rated by an recognized ECAI as stated in the Table 9. The capital requirement is to be calculated on the receivable amount, net of specific provisions, of any amount that is past due by more than 60 days. The credit RW is to be applied from the date of the contract made between both parties until the maturity of the Salam contract, which is upon receipt of the purchased commodity. The credit exposure amount of a Salam contract is not to be offset against the exposure amount of a Parallel Salam contract, as an obligation under one contract does not discharge an obligation to perform under the other contract.

3. Capital Charge for the Market Risk in the Salam contract:

Against the price risk on the commodity exposure in Salam contract capital charge will be equal to 15% of the net position in each commodity, plus an additional charge equivalent to 3% of the gross positions, long plus short, to cover basis risk and forward gap risk. The 3% capital charge is also intended to cater for potential losses in Parallel Salam when the seller in the original Salam contract fails to deliver and the Islamic bank has to purchase an appropriate commodity in the spot market to honour its obligation. The long and short positions in a commodity, which are positions of Salam and Parallel Salam, may be offset for the purpose of calculating the net open positions provided that the positions are in the same group of commodities. The funding of a commodity purchase or selling of a commodity may well leave an Islamic bank open to foreign exchange exposures, and in that case the relevant positions should be included in the measures of foreign exchange risk described in the market risk 6.5.6.

If the Islamic Banks purchase Goods/ Commodities from the seller and simultaneously sell the same to the ultimate buyer and if the Islamic Banks do not hold the goods/ Commodities at any stage, in that case, Market Risk will not be applicable.

c) Istisnā`and Parallel Istisnā:

1. Introduction

An Istisnā` contract refers to an agreement to buy from a customer a non-existent asset which is to be manufactured or built according to the ultimate buyer's specifications and is to be delivered on a specified future date at a predetermined price. The exposures under Istisnā` involve credit and market risks, as

describe below.Credit exposures arise once the work is billed to the customer, while market (price) exposures arise on unbilled work-in-process (WIP). There is a capital requirement to cater for the credit (counterparty) risk of the Islamic bank not receiving the price of the asset from the customer or project sponsor either in pre-agreed stages of completion and/or upon full completion of the manufacturing or construction process. The capital adequacy requirement for the market risk an Islamic bank incurs from the date of manufacturing or construction. Which is applicable throughout the period of the contract on unbilled WIP inventory.

2. Credit risk

The amount generated from buying of an asset based on an Istisna` contract shall be assigned a RW based on the credit standing of the customer as rated by an ECAI and as stated in Table 9.

(i) Exclusions: The capital requirement is to be calculated on the receivable amount, net of specific provisions, any amount that is secured by eligible collateral or any amount which is past due by more than 60 days.

(ii) Applicable period: The credit RW is to be applied from the date when the manufacturing or construction process commences and until the credit exposure amount is fully settled by the Islamic bank, either in stages and/or on the maturity of the Istisna` contract, which is upon delivery of the manufactured asset to the Istisna` ultimate buyer.

(iii) Offsetting arrangement between credit exposures of istisna` and parallel istisna`: The credit exposure amount of an Istisna` contract is not to be offset against the credit exposure amount of a Parallel Istisna` contract because an obligation under one contract does not discharge an obligation to perform under the other contract.

3. Market risk

(a) **Istisna` with parallel istisna`:** There is no capital charge for market risk to be applied in addition to provisions stated above, subject to there being no provisions in the Parallel Istisna` contract that allow the seller to increase or vary its selling price to the Islamic bank, under unusual circumstances. Any variations in a Parallel Istisna` contract that are reflected in the corresponding Istisna`contract which effectively transfers the whole of the price risk to an Istisna` customer (buyer), is also eligible for this treatment.

(b) **Istisna` without parallel istisna`:** A capital charge of 1.6% is to be applied to the balance of unbilled WIP inventory to cater for market risk, in addition to the credit RW stated above.

This inventory is held subject to the binding order of the Istisna` buyer and is thus not subject to inventory price. However this inventory is exposed to the price risk.

(If the Islamic Banks sell commodity simultaneously to the ultimate buyer, no Market Risk will be applicable).

Foreign exchange risk: Any foreign exchange exposures arising from the purchasing of input materials, or from Parallel Istisna` contracts made, or the selling of a completed asset in foreign currency should be included in the measures of foreign exchange risk.

d) Ijārah and IjārahMuntahiaBittamleek:

1. Introduction

Bank leases a particular product for specific sum for specific period of time. Under the Shariah, substantial risk and rewards of ownership of assets may not be transferred to lessees in Ijarah Muntahia Bittamleek/ Hire Purchase under Shirkatul Melk (HPSM) contracts. This should be carried on the balance sheet of the lessor and assigned a risk weighting as per credit standing of the counterparty. All liabilities and risks pertaining to the leased asset are to be borne by the Islamic bank including obligations to restore any impairment and damage to the leased asset arising from wear and tear and natural causes which are not due to the lessee's misconduct or negligence. Thus, in both Ijarah and IMB/HPSM, the risks and rewards remain with the lessor, except for the residual value risk at the term of an IMB/HPSM which is borne by the lessee, the risks and rewards remain with the lessor, except for the residual value risk at the term of an IMB which is borne by the lessee. The lessor is exposed to price risk on the asset while it is in the lessor's possession prior to the signature of the lease contract, except where the asset is acquired following a binding promise to lease. In an IMB contract, the lessor promises to transfer to the lessee its ownership in the leased asset to the lessee at the end of the contract as a gift or as a sale at a specified consideration, provided that (a) the promise is separately expressed and independent of the underlying Ijarah; or (b) a gift **contract is** entered into conditional upon fulfillment of all the Ijarah obligations, and thereby ownership shall be automatically transferred thereupon.

2. Credit risk

The applicable RW as stated in Table-9 shall be based on the standing of the obligor as rated by an ECAI that is approved by the BB. The lessor is exposed to credit risk in respect of the estimated value of the lease payments in respect of the remaining period of the Ijarah. This exposure is mitigated by the market value of the leased asset which may be repossessed. The net credit risk exposure shall be assigned a RW as stated in the Table-9 based on the credit standing of the lessee/counterparty as rated by an ECAI that is approved by BB.

IMB: The capital requirement for IMB is based on the following two components:

(a) The total estimated future Ijarah receivable amount over the duration of the lease contract. This exposure is mitigated by the market value of the leased asset which may be repossessed. The net credit risk exposure shall be assigned a RW as stated in the Table-9 based on the credit standing of the lessee/counterparty as rated by an ECAI that is approved by BB; and

(b) The price risk attached to the expected residual fair value of a leased asset. The estimated future Ijarah receivable amount shall be risk-weighted based on the credit standing of the lessee as rated by an ECAI after deduction of the value of the leased asset as collateral (subject to any haircut).

