
Basel Capital Adequacy Framework

Instructions for Credit Risk

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Banking Policy and Regulations Department
State Bank of Pakistan

The Team

Name	Designation
Mr. Muhammad Akhtar Javed	Executive Director Banking Policy & Regulations Group
Mr. Ghulam Muhammad	Director Banking Policy & Regulations Department
Mr. Saeed Afgan	Additional Director Banking Policy & Regulations Department
Mr. Rahim Bakhsh	Joint Director Banking Policy & Regulations Department
Mr. Uzair Ashfaq	Joint Director Banking Supervision Department-2

Contents

Preamble	4
Credit Risk	6
Section 1: Overview and General Requirements:	7
1.1. External Credit Ratings:	7
1.2. Mapping Process:	9
1.3. Use of External Credit Ratings:	10
1.4. Rating Disclosure:	11
1.5. Multiple External Ratings:	11
1.6. Issue-Specific and Issuer Ratings:	11
1.7. Domestic Currency and Foreign Currency Ratings:	12
1.8. Short-Term & Long-Term Ratings:	12
1.9. Application Level of External Credit Ratings:	13
1.10. Bank Loan or Facility Ratings:	13
Section 2: Banks' Exposures and Applicable Risk Weighting Regime:	14
A - On-Balance Sheet Exposures:	14
2.1. Cash and Cash Equivalents:	15
2.2. Exposure to Sovereigns:	15
2.3. Exposure to Multilateral Development Banks (MDBs):	16
2.4. Exposure to (Non-Financial) Public Sector Entities (PSEs):	17
2.5. Exposure to Banks:	17
2.6. Exposure to Corporates:	20
2.6.1. General Corporate Exposures:	20
2.6.2. Specialized Lending Exposures:.....	21
2.7. Exposure to Retail Customers:	23
2.8. Exposure to Subordinated Debt, Equity and Other Capital Instruments:	25
2.9. Exposure to Covered Bonds:	27
2.10. Exposure secured by Real Estate:	28
2.10.1. Exposure secured by Regulatory Real Estate:.....	28
2.10.1.1. Exposure secured by Regulatory Residential Real Estate:	30
2.10.1.2. Exposure Secured by Regulatory Commercial Real Estate:	31
2.10.2. Exposure Secured by Real Estate for "Low Cost Housing":	32

2.10.3. Land Acquisition, Development and Construction” (ADC) Exposures:	32
2.10.4. Exposure on Real Estate Investment Trusts (REITs):.....	32
2.11. Defaulted Exposures:	32
2.12. Other Assets:	34
B - Off-Balance Sheet Exposures:.....	34
2.13. Non-Market Related Off-Balance Sheet Exposures:	34
2.14. Market Related Off-Balance Sheet Exposures:	36
Section 3: Credit Risk Mitigation (CRM) Techniques:	39
3.1. General Principles and Minimum Requirements:	39
3.2. General Legal Requirements:.....	40
3.3. General Treatment for Maturity Mismatches:.....	40
3.4. General Treatment for Currency Mismatches:.....	41
3.5. Overview of Credit Risk Mitigation Techniques:.....	41
3.6. Collateralized transactions:	42
3.6.1. General Requirements:.....	42
3.6.2. The Simple Approach:	43
3.6.3. The Comprehensive Approach:.....	45
3.7. On-balance Sheet Netting:.....	51
3.8. Guarantees and Credit Derivatives:.....	52
3.8.1. Operational requirements for guarantees and credit derivatives:.....	52
3.8.2. Specific Operational Requirements for Guarantees:	52
3.8.3. Specific Operational Requirements for Credit Derivatives:	53
3.8.4. Range of eligible guarantors (counter-guarantors)/ protection providers and credit derivatives:.....	54
3.8.5. Risk weight treatment of transactions in which eligible credit protection is provided:.....	56
3.8.6. Currency Mismatches:	56
3.8.7. Sovereign Guarantees and Counter-Guarantees:.....	56

Preamble

1. Basel III framework is a central element of Basel Committee on Banking Supervision (BCBS)' reforms in response to the Global Financial Crisis (GFC). It aims to address a number of shortcomings in the pre-crisis regulatory framework and provides a foundation for a resilient banking system that attempts to avoid the build-up of systemic vulnerabilities. Basel's post crisis reforms may broadly be classified into the following:
2. The **first phase** of Basel III reforms, which have largely been adopted by State Bank of Pakistan (SBP) are as under:
 - a. Improvement in the quality, quantity and level of bank's regulatory capital;
 - b. Introduction of Capital Conservation Buffer (CCB);
 - c. Introduction of a minimum Leverage Ratio requirement of 3% to constrain excess leverage in the banking system that also complements the risk-weighted capital requirements¹;
 - d. Adoption of liquidity management framework for mitigating excessive liquidity risk and maturity transformation, through the Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR) and Liquidity Monitoring Tools²;
 - e. Framework for Domestic Systemically Important Banks (D-SIBs)³.
3. The **second phase** of Basel III reforms primarily includes BCBS' risk weighting regime (denominator of CAR) and a few other improvements. Therefore, with an objective to initiate implementation of the relevant second phase reforms, in an orderly and timely fashion, SBP, in line with BCBS instructions, has prepared revised instructions on the Standardized Approach for Credit Risk⁴;
4. The instructions contained in this document will bring partial change in the denominator (Risk Weighted Assets - RWAs/ Exposure) of Capital Adequacy Ratio (CAR). Notably, these instructions cover revised rules for the calculation of only credit risk related RWAs. Therefore, for determining market risk and operational risk related RWAs, during the CAR calculation, existing instructions on the subject⁵ will be used.
5. The aforementioned reforms shall apply to all Banks, Digital Banks, and Development Finance Institutions (DFIs), hereinafter collectively referred to as 'bank(s)'. Reforms will be implemented on parallel run basis for a period of four quarters starting from **September 30, 2025 till June 30, 2026**. The parallel run adoption approach would help SBP to monitor practical challenges and issues faced by the banking industry during implementation of revised instructions and enable SBP to use industry feedback for review/ revision of these instructions (if warranted). At the end of parallel run phase, SBP may issue final instructions on the subject after taking into account

¹ Regulatory instruction for a, b & c were issued vide BPRD Circular No. 6 of 2013.

² Regulatory instruction for d were issued vide BPRD Circular No. 8 of 2016.

³ Regulatory instructions for e were issued vide BPRD Circular No. 4 of April 13, 2018.

⁴ Existing instructions contain in Chapter 2: Credit Risk: The Standardized Approach of BSD Circular No. 8 of June 27, 2006.

⁵ Chapter 5 & 6: Market Risk and Operational Risk as contained in BSD Circular No. 8 of June 27, 2006.

the relevant industry feedback and this final version would replace SBP's existing instructions in the relevant areas for industry wide implementation.

6. Understandably, implementation of these instructions, on parallel run basis, would necessitate additional regulatory reporting by the banks to SBP. However, to ease off the burden of additional regulatory reporting, industry is given extra reporting time of 10 working days to submit quarterly CAR statements. Additionally, for the annual audited CAR return, duly certified by the external auditor, an extra month is being allowed, extending the submission deadline to within four months of the close of the financial year.
7. The scope of application of revised instructions would remain both at standalone as well as at consolidated level⁶. Moreover, regulatory reporting based on these instructions shall only be submitted in soft copy format (excel sheet) to SBP. Accordingly, for periodical reporting of capital adequacy/ leverage ratio under these instructions, during the parallel-run, banks shall submit their returns via email to car.bprd@sbp.org.pk. After the parallel run period, banks shall submit the quarterly returns on DAP portal within 14 working days of the quarter end, whereas annual audited returns, duly certified by the external auditor, shall be submitted within three months of the close of the year.

⁶ Section 1.3 – Scope of Application, Chapter 1 of BPRD Circular No. 6 of August 15, 2013.

Credit Risk

8. Credit risk is the risk that financial obligations are not paid when they fall due because the borrower or counterparty (“obligor”) of the banks and DFIs (hereinafter referred as banks) is either unable, or unwilling, to pay its financial obligation(s). The following chapter enunciates the revised instructions for calculating the risk based capital requirements for credit risk and will replace the previous instructions on the subject matter (Chapter 2: Credit Risk: The Standardized Approach) as contained in BSD Circular No. 8 of June 27, 2006 and all the related FAQs issued by SBP from time to time, in this regard. This chapter has been divided into the following three sub sections:
 - i. Overview and General Requirements;
 - ii. Banks’ Exposures and Applicable Risk Weighting Regime;
 - iii. Credit Risk Mitigation Techniques.

Section 1: Overview and General Requirements:

9. Under the Basel Capital Adequacy Framework, there are following two broad methodologies for calculating risk-based capital requirements for credit risk of banks.
 - a. **The Standardized Approach (SA)** wherein standardized risk weights are assigned to banks' exposures as described in the ensuing paragraphs. In order to determine the risk weights and ultimately the risk-based capital under the standardized approach, banks will largely use credit risk assessments reflective of counterparty's default (hereinafter referred as credit rating) issued by Credit Rating Agencies (CRAs). These CRAs are duly recognized either by State Bank of Pakistan (SBP) or by the banking supervisor of the country of operations as External Credit Assessment Institutions (ECAIs) for use of their credit ratings for capital adequacy purposes.
 - b. **The Internal Ratings-Based Approach (IRB)** wherein the banks are allowed to use their internal rating systems for determining the risk-based capital for credit risk, subject to the explicit approval of SBP.
10. The following instructions describe the methodology for calculating risk-weighted assets for credit risk under the Standardized Approach (SA) only. Moreover, the banks are also allowed to reduce their credit risk capital requirements for banking book exposures where these exposures are secured against the eligible collaterals. The rules for such reduction in capital requirements have been prescribed in the Credit Risk Mitigation (CRM) section.

1.1. External Credit Ratings:

11. Banks are required to utilize credit ratings exclusively from those credit rating agencies (CRAs) that have been duly recognized by the State Bank of Pakistan (SBP) for capital adequacy purposes. In this regard, SBP shall follow an eight (8)-point eligibility criteria as prescribed by the Basel Committee on Banking Supervision (BCBS).
12. The outlined criteria serve as the foundation for evaluating and assessing CRAs applying to the SBP for recognition as eligible External Credit Assessment Institutions (ECAIs) within the Basel Capital Adequacy Framework. The Securities and Exchange Commission of Pakistan (SECP) serves as the licensing and primary regulatory authority for CRAs in Pakistan. In this specific context, only those CRAs duly licensed by the SECP under the relevant laws, rules, and regulations are eligible to submit applications to the SBP. Furthermore, CRAs incorporated in Pakistan, aiming for recognition as ECAIs, are also encouraged to embrace the most recent version of the "IOSCO's Code of Conduct Fundamentals for Credit Rating Agencies."
13. An ECAI/CRA must consistently satisfy each of the following eight (8) point eligibility criteria:
 - i. **Objectivity**: The methodology for assigning credit ratings must be rigorous, systematic, and subject to some form of validation based on historical experience. Moreover, ratings must be subject to ongoing review and responsive to changes in financial condition. Before being recognized by the SBP, rating methodology for each market segment, including rigorous back testing, must have been established by the ECAIs.

- ii. **Independence:** An ECAI should be independent and should not be subject to political or economic pressures that may influence the rating. In particular, an ECAI should not delay or refrain from taking a rating action based on its potential effect (economic, political or otherwise). The rating process should be as free as possible from any constraints that could arise in situations where the composition of the board of directors or the shareholder structure of the ECAI may be seen as creating a conflict of interest. Furthermore, an ECAI should separate operationally, legally and, if practicable, physically its rating business from other businesses and analysts.
- iii. **International Access/Transparency:** The individual ratings and the key elements underlining the assessments should be publicly available on a non-selective basis, unless they are private ratings, which should be at least available to both domestic and foreign institutions with legitimate interest and on equivalent terms. In addition, the ECAI's general procedures, methodologies and assumptions for arriving at ratings should be publicly available.
- iv. **Disclosure:** An ECAI should at least disclose the following information on its website:
 - a. Its code of conduct;
 - b. General nature of its compensation arrangements with assessed entities;
 - c. Any conflict of interest;⁷
 - d. Its compensation arrangements;⁸
 - e. Its assessment methodologies, including the definition of default, the time horizon, and the meaning of each rating;
 - f. Actual default rates experienced in each assessment category; and transitions of the ratings, e.g. the likelihood of "AA" ratings becoming "A" over time.

A rating should be disclosed as soon as practicably possible after issuance. When disclosing a rating, the information should be provided in plain language, indicating the nature and limitation of credit ratings and the risk of unduly relying on them to make investments or take exposures there against.

⁷ At a minimum, the following situations and their influence on the ECAI's credit rating methodologies or credit rating actions shall be disclosed:

- The ECAI is being paid to issue a credit rating by the rated entity or by the obligor, originator, underwriter, or arranger of the rated obligation;
- The ECAI is being paid by subscribers with a financial interest that could be affected by a credit rating action of the ECAI;
- The ECAI is being paid by rated entities, obligors, originators, underwriters, arrangers, or subscribers for services other than issuing credit ratings or providing access to the ECAI's credit ratings;
- The ECAI is providing a preliminary indication or similar indication of credit quality to an entity, obligor, originator, underwriter, or arranger prior to being hired to determine the final credit rating for the entity, obligor, originator, underwriter, or arranger; and
- The ECAI has a direct or indirect ownership interest in a rated entity or obligor, or a rated entity or obligor has a direct or indirect ownership interest in the ECAI.

⁸ An ECAI should disclose the general nature of its compensation arrangements with rated entities, obligors, lead underwriters, or arrangers. When the ECAI receives from a rated entity, obligor, originator, lead underwriter, or arranger compensation unrelated to its credit rating services, the ECAI should disclose such unrelated compensation as a percentage of total annual compensation received from such rated entity, obligor, lead underwriter, or arranger in the relevant credit rating report or elsewhere, as appropriate. An ECAI should disclose in the relevant credit rating report or elsewhere, as appropriate, if it receives 10% or more of its annual revenue from a single client (e.g. a rated entity, obligor, originator, lead underwriter, arranger, or subscriber, or any of their affiliates).

