Completion Instructions

Return of Capital Adequacy Ratio
Part IIIa - Risk-weighted Amount for Credit Risk
Basic Approach
Form MA(BS)3(IIIa)

Introduction

1. Form MA(BS)3(IIIa) of Part III should be completed by each authorized institution incorporated in Hong Kong using the ***basic approach (BSC approach)*** to calculate ***credit risk*** under Part 5 of the Banking (Capital) Rules.

2. This Form covers the following exposures of the reporting institution:

   (a) All on-balance sheet exposures and off-balance sheet exposures booked in its ***banking book***, except:

      (i) exposures subject to deduction from the ***core capital*** and/or ***supplementary capital*** (which should be reported in Form MA(BS)3(II)); and

      (ii) exposures subject to the requirements of Part 7 of the Rules (which should be reported in Form MA(BS)3(IIId));

   (b) All exposures to counterparties under the following transactions booked in its ***trading book: repo-style transactions*** treated as collateralized lending (see paragraph 11 below), ***OTC derivative transactions*** and ***credit derivative contracts***.

   (c) All exposures which are exempted from the requirements of Part 8 of the Rules but expose the institution to credit risk.

3. This Form and its completion instructions should be read in conjunction with the Rules and the relevant supervisory policy/guidance on the revised capital adequacy framework.

Section A: Definitions and Clarification

4. The amounts reported in the column of "Principal Amount" should be net of ***specific provisions*** for all items in Division A and items *1* to *9c* in Division B, but gross of specific provisions for items *10a* to *16* in Division B. For items *10a* to *16* in Division B, specific provisions should be deducted from the ***credit equivalent amount*** and the resulting figure should be reported in the column of "Credit Equivalent Amount".

5. "Tier 1 countries" means Hong Kong and any country or place other than Hong Kong which -

(a) is a member of the Organization for Economic Co-operation and Development (OECD), for the time being OECD members comprise:

Australia	Germany	Mexico	Spain
Austria	Greece	Netherlands	Sweden
Belgium	Hungary	New Zealand	Switzerland
Canada	Iceland	Norway	Turkey
Czech Republic	Irish Republic	Poland	U.K.
Denmark	Italy	Portugal	U.S.A.
Finland	Japan	Slovak Republic	
France	Luxembourg	South Korea	

or

(b) has concluded special lending arrangements with the International Monetary Fund associated with the Fund's General Arrangements to Borrow (at present only Saudi Arabia),

but excludes any such country or place which -

(c) has rescheduled its external sovereign debt, whether to central government or non-central government creditors, within the previous five years; or

(d) is specified by the Monetary Authority (MA) as being a country or place that is not to be regarded as a Tier 1 country.

6. Authorized institutions and ***banks*** include their overseas head offices and branches. For example, a placement with a ***Tier 2 country*** incorporated authorized institution or its overseas branch should be classified as an exposure to an authorized institution regardless of the country of incorporation or location of its branch. A placement with a Tier 1 country incorporated bank's branch, regardless of its location, should be classified as an exposure to a bank incorporated in Tier 1 country.

7. ***Recognized credit risk mitigation*** (CRM) refers to techniques the reporting institution may use to mitigate credit risk, hence reduce the capital requirement of a credit exposure. Four types of CRM viz., collateral, netting, ***guarantees*** and credit derivative contracts, are recognized for this purpose provided that they satisfy the relevant operational requirements and conditions set out in sections 124 and 125, 132 or 133 of the Rules. For the avoidance of doubt, guarantees issued by other offices of the reporting institution are not regarded as recognized CRM. See Section C for capital treatment and reporting arrangement.

8. Double counting of exposures arising from the same contract or transaction should be avoided. For example, only the undrawn portion of a loan commitment should be reported as an off-balance sheet exposure under item *9a*, *b* or *c* of Division B while the actual amount which has been lent out should be reported as an on-balance sheet

exposure under the relevant class of Division A. ***Trade-related contingencies*** such as trust receipts and shipping guarantees for which the exposures have already been reported as letters of credit issued or loans against import bills etc. should not be reported under item *3* of Division B.

9. In certain cases, credit exposures arising from ***derivative contracts*** may already be reflected, in part, on the balance sheet. For example, the reporting institution may have recorded current credit exposures to counterparties (i.e. ***mark-to-market*** values) under foreign exchange and interest rate related contracts on the balance sheet, typically as either sundry debtors or sundry creditors. To avoid double counting, such exposures should be excluded from the on-balance sheet exposures and treated as off-balance sheet exposures for the purposes of this Form.

10. Accruals on an exposure should be classified and weighted in the same way as the exposure. Accruals which cannot be so classified should, with the ***prior consent*** of the MA, be included in Class VII - Other exposures.