Exclusions: The capital requirement is to be calculated on the receivable amount, net of specific provisions, of any amount that is secured by eligible collateral or any amount which is past due by more than 60 days. The portions that are collateralized and past due are subject to the relevant RW.

3. Market risk

In the case of an asset acquired and held for the purpose of either operating Ijarah or IMB, the capital charge to cater for market (price) risk in respect of the leased asset from its acquisition date until its disposal can be treated as inventory of the Islamic bank and the capital charge applicable to such a market risk exposure would be 15% of the amount of the asset's market value.

e) Mushārakah and diminishing mushārakah;

1. Introduction

A *Musharakah*is an agreement between the Islamic bank and a customer to contribute capital in various proportions to an enterprise, whether existing or new, or to ownership of a real estate or moveable asset, either on a permanent basis, or on a diminishing basis where the customer progressively buys out the share of the Islamic bank ("Diminishing *Musharakah*"). Profits generated by that enterprise or real estate/asset are shared in accordance with the terms of *Musharakah*agreement whilst losses are shared in proportion to the respective contributor's share of capital. An Islamic bank may enter into a *Musharakah*contract with a customer as a means of providing a financing to the latter on a profit sharing and loss bearing basis. In this case, the *Musharakah*is normally of the diminishing type, in which the customer gradually purchases the Islamic bank's partnership share over the life of the contract. This type of financing is one of the *Shari`ah*compliant alternatives to avoid a conventional term loan repayable by installments, and as such it is exposed to credit risk in respect of the customer's purchase payments as well as to the risk attaching to the Islamic bank's share of the underlying assets.

Musharakah:

For the purpose of determining the minimum capital adequacy requirement, this section makes distinctions between the three main categories of *Musharaka* has set out below:

(a)Private commercial enterprise to undertake trading activities in foreign exchange, Shares and/or Commodities: This type of *Musharakah*exposes the Islamic bank to the risk of underlying activities, namely foreign exchange, equities or commodities.

(b) **Private commercial enterprise to undertake a business venture other than (a):** This type of *Musharakah*exposes the Islamic bank to the risk as an equity holder, which is similar to the risk assumed by a partner in venture capital or a joint-venture, but not to market risk. As an equity investor, the Islamic bank serves as the first loss position and its rights and entitlements are subordinated to the claims secured and unsecured creditors.

(c) Joint ownership of real estate or movable assets (such as cars) is divided into two sub-categories:

(i) Musharakah with ijarah sub-contract: Ownership of such assets can produce rental income for the partnership, through leasing the assets to third parties by means of *Ijarah*contracts. In this case, the risk of the *Musharakah*investment is essentially that of the underlying *Ijarah*contracts, i.e. credit risk mitigated by the collateral represented by the leased assets. However, in some cases the lessee is not a third party but the Islamic bank's partner as customer. The existence of such an *Ijarah*sub-contract in addition to a *Musharakah* exposes the Islamic bank to credit risk in respect of the partner's obligation to service the lease rentals.

(ii) Musharakah with Murabahah sub-contract: The IIFS is entitled to its share of revenue generated from selling the assets to third parties by means of *Murabahah* contracts that expose the Islamic bank to credit risk in respect of the *Murabahah* receivables from the buyer/counterparty.

Diminishing Musharakah:

This form of *Musharakah* is a means whereby an Islamic bank can provide term finance to a client on a profit and loss sharing basis. The Islamic bank enters into this type of *Musharakah* with the objective of transferring the ownership to the partner/customer, where the Islamic bank acts as a joint-owner of the asset with a promise by the partner to purchase the Islamic bank's share making a payment on one or more specified future dates. The Islamic bank's selling price is normally based on the fair value of the partnership share being transferred on the date of each purchase, which may expose the Islamic bank to the risk of selling its share of ownership below the acquisition price. As a joint-owner, the Islamic bank is also entitled to its share of revenue generated from the assets of the *Musharakah*, such as *Ijarah*lease rentals in which the rental entitlements to the Islamic bank shall be adjusted periodically according to the IIFS's share of ownership in the asset. The Islamic bank's position in a Diminishing *Musharakah*thus entails two kinds of exposure. The amounts due from the partner to purchase the agreed shares of the asset on the agreed dates are subject to credit risk in respect of the partner's ability and willingness to pay, with the shares of the partner in the asset providing credit risk mitigation as collateral. The capital invested by the Islamic bank is also subject to the risk that the amounts recoverable from the partner may be less than the amount invested because the value of the Musharakah assets has decreased (capital impairment risk).

f) Mudārabah:

A *Muḍārabah*is an agreement between the Islamic bank and a customer whereby the Islamic bank would contribute capital to an enterprise or activity which is to be managed by the customer as the (labour provider or) *Muḍārib*. Profits generated by that enterprise or activity are shared in accordance with the terms of the *Muḍārabah* agreement whilst losses are to be borne solely by the Islamic bank unless the losses are due to the *Muḍārib*'s misconduct, negligence or breach of contracted terms. A *Muḍārabah* financing can be carried out on either:

(a) a restricted basis, where the capital provider allows the *Muḍārib*to make investments subject to specified investment criteria or certain restrictions such as types of instrument, sector or country exposures; or

(b) an unrestricted basis, where the capital provider allows the *Muḍārib*to invest funds freely based on the latter's skills and expertise.

As the fund provider, the Islamic bank is exposed to the risk of losing its capital investment or 'capital impairment risk' upon making payment of the capital to the *Muḍārib*. Any loss on the investment is to be borne solely by the capital provider, but is limited to the amount of his capital. Losses that are due to misconduct, negligence or breach of contractual terms, are to be borne by the *Muḍārib*.

However, it is not permissible for a *Muḍārib*to give a guarantee against such losses; such a guarantee may be given by a third party on the basis of *tabarru'* (donation). In such a case, the amount of the *Muḍārabah*capital so guaranteed may be considered as subject to credit risk with a risk weighting equal to that of the guarantor. In particular, such guarantees may be given when liquid funds are placed in an Islamic inter-bank market under a Mudārabah contract.

In assigning the RW, consideration is given to the intent of the *Muḍārabah* investment, and to the nature of the underlying assets. The intent may be either (a) the purchase of assets for trading; (b) investing on an equity basis in an ongoing business venture with the intention of holding the investment for an indefinite period perhaps with a view to eventual sale (e.g. venture capital investments); or (c) project finance. The underlying assets may be tradable assets such as commodities, foreign exchange or securities, or business assets such as real property, plant and equipment and working capital. Real property and moveable property may also be purchased with a view to generating rental income by means of *Ijārah* contracts.