- v. **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 levels within the entities assessed in order to add value to the credit assessments. In particular, ECAIs should assign analysts with appropriate knowledge and experience to assess the creditworthiness of the type of entity or obligation being rated. Such assessments should be based on methodologies combining qualitative and quantitative approaches.
 - vi. **Credibility**: To some extent, credibility is derived from the criteria above. In addition, the reliance on an ECAI's external credit ratings by independent parties (investors, insurers, trading partners) is evidence of the credibility of the ratings of an ECAI. The credibility of an ECAI is also underpinned by the existence of internal procedures to prevent the misuse of confidential information.
 - vii. **No Abuse of Unsolicited Ratings**: An ECAI must not use unsolicited ratings to put pressure on entities to obtain solicited ratings. The SBP may consider derecognizing such ECAI(s) as eligible for capital adequacy purposes, if such behavior is identified.
 - viii. **Cooperation with Supervisor**: ECAIs should notify the SBP and SECP with respect to significant changes made to their methodologies and provide access to external ratings and other relevant data in order to support initial and continued determination of its eligibility as ECAI.
14. On a periodic basis, the SBP will formally recognize domestic CRAs as ECAIs upon their specific requests. Should a recognized ECAI be found non-compliant with prescribed criteria or fail to follow issued instructions, the SBP may withdraw its recognition, barring banks from using the CRA's credit ratings for capital adequacy assessments.

1.2. Mapping Process:

15. In order to determine the risk based capital under standardized approach for credit risk, eligible ECAIs' credit ratings will first be mapped with SBP rating grades as given in Table 1 (a) and (b) and then risk weights available under the standardized approach will be assigned to SBP rating grades. The indicative mapping of ECAIs' ratings with SBP rating grades may be reviewed by the SBP keeping in view of any relevant market development(s). Pakistani banks, having exposures abroad, may use the ratings assigned by ECAIs recognized by the respective supervisors of those jurisdictions. However, the risk weights will only be assigned after their mapping with SBP grades.
16. Moreover, banks must use the chosen ECAIs (recognized by SBP) and their credit ratings consistently for all types of claims for both risk weighting and risk management purposes. Banks will not be allowed to "cherry-pick" the ratings provided by different ECAIs and to arbitrarily change the use of ECAIs.

Table 1 (a): Long-Term Rating Grades Mapping						
SBP Rating Grade	ECA Scores	PACRA	VIS	Fitch	Moody's	S&P
1	0,1	AAA AA+,AA,AA-	AAA AA+,AA,AA-	AAA AA+,AA,AA-	Aaa Aa1,Aa2,Aa3	AAA AA+,AA,AA-
2	2	A+,A,A-	A+,A,A-	A+,A,A-	A1,A2,A3	A+,A,A-
3	3	BBB+,BBB,BBB-	BBB+,BBB,BBB-	BBB+,BBB,BBB-	Baa1,Baa2,Baa3	BBB+,BBB,BBB-
4	4	BB+,BB,BB-	BB+,BB, BB-	BB+,BB,BB-	Ba1,Ba2,Ba3	BB+,BB,BB-
5	5,6	B+,B,B-	B+,B,B-	B+,B,B-	B1,B2,B3	B+,B,B-
6	7	CCC+ & below	CCC+ & below	CCC+ & below	Caa1 & below	CCC+ & below

Table 1 (b): Short-Term Rating Grades Mapping					
SBP Rating Grade	PACRA	VIS	Fitch	Moody's	S&P
S1	A-1	A-1	F1	P-1	A-1+, A-1
S2	A-2	A-2	F2	P-2	A-2
S3	A-3	A-3	F3	P-3	A-3
S4 ⁹	Others	Others	Others	Others	Others

1.3. Use of External Credit Ratings:

17. For Capital Adequacy Ratio (CAR) calculation purposes, banks shall only use solicited ratings of ECAs recognized either by SBP or the banking supervisor of the country of operations. The term "Solicited Rating" shall mean a rating initiated at the request of the entity being rated under a formal agreement between the ECAI and the entity being rated. To be eligible for risk weighting purposes, the ratings must meet the following requirements:
 - i. The ECAI(s) is given access to all information required to rate the entity;
 - ii. The ECAI(s) is authorized to assign rating;
 - iii. Rating assigned by the ECAI(s) is disclosed publically.
18. The requirement of a formal agreement between ECAI and the entity being rated, as mentioned above, would not be applicable in case the rating is conducted by international rating agencies such as Fitch, Moody's and S&P, however, in such cases the rating should be publically disclosed.
19. All ratings used by the banks for capital adequacy purposes should fulfill the following conditions:
 - i. The ratings should be publically disclosed by the ECAs along with its history;
 - ii. The ECAs should have reviewed/ assigned the rating within the previous 15 months;
 - iii. Banks should have mechanism to monitor changes in ratings (upgrade, downgrade and

⁹ This category includes all non-prime and B or C ratings.

withdrawals) for accurate CAR reporting.

20. An exposure shall be considered rated from the perspective of a bank if the exposure is rated by a recognized ECAI, which has been nominated by the bank i.e. the bank has informed SBP of its intention to use the ratings of such ECAI(s) for regulatory purposes in a consistent manner. In other words, if an external rating exists but the credit rating agency is not a recognized ECAI by the banking supervisor (e.g., the SBP or the banking supervisor of the country of operations), or the rating has been issued by an ECAI, which has not been nominated by the bank, the exposure would be considered as unrated.

1.4. Rating Disclosure:

21. Banks must disclose the ECAs that they use for the risk weighting purposes of their assets by type of claims, the risk weights associated with the particular rating grades through the mapping process as well as aggregated risk weighted assets for each risk weight based on the assessments of each eligible ECAI.

1.5. Multiple External Ratings:

22. If there is only one rating by an ECAI chosen by a bank for a particular claim, that rating should be used to determine the risk weight of the exposure.
23. If there are two ratings by ECAs chosen by a bank that map into different risk weights, the rating with higher risk weight will be applied.
24. If there are three or more ratings with different risk weights, the two ratings that correspond to the lowest risk weights should be referred. If these give rise to the same risk weight, that risk weight should be applied. If different, the higher risk weight should be applied.

1.6. Issue-Specific and Issuer Ratings:

25. Where a bank invests in a particular issue that has an issue-specific rating, the risk weight of the exposure will be based on this rating. Where the bank's exposure is not an investment in a specific rated issue, the following general principles apply:
- i. In circumstances where the borrower has a specific rating for an issued debt – but the bank's exposure is not an investment in this particular debt – a high-quality credit rating (one which maps into a risk weight lower than that which applies to an unrated claim) on that specific debt may only be applied to the bank's unrated exposure if this claim ranks in all respects *pari passu* or senior to the claim with a rating. If not, the external rating cannot be used and the unassessed claim will receive the risk weight for unrated exposures.
 - ii. In circumstances where the borrower has an issuer rating, this rating typically applies to senior unsecured claims on that issuer. Consequently, only senior claims on that issuer will benefit from a high-quality issuer rating. Other unassessed exposures of a highly rated issuer will be treated as unrated. If either the issuer or a single issue has a low-quality rating (mapping into a risk weight equal to or higher than that which applies to unrated exposures),

an unassessed exposure to the same counterparty that ranks *pari passu* or is subordinated to either the senior unsecured issuer rating or the exposure with a low-quality rating will be assigned the same risk weight as is applicable to the low-quality rating.

- iii. In circumstances where the issuer has a specific high-quality rating (one which maps into a lower risk weight) that only applies to a limited class of liabilities (such as a deposit assessment or a counterparty risk assessment), this may only be used in respect of exposures that fall within that class.
26. Whether the bank intends to rely on an issuer or an issue-specific rating, the rating 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 rating must fully take into account and reflect the credit risk associated with repayment of both principal and interest.
 27. In order to avoid any double counting of credit enhancement factors, no supervisory recognition of credit risk mitigation techniques will be taken into account if the credit enhancement is already reflected in the issue specific rating.

1.7. Domestic Currency and Foreign Currency Ratings:

28. Banks should not use ECAI's rating that refers to a claim denominated in a particular currency to derive the credit rating grade for another claim, denominated in another currency, on the same counterparty. Where exposures are risk-weighted based on the rating of an equivalent exposure to that borrower, the general rule is that foreign currency ratings would be used for exposures in foreign currency. Domestic currency ratings, if separate, would only be used to risk weight exposures denominated in the domestic currency¹⁰.

1.8. Short-Term & Long-Term Ratings:

29. For risk-weighting purposes, short-term ratings are deemed to be issue-specific. They can only be used to derive risk weights for exposures arising from the rated facility and cannot be generalized to other short-term exposures, except under the conditions as mentioned below. In no event can a short-term rating be used to support a risk weight for an unrated long-term exposure. Short-term ratings may only be used for short-term exposures against banks and corporates. Table 2 provides a framework for banks' exposures to specific short-term facilities, such as a particular issuance of commercial paper:

Table 2: Risk Weight for Specific Short-Term Ratings				
SBP Rating Grade	S1	S2	S3	S4
Risk Weight	20%	50%	100%	150%

¹⁰ However, when an exposure arises through a bank's participation in a loan that has been extended and has been guaranteed against convertibility and transfer risk, by certain MDBs (paragraph 52). In such cases, for risk-weighting purposes, the borrower's domestic currency rating may be used instead of its foreign currency rating. In the case of a guarantee against convertibility and transfer risk, the local currency rating can be used only for the portion that has been guaranteed. The portion of the loan not benefiting from such a guarantee will be risk-weighted based on the foreign currency rating.

30. An unrated short-term claim on a counterparty must be assigned a risk weight at least one level higher than the risk weight applied to a rated short-term claim on the same counterparty. Accordingly, if a short-term rated facility to a counterparty carries a 50% risk weight, an unrated short-term exposures associated with the same counterparty shall not receive a risk weight lower than 100%.
31. In instances where an issuer holds a short-term facility possessing an external rating that warrants a 150% risk weight, all unrated exposures, whether they are of a long-term or short-term nature, should uniformly be assigned a 150% risk weight. This holds true unless the bank employs recognized credit risk mitigation techniques specifically tailored for such exposures.
32. In cases where short-term ratings are available, the following interaction with the general preferential treatment¹¹ for short-term exposures to banks as described in “Exposure to Banks” will apply:
- i. The general preferential treatment for short-term exposures applies to all exposures to banks of up to three months original maturity¹² when there is no specific short-term claim assessment;
 - ii. When there is a short-term rating and such a rating maps into a risk weight that is more favorable (i.e. lower) or identical to that derived from the general preferential treatment, the short-term rating should be used for the specific exposure only. Other short-term exposures would benefit from the general preferential treatment;
 - iii. When a specific short-term rating for a short-term exposure to a bank maps into a less favorable (higher) risk weight, the general short-term preferential treatment for interbank exposures cannot be used. All unrated short-term exposures should receive the same risk weighting as that implied by the specific short-term rating.
33. When a short-term rating is to be used, the CRA making the assessment needs to meet all of the eligibility criteria for recognizing the ECAIs, as described above.

1.9. Application Level of External Credit Ratings:

34. External ratings for one entity within a corporate group cannot be used to risk-weight other entities within the same group.

1.10. Bank Loan or Facility Ratings:

35. The use of Bank Loan Ratings (BLR) assigned by recognized ECAIs is not allowed to be used for capital adequacy purposes.

¹¹ The applicable risk weight is one category **more favorable** than longer-term claims, subject to a floor of 20 percent. However, this treatment will not be available to capital deficient banks or banks rated below SBP rating grade 5.

¹² Claims with original maturity under 3 months which are expected to be rolled over (i.e. where the implicit or explicit prior understanding exists that effective maturity is longer than 3 months) do not qualify for this preferential treatment for CAR.

Section 2: Banks' Exposures and Applicable Risk Weighting Regime:

36. Under the standardized approach for credit risk, banks will assign standardized risk weights to their exposures based on the external credit ratings issued by recognized ECAs. However, the banks will also be required to perform proper due diligence¹³ to ensure that they have an adequate understanding, at origination, and thereafter on a regular basis (at least annually), of the risk profile and characteristics of their counterparties. The due diligence exercise is important for the purpose of banks' risk management as well as to ensure that the applied risk weights are appropriate, prudent and commensurate with the counterparty's true risk profile.
37. The sophistication of due diligence should be appropriate to the size and complexity of banks' activities. Banks must take reasonable and adequate steps to assess the operating and financial performance levels and trends through internal credit analysis as appropriate for each counterparty. Banks must be able to access information about their counterparties on a regular basis to complete the due diligence analysis.
38. Banks should have in place effective internal policies, processes, systems and controls to ensure that appropriate risk weights are assigned to counterparties and they must be able to demonstrate to SBP that their due diligence analyses are appropriate.
39. If the due diligence analysis reflects higher risk characteristics than that implied by the external rating bucket of the exposure, the bank must assign a risk weight at least one bucket higher than the "base" risk weight determined by the external rating and mapped into SBP rating grade. Due diligence analysis shall never result in the application of a lower risk weight than that determined by the external rating.

A - On-Balance Sheet Exposures:

40. The risk-weighting process used for measuring banks' on-balance sheet credit exposures covers all on-balance sheet assets held in the banking book for the purpose of assessing its credit risk capital requirements, except the following specifically excluded items:
- i. Those assets or investments that are required to be deducted from CET1, Tier 1 and Tier 2 capital.
 - ii. All debt and equity securities held in the trading book, which will be risk-weighted in accordance with the methodology prescribed for Market Risk capital charge.
 - iii. On-balance sheet unrealized gains on market-related off-balance sheet transactions (which are to be included in the calculation of bank's total risk-weighted off-balance sheet credit exposures).
 - iv. Securitization exposures, which are subject to separate rules (Chapter 4 of Minimum Capital Requirements for Banks and DFIs issued vide BSD Circular No. 8 of June 27, 2006).

¹³ The due diligence requirement does not apply on Exposure to Sovereigns and PSEs.

41. The risk-weighted amount of an on-balance sheet asset is determined by multiplying its current book value (including accrued interest or revaluations, and net of any specific provision(s)/ write-off(s)/ partial write-off(s) or associated depreciation) by the relevant risk weight as specified below. Banks' on-balance sheet exposures have been divided into the broad categories mentioned below for risk-weighting purposes.
42. Where an exposure is secured by eligible collateral or the bank has obtained direct irrevocable and unconditional credit protection such as guarantee or credit derivative, it may reduce its capital charge by taking benefit of the risk mitigation as described in the relevant section(s) of this chapter. The total of risk-weighted on-balance sheet credit exposures equal the sum of the risk-weighted amounts of each on-balance sheet asset.

2.1. Cash and Cash Equivalents:

43. A 0% risk weight will be applied on the:
- i. Stock of cash owned and held at the bank or in transit¹⁴ (domestic & foreign currency);
 - ii. Gold bullion held at bank or held in another bank on an allocated basis¹⁵, to the extent that gold bullion assets are backed by gold bullion liabilities;
 - iii. Cash equivalents including national prize bonds etc.
44. Cash items in the process of collection¹⁶ will be risk weighted @ 20%.