11. Reporting institution should adopt the "economic substance" approach for capital treatment of repo-style transactions and report them as on-balance sheet exposures in Division A in the following manner:

(a) *repos of securities* - where the reporting institution has sold securities under repo agreements, the securities sold should continue to be treated as assets on the balance sheet of the institution, with ***regulatory capital*** provided for the credit exposure to the securities:

(b) *reverse repos of securities* - where the reporting institution has acquired securities under reverse repo agreements, the transaction should be treated as a collateralized lending to the counterparty, providing the securities acquired meet the relevant criteria for qualifying as recognized CRM under the Rules. Regulatory capital should then be provided for the credit exposure to the counterparty, taking into account the CRM effect of the collateral;

(c) *securities lending* - the treatment is similar to that of repo transactions. The securities lent should continue to remain as assets on the balance sheet of the institution, with regulatory capital provided for the credit exposure to the securities; and

(d) *securities borrowing* - the treatment depends on whether the collateral provided is cash or securities:

(i) Where the collateral provided is cash, the transaction should be treated as a collateralized lending to the counterparty[1], providing the securities received meet the relevant criteria for qualifying as recognized CRM under the Rules. Regulatory capital should then be provided for the credit

[1] For securities lending or borrowing where the contractual agreement is made between the securities borrower/lender and the custodian (e.g. Clearstream Banking or Euroclear Bank) and the securities borrower/lender has no knowledge as from/to whom the security is borrowed/lent, the custodian becomes the "counterparty" of the securities borrower/lender.

exposure to the counterparty, taking into account the CRM effect of the collateral;

(ii) Where the collateral provided is not cash but securities, the securities should continue to remain as assets on the balance sheet of the reporting institution, with regulatory capital provided for the credit exposure to the securities.

12. ***Underlying exposures*** of a ***synthetic securitization transaction*** which fulfils the requirements set out in Schedule 10 of the Rules should be reported in this Form with the CRM available to hedge the credit risk of the underlying exposures taken into account. For cases which are not specified in these instructions or in any other supervisory guidance relevant to securitization transactions, reporting institution should consult the HKMA on the reporting arrangements.

Section B: Exposure Classification, Determination of Credit Conversion Factors and Risk-weights

B.1 On-balance Sheet Exposures

Exposure Classification

13. Division A of the Form is organized according to the 7 standard classes into which on-balance sheet exposures should be classified under the BSC approach:

Class I	-	***Sovereign*** exposures
Class II	-	***Public sector entity*** exposures
Class III	-	Multilateral development bank exposures
Class IV	-	Bank exposures
Class V	-	***Cash items***
Class VI	-	***Residential mortgage loans***
Class VII	-	Other exposures

14. The 7 classes are mutually exclusive and therefore any given exposure should be reported under only one of them.

Determination of Risk-weights

15. The following explains how exposures in each class are risk-weighted, and, where applicable, the relevant principles for reporting exposures under the class.

Item	Nature of item
Class I	**Sovereign Exposures**
	Exposures to sovereigns should be divided into those arising from loans and those arising from holding of ***debt securities***.

Exposures to sovereigns arising from loans should be reported under items *1* and *6*. Deposits placed with and loans made to the Government (including those for the account of the Exchange Fund and clearing balances with the Exchange Fund) should be reported under item *1*. Exposures to sovereigns arising from holding of debt securities should be reported under items *2* to *5* and *7* to 10 depending on whether the securities are issued or guaranteed by the sovereigns of Tier 1 or Tier 2 countries as well as the interest rate structures and the residual maturities.

Market makers who have short positions in Exchange Fund Bills/Notes may report their net holdings of such instruments provided that the short positions are covered by the Sale and Repurchase Agreements with the HKMA. The following steps should be taken in determining the amount to be reported:

(a) the long and short positions of instruments with a residual maturity of less than one year may be offset with each other;

(b) the long and short positions of instruments with a residual maturity of not less than one year may be offset with each other;

(c) if the net positions of both (a) and (b) above are long, the positions should be reported under items *2* and *3* respectively;

(d) if the net positions in (a) is long and the net position in (b) is short, or the other way round, the positions can be netted with each other on a dollar for dollar basis. The resultant net long position, if any, should be reported under item *2* or *3* as appropriate.

1. Loans to the sovereigns of Tier 1 countries are risk-weighted at 0%.

2. Holding of fixed rate debt securities with a residual maturity of less than one year or floating rate debt securities of any maturity issued by the sovereigns of Tier 1 countries is risk-weighted at 10%.

3. Holding of fixed rate debt securities with a residual maturity of not less than one year issued by the sovereigns of Tier 1 countries is risk-weighted at 20%.

4. Holding of fixed rate debt securities with a residual maturity of less than one year or floating rate debt securities of any maturity guaranteed by the sovereigns of Tier 1 countries is risk-weighted at 10%.

5. Holding of fixed rate debt securities with a residual maturity of not less than one year guaranteed by the sovereigns of Tier 1 countries is risk-weighted at 20%.

6. Loans to the sovereigns of Tier 2 countries, where the loans are ***domestic currency exposures***, are risk-weighted at 0% e.g. a Malaysian Ringgit loan to the Malaysian government which is funded by Malaysian Ringgit liabilities.

7. Holding of fixed rate debt securities with a residual maturity of less than one year or floating rate debt securities of any maturity issued by the sovereigns of Tier 2 countries, which are domestic currency exposures, is risk-weighted at 10%.

8. Holding of fixed rate debt securities with a residual maturity of not less than one year issued by the sovereigns of Tier 2 countries, which are domestic currency exposures, is risk-weighted at 20%.