For the purpose of calculating the minimum adequacy capital requirement, this section makes distinctions between the three main categories of *Muḍāraba* has set out below:

(a) Private commercial enterprise to undertake trading activities in foreign exchange, shares or commodities

This type of *Muḍārabah* exposes the Islamic bank to the risk of the underlying activities, namely foreign exchange, equity or commodities.

(b) Private commercial enterprise to undertake a business venture (other than (a))

This type of *Muḍārabah* exposes the Islamic bank to risk as an equity holder, which is similar to the risk assumed by a partner in venture capital or a joint-venture, but not to market risk. As an equity investor, the Islamic bank serves as the first loss position and its rights and entitlements are subordinated to the claims secured and unsecured creditors.

(c) Muḍārabah investments in project finance

An Islamic bank advances funds to a customer who acts as *Muḍārib*in a construction contract for a third-party customer (ultimate customer). The ultimate customer will make progress payments to the*Muḍārib* who in turn make payments to the Islamic bank. The essential role of the Islamic bank in this structure is to provide bridging finance to the *Muḍārib* pending its receipt of the progress payments. In this *Muḍārabah* structure:

(i) the Islamic bank has no direct or contractual relationship with the ultimate customer (but the Islamic bank may stipulate that payments by the ultimate customer to the *Muḍārib*be made to an account ("repayment account") with the Islamic bank which has been opened for the purpose of the *Muḍārabah*and from which the *Muḍārib* may not make withdrawals without the Islamic bank's permission); and

(ii) The Islamic bank as investor advances funds to the construction company as *Muḍārib* for the construction project and is entitled to a share of the profit of the project but must bear 100% of any loss.

The Islamic bank is exposed to the risk on the amounts paid to the *Muḍārib*, and as these amounts are made on a profit sharing and loss bearing basis they are treated under credit risk as "equity positions in the 'banking book'". In principle, the Islamic bank's credit exposure is to the *Muḍārib*, not to the ultimate customer; however, as described below, a structure may involve the "*Muḍārabah* repayment account" instead of making payments to the *Muḍārib,* which transfers much of the credit risk to the ultimate customer.

In addition to credit risk (i.e. that the *Muḍārib*has received payment from the ultimate customer but fails to pay the Islamic bank, or that the ultimate customer fails to pay) the IIFS is exposed to capital impairment in case the project results in a loss.

Direct payment by ultimate customer into account opened with the Islamic bank and effectively pledged to the Islamic bank

Much of the Islamic bank's credit exposure to the *Muḍārib* may be transferred to the ultimate customer under this structure involving the "repayment account". If the ultimate customer is a sovereign or otherwise has a very low risk weighting, this may affect the RW to be applied to the exposure, and other credit risk mitigants may be applied, as described below.

Provided the construction work proceeds normally and to the ultimate customer's satisfaction, the risk attaching to the progress payments due from the ultimate customer to the *Muḍārib*will be the credit risk of the ultimate customer. However, this does not per se constitute a mitigation of the credit risk of the Islamic bank's exposure to the *Muḍārib*. In such a case, if an independent engineer employed to certify that the work has reached a certain stage of completion has issued a certificate to that effect, so that a progress payment is due from the ultimate customer, from the point of view of the Islamic bank the amount of that progress payment due is no longer exposed to the risk of unsatisfactory performance by the *Muḍārib*, but only to the latter's failure to pay the Islamic bank (the *Muḍārib*being exposed to possible default by the ultimate customer). Such an amount might thus arguably bear a RW based entirely on the credit standing of the *Muḍārib*, i.e. say 100%, rather than 400%. However, if a binding agreement exists between the Islamic bank and the ultimate customer whereby the latter will make the payment into a "repayment account" with the Islamic bank, the latter's credit exposure in respect of the amount due is transferred from the *Muḍārib*to the ultimate customer.

Other structures may be used which have the effect of modifying the risk exposures of the investors in a *Muḍārabah*. The determination of the risk exposure (nature and amount) shall take into account any such structures and this shall also be reflected in the application of RW.

2. Equity Position Risk

The equity exposure can be measured based on the nature of the underlying investments as follows: (a) For investments held in the trading book, the exposure is equal to the fair value; or (b) For investments held to maturity, the exposure is equal to the historical cost less any provisions for impairment. The *Muḍārabah* exposures, net of specific provisions, shall be measured as follows:

The Capital Charge shall be based on the applicable underlying assets as set out in the market risk section.

The investment in foreign exchange and trading in gold/silver shall be measured according to the treatment of as set out in paragraphs, which requires at rate of minimum CRAR capital charge on the greater of either net long or net short positions and at rate of minimum CRAR capital charge on the net position of gold/silver.

The capital charge of a *Muḍārabah* that invests in quoted shares shall be measured according to equity position risk approach where positions in assets tradable in markets will qualify for treatment as equity position risk in the trading book, which would incur a total capital charge of 20% as set out in paragraphs.

Calculating capital charge for operational risk

Operational risk is defined as the risk of losses resulting from inadequate or failed internal processes, people and systems or from external events, which includes but is not limited to, legal risk and ***Sharī`ah*** compliance risk. This definition excludes strategic and reputational risks.

The proposed measurement of capital to cater for operational risk in Islamic Banks will be based on the Basic Indicator Approach as set out in the Basel II. Under the Basic Indicator Approach, a fixed percentage of 15% of annual average gross income, averaged over the previous 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. 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)
α= 15%
n = number of the previous three years for which gross income is positive.

Gross income is defined as:

(a) Net income from financing activities which is gross of any provisions and operating expenses and of depreciation of Ijarah assets;
(b) Net income from investment activities; and
(c) Fee income (e.g. commission and agency fee)
Less:
Investment account holders' share of income i.e. Profit Paid on Mudaraba Deposits (PPD)

The gross income includes income attributable to restricted and unrestricted Profit Sharing Investment Accounts' funds, but excludes extraordinary or exceptional income. Net income from investment activities includes the Islamic Bank's share of profit from Mushārakah and Mudārabah financing activities.

Sharī`ah compliance risk is a type of operational risk facing the Islamic Banks which can lead to non-recognition of income and resultant losses.

Set out below are examples of Sharī`ah requirements that are to be complied with by the Islamic Banks in respect of the financing contracts. The list is not conclusive and may vary according to the views of the various Sharī`ah Supervisory Board (SSB):

(a) Murābahah and ijārah contracts

- The asset is in existence at the time of sale or lease or, in case of Ijārah, the lease contract should be preceded by acquisition of the usufruct of that asset except if the asset was agreed upon based on a general specification.
- The asset is legally owned by the Islamic Banks when it is offered for sale.
- The asset is intended to be used by the buyer/lessee for activities or businesses permissible by Sharī`ah; if the asset is leased back to its owner in the first lease period, it should not lead to contract of 'inah, by varying the rent or the duration.
- There is no late payment, penalty fee or increase in price in exchange for extending or rescheduling the date of payment of accounts receivable or lease receivable, irrespective of whether the debtor is solvent or insolvent.