2.2. Exposure to Sovereigns:

45. Sovereigns include Federal Government, Provincial Government(s) and Central Bank of the country.
46. Claim on Government of Pakistan (Federal or Provincial) and SBP, denominated and funded in PKR, will be assigned a risk weight of 0%.
47. Foreign currency claims on sovereigns (Domestic or Foreign) will attract risk weight as per the relevant credit ratings assigned by recognized ECAs. However, claims denominated in the domestic currency of foreign sovereigns and funded (i.e. met out of resources/ corresponding liabilities raised in the jurisdiction) in that domestic currency may attract a risk weight of 0% provided the host supervisor do not require a more conservative treatment. In such instances, the bank would compute their capital adequacy based on the conservative requirements.

¹⁴ Cash-in-transit (CIT) or cash/valuables-in-transit (CVIT) is the physical transfer of banknotes, coins, credit cards and items of value from one location to another. The locations include cash centers and bank branches, ATM points, large retailers and other premises.

¹⁵ Under Allocated Basis, one bank is obliged to hold another bank's gold as the other bank's outright property, under a custodial or safe-keeping contract. On the other hand, if gold is held on an Unallocated Basis, it essentially is equivalent to a deposit, which becomes the one bank's property and its liability (deposit) to the other bank.

¹⁶ Includes cheques and other cash items such as interbank fund transfers and funds transferred through ATMs, deposited with NIFT or other clearing agents for collection on behalf of a customer, where the customer's account has been credited (i.e., a liability has been recorded by the bank), but final settlement of the funds is still pending.

48. Foreign currency claims on SBP arising out of statutory obligations will attract a 0% risk weight.
49. For unrated foreign currency claims on sovereigns (Domestic or Foreign), the bank may use risk weights on the basis of the consensus country risk scores (mapped to the SBP rating grade) of Export Credit Agencies (ECA) participating in the “Arrangement on Officially Supported Export Credits”¹⁷.

Table 3: Risk Weight for Exposure to Sovereigns						
SBP Rating Grade	1	2	3	4 & 5	6	Unrated
ECA Scores	0 – 1	2	3	4 - 6	7	-
Risk Weight	0%	20%	50%	100%	150%	100%

50. Exposures to the Bank for International Settlements (BIS), the International Monetary Fund (IMF), the European Central Bank (ECB), the European Union (EU), the European Stability Mechanism (ESM) and the European Financial Stability Facility (EFSF) may receive a 0% risk weight.

2.3. Exposure to Multilateral Development Banks:

51. For the purposes of calculating capital requirements, a Multilateral Development Bank (MDB) is an institution, created by a group of countries that provides financing and professional advice for economic and social development projects. MDBs have large sovereign memberships and may include both developed countries and/or developing countries. Each MDB has its own independent legal and operational status, but with a similar mandate and a considerable number of joint owners.
52. A 0% risk weight will be applied to exposures to the following MDBs¹⁸ :
- The World Bank Group comprising the International Bank for Reconstruction and Development (IBRD),
 - International Finance Corporation (IFC),
 - Multilateral Investment Guarantee Agency (MIGA)
 - International Development Association (IDA),
 - Asian Development Bank (ADB),
 - African Development Bank (AfDB),
 - European Bank for Reconstruction and Development (EBRD),
 - Inter-American Development Bank (IADB),

¹⁷ These scores are available on the OECD’s website (www.oecd.org).

¹⁸ SBP may review the above mentioned list, from time to time, for possible changes.

- ix. European Investment Bank (EIB),
- x. European Investment Fund (EIF),
- xi. Nordic Investment Bank (NIB),
- xii. Caribbean Development Bank (CDB),
- xiii. Islamic Development Bank (IDB),
- xiv. Council of Europe Development Bank (CEDB),
- xv. International Finance Facility for Immunization (IFFIm), and
- xvi. Asian Infrastructure Investment Bank (AIIB).

53. For exposures to all other MDBs, banks will use the risk weights depending upon their credit ratings.

Table 4: Risk Weight for Exposure to Multilateral Development Banks						
SBP Rating Grade	1	2	3	4 & 5	6	Unrated
Risk Weight - Base	20%	30%	50%	100%	150%	50%

2.4. Exposure to (Non-Financial) Public Sector Entities:

54. Public Sector Entity (PSE) includes entities, which are owned or controlled by federal or provincial governments or any entity categorized as PSE by the relevant authority or banking supervisor in the country of operations.
55. Claims on domestic PSEs [list available in Data Acquisition Portal (DAP) of SBP] in PKR will be risk weighted as per external ratings assigned by the recognized ECAs.
56. Foreign currency claims on domestic PSEs will be risk weighted as per external ratings assigned by SBP recognized ECAs for that currency. If the external rating for that PSE in the currency of exposure is not available, the risk weight applicable on the sovereign will be used.

Table 5: Risk Weight for Exposure to Public Sector Entities						
SBP Rating Grade	1	2	3	4 & 5	6	Unrated
Risk Weight - Base	20%	30%	50%	100%	150%	50%

57. Claims on foreign PSEs will be risk weighted as per external ratings assigned by international rating agencies recognized by SBP or one category higher than the sovereign risk weight applicable on the sovereign of the PSE.

2.5. Exposure to Banks:

58. For capital adequacy purposes, the term bank exposure refers (including loans and senior debt instruments) to exposure to any financial institution that is licensed to take deposits from the public and is subject to appropriate prudential standards and level of supervision by appropriate banking supervisory or monetary authority. In Pakistan, Scheduled Banks, Digital Banks,

Development Finance Institutions (DFIs) and Microfinance Banks (MFBs), licensed by the SBP, qualify under this category.

59. The base risk weight for rated bank exposures will be determined based on the external credit rating assigned by the recognized ECAs. The external credit ratings of banks shall not incorporate assumptions of implicit government support, unless the rating refers to a public sector bank owned by the government¹⁹.
60. Exposures to banks with an original maturity of three months or less, as well as exposures to banks that arise from the movement of goods across national borders with an original maturity of six months or less²⁰, may be assigned a risk weight that correspond to the risk weights for short term exposures as given below.

Table 6a: Risk Weight for Rated Exposure to Banks					
SBP Rating Grade	1	2	3	4 & 5	6
Risk Weight – Base	20%	30%	50%	100%	150%
Risk Weight for Short-term Exposures	20%	20%	20%	50%	150%

61. The risk weight for unrated exposure of banks (including short-term as well as exposures from the movement of goods across national borders with an original maturity of six months or less) will be determined based on the “Standardized Credit Risk Assessment Approach (SCRA)” which requires bank to classify its unrated exposures into one of the following three risk-weight buckets.

Table 6b: Risk Weight for Unrated Exposure to Banks			
Credit Risk Assessment of Counterpart Bank	Grade A	Grade B	Grade C
Risk Weight – Base	40%	75%	150%
Risk Weight for Short-term Exposures	20%	50%	150%

62. Under the SCRA, exposures to banks without an external credit rating may receive a risk weight of 30%, provided that the counterparty bank has a CET1 ratio, which meets or exceeds 14% and a Tier 1 leverage ratio, which meets or exceeds 5%. The counterparty bank must also satisfy all the requirements for “Grade A” classification as provided below.
63. **Grade A:** This refers to exposures to banks where the counterparty bank has adequate capacity to meet their financial commitments (including repayments of principal and interest) in a timely manner, for the projected life of the assets or exposures and irrespective of the economic cycles and business conditions:

¹⁹ Implicit government support refers to the notion that the government would act to prevent bank creditors from incurring losses in the event of a bank default or bank distress.

²⁰ This may include on-balance sheet exposures such as loans and off-balance sheet exposures such as self-liquidating trade-related contingent items.

- i. A counterparty bank classified into “Grade A” must meet or exceed the published minimum regulatory requirements and buffers²¹, as notified by the banking supervisor from time to time;
- ii. If such minimum regulatory requirements and buffers (other than bank-specific minimum requirements or buffers as specified under Pillar 2) are not publicly disclosed or otherwise made available by the counterparty bank, then the counterparty bank must be assessed as “Grade B” or lower;
- iii. If as part of its due diligence, a bank assesses that a counterparty bank does not meet the definition of “Grade A”, exposures to such counterpart bank shall be classified as “Grade B” or “Grade C”.

64. **Grade B:** This refers to exposures to banks where the counterparty bank is subject to substantial credit risk, such as repayment capacities that are dependent on stable or favorable economic or business conditions:

- i. A counterparty bank classified into “Grade B” must meet or exceed the published minimum regulatory requirements (excluding buffers or bank-specific minimum requirements or buffers as specified under Pillar 2) as notified by the banking supervisor from time to time;
- ii. If such minimum regulatory requirements are not publicly disclosed or otherwise made available by the counterparty bank then the counterparty bank must be assessed as “Grade C”;
- iii. If as part of its due diligence, a bank assesses that a counterparty bank does not meet the definition of “Grade A” or “Grade B”, exposures to such counterpart bank shall be classified as “Grade C”.

65. **Grade C:** This refers to higher credit risk exposures to banks, where the counterparty bank has material default risks and limited margins of safety. For these counterparties, adverse business, financial, or economic conditions are very likely to lead, or have led, to an inability to meet their financial commitments. At a minimum, if any of the following triggers is breached, a bank must classify the exposure into Grade C:

- i. The counterparty bank does not meet the criteria for being classified as “Grade B” with respect to its published minimum regulatory requirements; or
- ii. The external auditor has issued an adverse audit opinion or has expressed substantial doubt about the counterparty bank’s ability to continue as a going concern in its financial statements or audited reports within the previous 12 months;

²¹ Published Minimum Regulatory Requirements & Buffers include Minimum Paid up Capital Requirement (MCR), Capital Adequacy Ratio (CAR) plus Capital Conservation Buffer (CCB), Leverage Ratio (LR) and Systemically Important Bank (SIB) Charge etc. or any other requirement as notified by the banking supervisor for a particular bank or for the overall banking industry.

- iii. Even if these minimum triggers are not breached, a bank may assess, as a part of its due diligence, that the counterparty bank meeting the above mentioned definition as “Grade C”.

66. To reflect transfer and convertibility risk under the SCRA, a risk weight floor will be applied to the risk weight assigned to bank exposures. The risk weight floor will apply when the exposure is not in the local currency of the jurisdiction of incorporation of the counterparty bank and/or for a borrowing booked in a branch of the counterparty bank in a foreign jurisdiction, when the exposure is not in the local currency of the jurisdiction in which the branch operates. The risk-weight floor will not apply to short-term (i.e. with a maturity below one year) self-liquidating, trade-related contingent items that arise from the movement of goods. This risk-weight floor will be based on the risk weight applicable on exposures to the sovereign of the country where the counterparty bank is incorporated.

2.6. Exposure to Corporates:

67. For capital adequacy purposes, exposure to corporates include exposure to incorporated entities, associations, partnerships, proprietorships, trusts and other entities with similar characteristics, except those which qualify for one of the other exposure classes. Exposures to securities firms and other public sector as well as private sector financial institutions that do not meet the definition of banks shall be treated as exposures to corporates. The corporate exposure class does not include exposures to individuals.

68. The treatment associated with subordinated debt and equities of corporates is addressed separately (Section 2.8).

69. Risk weighting regime for corporate exposure differentiates between the following two subcategories:

- General Corporate Exposures;
- Specialized Lending Exposures.

2.6.1. General Corporate Exposures:

70. Banks shall assign risk weights based on the external credit ratings of the counterparties.

Table 7a: Risk Weight for Exposure to General Corporates							
SBP Rating Grade	1	2	3	4	5 & 6	Unrated 1	Unrated 2
Risk Weight - Base	20%	50%	75%	100%	150%	100%	125%

71. Exposures to an unrated private sector corporate entity incorporated in Pakistan, having aggregate outstanding exposure (both fund-based and non-fund based), net of liquid assets, of Rs. 3.0 billion or above from all financial institutions, shall attract risk weight of 125%.

72. For un-rated corporates, a risk-weight floor will apply when the exposure is not in the local currency of the jurisdiction of incorporation of the counterpart corporate and/or for a borrowing booked in a branch of the bank in a foreign jurisdiction, when the exposure is not in the local currency of the jurisdiction in which the branch operates. This risk-weight floor will be based on the sovereign rating of the country where the counterparty is incorporated. However, if the bank can ascertain that the primary income of the borrower is in the same currency in which it has borrowed and can cover 90% of the loan installment, it may apply a risk weight of 100% or 125% (if it is an un-rated large exposure as defined in paragraph 71 above).
73. SMEs, as defined under the SBP's Prudential Regulations for SME Financing, that do not meet the regulatory retail portfolio criteria outlined in Section 2.7 may be classified as "corporate SMEs." For exposures to unrated corporate SMEs in domestic currency, an 85% risk weight may be applied.
74. For exposures to unrated corporate SMEs, where the lending currency differs from the domestic currency of the borrower's host jurisdiction, the bank will apply a 1.5 times multiplier to the risk weight applicable for that SME unless the bank can ascertain that the primary income of the borrower is in the same currency in which it has borrowed and can cover 90% of the loan installment; in which case 85% risk weight can be applied.

2.6.2. Specialized Lending Exposures:

75. A corporate exposure will be treated as a specialized lending exposure if such lending possesses some or all of the following characteristics, either in legal form or economic substance:
- i. The exposure is within the definitions of object finance, project finance or commodities finance as defined below;
 - ii. The exposure is typically to an entity that was created specifically to finance and/or operate physical assets;
 - iii. The borrowing entity has few or no other material assets or activities, and therefore little or no independent capacity to repay the obligation, apart from the income that it receives from the asset(s) being financed. The primary source of repayment of the obligation is the income generated by the asset(s), rather than the independent capacity of the borrowing entity; and
 - iv. The terms of the obligation give the lender a substantial degree of control over the asset(s) and the income that it generates.
76. Specialized Lending Exposures will be classified in one of the following three subcategories:
- i. **Project Finance** refers to the method of funding in which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the loan. This type of financing is usually for large, complex and expensive installations such as power plants, chemical processing plants, mines, transportation

infrastructure, environment, media, and telecoms. Project finance may take the form of financing the construction of a new capital installation, or refinancing of an existing installation, with or without improvements.