9. Holding of fixed rate debt securities with a residual maturity of less than one year or floating rate debt securities of any maturity where: (i) the securities are guaranteed by the sovereigns of Tier 2 countries and (ii) the securities are denominated and funded in the ***local currency*** of Tier 2 countries, is risk-weighted at 10%.

10. Holding of fixed rate debt securities with a residual maturity of not less than one year where: (i) the securities are guaranteed by the sovereigns of Tier 2 countries and (ii) the securities are denominated and funded in the local currency of Tier 2 countries, is risk-weighted at 20%.

11. Exposures to Tier 2 countries, other than those reported under items *6* to *10*, are risk-weighted at 100%.

12. Exposures to ***relevant international organizations*** are risk-weighted at 0%.

Class II Public Sector Entity (PSE) Exposures

13. Exposures to PSEs of Tier 1 countries are risk-weighted at 20%.

14. Exposures to PSEs of Tier 2 countries are risk-weighted at 100%.

Class III Multilateral Development Bank (MDB) Exposures

15. Exposures to MDBs are risk-weighted at 0%.

Class IV Bank Exposures

For the purpose of this class, export trade bills negotiated under other banks' letters of credit may be reported as exposures to the issuing banks of the letters of credit.

16. Exposures to authorized institutions are risk-weighted at 20%.

17. Exposures to banks incorporated in Tier 1 country are risk- weighted at 20%.

18. Exposures to banks incorporated in Tier 2 countries with a residual maturity of less than one year are risk-weighted at 20%.

19. Exposures to banks incorporated in Tier 2 countries with a residual maturity of not less than one year are risk-weighted at 100%.

Class V Cash Items

20. Notes and coins are allocated a risk-weight of 0%.

21. Government certificates of indebtedness are allocated a risk-weight of 0%.

22. Gold bullion held by the reporting institution or held by another person for the institution on an allocated basis, to the extent backed by gold bullion liabilities, is risk-weighted at 0%. Gold bullion held in safe custody for other institutions or customers should not be reported.

Gold bullion held for the reporting institution on an unallocated basis by a third party, though backed by gold liabilities, should be risk-weighted as an exposure to that third party and reported under the class to which the third party belongs.

23. Gold bullion held <u>not</u> backed by gold liabilities, which refers to all other holdings of gold bullion not included in item *22* above, is risk-weighted at 100%.

24. Cash items in the course of collection refer to the amount of cheques, drafts and other items drawn on other banks that are payable to the account of the reporting institution immediately upon presentation and which are in the process of collection. Such items are allocated a risk-weight of 20%. Included are cheques and drafts against which the institution has paid to its customers (i.e. by purchasing or discounting the cheques or drafts presented by the customers) and in respect of which it now seeks payment from the drawee banks.

Import and export trade bills held by the reporting institution which are in the process of collection should be excluded and allocated a risk-weight according to the counterparty of the exposures.

Unsettled clearing items under the interbank clearing system in Hong Kong and receivables arising from transactions in securities (other than repo-style transactions), foreign exchange, and commodities which are not yet due for settlement should also be excluded.

25a. to e. Failed trade – delivery-versus-payment (DvP) basis

For any transaction in securities (other than repo-style transactions), foreign exchange, and commodities entered into on a ***delivery-versus-payment (DvP) basis***[2] where payment / delivery has not yet taken place after the settlement date, the reporting institution should report the ***positive current exposure*** of the transaction in the column of "Principal Amount". The ***risk-weighted amount*** (RWA) of the transaction is calculated by multiplying the positive current exposure of the transaction by the risk-weight corresponding to the length of the period of unsettlement (both the start and end days of the period inclusive).

Failed trade – non-DvP basis

When such transaction is entered into on a non-DvP basis and payment / delivery from the counterparty has not yet taken place up to and including the fourth ***business day*** after the settlement date, the amount of payment made or the current market value of thing delivered by the reporting institution, plus any positive current exposure associated with the transaction, should be treated as exposure to that counterparty. The amount of the exposure should be reported under the class to which the counterparty belongs and risk-weighted at the risk-weight applicable to that counterparty.

When in any of the above non-DvP transactions, payment / delivery has not yet taken place for five or more business days after the settlement date, the reporting institution should deduct the relevant amount from the capital base. Please refer to Form M(BS)3(II) and Part 3 of the Rules for details.

26. Exposures collateralized by cash deposits (including certificates of deposit and comparable instruments issued by the institution) held by the reporting institution are risk-weighted at 0%. When a cash deposit pledged to the institution is held at third-party bank in a non-custodial arrangement, the institution should treat the cash deposit as an exposure to that third-party bank and report it in accordance with the instructions in Section C.

Class VI Residential Mortgage Loans (RMLs)

27a. RMLs that satisfy the criteria set out in section 115(1) of the Rules are risk-weighted at 50% and should be reported here.

[2] DvP transactions include payment-versus-payment (PvP) transactions.