(b) Salam and istisnā` contracts

- A sale and purchase contract cannot be inter-dependent and inter-conditional on each other, such as Salam and Parallel Salam; Istisnā` and Parallel Istisnā`.
- It is not allowed to stipulate a penalty clause in respect of delay in delivery of a commodity that is purchased under Salam contract, however it is allowed under Istisnā` or Parallel Istisnā`.
- The subject-matter of an Istisnā` contract may not physically exist upon entering into the contract.

(c) Mushārakah and mudārabah contracts

- The capital of the Islamic Banks is to be invested in Sharī`ah compliant investments or business activities.
- A partner in Mushārakah cannot guarantee the capital of another partner or a Mudārib guarantees the capital of the Mudārabah.
- The purchase price of other partner's share in a Mushārakah with a binding promise to purchase can only be set as per the market value or as per the agreement at the date of buying. It is not permissible, however, to stipulate that the share be acquired at its face value.

The extent of losses arising from non-compliance with Sharī`ah rules and principles cannot be ascertained owing to lack of data. Therefore, the Islamic Banks is not required to set aside any additional amount over and above the 15% of average annual gross income over the preceding three years for operational risk. A higher capital charge may be imposed by Bangladesh Bank to fit to cater for the Sharī`ah compliance risk of a particular Islamic Banks.

Annex 12: Guidelines for Recognition of eligible External Credit Assessment Institutions (ECAIs)

External Credit Assessment Institutions (ECAIs) duly recognized by Bangladesh Bank (BB) will be engaged in credit risk assessment under the Standardized Approach of the Risk Based Capital Adequacy framework (Basel II). On the basis of that assessment, risk weight will be mapped with the credit rating category and risk weighted assets (RWA) to be determined for calculating the capital requirement of banks against credit risk. The criteria of ECAI recognition and mapping process of risk weight (RW) has been developed in line with the "International Convergence of Capital Measurement and Capital Standards" (Basel II) issued by the Basel Committee on Banking Supervision (BCBS) in June 2006.

1. Recognition Process

BB is responsible for determining on a continuous basis whether an external credit assessment institution (ECAI) meets the criteria listed in the paragraphs below. BB will refer to the IOSCO Code of Conduct Fundamentals for Credit Rating Agencies when determining ECAI eligibility. The assessments of ECAIs may be recognized on a limited basis, e.g. by type of claims or by jurisdiction. ECAIs that produce credit assessments of sufficiently high quality, uniformity and potency to be used by banks shall be eligible for recognition by BB for regulatory capital purpose.

2. Eligibility criteria

The following six criteria will be considered in determining the eligibility of an ECAI:

A) Objectivity

The methodology for assigning credit assessments must be rigorous, systematic, and subject to validation based on historical experience. Moreover, assessments must be subject to ongoing review and responsive to changes in financial condition of the concerned entity. An assessment methodology for each market segment, including rigorous back-testing, must have been established for at least one year and preferably three years.

B) Independence:

An ECAI should be independent and free from political, social or economic pressure that may influence the rating. The assessment process should also be free from any such constraints that could arise in situations where the composition of the board of directors or the shareholder structure and the officials of the assessment team of the ECAIs may be seen as creating a conflict of interest.

C) International access / Transparency:

The individual assessments, the key elements underlining the assessments and whether the issuer participated in the assessment process should be publicly available on a non-selective basis, unless they are private assessments. In addition, the general procedures, methodologies and assumptions for arriving at assessments used by the ECAI should be publicly available.

D) Disclosure:

An ECAI should disclose the following information: its code of conduct; the general nature of its compensation arrangements with assessed entities; its assessment methodologies, including the definition of default, the time horizon, and the meaning of each rating; the actual default rates experienced in each assessment category; and the transitions of the assessments, e.g. the likelihood of AA ratings becoming A over time.

E) Resources:
An ECAI should have sufficient resources to carry out high quality credit assessments. These resources should allow for substantial ongoing contact with senior and operational level executives within the entities assessed in order to add value to the credit assessments. Such assessment methodologies should be based on both qualitative and quantitative approaches.

F) Credibility:
In addition to the above criteria, the reliance on an ECAI's credit assessments by independent parties (investors, insurers, trading partners) shall be evidences of the credibility of the assessments of an ECAI. The credibility of an ECAI is also underpinned by the existence of effective internal control to prevent the misuse of confidential information.

3. Mapping process

The Revised Framework recommends development of a mapping process to assign the ratings issued by eligible credit rating agencies to the risk weights available under the Standardized risk weighting framework. The mapping process is required to result in a risk weight assignment consistent with that of the level of credit risk. A mapping of the credit ratings awarded by the chosen domestic credit rating agencies has been furnished in Table 7 and Table 8 which should be used by banks in assigning risk weights to the various exposures.

2.1 BB will assign risk weight to an eligible ECAI's rating categories i.e. deciding which rating categories correspond to which risk-weights. BB will evaluate each credit rating category of an eligible ECAI which will be mapped with the numerals 1 to 6, with 1 being the best and 6 being the worst and includes 'Default Rating Category'[33]. Each "short term credit rating category"[34]will be evaluated and mapped with category S1 to S4, with S1 being the best. BB will assign risk weight on the basis of evaluation of variety of qualitative and quantitative factors relate to ECAI's rating category.

2.2 BB will consider a variety of qualitative and quantitative factors to differentiate between the relative degrees of risk expressed by each rating category. Both quantitative and qualitative parameters may help to promote a more consistent mapping of rating categories into the assigned risk-weights.

a) Quantitative factors:

[33]This rating is applicable for those counterparties who are in default position. A default is considered to have occurred with regard to a particular obligor when either or both of the two following events have taken place.

- The bank considers that the obligor is unlikely to pay its credit obligations to the banking company or syndicate banking group, without recourse by the bank to actions such as realizing security (if held).
- The obligor is past due for more than 60 days or more as defined by BB.

[34]Short-term ratings may only be used for short-term claims against banks and corporate counterparties.

i) BB will evaluate the consistency of an ECAI's rating category (Notch/Notation) through analysis of Cumulative Default Rate (CDR). CDR is the measure of movement of a rating category into 'Default Rating Category '* during a time period.