- ii. **Object Finance** refers to the method of funding the acquisition of equipment (e.g. ships, aircraft, satellites, railcars, and fleets) where the repayment of the loan is dependent on the cash flows generated by the specific assets that have been financed and pledged or assigned to the lender.
- iii. **Commodities Finance** refers to short-term lending to finance reserves, inventories, or receivables of exchange-traded commodities (e.g. crude oil, metals, or crops), where the loan will be repaid from the proceeds of the sale of the commodity and the borrower has no independent capacity to repay the loan.

77. Banks shall use the issue-specific external ratings for assigning risk weights to the specialized lending exposures, according to Table 7a, and issuer rating will not be used.

78. However, for specialized lending exposures for which an issue-specific external rating is not available, the following risk weights will apply:

Table 7b: Risk Weight for Specialized Corporate Lending Exposures				
Project Finance			Object Finance	Commodities Finance
Pre-operational Phase	Operational Phase			
130%	80%	100%	100%	100%

79. For Project Finance, operational phase is defined as the phase in which the entity that was specifically created to finance the project has (i) a positive net cash flow that is sufficient to cover any remaining contractual obligation, and (ii) declining long term debt.

80. Project finance exposures in the operational phase which are deemed to be high quality (as specified below) may be risk weighted at 80%. A high quality project finance exposure refers to an exposure to a project finance entity that is able to meet its financial commitments in a timely manner and its ability to do so is assessed to be robust against adverse changes in the economic cycle and business conditions. The following conditions must also be met:

- i. The project finance entity is restricted from acting to the detriment of the creditors (e.g. by not being able to issue additional debt without the consent of existing creditors);
- ii. The project finance entity has sufficient reserve funds or other financial arrangements to cover the contingency funding and working capital requirements of the project;
- iii. The revenues are availability-based²² or subject to a rate-of-return regulation or take-or-pay contract;

²² Availability-based revenues mean that once construction is completed, the project finance entity is entitled to payments from its contractual counterparties (eg the government), as long as contract conditions are fulfilled. Availability payments are sized to cover operating and maintenance costs, debt service costs and equity returns as the project finance entity operates the project. Availability payments are not subject to swings in demand, such as traffic levels, and are adjusted typically only for lack of performance or lack of availability of the asset to the public.

- iv. The project finance entity's revenue depends on one main counterparty and this main counterparty shall be a central government, PSE or a corporate entity with a risk weight of 80% or lower;
 - v. The contractual provisions governing the exposure to the project finance entity provide for a high degree of protection for creditors in case of a default of the project finance entity;
 - vi. The main counterparty or other counterparties which similarly comply with the eligibility criteria for the main counterparty will protect the creditors from the losses resulting from a termination of the project;
 - vii. All assets and contracts necessary to operate the project have been pledged to the creditors to the extent permitted by applicable law; and
 - viii. Creditors may assume control of the project finance entity in case of its default.
81. Un-rated specialized lending exposures not in the domestic currency of the jurisdiction of incorporation of the counterparty or for an exposure booked in a branch of the bank in a foreign jurisdiction, when the exposure is not in the domestic currency of the jurisdiction in which the branch operates, a risk-weight floor based on the sovereign rating of the country where the counterparty is incorporated will be applicable. However, where the borrower's income is in the same currency as the currency of loan and can cover 90% of the loan installment, such exposures may be treated in the same way as local currency exposures i.e. risk weights defined in table 7b will be applicable.

2.7. Exposure to Retail Customers:

82. The retail exposure class excludes exposures within the real estate exposure class. The retail exposure class includes the following types of exposures:
- i. Exposures to an individual person or persons, and
 - ii. Exposures to SMEs (that meet the definition in Prudential Regulations for SMEs).
83. For the purpose of determining risk-weighted assets, the retail exposure asset class consists of the following three sets of exposures:
- i. Regulatory retail exposures to transactors
 - ii. Regulatory retail exposures that do not arise from exposures to transactors.
 - iii. Other retail exposures.
84. An exposure will be categorized as "Regulatory Retail Portfolio", if it meets all of the following criteria:
- i. **Orientation Criteria**: The exposure should be to an individual person or persons or SMEs;

- ii. **Product Criteria:** The exposure takes the form of revolving credits and lines of credit (including credit cards, charge cards and overdrafts), personal term loans and leases (e.g. installment loans, auto loans and leases, student and educational loans, personal finance) and small business facilities and commitments;
- iii. **Low Value of Individual Exposures:** The maximum aggregated exposure to one counterparty cannot exceed an absolute threshold of Rs. 300 million;
- iv. **Granularity Criteria:** No aggregated exposure to one counterparty²³ can exceed 0.2%²⁴ of the overall regulatory retail portfolio of the bank.

85. In the context of regulatory retail portfolio, a term “Transactor” has also been incorporated. Transactors are obligors in relation to facilities such as credit cards where the balance has been repaid in full at each scheduled repayment date for the previous 12 months. Moreover, obligors in relation to overdraft facilities²⁵ would also be considered as transactors if there has been no drawdowns over the previous 12 months.

86. Regulatory retail portfolio that meets the above mentioned criteria will be risk weighted at 75%. However, exposure on retail obligors who qualify as transactors will be risk weighted at 45%. For regulatory retail exposures to SMEs, where the lending currency differs from the domestic currency of the borrower’s host jurisdiction, the bank will apply a 112.5% risk weight for that SME unless the bank can ascertain that the primary income of the borrower is in the same currency in which it has borrowed and can cover 90% of the loan installment; in which case 75% risk weight can be applied.

87. Retail exposures to SMEs that do not meet all of the above mentioned criteria may be treated as corporate SMEs exposures (unrated only), and will be risk weighted as per instructions at paragraph 73 and paragraph 74.

88. All other retail exposures to an individual person or persons (except real estate exposure) in domestic currency will be risk weighted at 100% or above. For such exposures that are not

²³ Aggregated exposure means gross amount (i.e. not taking any credit risk mitigation into account) of all forms of retail exposures, excluding residential real estate exposures. In case of off-balance sheet claims, the gross amount would be calculated after applying credit conversion factors. In addition, “to one counterparty” means one or several entities that may be considered as a single beneficiary (e.g. in the case of a small business that is affiliated to another small business, the limit would apply to the bank’s aggregated exposure on both businesses).

²⁴ To apply the 0.2% threshold of the granularity criterion, an FI must undertake a one-off computation by taking the following actions –

- first, identify the full set of exposures in the retail exposure class;
- second, identify the subset of exposures that meet the product criterion and do not exceed the threshold for the value of aggregated exposures to one counterparty; and
- third, exclude any exposures that have a value greater than 0.2% of the subset before exclusions.

FIs may update the computation annually based on audited financials to ensure compliance with the requirement. Moreover, for granularity criterion assessment, an FI shall exclude the defaulted exposures from the overall regulatory retail portfolio.

²⁵ Undrawn overdraft facilities are off-balance sheet items and shall be subject to the Credit Conversion Factors (CCFs) specified in Table 13. Where the conditions outlined in paragraph 85 are met, banks shall first apply the applicable CCF and then apply a risk weight of 45% to the resulting credit equivalent amount.

denominated in the domestic currency of the borrower's host jurisdiction, a risk weight of 150% shall apply.

89. For banks' exposure to Retail Category, following risk weights may apply:

Table 8: Risk Weight for Exposure against Retail Portfolio			
Regulatory Retail Portfolio		Unrated Corporate SMEs	All Others
Transactor(s)	Others		
45%	75%	85%	100%

2.8. Exposure to Subordinated Debt, Equity and Other Capital Instruments:

90. The treatment covered in this section applies to subordinated debt, equity and other regulatory capital instruments issued by either corporates or banks, provided that such instruments are not deducted from regulatory capital or risk-weighted at 250% as prescribed under threshold deductions, in BPRD Circular No. 6 of August 15, 2013.

91. Equity exposures are defined on the basis of economic substance of the instruments. Equity exposures include both direct and indirect ownership interests,²⁶ whether voting or non-voting, in the assets and income of a commercial enterprise or of a financial institution that is not consolidated or deducted for capital adequacy purposes. An instrument is considered to be an equity exposure if it meets all of the following requirements:

- i. It is irredeemable in the sense that the return of invested funds can be achieved only by the sale of the investment or sale of the rights to the investment or by the liquidation of the issuer;
- ii. It does not embody an obligation on the part of the issuer; and
- iii. It conveys a residual claim on the assets or income of the issuer.

92. Additionally, any of the following instruments must be categorized as an equity exposure:

- i. An instrument with the same structure as those permitted for Tier 1 capital for banks;
- ii. An instrument that embodies an obligation on the part of the issuer and meets any of the following conditions:
 - a. The issuer may defer indefinitely the settlement of the obligation;
 - b. The obligation requires (or permits at the issuer's discretion) settlement by issuance of a fixed number of the issuer's equity shares;
 - c. The obligation requires (or permits at the issuer's discretion) settlement by issuance of a variable number of the issuer's equity shares and (ceteris paribus) any change in the value of the obligation is attributable to, comparable to, and

²⁶ Indirect equity interests include holdings of derivative instruments tied to equity interests, and holdings in corporations, partnerships, limited liability companies or other types of enterprises that issue ownership interests and are engaged principally in the business of investing in equity instruments.

in the same direction as, the change in the value of a fixed number of the issuer's equity shares;²⁷ or

- d. The holder has the option to require that the obligation be settled in equity shares, unless either (i) in the case of a traded instrument, the bank has demonstrated that the instrument trades more like the debt of the issuer than like its equity, or (ii) in the case of non-traded instruments, the bank has demonstrated that the instrument should be treated as a debt position.

93. Debt obligations and other securities, partnerships, derivatives or other vehicles structured with the intent of conveying the economic substance of equity ownership are considered an equity holding.²⁸ This includes liabilities from which the return is linked to that of equities. Conversely, equity investments that are structured with the intent of conveying the economic substance of debt holdings would not be considered an equity holding.

94. Speculative unlisted equity exposures are defined as equity investments in unlisted companies that are invested for short-term resale purposes or are considered venture capital or similar investments, which are subject to price volatility and are acquired in anticipation of significant future capital gains.

95. Application of risk weights will be as follows:

- i. An investment in subordinated debt instruments and capital instruments other than equities, which are not deducted from regulatory capital, will be risk weighted at 150%.
- ii. Listed & unlisted equity investments in commercial entities (below the threshold of 10% of the issued common share of Investee Company), Listed & unlisted equity investments in other banks/ financial/ insurance entities (where bank does not own more than 10% of the common share capital of individual entity)²⁹, Listed & unlisted equity investments in other banks/ financial/ insurance entities – (where the bank owns more than 10% of the issued common shares of the individual entity)³⁰, which are not deducted from capital under the instructions regarding threshold deductions in the chapter on capital, will be risk weighted at 250%.
- iii. Speculative unlisted equity exposures will be risk weighted at 400%.
- iv. Strategic equity investments and investments in un-listed equities are required to be included in the banking book.

²⁷ For certain obligations that require or permit settlement by issuance of a variable number of the issuer's equity shares, the change in the monetary value of the obligation is equal to the change in the fair value of a fixed number of equity shares multiplied by a specified factor. For example, an issuer may be required to settle an obligation by issuing shares with a value equal to three times the appreciation in the fair value of 1,000 equity shares. That obligation is considered to be the same as an obligation that requires settlement by issuance of shares equal to the appreciation in the fair value of 3,000 equity shares.

²⁸ Equities that are recorded as a loan but arise from a debt/equity swap made as part of the orderly realisation or restructuring of the debt are included in the definition of equity holdings. However, these instruments may not attract a lower capital charge than would apply if the holdings remained in the debt portfolio.

²⁹ Refer to paragraph 2.4.9.2 of BPRD Circular No. 6 of August 15, 2013.

³⁰ Refer to paragraph 2.4.9.3 and 2.4.10 of BPRD Circular No. 6 of August 15, 2013.

- v. The portion of equity investment in commercial entities, which exceeds 10% of the issued common share capital of the issuing entity or where the entity is an unconsolidated affiliate will be risk weighted at 1,000%.

2.9. Exposure to Covered Bonds:

96. Covered bonds are bonds issued by a bank that are subject, by law, to special public supervision designed to protect the bond holders. Proceeds from these bonds must be invested in conformity with the applicable rules in such assets, which during the whole period of the validity of bonds, are capable of covering claims attached to the bonds and which, in the event of failure of the issuer, would be used on a priority basis for the reimbursement of the principal and payment of the accrued interest.
97. The underlying assets (the cover pool) of covered bonds shall include any of the following:
- i. Claims on, or guaranteed by, federal government, provincial governments, SBP, PSEs and MDBs;
 - ii. Claims secured by residential real estate meeting the applicable criteria and with a loan-to-value ratio of 80% or lower;
 - iii. Claims secured by commercial real estate meeting the applicable criteria and with a loan-to-value ratio of 60% or lower; or
 - iv. Claims on, or guaranteed by banks that qualify for a 30% or lower risk weight. However, such assets cannot exceed 15% of covered bond issuances.
98. The nominal value of pool of assets assigned to the covered bond instrument(s) by its issuer should exceed its nominal outstanding value by at least 10%. In addition to the primary assets listed above, substitution assets (in place of primary assets) may include cash or short term liquid and secure assets to top up the cover pool for management purposes. The conditions set out in this paragraph must be satisfied at the inception of the covered bond and throughout its remaining maturity.
99. The bank investing in the covered bonds shall be able to demonstrate to SBP that it receives portfolio information at least on:
- i. The value of cover pool and outstanding covered bonds;
 - ii. The geographical distribution and type of cover assets, loan size, interest rate and currency risks;
 - iii. The maturity structure of cover assets and covered bonds;
 - iv. The percentage of loans more than 90 days past due;
 - v. The issuer makes the above-mentioned information available to the bank at least semi-annually.