The following RMLs should be reported in Class II in accordance with the instructions in Section C if the relevant criteria set out in the Rules are met:

- RMLs granted for the purchase of flats under Home Ownership Scheme, Private Sector Participation Scheme and Tenants Purchase Scheme which are covered by guarantees issued by the Housing Authority

- RMLs granted under Mortgage Insurance Programme of The Hong Kong Mortgage Corporation Limited

27b. Where the reporting institution has opted to risk-weight those RMLs that are secured by a first legal charge on residential properties situated outside Hong Kong according to the capital adequacy requirements in the jurisdictions in which the properties are situated, the RMLs should be reported under this item if the risk-weights are not 50%. RMLs that are risk-weighted at 50% according to those jurisdictions' capital adequacy requirements should be reported under item *27a*.

27c. Other RMLs i.e. those that do not satisfy the criteria set out in section 115(1) or 115(2) of the Rules should be reported here and are risk-weighted at 100%.

Class VII Other Exposures

Included in this class are all on-balance sheet exposures falling within the scope of this Form and have not been included elsewhere in this Form. Exposures included in this class are subject to a risk-weight of 100%, unless otherwise specified by the MA. Examples of exposures to be included in this class are:

28a. Exposures to corporates or individuals not elsewhere reported

This refers to exposures to corporates or individuals which have not been included in other classes.

28b. Investments in equity or other capital instruments of other banks and financial institutions (other than where deducted from the capital base)

Included are investments in equity or other capital instruments issued by banking, securities, insurance and other financial institutions, for which the MA is satisfied that a deduction from capital base is not required.

28c. Investments in equity of other entities and holding of collective investment schemes

Included are investments in commercial entities, for which the MA is satisfied that a deduction from capital base is not required. Holding of ***collective investment schemes*** should also be reported here.

28d. Premises, plant and equipment, other fixed assets for own use, and other interest in land

Included are investments in premises, plant and equipment and all other fixed assets of the reporting institution which are held for own use and also any fixed asset which is held by the institution as lessee under a finance lease in accordance with the Hong Kong Accounting Standard 17 issued by Hong Kong Institute of Certified Public Accountants.

Other interests in land which are not occupied or used in the operation of the reporting institution's business should also be reported here.

28e. Other on-balance sheet exposures which are not elsewhere specified

This refers to other investments or exposures which are not classified elsewhere, and may include any fixed asset leased by the reporting institution under an operating lease.

28f. Where necessary, the MA may specify risk-weights which are greater than 100% for an exposure falling within this class. Such exposures should be reported under this item.

16. *Risk-weights for Credit-linked Notes held*

A ***credit-linked note*** held by the reporting institution should be allocated a risk-weight which is the higher of the risk-weight of the ***reference obligation*** of the note, or risk-weight of the note issuer. The amount of the exposure, which is the book value of the note, should be reported under the relevant class in Division A. Where the note is referenced to multiple reference obligations, the institution should determine the risk-weight of the basket of reference obligations according to the principles set out in paragraph 22(g) in Section B.2 below.

B.2 Off-balance Sheet Exposures

Classification and Determination of Credit Conversion Factors

17. The reporting institution should classify off-balance sheet exposures into the following 17 standard items and report the ***principal amount***, and the RWA arrived at for each exposure based on the instructions under Section C.

18. ***Credit conversion factors*** (CCFs) for items *1* to *9* are set out in the Form. CCFs for items *10* to *17* are set out in paragraphs 19 to 21.

Item	Nature of item
1.	***Direct credit substitutes***
2.	***Transaction-related contingencies***
3.	Trade-related contingencies
4.	***Asset sales with recourse***
5.	***Forward asset purchases***
6.	***Partly paid-up shares and securities***
7.	***Forward forward deposits placed***

These include a commitment to place a forward forward deposit. Where the reporting institution has contracted to receive the deposit, failure to deliver by the counterparty will result in an unanticipated change in its interest rate exposure and may involve a replacement cost. Such exposure should therefore be accorded the same treatment as ***interest rate contracts*** and reported under item *11* below.

8.	***Note issuance and revolving underwriting facilities***
9a. to c.	Other commitments

Included is the undrawn portion of any binding arrangements which obligate the reporting institution to provide funds or to incur off-balance sheet exposures (e.g. this includes commitment to issue letters of credit or performance bonds, but does not include commitments to enter into OTC derivative / credit derivative contracts) at some future dates.

A commitment is regarded as being created no later than the acceptance in writing by the customer of the facility offered.

In the case of a commitment the drawdown of which will give rise to an off-balance sheet exposure falling within any of items *1* to *8* and *17*, the CCF applicable to the commitment should be the lower of

- the CCF applicable to the commitment based on its original maturity [3] and whether it can be cancelled at any time unconditionally; or

- the CCF applicable to the off-balance sheet exposure arising from the drawdown of the commitment.

If the commitment is in the form of a general banking facility consisting of 2 or more credit lines (including lines for entering into OTC derivative / credit derivative contracts), the reporting institution should assign a CCF to the commitment based on its original maturity and whether it can be unconditionally cancelled at any time.

9a. This item includes commitments which are unconditionally cancellable without prior notice by the reporting institution other than for "force majeure" reason, or which effectively provide for automatic cancellation due to deterioration in a borrower's creditworthiness. This also includes any revolving or undated/open-ended commitments, e.g. overdrafts or unused credit card lines, provided that they can be unconditionally cancelled at any time and subject to credit review at least annually.