The following two measures of CDR may be considered in this regard:

- Ten-year average of the three-year CDR for evaluating the long-run default experience; and
- Most recent three-year CDR for evaluating the short-run default experience.

ii) The transition of individual notch/notation towards default rating category observed in a particular ECAI rating category will be compared to the standards available domestically/ regionally/ internationally.

iii) The long-run transition towards default category of the ECAI ratings will be compared with the reference values of CDRs available domestically/regionally/internationally. In this connection, internationally accepted long-run reference values are stated below for information:

Long-run "reference" three-year CDRs

S&P assessment	**AAA-AA**	**A**	**BBB**	**BB**	**B**
Moody's	***Aaa-Aa***	***A***	***Baa***	***Ba***	***B***
20-year average of three year CDR	**0.10%**	**0.25%**	**1.00%**	**7.50%**	**20.00%**

*Ref. Table-2 Annexure-2 of International Convergence of Capital measurement and Capital standards, published by BCBS (June 2006)

iv) BB will use two benchmark CDRs namely "monitoring" level CDR and a "trigger" level CDR in interpreting whether a CDR falls within an acceptable range for a rating category to qualify for a particular risk-weight. BB will adopt the two benchmarks of CDR standard in line with domestic/regional/international standard. In this connection, Basel Committee standards are specified in the following table for information:

Three-year CDRs benchmark*

S&P assessment	**AAA-AA**	**A**	**BBB**	**BB**	**B**
Moody's	***Aaa-Aa***	***A***	***Baa***	***Ba***	***B***
Monitoring level	0.8%	1.0%	2.4%	11.0%	28.6%
Trigger level	1.2%	1.3%	3.0%	12.4%	35.0%

*Ref. Table-3 Annexure-2 of International Convergence of Capital measurement and Capital standards, published by BCBS (June 2006)

v) Exceeding the “monitoring” level CDR benchmark implies that a rating agency’s transition to default rating for a particular notch/ notation is markedly higher than domestic/regional/international transition experience to default rating. A consultation process with a relevant ECAI will commence to understand why the default experience appears to be significantly worse. If the BB determines that the higher default experience is attributable to weaker standards in assessing credit risk, they would be expected to assign a higher risk category to ECAIs credit risk assessments.

vi) Exceeding the “trigger” level benchmark implies that transition of an ECAI's notch/notation towards default rating is considerably above the domestic/regional/international standards. If the observed three-year CDR exceeds the trigger level in two consecutive years, the ECAIs rating category shall be degraded.

vii) ECAIs who have only a short record of transition and default data will be required to provide a projection of the ten-year average of the three-year CDR on the basis of two most recent CDRs.

viii) Definition of 'Default Rating' has an impact on the assessment of CDR. ECAI will declare definition of 'default rating' at their website and submit a copy to BB. Subsequently, if any amendment on the same is made must be reported to BB with due justification thereof.

b) Qualitative factors

Criteria under qualitative factors will be set by BB's working group to assess different rating methodology and their scoring standard will form the necessary basis of the mapping process. Quantitative data may be inconclusive for mapping risk weights, in that situation qualitative criteria may be the only basis of mapping risk weight.

3. Scope of Application of External Ratings

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

(ii) Banks must disclose the names of the credit rating agencies that they use for the risk weighting of their assets, the risk weights associated with the particular rating grades as determined by BB for each eligible credit rating agency as well as the aggregated risk weighted assets. To be eligible for risk-weighting purposes, the external credit assessment must take into account and reflect the entire amount of credit risk exposure the bank has with regard to all payments owed to it. For

example, if a bank is owed both principal and interest, the assessment must fully take into account and reflect the credit risk associated with timely repayment of both principal and interest.

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

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

(v) Where "+" or "-" notation is attached to the rating, the corresponding main rating category risk weight should be used for A and below, unless specified otherwise. For example, A+ or A- would be considered to be in the A rating category and assigned 50 per cent risk weight.

(vi) The above risk weight mapping of both long term and short term ratings of the chosen domestic rating agencies would be reviewed annually by Bangladesh Bank

4. Application process

4.1 Credit Rating Companies (Domestic & International) that are registered under Credit Rating Companies Rules, 1996 of Bangladesh Securities and Exchange Commission (BSEC), and further amendments (Notification 2009) and meet the eligibility criteria may apply to General Manager, Banking Regulation and Policy Department, Bangladesh Bank, Head Office, Dhaka for the recognition as an ECAI (As per application Form A along with list of information supported by documents and required methodology for corporate, banks, NBFIs stated at the end of this Annex and for SME Rating Methodology Annex 10 will also be applicable)**.**

4.2 ECAIs will categorize their ratings into the following broad asset classes or market segments:
a)Sovereign (Government, Public Sector Corporations & Autonomous Bodies)

b) Financial Institutions (Banks, Insurances Co., Security firms and other Financial Institutions)

c) Corporate (other than Government & Financial Institutions)

d) Others (If any to be mentioned specifically)

4.3 A working group of BB will complete recognition process and follow a uniform minimum standard of the components are stated at the end of this Annex. They will define any required term(s), prepare check list and score list where necessary.

5. On-going recognition

Recognition of an ECAI will be reviewed annually until they reach the point where the robustness of system is assured to BB's satisfaction. It is expected that an ECAI will continue to meet the eligible

criteria for recognition and its methodologies and credit assessments remain appropriate over different periods of time and through changes in market conditions:

(a) ECAIs ratings will be reviewed at least annually and may be revised in response to changes in financial conditions; and their ratings are subject to back-testing on an annual basis.

(b) If any material changes occur that alter a significant number of ratings, ECAIs will inform BB about the changes promptly (e.g. change of ownership or internal structure and major deterioration in financial positions etc.). ECAIs will maintain minimum standard of the rating methodology set by BB from time to time.

(c) BB will review the eligibility of an ECAI on continuous basis. If it comes to BB's attention that there is a noticeable deterioration in the performance and/or market acceptance of the ECAI, BB will review the eligibility of the ECAI immediately.

(d) BB may withdraw the recognition of an eligible ECAI if it ceases to comply with any of the recognition criteria. Before taking such decision of derecognizing, BB will first notify the concerned ECAI mentioning the eligibility criteria which is found as non-compliant. The ECAI will also be allowed to clarify their position within a reasonable time. After which appropriate decision in this regard shall be taken.

(e) If an ECAI is suspended or their registration is cancelled by BSEC under Credit Rating Companies rules 1996 (and any further amendments), BB will treat the particular ECAI as derecognized.

6. Guidelines applicable to Banks regarding nomination of ECAIs

6.1. For the purpose of applying ECAI ratings to derive risk-weights for exposures under the portfolio of claims on sovereigns, claims on banks, claims on securities firms and claims on corporate, a bank should satisfy the following steps: (i) Banks will nominate recognized ECAI for determining credit rating of banking book exposures and notify BB about the nominated ECAI. (ii) Banks will use the ratings of the nominated ECAI for each of banking book portfolio constantly for a reasonable period. If they want to change the ECAI(s) must seek the consent from BB stating valid ground; and iii) A client may be counter party of many banks or may change his bank in a particular year. In such cases, credit rating assigned by any recognized ECAI will be considered as valid for that year by the bank.