100. Covered bonds that meet the above referred criteria shall be risk-weighted based on the issue-specific rating or the issuer's risk weight as per the following:

Table 9a: Risk Weight for Rated Covered Bond Exposures					
Issue-specific Rating of Covered Bond	1	2	3	4 & 5	6
Risk Weight – Base	10%	20%	20%	50%	100%

Table 9b: Risk Weight for Un-Rated Covered Bond Exposures							
Risk Weight of the Issuing Bank	20%	30%	40%	50%	75%	100%	150%
Risk Weight – Base	10%	15%	20%	25%	35%	50%	100%

2.10. Exposure secured by Real Estate:

101. Real estate is immovable property that is land, including agricultural land and forest, or anything treated as attached to land, in particular buildings, in contrast to being treated as movable/personal property. The real estate exposure asset class consists of:

- i. Exposures secured by real estate that are classified as “Regulatory Real Estate” exposures.
- ii. Exposures secured by real estate that qualify under “Low Cost Housing Finance” under SBP regulations³¹.
- iii. Exposures that are classified as “Land Acquisition, Development and Construction” (ADC) exposures.
- iv. Exposure on Real Estate Investment Trusts (REITs)

2.10.1. Exposure secured by Regulatory Real Estate

102. “Regulatory real estate” exposures consist of:

- i. “Regulatory Residential Real Estate” exposures that are not “materially dependent on cash flows generated by the property”.
- ii. “Regulatory Residential Real Estate” exposures that are “materially dependent on cash flows generated by the property”.
- iii. “Regulatory Commercial Real Estate” exposures that are not “materially dependent on cash flows generated by the property”.
- iv. Regulatory Commercial Real Estate” exposures that are “materially dependent on cash flows generated by the property”.

103. For an exposure secured by real estate to be classified as a “Regulatory Real Estate” exposure, the loan must meet the following requirements:

- i. Counterparty: The exposure is to an individual;

³¹ BPRD Circular No. 1 of March 11, 2019 & IH&SMEFD Circular No. 04 of 2019

- ii. Finished property: the property securing the exposure must be fully completed. This requirement does not apply to forest and agricultural land;
 - iii. Legal enforceability: any claim on the property must be legally enforceable in all relevant jurisdictions. The collateral agreement and the legal process underpinning it must provide the Bank the legal powers and avenues to realize the value of the property within a reasonable time frame;
 - iv. Claims over the property: the exposure is a claim over the property where the Bank holds a first lien over the property, or holds the first lien and any sequentially lower ranking lien(s) (i.e. there is no intermediate lien from another bank) over the same property;
 - v. Ability of the borrower to repay: the borrower must meet the criteria set out in the Bank's underwriting policies for granting exposures secured by real estate, including the assessment of the ability of the borrower to repay. The minimum requirements with respect to the underwriting policies are provided at paragraph 104;
 - vi. Prudent value of property – the property must be valued according to the criteria in paragraph 105 for determining the value in the Loan-to-value ratio (LTV). Moreover, the value of the property must not depend materially on the performance of the obligor; and
 - vii. Required documentation: all the information required at loan origination and for monitoring purposes must be properly documented, including information on the ability of the borrower to repay and on the valuation of the property.
104. The Bank should have in place underwriting policies with respect to the granting of mortgage loans that include the assessment of the ability of the borrower to repay. Underwriting policies must define a metric(s) (such as the loan's debt service coverage ratio) and specify its (their) corresponding relevant level(s) to conduct such an assessment. Underwriting policies must also be appropriate when the repayment of the mortgage loan depends materially on the cash flows generated by the property, including relevant metrics (such as an occupancy rate of the property).
105. The Loan to Value (LTV) ratio is the amount of the loan divided by the value of the property. The value of the property will be maintained at the value measured at origination unless the bank revises the property value downward. The value must be adjusted if an extraordinary, idiosyncratic event occurs resulting in a permanent reduction of the property value. If the value has been adjusted downwards, a subsequent upwards adjustment can be made but not to a higher value than the value at origination. Modifications made to the property that unequivocally increase its value could also be considered in the LTV. When calculating the LTV ratio, the loan amount will be reduced as the loan amortizes. The LTV ratio must be prudently calculated in accordance with the following requirements:

- i. Amount of the loan includes outstanding loan amount and any undrawn committed amount of the mortgage loan.³² The loan amount must be calculated gross of any provisions and other risk mitigants, except for pledged deposits accounts with the lending bank that meet all requirements for on-balance sheet netting and have been unconditionally and irrevocably pledged for the sole purposes of redemption of the mortgage loan;
 - ii. Valuation of the property must be appraised independently³³ by PBA approved valuator(s), using prudently conservative valuation criteria. To ensure that the value of the property is appraised in a prudently conservative manner, the valuation must exclude expectations on price increases and must be adjusted to take into account the potential for the current market price to be significantly above the value that would be sustainable over the life of the loan. If a market value can be determined, the valuation should not be higher than the market value.³⁴
106. A guarantee or financial collateral may be recognized as a credit risk mitigant in relation to exposures secured by real estate if it qualifies as eligible collateral under the credit risk mitigation framework. This may include mortgage insurance if it meets the operational requirements of the credit risk mitigation framework for a guarantee. Banks may recognize these risk mitigants in calculating the exposure amount; however, the LTV bucket and risk weight to be applied to the exposure amount must be determined before the application of the appropriate credit risk mitigation technique.
107. Regulatory real estate exposures (both residential and commercial) are classified as exposures that are “materially dependent on cash flows generated by the property” when the prospects for servicing the loan materially depend on the cash flows generated by the property securing the loan rather than on the underlying capacity of the borrower to service the debt from other sources. The primary source of these cash flows would be lease or rental payments, or the sale of the property. An exposure may be considered materially dependent on cash flows generated by the property if more than 50% of the borrower’s income used to service the exposure is from cash flows generated by the property.
- 2.10.1.1. Exposure secured by Regulatory Residential Real Estate:*
108. A residential real estate exposure is an exposure secured by an immovable property that has the nature of a dwelling and satisfies all applicable laws and regulations enabling the property to be occupied for housing purposes (i.e. residential property).
109. Loans to individuals that are secured by residential property under construction or land upon which residential property would be constructed, may be treated under this category provided the property is a family residential housing unit that will be the primary residence of the

³² If a bank grants different loans secured by the same property and they are sequential in ranking order (ie there is no intermediate lien from another bank), the different loans should be considered as a single exposure for risk-weighting purposes, and the amount of the loans should be added to calculate the LTV ratio.

³³ The valuation must be done independently from the bank’s mortgage acquisition, loan processing and loan decision process.

³⁴ In the case where the mortgage loan is financing the purchase of the property, the value of the property for LTV purposes will not be higher than the effective purchase price.

borrower and the lending to the individual is not, in effect, indirectly financing land acquisition, development and construction exposures described in sub section 2.10.3. This category includes loans provided to individuals for the purchase of residential house / apartment. The loans availed for the purpose of making improvements in residential house/ apartment shall also fall under this category.

110. Staff housing finance availed by staff of banks and fulfilling above criteria will also be treated as exposure against residential real estate. Other staff loans shall be treated as retail or any other categories provided respective requirements are fulfilled.

111. For residential real estate exposures, a bank shall exclude the following exposures from being classified as “materially dependent on cash flows generated by the property”:

- i. an exposure secured by a property that is the obligor’s primary residence;
- ii. an exposure secured by an income-producing residential housing unit, to an individual who has two (2) or less residential mortgages.

112. Risk Weights for exposures to regulatory residential real estate that are **NOT** materially dependent on cash flows generated by the property are as follows:

Table 10a: Risk Weight for Exposure secured by Residential Real Estate (Repayment is NOT materially dependent on cash flows generated by property)							
	LTV ≤ 50%	50% < LTV ≤ 60%	60% < LTV ≤ 80%	80% < LTV ≤ 90%	90% < LTV ≤ 100%	LTV > 100%	Criteria Not Met
Risk Weight	20%	25%	30%	40%	50%	70%	RW of Counterparty

113. Risk Weights for exposures to regulatory residential real estate that are materially dependent on cash flows generated by the property are as follows:

Table 10b: Risk Weight for Exposure secured by Residential Real Estate (Repayment is materially dependent on cash flows generated by property)							
	LTV ≤ 50%	50% < LTV ≤ 60%	60% < LTV ≤ 80%	80% < LTV ≤ 90%	90% < LTV ≤ 100%	LTV > 100%	Criteria Not Met
Risk Weight	30%	35%	45%	60%	75%	105%	150%

2.10.1.2. Exposure Secured by Regulatory Commercial Real Estate:

114. A commercial real estate exposure is an exposure secured by any immovable property that is not a residential real estate.

115. Risk Weights for exposures to regulatory commercial real estate, under this category, that are **NOT** materially dependent on cash flows generated by the property are as follows:

Table 11a: Risk Weight for Exposure secured by Commercial Real Estate (Repayment is NOT materially dependent on cash flows generated by property)			
	LTV ≤ 60%	LTV > 60%	Criteria Not Met
Risk Weight	60%	RW of Counterparty	

116. Risk Weights for exposures to regulatory commercial real estate that are materially dependent on cash flows generated by the property are as follows:

Table 11b: Risk Weight for Exposure secured by Commercial Real Estate (Repayment is materially dependent on cash flows generated by property)				
	LTV ≤ 60%	60% < LTV ≤ 80%	LTV > 80%	Criteria Not Met
Risk Weight	70%	90%	110%	150%

2.10.2. Exposure Secured by Real Estate for “Low Cost Housing”:

117. To support the growth of “Low Cost Housing” in Pakistan, a standardized risk weight of 25% will be applied on banks/ DFIs’ exposure to “Low Cost Housing” (i.e. LTV will not be applicable, in this case) wherein borrowers are meeting the relevant criteria as prescribed by SBP, from time to time³⁵.

2.10.3. Land Acquisition, Development and Construction” (ADC) Exposures:

118. Land acquisition, development and construction (ADC) exposures refers to loans to companies or SPVs financing any of the land acquisition for development and construction purposes, or development and construction of any residential or commercial property. ADC exposures will be risk-weighted at 150%.

119. ADC exposures to residential real estate projects may be risk weighted at 100%, provided that the following criteria are met:

- i. Prudential underwriting standards meet the requirements in paragraph 104, where applicable;
- ii. For construction projects, pre-sale contracts amount to over 50% of total of the real estate’s appraised as-completed value. Pre-sale contracts must be legally binding written contracts and the purchaser/renter must have made a substantial cash deposit, which is subject to forfeiture if the contract is terminated;
- iii. For land acquisition, LTV does not exceed 60%

2.10.4. Exposure on Real Estate Investment Trusts (REITs)

120. Considering the nature of underlying exposure of REITs, banks’ investment therein shall be subject to a uniform risk weight of 100%. If required, SBP may require banks to treat investment in REITs as per the relevant instructions on “Investment in the Units of Mutual Fund/ Collective Investment Scheme”.

2.11. Defaulted Exposures:

121. For risk-weighting purposes under these instructions only, a defaulted exposure is defined as one that is past due for more than 90 days, or is an exposure to a defaulted borrower. A defaulted borrower is a borrower in respect of whom any of the following events have occurred:

³⁵ BPRD Circular No. 1 of March 11, 2019.

- i. Any material credit obligation that is past due for more than 90 days. However, overdrafts will be considered as being past due once the customer has breached an advised limit or been advised of a limit smaller than current outstanding;
- ii. Any material credit obligation is on non-accrued status (e.g. the lending bank no longer recognizes accrued interest as income or, if recognized, makes an equivalent amount of provisions);
- iii. A write-off or account-specific provision is made as a result of a significant perceived decline in credit quality subsequent to the bank taking on any credit exposure to the borrower;
- iv. Any credit obligation is sold at a material credit-related economic loss;
- v. A distressed restructuring of any credit obligation (i.e. a restructuring that may result in a diminished financial obligation caused by the material forgiveness, or postponement, of principal, interest or (where relevant fees) is agreed by the bank;
- vi. The borrower's bankruptcy or a similar order in respect of any of the borrower's credit obligations to the banking group has been filed;
- vii. The borrower has sought or has been placed in bankruptcy or similar protection where this would avoid or delay repayment of any of the credit obligations to the banking group; or
- viii. Any other situation where the bank considers that the borrower is unlikely to pay its credit obligations in full without recourse by the bank to actions such as realizing security.

122. For retail exposures, the definition of default can be applied at the level of a particular credit obligation, rather than at the level of the borrower. As such, default by a borrower on one obligation does not require a bank to treat all other obligations to the banking group as defaulted.

123. With the exception of residential real estate exposures, treated under paragraph 124, the unsecured or unguaranteed portion of a defaulted exposure shall be risk-weighted net of specific provisions and partial write-offs as follows:

Table 12: Risk Weight for Defaulted Exposures		
Specific Provisions are < 20% of outstanding loan amount	Specific Provisions are between 20% - 50% of outstanding loan amount	Specific Provisions are > 50% of outstanding loan amount
150%	100%	50%

124. Defaulted residential real estate exposures where repayments do not materially depend on cash flows generated by the property securing the loan shall be risk-weighted net of specific provisions and partial write-offs at 100%. Guarantees or financial collateral, which are eligible

according to the credit risk mitigation framework might be taken into account in the calculation of the exposure in accordance with applicable instructions.

125. For the purpose of defining the secured or guaranteed portion of the defaulted exposure, eligible collateral and guarantees will be the same as for credit risk mitigation purposes.

2.12. Other Assets

126. Rights of Use (ROU) assets, Investments in premises, plant and equipment, and all other fixed assets and all other exposure classes not covered in the above sections shall be categorized as other assets and allocated a risk weight of 100%

B - Off-Balance Sheet Exposures:

127. Banks are required to calculate their risk-weighted assets for all off-balance sheet (OBS) exposures, which may include guarantees, letter of credit, commitments, derivatives and similar contractual arrangements etc. The total risk weighted off-balance sheet credit exposure is calculated as the sum of risk-weighted amounts of all its non-market-related and market-related off-balance sheet items.
128. Where the off-balance sheet item is secured by eligible collateral, guarantee or credit derivative, the credit risk mitigation techniques as detailed in the relevant section may be applied.

2.13. Non-Market Related Off-Balance Sheet Exposures:

129. The non-market related off-balance sheet exposure includes direct credit substitutes, trade and performance related contingent items and other commitments. The risk-weighted amount of a non-market related off-balance sheet transaction that gives rise to credit exposure is generally calculated by means of a two-step process:
- i. First, the notional amount of the transaction is converted into an on-balance sheet equivalent (i.e. credit equivalent amount) by multiplying the amount by a specified Credit Conversion Factor (CCF); and
 - ii. Second, the resulting credit equivalent amount is multiplied by the risk-weight associated with that counterparty (as described in the above sections for Risk-weights of On-balance Sheet Credit Exposures).
130. In the case of commitments, the committed but undrawn amount of the exposure would be multiplied by the applicable CCF. Any drawn portion of a commitment forms part of on-balance sheet credit exposure and will subject to relevant capital adequacy requirements as contained in this document.
131. For capital adequacy purposes, commitment means any contractual arrangement that has been offered by the bank and accepted by the client to extend credit, purchase assets or issue

credit substitutes.³⁶ It includes any such arrangement that can be unconditionally cancelled by the bank at any time without prior notice to the obligor. It also includes any such arrangement that can be cancelled by the bank if the obligor fails to meet conditions set out in the facility documentation, including conditions that must be met by the obligor prior to any initial or subsequent drawdown under the arrangement. Table 13 provides a repertoire of CCFs associated with various types of off balance sheet Non Market related transactions.