9b. Other commitments with an original maturity of up to one year, or commitments to incur off-balance sheet exposures of which the applicable CCF is 20%.

9c. Other commitments with an original maturity of over one year, or commitments to incur off-balance sheet exposures of which the applicable CCF is 50%.

10. ***Exchange rate contracts***

The following derivative contracts may be <u>excluded</u> from the calculation of RWA:

- exchange rate contracts (except those which are based on gold) with an original maturity of 14 calendar days or less. When such contracts are covered by a ***valid bilateral netting agreement*** (see Section C below), the reporting institution may net the profit or loss on such contracts against those on other contracts covered by the same agreement in arriving at the net exposure for capital adequacy purposes. The inclusion or exclusion of such contracts for netting purposes must however be done on a consistent basis; or

[3] This is the length of time between the date the commitment is made and the earliest date on which the reporting institution can, at its option, unconditionally cancel the commitment.

- forward exchange rate contracts arising from swap deposit arrangements. Under such arrangements, the money deposited by the customer remains under the control of the reporting institution during the life of the forward contract, therefore the institution is in a position to ensure that the customer does not default on the settlement of the forward contract.

11. Interest rate contracts

12. ***Equity contracts***

13. ***Precious metal contracts***

14. ***Debt security contracts*** or ***other commodity contracts***

15. Credit derivative contracts

This item is intended for the reporting of counterparty credit risk exposures to ***credit default swaps*** and ***total return swaps*** ("credit derivative contracts") that are booked in the trading book.

Credit risk exposure to ***reference entities*** of credit derivative contracts booked in the banking book does not fall within the scope of this item and should be reported in the following manners:

(a) Reporting institution as protection seller

Credit risk exposure to a reference entity of a credit derivative contract is reported as "direct credit substitutes" under item *1* above.

(b) Reporting institution as protection buyer

Credit risk protection provided by a credit derivative contract is either:

- ignored for capital adequacy purposes if the protection is not bought for the purposes of hedging the credit risk of an exposure of the institution or the credit derivative contract is not a ***recognized credit derivative contract***; or

- accounted for in the ways as described in Section C if the protection is bought for the purposes of hedging the credit risk of an exposure of the institution and the credit derivative contract is a recognized credit derivative contract.

16. OTC derivative transactions and credit derivative contracts subject to valid bilateral netting agreements

This item refers to the net counterparty credit risk exposure obtained by the use of the methodology described in paragraph 30. For capital adequacy purposes, only counterparty credit risk exposures of credit derivative contracts booked in the trading book and OTC derivative transactions may be reported on a net basis.

17. Other off-balance sheet exposures not elsewhere reported

For off-balance sheet exposures other than those included in items *1* to *16* above, the reporting institution should consult the HKMA on the reporting arrangements.

19. *CCFs for OTC derivative transactions*

The CCFs applicable to OTC derivative transactions are set out in the following table:

Residual Maturity	Exchange Rate (including gold)	Interest Rate	Equity	Precious Metal	Debt Security or Other Commodity
1 year or less	1.0%	0%	6.0%	7.0%	10.0%
Over 1 year to 5 years	5.0%	0.5%	8.0%	7.0%	12.0%
Over 5 years	7.5%	1.5%	10.0%	8.0%	15.0%

For contracts with multiple exchanges of principal, the CCFs to be used should be multiplied by the number of remaining payments in the contract.

For contracts structured to settle outstanding exposure following specified payment dates and where the terms are reset such that the market value of the contract is zero on these dates, the residual maturity should be set equal to the time until the next reset date. In the case of interest rate contracts which meet these criteria and the remaining time to final maturity of the contracts is more than one year, the CCF is subject to a floor of 0.5%

20. *CCFs for credit derivative contracts booked in the trading book*

The CCFs to be applied for the calculation of ***potential exposure*** for single name credit derivative contracts are as follows:

	Protection buyer	Protection seller
Total Return Swap		
Qualifying reference obligation[4]	5%	5%
Non-qualifying reference obligation[4]	10%	10%
Credit Default Swap		
Qualifying reference obligation[4]	5%	5%*
Non-qualifying reference obligation[4]	10%	10%*

* The protection seller of a credit default swap is required to calculate potential exposure only when such a swap is subject to close-out upon the insolvency of the protection buyer while the reference entity is still solvent. The potential exposure of such swap should be capped at the amount of unpaid premium. The protection seller of any credit default swap without such a "close-out" clause is not required to calculate the potential exposure.

In the case of a ***first-to-default credit derivative contract***, the CCF for ***non-qualifying reference obligation*** should be applied to the contract if there is at least one non-qualifying reference obligation in the basket of reference obligations specified in the contract, otherwise, the CCF for ***qualifying reference obligation*** should be used. In the case of a ***second-to-default credit derivative contract***, the CCF for non-qualifying reference obligation should be applied to the contract if there are at least two non-qualifying reference obligations in the basket of reference obligations specified in the contract, otherwise, the CCF to be used should be that for qualifying reference obligation. The same principle applies to other subsequent-to-default credit derivative contracts.