6.2 Banks will require maintaining track record of their counterparty ratings over the years.

6.3 If any bank or a client has reasonable ground sufficient to raise question about ECAIs assessment of the credit rating, they may inform BB in writing with valid explanation. BB shall look into the matter and take necessary step(s) as it deem fit.

6.4 Bangladeshi banks, having exposures abroad, may use the ratings assigned by ECAIs recognized through indirect recognition. Indirect recognition process is that where BB is satisfied that host country supervisor has recognized an ECAI on the basis of recognition criteria which are well matched with this guidelines.

6.5 Banks will follow Credit Risk Grading Manual (CRGM) for assessing a borrower and making decisions of disbursing loans and advances/ investments. CRG may be customized for internal rating in such a way that can help to derive parameters like probability of default (PD), exposure at default (EAD) and loss given to default (LGD) which will be required for determining risk weight under Internal Rating Based (IRB) approach of Basel II.

7. Use of Multiple Rating Assessments

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

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

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

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

8. General Instructions:

8.1 The ECAI(s) will disclose credit ratings of related parties quarterly to BB after the assessment is finalized. All the rating will be supported by declaration (duly signed by CEO) that the rating is independent and free from conflict of interest. Such statement will be based upon the declaration made by each member/official related to rating activities.

8.2 The ECAIs should have a unique pricing system for credit rating. They should disclose their schedule of credit rating fees annually.

8.3 The ECAIs will follow the IOSCO/BSEC Code of Conduct Fundamentals published for Credit Rating Agencies.

Form – A

FORM OF APPLICATION FOR RECOGNITION
AS AN EXTERNAL CREDIT ASSESSMENT INTITUTION

To
General Manager
Banking Regulation and Policy Department
Bangladesh Bank
Head Office
12th Floor (2nd annex building)
Motijheel,
Dhaka-1000

Dear Sir,

We hereby apply for recognition as an External Credit Assessment Institution (ECAI). It is to mention that:

1. We are eligible for assessing credit standing of the Sovereign, Financial Institutions, Corporate and other clients.

2. We confirm that the credit assessments will be used for risk-weighting purposes under the Risk Based Capital Adequacy framework (Basel II).

4. Necessary information required for recognition listed as per annexure-1 (enclosed) is furnished herewith

5. We confirm that all the information outlined in this letter and the enclosed annexure are true and correct.

Yours Faithfully,

Signature of the Chairman/Managing Director/
Chief Executive Officer/ Executive Director/Director

annexure-1

List of information to be supported by document(s)

A) Regarding Objectivity		Supported Documents/ Statements required
	1. Manuscript of Methodology	Manuscript of Methodology will cover at least those information as mentioned in the annexure – 1(a) along with weightage score.
	- Risk area coverage	
	- Importance/ Weightage on each risk area	
	2. Internal Process	
	- Analysis Team	List of Executives with qualification and experience
	- Rating Committee	List of Members with qualification and experience
	- Internal Verification system	Internally practiced Manual
	3. Rating Scale and their sensitivity	
	- Number of Notches/ Notations to be used for ratings	Statement of Notches/ Notations to be used for each rating and Scoring system. Demonstration of methodology: how it is aligned with international ratings of S&P.
	- Scoring System for achieving the Notches/ Notation	
	Demonstration of Alignment with international ratings of Standard & Poor (S&P)	
	4. Validation system	Brief description on supported rules, regulation, techniques of the validation system used by an ECAI. (Minimum 150 words).
	- Off-site analysis	
	- On-site examination	
	5. Ongoing Review	Brief description on Database Management system which includes all these components. (Minimum 100 words).
	- Client wise yearly track record of rating	
	- Solicited Review	
	- Unsolicited Review	
	6. Database Management	Brief description on this issue included in Database Management system. (Minimum 100 words).
	- Assessment/disclosure of the depth of default data available/held by the ECAI	
	- Transition matrices (Notch/Notation wise)	
	7. System Back Testing	Brief description on this issue included in Database Management system. (Minimum 75 words).
	- Comparative Analysis (three year's comparison)	

B) Regarding Independence		Copy of Certificate of Registration
	1. Registration status with SEC	
	- Registration No.	
	- Date of Registration	
	2. Ownership Quality	Memorandum of Association, Articles of Association and Certificate of Commencement along with up to date information.
	- Nature of ownership	
	- List of major share holders (holding shares over 5%)	
	- Voting power of each share holder	
	3. Procedure to ensure Independence	Letter of undertakingfor providing declaration of team members regarding activity which will be independent and free from conflict of interest.
	- Executives of analyst team is independent i.e. free from any political, social or economic pressure that may influence assessment/rating.	
	- Rating Committee is independent and free from any political, social or economic pressure that may influence assessment/rating.	
	- The names, profiles and backgrounds of each executive within the analyst teams.	Details C.V of each executive and members of the rating committee.
	4. Board Members are free from influencing rating activities.	Letter of undertakings of Board Members
	- Board Members careful about influencing rating function.	
	5. Solvency of the Company	Audited Balance Sheet and Income Statement, Cash flow statement for 3 years and Bank turnover statements for last 1 year.
	- Audited Balance Sheet and Income Statement	
	- Cash flow statement	
	- Net- worth	
	- Bank Solvency Certificate	
	6. Schedule of credit assessment fees	Published/Disclosed List of fees to be charged for making assessment.
	- Published/Disclosed list of fees	

C) International Access/Transparency		Accreditation or membership Certificate. Evidence of overseas experience.
	1. International Exposure	
	- Accreditation or membership of international/ regional credit rating association	
	- Evidence of overseas experience	
	2. Accessibility of the ECAI's rating	
	- Easy availability of credit rating to the public	Published Document
	- Website containing track record & transition matrices of credit rating	Statement of Web-site Address

	3. Availability of Assessment Methodology	
	- Disclosure of assessment methodology to public	Published Document
	- Website containing updated assessment methodology	Description on how to find out and consult with methodology placed in Web-site.
	4. Nature of rating	Database Management system should have these sorts of declaration.
	- Disclose whether the rating was Solicited or Unsolicited	

E) Resources		Audited financial statements of last 3 years.
	1. Capital Structure and Net Worth	
	- Audited financial statements	
	- Significant change in net-worth (if any)	
	2. Hard and Soft Infrastructure	
	- Office set up, support system and software system for rating	Brief description on these issues (Minimum 150 words).
	3. Number of professional staffs	List of professional Staffs along with details of qualification and experience
	- List of professional staffs along with details of qualification and experience	
	4. Personnel Policy	
	- Recruitment and training policy, Service Rules, Pay structure , staff regulations	Brief description and Supported by documents (Minimum 150 words).
	- Employee Turnover Rate	Statement on this issue
	5. Internal Work Relationship	Work flow chart and organogram
	- Work flow chart and organogram	
	6. Data ware housing	Brief description (Minimum 100 words).
	- Data storing of rated entities	
	- "Data Warehousing" could disclosures regarding the security system installed by the ECAI to protect confidential customer information.	