Table 13: Credit Conversion Factors (CCFs) for Non-Market related Off-Balance Sheet Exposures	
CCFs	Nature of Transaction/ Items
100%	<p><u>Direct Credit Substitutes:</u></p> <ul style="list-style-type: none"> - General guarantees of indebtedness (including standby letters of credit serving as financial guarantees for loans and securities). - 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), 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). - Sale and repurchase agreements and asset sales with recourse³⁷ where the credit risk remains with the bank. - The lending of banks' securities or the posting of securities as collateral by banks, including instances where these arise out of repo-style transactions (i.e. repurchase/reverse repurchase and securities lending/securities borrowing transactions). The risk-weighting treatment for counterparty credit risk must be applied in addition to the credit risk charge on the securities or posted collateral, where the credit risk of the securities lent or posted as collateral remains with the bank. - Forward asset purchases, forward deposits and partly paid shares and securities, which represent commitments with certain drawdown.

³⁶ Certain arrangements may be exempted from the definition of commitments provided that the following conditions are met: (i) the bank receives no fees or commissions to establish or maintain the arrangements; (ii) the client is required to apply to the bank for the initial and each subsequent drawdown; (iii) the bank has full authority, regardless of the fulfillment by the client of the conditions set out in the facility documentation, over the execution of each drawdown; and (iv) the bank's decision on the execution of each drawdown is only made after assessing the creditworthiness of the client immediately prior to drawdown. Exempted arrangements that meet the above criteria are limited to corporates and SMEs, where counterparties are closely monitored on an ongoing basis. However, in this regard, SBP may review the compliance of bank(s) with the given conditions in letter and spirit and in case of any undue capital savings employed by the bank(s), SBP may prescribe the additional capital requirements for such off-balance sheet items.

³⁷ Where a bank, acting as an agent, arranges a repurchase/reverse repurchase or securities lending/borrowing transaction between a customer and a third party and provides a guarantee to the customer that the third party will perform on its obligations, then the risk to the bank is the same as if the bank had entered into the transaction as principal. In such circumstances, the bank will be required to calculate capital requirements as if it, itself, was the principal. These transactions are risk-weighted according to the type of assets or the issuer of securities (as appropriate) and not according to the counterparty with whom the transaction is made, where the credit risk associated with the underlying asset which has been sold (temporarily with recourse) or purchased, remains with the bank.

	- Off-balance sheet items that are credit substitutes not explicitly included in any other category.
50%	- Note Issuance Facilities (NIFs) and Revolving Underwriting Facilities (RUFs) regardless of the maturity of the underlying facility. - Certain transaction-related contingent items (e.g. performance bonds, bid bonds, warranties, indemnities, and standby letters of credit in relation to a non-monetary obligation of counterparty under a particular transaction). 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).
40%	- CCF will be applied on commitments regardless of the maturity of the underlying facility, unless they qualify for a lower CCF. Where there is an undertaking to provide a commitment on an off-balance sheet item, banks are to apply the lower of the two applicable CCFs. ³⁸
20%	- CCF will be applied to both the issuing and confirming banks of short-term (lower than one year) self-liquidating trade letters of credit arising from the movement of goods (e.g. documentary credits collateralized by the underlying shipment). - This includes documentary letters of credit, shipping guarantees and any other trade-related contingencies.
10%	- CCF will be applied to commitments that are unconditionally cancellable at any time by the bank without prior notice, or that effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness.

2.14. Market Related Off-Balance Sheet Exposures:

132. In calculating risk-weighted off-balance sheet credit exposures arising from market-related transactions for capital adequacy purposes, the bank must include all its market-related transactions held in the banking and trading books, which give rise to off-balance sheet credit risk.

133. The credit risk on off-balance sheet 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 weighting is permitted for:

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

134. Banks may, for capital adequacy purposes, net off-balance sheet claims and obligations arising from market-related contracts across both the banking and trading books, arising from contracts

³⁸ For example, if a bank has a commitment to open short-term self-liquidating trade letters of credit arising from the movement of goods, a 20% CCF will be applied (instead of a 40% CCF); and if a bank has an unconditionally cancellable commitment to issue direct credit substitutes, a 10% CCF will be applied (instead of a 100% CCF).

with a single counterparty, where the relevant obligations are covered by eligible bilateral netting agreements.

135. The credit equivalent amount of an off-balance sheet market-related transaction, whether held in the banking or trading book, must be determined as follows:

- i. Derivatives create two types of exposure: (a) An exposure arising from the underlying of the derivative contract; and (b) A counterparty credit risk (CCR) exposure.
- ii. The credit equivalent amount of a market-related derivative contract is the sum of Replacement Cost (RC) for the current credit exposure plus an add-on for Potential Future Exposure (PFE).
- iii. For a single derivative exposure not covered by an eligible bilateral netting contract, the amount to be included in the exposure measure is determined as follows:

$$\text{Exposure Measure} = \text{Replacement Cost (RC)} + \text{Add-on}$$

Where:

RC = Replacement Cost of the contract (obtained by marking to market), where the contract has a positive value.

Add-on = An amount for PFE over the remaining life of the contract calculated by applying an add-on factor to the notional principal amount of the derivative. The PFE is determined by multiplying the effective notional principal amount of each of these derivative contracts (regardless of whether the contract has a zero, positive or negative mark-to-market value) by the relevant Add-on factor specified in Table 14 according to the nature and residual maturity of the instrument.

136. The following add-on factors shall apply to financial derivatives based on the residual maturity:

Table 14: Add-on Factors for Determining Potential Future Exposure ³⁹				
Bucket	Interest Rates	FX & Gold	Equities	Other Commodities
One Year or Less	0.0%	1.0%	6.0%	10.0%
Over One Year to Five Years	0.5%	5.0%	8.0%	12.0%
Over Five Years	1.5%	7.5%	10.0%	15.0%

137. Potential future credit exposure should be based on effective rather than apparent notional amounts. In the event that the stated notional amount of a contract is leveraged or enhanced by the structure of the transaction, bank must use the effective notional amount when

³⁹ For contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract. For contracts that are structured to settle outstanding exposures following specified payment dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the residual maturity would be set equal to the time until the next reset date. In the case of interest rate contracts with remaining maturities of more than one year that meet the above criteria, the add-on is subject to a floor of 0.5%. Forwards, swaps, purchased options and similar derivative contracts not covered by any of the columns in this matrix are to be treated as "other commodities". No potential future credit exposure would be calculated for single currency floating / floating interest rate swaps; the credit exposure on these contracts would be evaluated solely on the basis of their mark-to-market value.

calculating potential future credit exposure. For example, a stated notional amount of PKR 1 million with payments based on two times 6 month MTB would have an effective notional amount of PKR 2 million.

138. Potential future credit exposure is required to be calculated for all OTC contracts regardless whether the replacement cost is positive or negative except single currency floating / floating interest rate swaps; the credit exposure on these contracts is evaluated solely on the basis of their mark-to-market value.

Section 3: Credit Risk Mitigation (CRM) Techniques:

139. Generally, banks use a number of techniques to mitigate the credit risks to which they are exposed. For example, exposures may be collateralized by first-priority claims, in whole or in part with cash or securities, a loan exposure may be guaranteed by a third party, or a bank may buy a credit derivative to offset various forms of credit risk. Additionally, banks may agree to net loans owed to them against deposits from the same counterparty.⁴⁰
140. The Credit Risk Mitigation Framework in this section is applicable to the banking book exposures that are risk-weighted under the standardized approach.

3.1. General Principles and Minimum Requirements:

141. Under the applicable CRM technique, no transaction shall receive a higher capital requirement than an otherwise identical transaction without using any CRM technique.
142. The effects of CRM must not be double-counted. Therefore, no additional supervisory recognition of CRM for regulatory capital purposes will be granted on exposures for which the risk weight already reflects that CRM.
143. While the use of CRM techniques reduces or transfers credit risk, it may simultaneously increase other risks (i.e. residual risks). Residual risks include legal, operational, liquidity and market risks. Therefore, banks must employ robust procedures and processes to control these risks, including strategy; consideration of the underlying credit; valuation; policies and procedures; systems and management of concentration risk arising from the bank's use of CRM techniques and its interaction with the bank's overall credit risk profile. Where these risks are not adequately controlled, SBP may, if deemed appropriate, impose additional capital charges or take other supervisory actions under Pillar 2 of Basel Capital Adequacy Framework.
144. In order for CRM techniques to provide protection, the credit quality of the counterparty must not have a material positive correlation with the employed CRM technique or with the resulting residual risk. For example, securities issued by the counterparty (or by any counterparty-related entity) provide little protection as collateral and are thus ineligible.
145. In case where a bank has multiple CRMs covering a single exposure (e.g. a bank has both collateral and a guarantee partially covering an exposure), the bank must subdivide the exposure into portions covered by each type of CRM (e.g. portion covered by collateral, portion covered by guarantee) and the risk-weighted assets of each portion must be calculated separately. When credit protection provided by a single protection provider has differing maturities, they must be subdivided into separate protection as well.

⁴⁰ In this section, "counterparty" is used to denote a party to whom a bank has an on- or off-balance sheet credit exposure. That exposure may, for example, take the form of a loan of cash or securities (where the counterparty would traditionally be called the borrower), of securities posted as collateral, of a commitment or of exposure under an OTC derivatives contract.

3.2. General Legal Requirements:

146. In order for banks to obtain capital relief by using CRM techniques, all documentation used in collateralized transactions, on-balance sheet netting agreements, guarantees and credit derivatives must be binding on all parties and legally enforceable in all relevant jurisdictions. Banks must have conducted sufficient legal review to verify this and have a well-founded legal basis to reach this conclusion, and undertake such further review as necessary to ensure continuing enforceability.

3.3. General Treatment for Maturity Mismatches:

147. For the purposes of calculating risk-weighted assets, a maturity mismatch occurs when the residual maturity of a credit protection arrangement (e.g. hedge) is less than that of the underlying exposure.
148. In the case of financial collateral, maturity mismatches are not allowed under the simple approach.
149. Under the other approaches, when there is a maturity mismatch, the credit protection arrangement may only be recognized if the original maturity of the arrangement is greater than or equal to one year, and its residual maturity is greater than or equal to three months. In such cases, credit risk mitigation may be partially recognized. When there is a maturity mismatch with recognized credit risk mitigants, the following adjustment applies:

$$Pa = P \cdot \frac{t - 0.25}{T - 0.25}$$

Where:

Pa	=	Value of the credit protection adjusted for maturity mismatch;
P	=	Credit protection amount (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 {five years, residual maturity of the exposure expressed in years}.

150. The maturity of the underlying exposure and the maturity of the hedge must both be defined conservatively. The effective maturity of the underlying must be gauged as the longest possible remaining time before the counterparty is scheduled to fulfil its obligation, taking into account any applicable grace period. For the hedge, (embedded) options that may reduce the term of the hedge must be taken into account so that the shortest possible effective maturity is used. For example: where, in the case of a credit derivative, the protection seller has a call option, the maturity is the first call date. Likewise, if the protection buyer owns the call option and has a

strong incentive to call the transaction at the first call date, for example because of a step-up in cost from this date on, the effective maturity is the remaining time to the first call date.

3.4. General Treatment for Currency Mismatches:

151. Currency mismatches are allowed under all approaches. Under the simple approach, there is no specific treatment for currency mismatches, given that a minimum risk weight of 20% (floor) is generally applied. Under the comprehensive approach and in case of guarantees and credit derivatives, a specific adjustment for currency mismatches is prescribed in the relevant sub-sections of these instructions.

3.5. Overview of Credit Risk Mitigation Techniques:

Collateralized transactions

152. A collateralized transaction is one in which:

- i. Banks have a credit exposure or a potential credit exposure; and
- ii. That credit exposure or potential credit exposure is hedged in whole or in part by collateral posted by a counterparty or by a third party on behalf of the counterparty.

153. Where banks take eligible financial collateral, they may reduce their regulatory capital requirements through the application of CRM techniques. Primarily, banks may opt for either:

- i. **The Simple Approach**, which replaces the risk weight of the counterparty with that of the collateral for the collateralized portion of the exposure (generally subject to a 20% floor); or
- ii. **The Comprehensive Approach**, which allows a more precise offset of collateral against exposures, by effectively reducing the exposure amount by a volatility-adjusted value ascribed to the collateral.

154. Detailed operational requirements for the simple approach and comprehensive approach are given in paragraphs 166 to 195. Institutions may operate under either, but not both, approaches in the banking book.

On-balance sheet netting

155. Banks may calculate capital requirements on the basis of net credit exposures, if they have legally enforceable netting arrangements (Section 3.7) for loans and deposits.

Guarantees and Credit Derivatives

156. Where guarantees or credit derivatives fulfil the minimum operational conditions set out in the relevant sub-section of these instructions (Section 3.8), banks may take account of the credit protection offered by such credit risk mitigation techniques in calculating capital requirements.

157. A range of guarantors and protection providers are recognized and a substitution approach applies for capital requirement calculations. Only guarantees issued by or protection provided

by entities with a lower risk weight than the counterparty lead to reduced capital charges for the guaranteed exposure, 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.

158. Detailed conditions and operational requirements for guarantees and credit derivatives are given in section 3.8.

3.6. Collateralized transactions

3.6.1. General Requirements

159. Before capital relief is granted in respect of any form of collateral, the minimum requirements as set out in the below paragraphs 160 to 165 must be met, irrespective of whether the simple or the comprehensive approach is used. Banks that lend securities or post collateral must calculate capital requirements for both of the following: (i) the credit risk or market risk of the securities, if this remains with the bank; and (ii) the counterparty credit risk arising from the risk that the borrower of the securities may default.

160. 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 default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the counterparty (and, where applicable, of the custodian holding the collateral). Additionally, banks must take all steps necessary to fulfil those requirements under the law applicable to the bank's interest in the collateral for obtaining and maintaining an enforceable security interest, e.g. by registering it with a registrar, or for exercising a right to net or set off in relation to transfer of title of the collateral.