21. For OTC derivative transactions other than those mentioned in paragraph 19, credit derivative contracts other than those mentioned in paragraph 20, and other off-balance sheet items the CCF of which is not specified in the Form, , a CCF of 100% should be applied unless otherwise specified by the MA.

Determination of Risk-weights for Off-balance Sheet Items

22. Except the following, the applicable risk-weights to an off-balance sheet item is determined in accordance with the relevant instructions under Section B above as if the item were an on-balance sheet exposure.

(a) Asset sales with recourse;
(b) Forward asset purchases;
(c) Partly paid-up shares and securities; and
(d) Exposures arising from the selling of credit derivative contracts in the form of total return swaps or credit default swaps booked in the reporting institution's banking book reported as direct credit substitutes.

The applicable risk-weight to an exposure in any of the above categories should be:

[4] The definition of "qualifying" is same as that of the "qualifying" category for the treatment of specific risk under the Standardized (Market Risk) approach described in Part 8 of the Rules and also includes reference obligations issued by sovereigns whose credit quality grades are 1, 2 or 3 as determined in accordance with section 287 of the Rules.

(e) in the case of (a) and (b), determined by reference to the risk-weights allocated to the assets sold/to be purchased or the ***obligor*** of these assets, as the case requires;

(f) in the case of (c), 100% (i.e. the risk-weight for equities); and

(g) in the case of (d), determined by reference to the risk-weight of the relevant reference obligation, provided that:

- where a credit derivative contract sold is a first-to-default credit derivative contract, the reporting institution should allocate to the contract a risk-weight which is equal to the sum of the risk-weights of the reference obligations in the basket of reference obligations specified in the contract, subject to a maximum of 1,250%;

- where a credit derivative contract sold is a second-to-default credit derivative contract, the reporting institution should allocate to the contract a risk-weight which is equal to the sum of the risk-weights of the reference obligations in the basket of reference obligations specified in the contract, but excluding that reference obligation which carries the lowest risk-weight, subject to a maximum of 1,250%. The same principle, with all necessary modifications, also applies to other subsequent-to-default credit derivative contracts; and

- where a credit derivative contract sold provides credit protection proportionately to the reference obligations in the basket as specified in the credit derivative contract, the reporting institution should calculate the risk-weight of its exposure to the credit derivative contract by taking a weighted average of the risk-weights attributable to the reference obligations in the basket in accordance with the following formula:

$$RW_a = \sum_i a_i \times RW_i$$

where:

RW_a = Average risk-weight of a basket of reference obligations

a_i = Proportion of credit protection allocated to a reference obligation

RW_i = Risk-weight of a reference obligation

Section C: Calculation and Reporting of Risk-weighted Amount

C.1 On-balance Sheet Exposures

23. For each on-balance sheet exposure, the RWA is calculated by multiplying its principal amount (after deduction of specific provisions) by an appropriate risk-weight determined based on the instructions set out in Section B above.

24. Where an exposure is not covered by any recognized CRM, the whole principal amount (after deduction of specific provisions) is reported along the row of the risk-weight applicable to the exposure in the column of "Principal Amount". Where an exposure is covered fully or partially by recognized CRM, the amount reported in the column of "Principal Amount" should be adjusted to reflect the CRM effect.

25. The reporting arrangement for exposures covered by CRM techniques depends on the types of recognized CRM used:

(a) **CRM treatment by substitution of risk-weights,** which applies to the use of collateral, guarantees and credit derivative contracts:

- Firstly, divide the principal amount (after deduction of specific provisions) of the exposure into two portions: the ***credit protection covered portion*** and the ***credit protection uncovered portion***;

- Secondly, report the amount of the credit protection covered portion in the column of "Principal Amount" along the row for the class and risk-weight applicable to the credit protection based on the instructions set out in Section B above. That is, if the credit protection is collateral, allocate the risk-weight of the collateral to the credit protection covered portion and if the credit protection is a guarantee or a credit derivative contract, the risk-weight of the ***credit protection provider*** is applicable;

- Thirdly, report the amount of the credit protection uncovered portion in the column of "Principal Amount" along the row for the class and risk-weight applicable to the exposure based on the instructions set out in Section B above; and

- Fourthly, the RWAs of the credit protection covered and uncovered portions are then calculated by multiplying the principal amounts by their applicable risk-weights.

For collateral, the value of credit protection is its market value subject to a minimum revaluation frequency of 6 months. Where the collateral are cash deposits, certificates of deposit or other comparable instruments which are held at a third-party bank in a non-custodial arrangement and unconditionally and irrevocably pledged or assigned to the reporting institution, the collateral should be allocated the same risk-weight as that of the third-party bank. Where the underlying exposure and the collateral concerned have ***currency mismatch***, the value of collateral should be reduced by a standard ***haircut*** of 8%.

For guarantees and credit derivatives, the value of credit protection is their nominal value. Where the credit protection and the original exposure have currency mismatch, the value of credit protection should be reduced by a standard haircut of 8%.