F) Credibility		
	1. Degree of acceptance by the client	Study Report (If any)
	- Evidence of dependability of rating by the client	
	- Study report on " Degree of acceptance by the client" (if any)	Copy of the report
	- Policy of maintaining secrecy of information	Policy paper
	2. Market Share of the ECAI	Brief description and Study Report (If any)
	- Record of the borrower's credit rating	
	3. Handling Conflict of Interest	Brief description on this Policy issue (Minimum 150 words).
	- Existence of Policy and procedures for handling conflict of interest	
	4. Market Penetration Approach	Strategic Plan along with vision and mission of the ECAI.
	- Business expansion strategy	

annexure-1(a)

Methodology requires minimum information on following parameters

A. Corporate (other than Bank and Non-bank Financial Institution)

i) Financial Risk	
	Leverage
	Liquidity
	Profitability
	Coverage ratio
ii) Business/Industry Risk	
	Size of Business
	Age of Business
	Business Outlook
	Industry Growth
	Competition
	Entry/Exit Barriers to Business
iii) Management Risk	
	Experience
	Succession
	Team Work
iv) Security Risk	
	Security Coverage
	Collateral coverage
	Support/Guarantee
	legal intervention (If any)
v) Relationship Risk	
	Account Conduct
	Utilization of Limit –If any loan from bank
	Compliance of covenants/conditions with banks & other counterparty
	Deposit with bank or others

B. Bank and Non-bank Financial Institution

i) Quantitative Factors	
	Capital Adequacy
	Asset Quality
	Earning quality
	Liquidity and Capacity of External Fund Mobilization
	Size of the Bank and Market Presence
ii) Qualitative Factors	
	Management
	Regulatory Environment & Compliance
	Risk Management
	Sensitivity to Market Risk
	Ownership (Share holding pattern) and Corporate Governance
	Accounting Quality
	Franchise Value

C. Quantitative and Qualitative risk factors for other business segments i.e. Securitization exposure, Insurance Company, Autonomous Bodies etc. have to be enclosed.

Annex 13: Credit Rating Methodology for Small and Medium Enterprise (SME)

Introduction

As a move towards facilitating development of Small & Medium Enterprises (SMEs) in the country and encourage larger levels of transparency and credit discipline, BB proposes to launch SME Ratings in Bangladesh. The credit risk assessment in this segment requires a specific approach, as the factors affecting the creditworthiness differ from those compared to large corporate entities. Hence, to further support the growth for this sector and help the investors to determine the relative creditworthiness of entities belonging to this segment, SME Ratings will play a helping hand.

Concepts and Definition of SMEs

The Industrial policy 2010 and accordingly Bangladesh Bank's SME & SPD circular no.1 dated 19th June, 2011 defines small and medium enterprises in terms of the value of fixed assets with replacement cost excluding land and building or in terms the number persons employed as under-

Category	Industry Type	Value of Fixed Assets (Tk.)	Number of Persons Employed
Medium	Manufacturing	>1000 lacs -3000 lacs	100-250
	Service/ Trading	100-1500 Lacs	10-25
Small	Manufacturing	50 -1000 lacs	25-99
	Service/ Trading	5-100 Lacs	10-25

Objectives of SME rating

Banks and financial institutions are migrating from an individual's opinion based credit review process toward a systematic and scientific process with an emphasis on objective inputs. The main reason for this shift is the need for faster, more accurate, uniform and timely credit decisions. This can only be possible when highly productive and easy to use tools are provided to them to help them in their decision-making. There was a need to enhance the existing credit assessment system with additional features:

a. Comply with Standardized approach of Basel II requirements

b. Creation of risk rating system

c. Help to automate Credit Origination, credit approval process, risk administration and monitoring functions and management of Non Performing assets

d. Help to provide data feeds for management reporting.

RATING METHODOLOGY

Both quantitative and qualitative factors should be considered in assessing the SME operation. The methodology is comprehensive where assessment area concentrates five broad categories– Financial Risk, Business/Industry Risk, Management Risk, Bank Relationship Risk, Financial Security Risk and others. Although, the above concentration areas are in line with corporate rating methodology, the relative

weightage for different parameters may differ in between the two sectors. The financial position (i.e. Balance Sheet and Income Statement) and Cash flow Statement may be collected as per accounting Standard provided by concerned regulators that may either be audited or signed by the appropriate authority.

A. FINANCIAL RISK:

SMEs are typically set up as, Proprietorship, partnership or private limited companies. Each category of SMEs will prepare their own yearly financial statement (B/S, Profit and Loss A/C, Cash Flow Statement, statement of WC utilization etc.) in a structured format applicable for them and the same will be provided to the Rating Agencies. Bank transaction statement will also be provided which may be a good support to justify and assess its business volume.

Assessment of financial risk includes identification of net worth, asset size, liability, turnover, cost pattern, profitability, cash flow adequacy to debt repayment, and other important performance indicators (profit margin, ROE, ROA, leverage, liquidity etc). The ratio calculation is same as in the corporate ratings but adjustment may be made as per the nature of the business. Analysts are basically entrusted with the responsibility to frame opinion about the entity's ability in debt repayment based on its cash flow assessment. The future cash flow estimation against the debt obligation is also important in SME rating framework.

In addition to above, assessment of the flexibility of the entity in fund arrangement; especially the relationship with the bank and Assessment of the expected financial support from the sponsors in any distressed position may be considered. In view, the sponsor(s)' personal assets may be assessed specially for sole proprietorship and partnership business.

B. BUSINESS RISK/INDUSTRY RISK:

Business risk/Industry Risk can be termed as "a risk of direct or indirect loss arising due to deficient or unsuccessful internal systems, process, people or external factors.''

Business risk arises due to change in market situation and from its own operation infrastructure. Under the business risk, the sustainability of the business in the changing market situation will be assessed. Due to the limited scale of operation, business nature differs in different mode like manufacturing & marketing in a specific geographical region or functioning as support service to large scale manufacturers or trading of goods through import or local procurement, or even at agro-based level. A significant number of SMEs are doing their business as the backward operation of the formal sector; hence, rarely have control over pricing or fully market dependent. Even market competition is very high due to large number of SMEs in the same business.