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

162. Banks must ensure that sufficient resources are devoted to the orderly operation of margin agreements with OTC derivative and securities-financing counterparties, as measured by the timeliness and accuracy of its outgoing margin calls and response time to incoming margin calls. Banks must have collateral risk management policies in place to control, monitor and report:

- i. The risk to which margin agreements expose them (such as the volatility and liquidity of the securities exchanged as collateral);
- ii. The concentration risk to particular types of collateral;
- iii. The reuse of collateral (both cash and non-cash) including the potential liquidity shortfalls resulting from the reuse of collateral received from counterparties; and
- iv. The surrender of rights on collateral posted to counterparties.

163. 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.
164. A capital requirement must be applied on both sides of a transaction. For example, both repos and reverse repos will be subject to capital requirements. Likewise, both sides of a securities lending and borrowing transaction will be subject to explicit capital charges, as will the posting of securities in connection with derivatives exposures or with any other borrowing transaction.
165. Where a bank, acting as an agent, arranges a repo-style transaction (ie repurchase/reverse repurchase and securities lending/borrowing transactions) between a customer and a third party and provides a guarantee to the customer that the third party will perform on its obligations, then the risk to the bank is the same as if the bank had entered into the transaction as a principal. In such circumstances, a bank must calculate capital requirements as if it were itself the principal.

3.6.2. The Simple Approach:

3.6.2.1. General Requirements for simple approach

166. Under the simple approach for CRM, risk weight of the counterparty is replaced by the risk weight of collateral instrument fully or partially collateralizing the exposure.
167. For collateral to be recognized under the simple approach, it must be:
- Pledged, at least, for the life of the exposure i.e. a maturity mismatch will not be allowed;
 - Marked to market and revalued⁴¹ with a minimum frequency of six months. Those portions of exposures collateralized by the market value of recognized collateral receive the risk weight applicable to the collateral instrument. The risk weight on the collateralized portion is subject to a floor of 20% except under certain conditions as specified in section 3.6.2.3 below. The remainder of the exposure must be assigned the risk weight appropriate to the counterparty.

3.6.2.2. Eligible collateral under the simple approach

168. The following collateral instruments are eligible for recognition under the simple approach:

Table 15: Eligible Collateral under Simple Approach of CRM Techniques	
Eligible Collateral	Specifications
Cash	This may include cash (as well as certificates of deposit or comparable instruments issued by the lending bank) on deposit with the bank that is incurring counterparty exposure. ⁴²

⁴¹ For Govt. debts like CDNS instruments where quoted prices are not available, the current encashable value may be used instead.

⁴² Cash-funded credit-linked notes issued by the bank against exposures in the banking book that fulfil the criteria for credit derivatives are treated as cash-collateralized transactions. When cash on deposit, certificates of deposit or comparable instruments issued by the lending bank are held as collateral at a third-party bank in a non-custodial arrangement, if they are openly pledged/assigned to the lending bank and if the pledge/assignment is

Commodity	Gold
Debt Securities	<p><u>Rated</u> by a recognized ECAI where these are, at least, either:</p> <ul style="list-style-type: none"> - 4 when issued by sovereigns or PSEs that are treated as sovereigns by SBP; or - 3 when issued by other entities (including banks and securities firms); or - S3 for short-term debt instruments.
Debt Securities	<p><u>Not rated</u> by a recognized ECAI where these are:</p> <ul style="list-style-type: none"> - Issued by a bank; and - Listed on a recognized exchange; and - Classified as senior debt; and - All rated issues of the same seniority by the issuing bank are rated at least 3/ S3 by a recognized ECAI; and - Bank holding the securities as collateral has no information to suggest that the issue justifies a rating below 3/ S3 (as applicable); and - SBP is sufficiently confident that the market liquidity of the security is adequate.
Equities	This may include convertible bonds that are included in a main index.
Undertakings for Collective Investments in Transferable Securities (UCITS) and Mutual Funds	<p>Where:</p> <ul style="list-style-type: none"> - A price for the units is publicly quoted daily; and - UCITS/mutual fund is limited to investing in the instruments eligible under Simple Approach for Credit Risk Mitigation⁴³.

3.6.2.3. Exemptions under the simple approach to the risk weight floor

169. Under the Simple Approach for CRM, 0% risk weight instead of 20% risk-weight floor may be applied on a collateralized transaction where the exposure and the collateral are denominated in the same currency, and either:

- The collateral is cash or certificate of deposit or a comparable instrument as mentioned in the table above; or
- The collateral is in the form of sovereign/PSE securities eligible for a 0% risk weight, and its market value has been discounted by 20%.

170. OTC derivative transactions subject to daily mark-to-market, collateralized by cash and where there is no currency mismatch may receive a 0% risk weight. Such transactions collateralized by sovereign or PSE securities qualifying for a 0% risk weight in the standardized approach may receive a 10% risk weight.

171. Repo-style transactions that fulfil all of the following conditions are exempted from the risk-weight floor of 20%:

unconditional and irrevocable, the exposure amount covered by the collateral (after any necessary haircuts for currency risk) receives the risk weight of the third-party bank.

⁴³ However, the use or potential use by a UCITS/ mutual fund of derivative instruments solely to hedge investments listed in this table and under the Comprehensive Approach shall not prevent units in that UCITS/ mutual fund from being eligible financial collateral.

- i. Both the exposure and the collateral are denominated in the same currency;
- ii. Both the exposure and collateral are cash or a sovereign security or PSE security qualifying for a 0% risk weight under the standardized approach;
- iii. Either the transaction is overnight or both the exposure and the collateral are marked to market daily and are subject to daily re-margining;
- iv. Following a counterparty's failure to re-margin, the time that is required between the last mark-to-market before the failure to re-margin and the liquidation of the collateral is considered to be no more than four business days;
- v. The transaction is settled across a settlement system proven for that type of transaction;
- vi. The documentation covering the agreement is standard market documentation for repo-style transactions in the securities concerned;
- vii. The transaction is governed by documentation specifying that if the counterparty fails to satisfy an obligation to deliver cash or securities or to deliver margin or otherwise defaults, then the transaction is immediately terminable; and
- viii. Upon any default event, regardless of whether the counterparty is insolvent or bankrupt, the bank has the unfettered, legally enforceable right to immediately seize and liquidate the collateral for its benefit.

172. **Core market participants** include sovereigns, central banks, PSEs, banks, securities firms, other financial companies (including insurance companies) eligible for a 20% risk weight under the standardized approach, regulated mutual funds that are subject to capital or leverage requirements and regulated pension funds.

173. As an exemption to the risk weight floor of 20%, repo transactions that fulfil the above requirements in paragraph 171 shall receive a risk weight of 10%. However, if the counterparty to the repo transaction is a core market participant, banks may apply a risk weight of 0% to such transaction.

3.6.3. The Comprehensive Approach:

3.6.3.1. *General requirements for the comprehensive approach*

174. In the comprehensive approach, banks must calculate their adjusted exposure to a counterparty in order to take account of the risk mitigating effect of collateral. Banks must use the applicable supervisory haircuts to adjust both the amount of exposure to the counterparty and value of any collateral received in support of that counterparty to take account of possible future fluctuations in the value of either,⁴⁴ as occasioned by market movements. Unless either side of the transaction is cash or a zero haircut is applied, the volatility-adjusted exposure amount is

⁴⁴ Exposure amounts may vary where, for example, securities are being lent.

higher than the nominal exposure and the volatility-adjusted collateral value is lower than the nominal collateral value.

175. The size of the haircuts that banks must use depends on the prescribed holding period for the transaction. For the purposes of this guideline, the holding period is the period of time over which exposure or collateral values are assumed to move before the bank can close out the transaction. The supervisory prescribed minimum holding period is used as the basis for the calculation of the standard supervisory haircuts.
176. The holding period, and thus the size of individual haircuts depends on the type of instrument, type of transaction, residual maturity and the frequency of marking to market and re-margining as provided in paragraph 183. Haircuts must be scaled up using the square root of time formula depending on the frequency of re-margining or marking to market. This formula is included in paragraph 190.
177. Additionally, where the exposure and collateral are held in different currencies, banks must apply an additional haircut to the volatility-adjusted collateral amount in accordance with paragraphs 184 and 211 for possible future fluctuations in exchange rates.
178. The effect of master netting agreements covering repo-style transactions can be recognized for the calculation of capital requirements subject to the conditions and requirements in section 3.6.3.7.

3.6.3.2. Eligible collateral under the comprehensive approach

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

Table 16: Eligible Collateral under Comprehensive Approach of CRM Techniques	
Eligible Collateral	Specifications
Collateral under Simple Approach	This includes all the instruments eligible for Simple Approach.
Equities	This may include all the equities and convertible bonds that are not included in a main index but which are listed on a recognized security exchange.
Undertakings for Collective Investments in Transferable Securities (UCITS) and Mutual Funds	UCITS/ mutual funds which includes the instruments mentioned in "Equities" above.

3.6.3.3. Calculation of capital requirement for transactions secured by financial collateral

180. For the calculation of capital requirement, the exposure amount for a transaction secured by financial collateral, is calculated as follows:

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

Where:

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

181. In the case of maturity mismatches, the value of the collateral received (collateral amount) must be adjusted in accordance with section 3.3.

182. The exposure amount after risk mitigation (E*) must be multiplied by the risk weight of the counterparty to obtain the risk-weighted asset amount for the collateralized transaction.

3.6.3.4. *Standard supervisory haircuts for comprehensive approach*

183. The following supervisory haircuts (assuming daily mark-to-market, daily re-margining and a 10-business day holding period), expressed as percentages, must be used to determine the haircuts appropriate to the collateral (Hc) and to the exposure (He):

Table 17: Minimum Supervisory Haircuts			
Issue Rating for Debt Securities	Residual Maturity	Sovereigns ⁴⁵	Other Issuers ⁴⁶
1/ S1	≤ 1 Year	0.5	1
	> 1 Year, ≤ 3 Years	2	3
	> 3 Years, ≤ 5 Years		4
	> 5 Years, ≤ 10 Years	4	6
	> 10 Years		12
2 & 3/ S2 & S3 and unrated bank securities as per para 3.2.3	≤ 1 Year	1	2
	> 1 Year, ≤ 3 Years	3	4
	> 3 Years, ≤ 5 Years		6
	> 5 Years, ≤ 10 Years	6	12
	> 10 Years		20
4	All	15	Not Eligible
Main index equities (including convertible bonds) and gold	20		
Other equities and convertible bonds listed on a recognized exchange	30		
UCITS/mutual funds	Highest haircut applicable to any security in which the fund can invest, unless the bank can apply the look-through approach (LTA) for equity investments in funds, in which case the bank may use a weighted average of haircuts applicable to instruments held by the fund.		
Cash in the same currency ⁴⁷	0		

⁴⁵ Includes: PSEs that are treated as sovereigns by SBP as well as multilateral development banks receiving a 0% risk weight.

⁴⁶ Includes PSEs that are not treated as sovereigns by SBP.

⁴⁷ Eligible cash collateral as mentioned in paragraph 168.

184. The haircut for currency risk (H_{fx}) where exposure and collateral are denominated in different currencies is 8% (also based on a 10-business day holding period and daily mark-to-market).
185. For SFTs and secured lending transactions, a haircut adjustment may need to be applied in accordance with paragraphs 188 to 190.
186. For SFTs in which the bank lends, or posts non-eligible instruments as collateral, the haircut to be applied on the exposure must be 30%. For transactions in which the bank borrows non-eligible instruments, credit risk mitigation may not be applied.
187. Where the collateral is a basket of assets, the haircut on the basket must be $H = \sum_i a_i H_i$, where a_i is the weight of the asset (as measured by units of currency) in the basket and H_i the haircut applicable to that asset.

3.6.3.5. Adjustment for different holding periods and non-daily mark to market or re-margining

188. For some transactions, depending on the nature and frequency of the revaluation and re-margining provisions (non-daily) and different holding periods, an adjustment of different haircuts must be applied. The framework for collateral haircuts distinguishes between repo-style transactions (i.e. repo/reverse repos and securities lending/borrowing), "other capital markets-driven transactions" (i.e. OTC derivatives transactions and margin lending) and secured lending. In capital-market-driven transactions and repo-style transactions, the documentation contains re-margining clauses; in secured lending transactions, it generally does not.
189. The minimum holding period for various products and adjustment to supervisory haircuts are summarized in the following table:

Table 18: Adjustments to Minimum Supervisory Haircuts		
Transaction Type	Minimum Holding Period	Condition
Repo-style Transaction	05 (Five) Business Days	Daily Re-margining
Other capital market transactions	10 (Ten) Business Days	Daily Re-margining
Secured lending	20 (Twenty) Business Days	Daily Revaluation

190. When the frequency of re-margining or revaluation is longer than the minimum, the minimum haircut numbers must be scaled up depending on the actual number of business days between re-margining or revaluation. The 10-business day haircuts provided in paragraph 183 are the default haircuts and these haircuts must be scaled up or down using the formula below:

$$H = H_{10} \text{Root} \left[\frac{N_R + (T_M - 1)}{10} \right]$$

Where:

- H = Haircut;
- H_{10} = 10-Business day haircut for the instrument

N_R	=	Actual number of business days between re-margining for capital market transactions or revaluation for secured transactions
T_M	=	Minimum holding period for the type of transaction

3.6.3.6. Exemptions under the comprehensive approach for qualifying repo-style transactions involving core market participants

191. For repo-style transactions with core market participants as defined in paragraph 172 and that satisfy the conditions in paragraph 171, banks may apply a haircut of zero.

3.6.3.7. Treatment under the comprehensive approach of SFTs covered by master netting agreements

192. The effects of bilateral netting agreements covering repo-style transactions may be recognized on a counterparty-by-counterparty basis if the agreements are legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of whether the counterparty is insolvent or bankrupt. In addition, netting agreements must:

- i. Provide the non-defaulting party the right to terminate and close out in a timely manner all transactions under the agreement upon an event of default, including in the event of insolvency or bankruptcy of the counterparty;
- ii. Provide for the netting of gains and losses on transactions (including the value of any collateral) terminated and closed out under it so that a single net amount is owed by one party to the other;
- iii. Allow for the prompt liquidation or set-off of collateral upon the event of default.
- iv. Be, together with the rights arising from the provisions required in (i) to (iii) above, legally enforceable in each relevant jurisdiction upon the occurrence of an event of default and regardless of the counterparty's insolvency or bankruptcy.

193. Netting across positions in the banking and trading book may only be recognized when the netted transactions fulfil the following conditions:

- i. All transactions are marked to market daily⁴⁸ and
- ii. The collateral instruments used in the transactions are recognized as eligible financial collateral in the banking book.