However, where the credit protection for a basket of exposures consists of a credit derivative contract with the following features, the extent of credit protection should be determined as follows:

- where the contract is a recognized first-to-default credit derivative contract, the reporting institution may recognize that credit protection for the exposure in the basket which would carry the lowest RWA in the absence of the credit protection, provided that the principal amount of the exposure is not more than the ***notional amount*** of the credit derivative contract. The institution may substitute the risk-weight of the credit protection provider for the risk-weight of that exposure;

- where the contract is a recognized second-to-default credit derivative contract, the reporting institution may substitute the risk-weight of the credit protection provider for the risk-weight of the exposure in the basket which would carry the second lowest RWA in the absence of the credit protection only if:

  (i) the institution has, as a protection buyer, entered into a recognized first-to-default credit derivative contract with the same basket of reference obligations or the same basket of obligations used for the purposes of determining whether a ***credit event*** has occurred as that of the second-to-default credit derivative contract; or

  (ii) an obligation in the basket referred to in paragraph (a) above has defaulted;

- where the contract is any other subsequent-to-default credit derivative contract, the same principle as that applied to a second-to-default credit derivative contract, with all necessary modifications, applies;

- where the contract provides credit protection proportionately to reference obligations in the basket as specified in the contract, the reporting institution may substitute the risk-weight of the credit protection provider for the risk-weights of the exposures to the extent of the amounts protected.

(b) **CRM treatment by reduction of principal amount of an exposure**, which applies to on-balance sheet netting:

- Firstly, identify the class to which the obligor in respect of the exposures belongs and the risk-weight applicable to the obligor. Then calculate the net principal amount of the exposures and liabilities which are subject to netting by subtracting the aggregate book value of the liabilities from the aggregate principal amount of the exposures. Where the exposures and the liabilities have currency mismatches, the aggregate book value of the liabilities should be reduced by a haircut of 8%;

- Secondly, report this net principal amount in the column of "Principal Amount" along the row of the risk-weight applicable to the obligor; and

- Thirdly, report the RWA calculated by multiplying the "Principal Amount" by the risk-weight of the obligor.

26. Credit protection by means of Credit-linked Notes

Where the reporting institution issues a credit-linked note to cover the credit risk of an exposure, the maximum amount of credit protection is the amount of the funds received from issuing that note. The protected amount should be treated as an exposure collateralized by cash deposits.

C.2 Off-balance Sheet Exposures

27. For each off-balance sheet exposure, the reporting institution should identify the relevant item in Division B to which the exposure belongs, and report the exposure in the row for that item.

For Items other than OTC Derivative and Credit Derivative Contracts

28. Where an exposure is not covered by recognized CRM, the process for calculating the RWA is as follows:

- Firstly, report the whole principal amount (after deduction of specific provisions) of the exposure in the column of "Principal Amount" along the item to which the off-balance sheet exposure belongs;

- Secondly, convert the principal amount into a credit equivalent amount by multiplying it by the applicable CCF; and

- Thirdly, multiply the credit equivalent amount by the applicable risk-weight to calculate the RWA.

29. Where an exposure is covered fully or partially by recognized CRM, the calculation is similar to that of on-balance sheet exposures explained in Section C.1 above, except that in calculating the RWA, the credit equivalent amount is used instead of the principal amount. The following CRM treatment by substitution of risk-weights applies to the use of collateral, guarantees and credit derivatives contracts:

- Firstly, report the whole principal amount (after deduction of specific provisions) of the exposure in the column of "Principal Amount" along the item to which the off-balance sheet exposure belongs;

- Secondly, divide the principal amount into two portions: the credit protection covered portion and credit protection uncovered portion (the value of the credit protection for different types of recognized CRM is determined in the same way as set out in Section C.1);

- Thirdly, multiply the amount of each of the two portions by the CCF applicable to the exposure to come up with two credit equivalent amounts and report the sum of the two credit equivalent amounts in the column of "Credit Equivalent Amount"; and

- Fourthly, multiply the credit equivalent amount of the credit protection covered portion by the risk-weight attributed to the collateral or credit protection provider in accordance with Section B above and multiply the credit equivalent amount of the credit protection uncovered portion by the risk-weight attributable to the exposure to come up with two RWAs. The sum of the two RWAs is reported in the column of "Risk-weighted Amount".

For OTC Derivative and Credit Derivative Contracts

30. The reporting institution should use the current exposure method to calculate credit exposures to counterparties under OTC derivative and credit derivative contracts. Individual OTC derivative transactions should be reported under items *10* to *14* and individual credit derivative contracts under item *15*. Where OTC derivative transactions and credit derivative contracts are covered by a valid bilateral netting agreement, the reporting institution may report them on a net basis under item *16*.

(a) Current exposure method

(i) Firstly, report the principal amount of the transaction/contract in the column of "Principal Amount";

(ii) Secondly, calculate the credit equivalent amount by adding the ***current exposure*** and the potential exposure based on the current exposure method set out below. Specific provisions, if any, should then be deducted from the credit equivalent amount and the resultant amount should be reported in the column of "Credit Equivalent Amount".