Thus, customer group, performance track record, relationship with the suppliers, business network and the necessary infrastructures are important in market positioning of an enterprise. In case of new project in SME sector, the same key consideration factors in the project finance will be followed but in limited scale. SME project rating Framework would include parameters like: project viability in respect of market situation, estimated project cost, cost overrun, implementation plan, competence of the sponsor in implementing new project, estimated cash generation from the project and also the project location and availability of necessary manpower.

The industry related risks might have impact on the operation of related SMEs. So, the factors like the scope of diversification, industry size, supply gap, government policy towards the industry, nature of the product, social desirability, entry and exit barriers etc should be considered while rating SMEs broadly. As SMEs have presence in majority of the economic sectors of the economy, these types of enterprise operate as linkage and supportive to the industry either by products or by services.

C. MANAGEMENT RISK:

SMEs are typically managed by one or two entrepreneurs mostly related as family members or members from the known community. Unlike corporate, SMEs are rarely managed by qualified professionals; hence, performance of the enterprise is highly dependent on the experience and expertise of the entrepreneur in managing the business. A good number of entrepreneurs do not have formal education, however, involved in the business as inheritance. In assessing the competence of the promoters, track record and risk taking capacity is an important consideration in SME rating framework. However, the capacity of the support employees in many cases to handle the business efficiently may also be considered. Working condition and relationship between the employer and employees is an important consideration factor. Generally lenders have good control over the borrowers in SME sector, however, willingness to repay loan is an important characteristics even having good ability to pay its obligations which is being reflected by his/her track record. In addition to those, assess the performance of the entrepreneurs in other business, experience in the same or different line of business, succession of the entrepreneurs etc. should be assessed rigorously.

D. BANK RELATIONSHIP RISK:

Review of banking relationship is very important in SME rating process. The analyst team must visit the respective branch to meet with the bank professionals to collect information about the loan payment history, reason against the delay in payment, utilization performance of the loan limit, security against the loan, control over the security, and related issues. Any loan classification may create problem to the respective entity in further borrowing from the bank.

E. Financial Security Risk:

Although security against a loan is a post-default event and has bearing only in recovery rating, security offered against an SME loan plays an important role in the repayment behavior of the borrower even in the process of loan repayment.Loan coverage through FDR, hypothecation, guarantee, collateral, third party guarantee etc. will be considered in the rating evaluation process.

F. Other Factors:

Other than the above broad areas, other parameters like legal or environmental issue, disaster management capacity, impact of subsidies/tax waiver by the government, sudden business loss, impact of non-insurance or inadequate insurance of assets, extraordinary or windfall gains and losses, impact of the new monetary or fiscal policies or significant development in the industry should thoroughly be assessed on case to case basis.

Credit Rating Methodology
For Small and Medium Enterprise (SME)

Methodology should cover analysis of following risks parameters (Score 100)		Maximum Score	Score achieved by the client
i) Financial Risk (Business Performance and Profitability)		30	
1	Leverage (Less than 0.25-More than 2.75 times)	6	
2	Liquidity ((Greater than 2.74-Less than 0.70 times)	6	
3	Profitability (Greater than 25%-Less than 1%)	5	
4	Coverage ratio (More than 2.00 times-Less than 1.00 times)	3	
5	Additional Risk Parameters to be assessed (Profit Margin -Gross & Net, Return On Assets , Return on Equity, Equity Development Trend (Last 3 years), Trend of Operating cash flow (OCF), Business as well as personal net worth)	10	
ii) Business/Industry Risk		23	
6	Size of Business (Yearly sales in BDT) Medium-(1 crore or More) Small-(25 Lacs or More) Micro-(5 Lacs or More)	4	
7	Age of Business (>5 years -<2 years)	2	
8	Business Outlook (Favorable-Cause for concern)	2	
9	Business Growth compared to Industry (Strong-No Growth)	3	
10	Market Competition (Dominant Player-Highly Competitive)	3	
11	Entry/Exit Barriers to Business (Difficult-Easy)	1	
12	Additional Risk Parameters to be assessed (Level of Technology/Service, Infrastructure Facility, Government Policy Toward Industry, Nature of the Product & potentialities /Social Desirability, Dependency on suppliers/clients, Trade mark/Patent/copy right, Franchise/dealership, Marketing strategy)	8	

Methodology should cover analysis of following risks parameters (Score 100)		Maximum Score	Score achieved by the client
iii) Management Risk		18	
13	Track Records of the sponsors(Excellent- Not Satisfactory)	3	
14	Educational Qualification, Experience & technical know-how of sponsors/stuffs (5 years or more in the related line of business - No experience)	4	
15	Risk Taking Capacity of Sponsor(s) (Assessment would be made on the basis of past experience of sponsors) (High-Low)	2	
16	Personnel Policy & Internal Control System	3	
17	Succession (Ready Succession - Succession in question)	2	
18	Working Environment/Team Work (Very Good- Regular Conflict)	2	
19	Income Tax/VAT payment History	2	
iv) Bank Relationship Risk		12	
20	Relationship with bank (Maintain accounts for 3 (three) years or more with faultless record- Account(s) says Frequent Past dues & Irregular dealings)	4	
21	Current Status of Loans(Regular-Classified)	3	
22	Compliance of covenants/conditions-If any (Full Compliance - Non Compliance)	3	
23	Personal Deposit (Personal accounts of the key business Sponsors are maintained with banks) (with significant deposits - No depository relationship)	2	
v) Financial Security Risk		10	
24	Security Coverage(Primary) (Capable for fully pledged /cash cover/ Reg. Mortgage – Not capable to provide security)	3	
25	Collateral coverage (Property Location) (Capable for Registered Mortgage on Municipal corporation /Prime area property- Not capable for providing such collateral)	2	
26	Support/Guarantee (Capable Personal guarantee or Corporate Guarantee - Not capable for Support/ Guarantee)	3	
27	Legal Intervention regarding security Coverage (Fair-Disputed)	2	
VI) Other Factors		7	
28	Legal /Environmental Issue (Complied- Not Complied)	2	
29	Disaster Management capacity (Excellent- Not Satisfactory)	2	
30	Insurance (yes- No)	1	
31	Govt. Subsidies/Tax Waiver(Favorable - unfavorable)	1	
32	Any other Material risk factor	1	
	Total	**100**	

N.B: 1. Each External Credit Assessment Institutions (ECAIs) should prepare the sector wise industry average of SME on all risk parameters and this industry average will be considered while assigning score for the purpose of rating of the client.

2. Each Qualitative Factor related to rating report requires further explanation.