194. Banks using standard supervisory haircuts for repo-style transactions conducted under a master netting agreement must use the following formula to calculate their exposure amount:

$$E^* = \max \{0; \sum_i E_i - \sum_j C_j + 0.4 \cdot \text{Net exposure} + 0.6 \frac{\text{gross exposure} + \sum_{fx} (E_{fx} \cdot H_{fx})}{\text{SQRT}(N)}\}$$

⁴⁸ The holding period for the haircuts depends, as in other repo-style transactions, on the frequency of margining.

Where:

E^*	=	Exposure value of the netting set after risk mitigation;
E_i	=	Current value of all cash and securities lent, sold with an agreement to repurchase or otherwise posted to the counterparty under the netting agreement;
C_j	=	Current value of all cash and securities borrowed, purchased with an agreement to resell or otherwise held by the bank under the netting agreement;
Net exposure	=	$\sum_s E_s H_s $
Gross exposure	=	$\sum_s E_s H_s $
E_s	=	The net current value of each security issuance under the netting set (always a positive value);
H_s	=	Haircut appropriate to E_s as described in table of paragraph 183; <ul style="list-style-type: none"> - H_s has a positive sign if the security is lent, sold with an agreement to repurchased, or transacted in manner similar to either securities lending or a repurchase agreement; - H_s has a negative sign if the security is borrowed, purchased with an agreement to resell, or transacted in a manner similar to either a securities borrowing or reverse repurchase agreement;
N	=	Is number of security issues contained in the netting set (except that issuances where the value E_s is less than one tenth of the value of the largest E_s in the netting set are not included the count);
E_{fx}	=	Absolute value of the net position in each currency fx different from the settlement Currency;
H_{fx}	=	Haircut appropriate for currency mismatch of currency fx

Note: This formula includes the current exposure, an amount for systematic exposure of the securities based on the net exposure, an amount for the idiosyncratic exposure of the securities based on the gross exposure, and an amount for currency mismatch. All other rules regarding the calculation of haircuts under the comprehensive approach stated in sections 3.6.3.1 to 3.6.3.7 (paragraphs 174 to 191) equivalently apply for banks using bilateral netting agreements for repo-style transactions.

3.6.3.8. Collateralized OTC derivative transactions

195. The calculation of the counterparty credit risk charge for an individual contract will be as follows:

$$\text{Exposure Measure} = [\text{Replacement Cost (RC)} + \text{Add-on}] - C_A$$

Where:

RC	=	Replacement Cost of the contract (obtained by marking to market), where the contract has a positive value;
Add-on	=	An amount for PFE over the remaining life of the contract calculated by applying an add-on factor to the notional principal amount of the derivative. The PFE is determined by multiplying the effective notional principal amount of each of these derivative contracts (regardless of whether the contract has a zero, positive or negative mark-to-market value) by the relevant Add-on factor specified in Table 14 according to the nature and residual maturity of the instrument;
C _A	=	The adjusted collateral amount under the Comprehensive Approach, or zero if no eligible collateral is applied to the transaction.

When effective bilateral netting contracts are in place, RC will be the net replacement cost and the add-on will be calculated on net exposure. The haircut for currency risk (H_{fx}) should be applied when there is a mismatch between the collateral currency and the settlement currency. Even in the case where there are more than two currencies involved in the exposure, collateral and settlement currency, a single haircut assuming a 10-business day holding period scaled up as necessary depending on the frequency of mark-to-market will be applied.

3.7. On-balance Sheet Netting

196. A bank may use the net exposure of loans and deposits as the basis for its capital adequacy calculation in accordance with the formula in paragraph 180, if it meets the following conditions:

- i. It 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;
- ii. It is able at any time to determine those assets and liabilities with the same counterparty that are subject to the netting agreement;
- iii. It monitors and controls its roll-off risks; and
- iv. It monitors and controls the relevant exposures on a net basis.

197. Assets (loans) are treated as exposure and liabilities (deposits) as collateral. The haircuts are zero except when a currency mismatch exists. A 10-business day holding period applies when daily mark-to-market is conducted. For on-balance sheet netting, the requirements in paragraphs 183, 190 and section 3.3 must be applied.

3.8. Guarantees and Credit Derivatives:

3.8.1. Operational requirements for guarantees and credit derivatives:

198. If following general operational requirements/ conditions in respect of guarantees (counter-guarantee)/ credit derivatives are met, banks can substitute the risk weight of counterparty with risk weight of the guarantor:

- i. It represents a direct claim on the protection provider;
- ii. It is explicitly referenced to specific exposures or a pool of exposures, so that the extent of the cover is clearly defined and incontrovertible;
- iii. Other than non-payment by a protection purchaser of money due in respect of the credit protection contract it is irrevocable; there should be no clause in the contract that would allow the protection provider unilaterally to cancel the credit cover or that would increase the effective cost of cover as a result of deteriorating credit quality in the hedged exposure;⁴⁹
- iv. It must be unconditional; there should be no clause in the protection contract 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 underlying counterparty fails to make the payment(s) due.

199. In the case of maturity mismatches, the amount of credit protection that is provided must be adjusted in accordance with section 3.3.

3.8.2. Specific Operational Requirements for Guarantees:

200. In addition to the general requirements as mentioned above (in order for a guarantee to be recognized) and legal certainty requirements as mentioned in Section 3.2 , the following specific requirements must also be satisfied:

- i. On the qualifying default/non-payment of the counterparty, the bank may in a timely manner pursue the guarantor for any monies outstanding under the documentation governing the transaction. The guarantor may make one lump sum payment of all monies under such documentation to the bank, or the guarantor may assume the future payment obligations of the counterparty covered by the guarantee. The bank must have the right to receive any such payments from the guarantor without first having to take legal action in order to pursue the counterparty for payment;
- ii. The guarantee is an explicitly documented obligation assumed by the guarantor;
- iii. Except as noted in the following sentence, the guarantee covers all types of payments the underlying counterparty is expected to make under the documentation governing

⁴⁹ There must be no possibility for the protection provider to change the maturity agreed *ex post*.

the transaction, for example notional amount, margin payments, etc. Where a guarantee covers payment of principal only, interests and other uncovered payments must be treated as an unsecured amount in accordance with the rules for proportional cover described in paragraph 209.

3.8.3. Specific Operational Requirements for Credit Derivatives:

201. In addition to the general requirements as mentioned above (in order for a credit derivative to be recognized) and legal certainty requirements as mentioned in section 3.2, the following specific requirements must also be satisfied:

- i. The credit events specified by the contracting parties must at a minimum cover:
 - a. Failure to pay the amounts due under terms of the underlying obligation that are in effect at the time of such failure (with a grace period that is closely in line with the grace period in the underlying obligation);
 - b. Bankruptcy, insolvency or inability of the obligor to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and analogous events; and
 - c. Restructuring⁵⁰ of the underlying obligation involving forgiveness or postponement of principal, interest or fees that results in a credit loss event (i.e. write-off, specific provision or other similar debit to the profit and loss account).
- ii. If the credit derivative covers obligations that do not include the underlying obligation, point vii of this paragraph below governs whether the asset mismatch is permissible.
- iii. The credit derivative shall not terminate prior to expiration of any grace period required for a default on the underlying obligation to occur as a result of a failure to pay. In the case of a maturity mismatch, the provisions of section 3.3 must be applied.
- iv. Credit derivatives allowing for cash settlement are recognized for capital purposes insofar as a robust valuation process is in place in order to estimate loss reliably. There must be a clearly specified period for obtaining post-credit-event valuations of the underlying obligation. If the reference obligation specified in the credit derivative for purposes of cash settlement is different from the underlying obligation, section (vii) below governs whether the asset mismatch is permissible.
- v. If the protection purchaser's right/ability to transfer the underlying obligation to the protection provider is required for settlement, the terms of the underlying obligation

⁵⁰ When hedging corporate exposures, this particular credit event is not required to be specified provided that (i) A 100% vote is needed to amend maturity, principal, coupon, currency or seniority status of the underlying corporate exposure; (ii) The legal domicile in which the corporate exposure is governed has a well-established bankruptcy code that allows for a company to reorganize/restructure and provides for an orderly settlement of creditor claims. If these conditions are not met, then the treatment in paragraph 202 may be eligible.

must provide that any required consent to such transfer may not be unreasonably withheld.

- vi. The identity of the parties responsible for determining whether a credit event has occurred must be clearly defined. This determination must not be the sole responsibility of the protection seller. The protection buyer must have the right/ability to inform the protection provider of the occurrence of a credit event.
 - vii. A mismatch between the underlying obligation and the reference obligation under the credit derivative (i.e. the obligation used for purposes of determining cash settlement value or the deliverable obligation) is permissible if
 - a. The reference obligation ranks pari passu with or is junior to the underlying obligation, and
 - b. The underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.
 - viii. A mismatch between the underlying obligation and the obligation used for purposes of determining whether a credit event has occurred is permissible if:
 - a. The latter obligation ranks pari passu with or is junior to the underlying obligation, and
 - b. The underlying obligation and reference obligation share the same obligor (i.e. the same legal entity) and legally enforceable cross-default or cross-acceleration clauses are in place.
202. When the restructuring of the underlying obligation is not covered by the credit derivative, but the other requirements in paragraph 201 are met, partial recognition of the credit derivative will be allowed. If the amount of the credit derivative is less than or equal to the amount of the underlying obligation, 60% of the amount of the hedge can be recognised as covered. If the amount of the credit derivative is larger than that of the underlying obligation, then the amount of eligible hedge is capped at 60% of the amount of the underlying obligation.

3.8.4. Range of eligible guarantors (counter-guarantors)/ protection providers and credit derivatives

203. Credit protection (guarantee/ counter guarantee, protection providers, credit derivatives) given by the following entities can be recognized when they have a lower risk weight than the counterparty:

- i. Sovereign entities⁵¹, PSEs, MDBs, banks, securities firms and other prudentially regulated financial institutions with a lower risk weight than the counterparty⁵²;
 - ii. Other entities that are externally rated. This would include credit protection provided by a parent, subsidiary and affiliate companies when they have a lower risk weight than the obligor;
204. Only credit default swaps and total return swaps that provide credit protection equivalent to guarantees are eligible for recognition⁵³. The following exception applies: where a bank buys credit protection through a total return swap and records the net payments received on the swap as net income, but does not record offsetting deterioration in the value of the asset that is protected (either through reductions in fair value or by an addition to reserves), the credit protection will not be recognized.
205. First-to-default and all other nth-to-default credit derivatives (i.e. by which a bank obtains credit protection for a basket of reference names and where the first- or nth-to-default among the reference names triggers the credit protection and terminates the contract) are not eligible as a credit risk mitigation technique and therefore cannot provide any regulatory capital relief. In transactions wherein a bank provided credit protection through such instruments, it shall apply the treatment described in paragraph 206.
206. A bank providing credit protection through a first-to-default or second-to-default credit derivative is subject to capital requirements on such instruments. For first-to-default credit derivatives, the risk weights of the assets included in the basket must be aggregated up to a maximum of 1000% and multiplied by the nominal amount of the protection provided by the credit derivative to obtain the risk-weighted asset amount. For second-to-default credit derivatives, the treatment is similar; however, in aggregating the risk weights, the asset with the lowest risk-weighted amount can be excluded from the calculation. This treatment applies respectively for nth-to-default credit derivatives, for which the n-1 assets with the lowest risk-weighted amounts can be excluded from the calculation.

⁵¹ This includes the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Union, the European Stability Mechanism (ESM) and the European Financial Stability Facility (EFSF), as well as MDBs eligible for a 0% risk weight as defined in paragraph 52.

⁵² A prudentially regulated financial institution is defined as: a legal entity supervised by a regulator that imposes prudential requirements consistent with international norms or a legal entity (parent company or subsidiary) included in a consolidated group where any substantial legal entity in the consolidated group is supervised by a regulator that imposes prudential requirements consistent with international norms. These include, but are not limited to, prudentially regulated insurance companies, broker/dealers, thrifts and futures commission merchants, and qualifying central counterparties as defined in Basel Committee on Banking Supervision, *Regulatory capital requirements framework for bank exposures to central counterparties*, CRE54 of the Basel III framework..

⁵³ Cash-funded credit-linked notes issued by the bank against exposures in the banking book that fulfil all minimum requirements for credit derivatives are treated as cash-collateralised transactions. However, in this case the limitations regarding the protection provider as set out in paragraph 203 do not apply.

3.8.5. Risk weight treatment of transactions in which eligible credit protection is provided

General Risk-Weight Treatment:

207. The protected portion is assigned the risk weight of the protection provider. The uncovered portion of the exposure is assigned the risk weight of the underlying counterparty.
208. Materiality thresholds on payments below which the protection provider is exempt from payment in the event of loss are equivalent to retained first-loss positions. The portion of the exposure that is below a materiality threshold must be assigned a risk weight of 1000% by the bank purchasing the credit protection.

Proportional Cover:

209. Where losses are shared pari passu on a pro rata basis between the bank and the guarantor, capital relief is afforded on a proportional basis, i.e. the protected portion of the exposure receives the treatment applicable to eligible guarantees/credit derivatives, with the remainder treated as unsecured.

Tranched Cover:

210. Where the bank transfers a portion of the risk of an exposure in one or more tranches to a protection seller or sellers and retains some level of the risk of the loan, and the risk transferred and the risk retained are of different seniority, banks may obtain credit protection for either the senior tranches (e.g. the second-loss portion) or the junior tranche (e.g. the first-loss portion).

3.8.6. Currency Mismatches:

211. 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 must be reduced by the application of a haircut H_{FX} , i.e.

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

Where:

G	=	Nominal amount of the credit protection;
H_{FX}	=	Haircut appropriate for currency mismatch between the credit protection and underlying obligation.

212. The currency mismatch haircut for a 10-business day holding period (assuming daily marking to market) is 8%. This haircut must be scaled up using the square root of time formula, depending on the frequency of revaluation of the credit protection as described in paragraph 190.

3.8.7. Sovereign Guarantees and Counter-Guarantees:

213. As specified in section 2.2 “Exposure to Sovereigns”, 0% risk weight may be applied to a bank’s exposures to the sovereign (or central bank) where the bank is incorporated and where the

exposure is denominated in domestic currency and funded in that currency. This treatment is also extended to portions of exposures guaranteed by the sovereign (or central bank), where the guarantee is denominated in the domestic currency and the exposure is funded in that currency. An exposure may be covered by a guarantee that is indirectly counter-guaranteed by a sovereign. Such an exposure may be treated as covered by a sovereign guarantee provided that:

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