Under the current exposure method, the amount reported in the column of "Credit Equivalent Amount" should be the sum of:

(A) current exposure, which is –

- a contract's replacement cost obtained by marking-to-market (if the value so obtained is negative, the replacement cost should be taken as zero); or

- where contracts are covered by a valid bilateral netting agreement, the sum of the positive and negative mark-to-market replacement cost of individual contracts, if positive; and

(B) potential exposure (the add-on), which is -

- derived by multiplying the principal amount of a contract by the CCF specified in Section B.2; or

- where contacts are covered by a valid bilateral netting agreement, derived by the formula set out in paragraph (b) below.

(iii) Thirdly, multiply the reported "Credit Equivalent Amount" by the risk-weight applicable to the counterparty to calculate the RWA.

(b) Add-on of OTC derivative transactions and credit derivative contracts subject to ***recognized netting***

In the case of OTC derivative transactions and credit derivative contracts, where they are covered by a valid bilateral netting agreement, the net add-on (A_{Net}) of these contracts and transactions is calculated according to the following formula:

$$A_{Net} = 0.4 \times A_{Gross} + 0.6 \times NGR \times A_{Gross}$$

Where:

A_{Gross} = The sum of the individual add-on amounts derived by multiplying the principal amounts of all of the individual contracts/transactions by the applicable CCFs

NGR = The ratio of net replacement cost for all the contracts/transactions to gross replacement cost for all the contracts/transactions

The NGR in the above formula can be calculated on a per counterparty basis or on an aggregate basis. However, the basis chosen by the reporting institution should be used consistently. An illustration of the calculation of the NGR based on the two calculation bases is given in the **Annex IIIa-A**.

It is not necessary to calculate the potential exposure of single currency floating/floating interest rate swaps. The current exposure, i.e. replacement cost, of these contracts should be taken as their Credit Equivalent Amounts.

31. Where the (net) exposure to the counterparty is covered fully or partially by recognized CRM, the calculation is similar to that of on-balance sheet exposures explained in Section C.1 above, except that in calculating the RWA, the credit equivalent amount is used instead of the principal amount:

- Firstly, report the principal amount of the transaction/contract in the column of "Principal Amount";

- Secondly, convert the principal amount into credit equivalent amount by the current exposure method. Specific provisions should be deducted from the credit equivalent amount and the resultant amount should be reported in the column of "Credit Equivalent Amount";

- Thirdly, divide the reported "Credit Equivalent Amount" into two portions: the credit protection covered portion and the credit protection uncovered portion; and

- Fourthly, multiply the credit equivalent amount of the credit protection covered portion by the risk-weight applicable to the credit protection and the credit equivalent amount of the credit protection uncovered portion by the risk-weight applicable to the counterparty to come up with two RWAs. The sum of the two RWAs is reported in the column of "Risk-weighted Amount".

C.3 Multiple Credit Risk Mitigation

32. An exposure covered by two or more forms of recognized CRM (e.g. with both collateral and guarantee partially covering the exposure) should be divided into different portions which respectively represent the proportions of the exposure being covered by each of the forms of the recognized CRM used. The calculation of the RWA of each portion will be done separately. Where there is an overlap of coverage between the different forms of recognized CRM used, the reporting institution may select, in respect of the overlapped portion, the form of recognized CRM which will result in the lowest RWA of that overlapped portion of the exposure.

33. Where an exposure is in the form of general banking facility consisting of several types of credit line, the reporting institution may determine how credit protection obtained for the facility should be allocated amongst individual exposures under each of the credit lines.

C.4 Maturity Mismatches

34. Where the credit protection provided has a residual maturity which is shorter than the residual maturity of the exposure, the institution shall not take into account the CRM effect of that credit protection.

Hong Kong Monetary Authority
March 2007

Annex IIIa-A

Example of calculating the Net to Gross Ratio

1. The following table summarizes the calculation of the Net to Gross Ratio ("NGR") under the per counterparty and the aggregate basis:

Transaction	Counterparty A		Counterparty B		Counterparty C	
	Notional amount	Mark-to-market value	Notional amount	Mark-to-market value	Notional amount	Mark-to-market value
Outstanding contract 1	100	10	50	8	30	-3
Outstanding contract 2	100	-5	50	2	30	1
Gross replacement cost (GR)		10		10		1
Net replacement cost (NR)		5		10		0
NGR (per counterparty)	0.5		1		0	
NGR (aggregate)	$\sum$NR / $\sum$GR = 15 / 21 = 0.71					

2. The gross replacement costs (GR) include only the sums of positive market values, they are therefore, 10, 10 and 1 respectively for counterparties A, B and C. The corresponding net replacement costs (NR) are the non-negative sums of both positive and negative market values, i.e. 5, 10 and 0 for A, B and C respectively. Accordingly, the NGR calculated on a per counterparty basis should be 5/10 = 0.5, 10/10 = 1 and 0/1 = 0 for A, B and C respectively. Based on the per counterparty NGR, the net potential exposure can be calculated by the given formula on a per counterparty basis. The aggregate net potential exposure would be the sum of per counterparty net potential exposure.

3. If the NGR is calculated on an aggregate basis, it will be the ratio of total net replacement costs to total gross replacement costs, i.e. 15/21 = 0.71. The aggregate net potential exposure is then calculated by applying this ratio to the given formula for the individual counterparty subject to a valid bilateral netting agreement, i.e. A, B and C.