HONG KONG MONETARY AUTHORITY
香港金融管理局

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Our Ref : B9/75C

3 August 2006

LegCo Financial Affairs Panel
3/F, Citibank Tower
3 Garden Road
Hong Kong

Attn: Clerk to Financial Affairs Panel

Dear Sir,

Consultation on Draft Banking (Capital) Rules

The Banking (Amendment) Ordinance 2005 gave the Monetary Authority the power to make rules to set out the manner in which a locally incorporated institution's capital adequacy ratio is to be calculated. This followed the Government's decision to implement in Hong Kong the revised capital adequacy standards for banks under the Basel Committee on Banking Supervision's document entitled "International Convergence of Capital Measurement and Capital Standards: a Revised Framework" issued in June 2004. The framework contained in this report is commonly referred to as "Basel II".

Basel II is important to Hong Kong because it will contribute to greater robustness of the banking system and to banking stability. The improvements in risk management necessary to implement Basel II will also stand the institutions in good stead for future development of their business, and will contribute to the efficiency and effective working of the banking system.

Against the above background, the HKMA has released a draft of the Banking (Capital) Rules for statutory consultation today. We would like to extend an invitation to you to comment on the consultation paper.

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The draft Banking (Capital) Rules, which is attached at Annex A, reflects the minimum regulatory capital requirements for locally incorporated authorised institutions based on Pillar 1 of Basel II. They require institutions to calculate their capital requirement for credit risk, market risk and operational risk using various approaches to calculation. The Rules will replace the current regulatory capital regime set out in the Third Schedule to the Banking Ordinance. To assist parties interested in this consultation in understanding the objectives and contents of the draft Rules, an Explanatory Paper being issued along with the draft Rules, which is attached at Annex B.

There has been very extensive consultation throughout the long process of development of Basel II and the implementation proposals for Hong Kong. The consultation currently underway provides the opportunity for the banking industry and other interested parties to review the detailed requirements. All comments received will of course be given full and careful consideration before the Rules are finalised.

Subject to the results of the consultation on the draft Rules, it is expected that the final Banking (Capital) Rules will be published in the Gazette in late October and tabled in the Legislative Council in early November. It is proposed to implement the Rules from 1 January 2007.

Hong Kong will be in the first wave of jurisdictions to implement Basel II. It is important for Hong Kong, being a major financial centre, to keep up with the best practices adopted by the top tier financial centres. And it is important for our banks to move in step with major international banks in terms of adopting more advanced risk management, which Basel II promotes. Therefore, we encourage any parties interested in this subject to review the draft Rules and to provide us with their feedback as early as possible, so that we can meet the timetable of getting the Rules passed by the end of the year.

We welcome your comments in writing on the draft Rules as early as possible, and in any case not later than **2 September 2006**. The consultation documents are available at the HKMA website www.hkma.gov.hk under the "Basel II" icon. Should you wish to know more about the objectives of Basel II or the details of the draft Rules, the HKMA would be pleased to organise a briefing for you; please contact Ms Jasmin Fung, Manager of Banking Policy Department, at (852)2878 1617.

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It would be appreciated if you could complete the feedback questionnaire, attached at Annex C, together with any other comments on the draft Rules, and return to :

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55th Floor, Two International Finance Centre
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Attn : Ms Maggie Leong
Banking Policy Department

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Yours sincerely,

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Hong Kong Monetary Authority

Encls.

Annex A

Draft Banking (Capital) Rules

The Hong Kong Monetary Authority invites comments on this draft Banking (Capital) Rules. Comments should reach us by **2 September 2006**.

Comments may be sent by electronic submission to this email address: Basel2@hkma.gov.hk.

Alternatively, please send comments in writing to:
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55th Floor, Two International Finance Centre
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3 August 2006

BANKING (CAPITAL) RULES

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BANKING (CAPITAL) RULES

(Made by the Monetary Authority under section 98A of the Banking Ordinance (Cap. 155) as amended by the Banking (Amendment) Ordinance 2005 (19 of 2005) after consultation with the Financial Secretary, the Banking Advisory Committee, the Deposit-taking Companies Advisory Committee, The Hong Kong Association of Banks and The DTC Association)

PART 1

PRELIMINARY

1.1 Commencement

These Rules shall come into operation on the day appointed for the commencement of section 4 of the Banking (Amendment) Ordinance 2005 (19 of 2005).

1.2 Interpretation

(1) In these Rules, unless the context otherwise requires –

"alternative standardized approach" ( ) means the method of calculating an authorized institution's operational risk set out in Division 4 of Part 8;

"ASA approach" ( ) means the alternative standardized approach;

"asset sale with recourse" ( ), in relation to an authorized institution, means an asset sale transaction where the credit risk of the asset sold remains with the institution because the purchaser of the asset is entitled to sell the asset back to the institution within a period agreed, or under circumstances agreed, under the terms of the transaction;

"back-testing" ( ), in relation to the use of an internal model by an authorized institution, means a process whereby the daily changes in the value of a portfolio of exposures of the institution are compared with the daily VaR generated from the institution’s internal model applicable to that portfolio;

"bank" ( ) means –

(a) an authorized institution except an authorized institution the authorization of which is for the time being suspended under section 24 or 25 of the Ordinance; or

(b) a bank incorporated outside Hong Kong which is not an authorized institution except such a bank –

(i) which, in the opinion of the Monetary Authority, is not adequately supervised by the relevant banking supervisory authority; or

(ii) the licence or other authorization of which to carry on banking business is for the time being suspended;

"banking book" ( ), in relation to an authorized institution, means all the institution's on-balance sheet exposures and off-balance sheet exposures except such exposures which fall within the definition of "trading book" in this section;

"basic approach" ( ) means the method of calculating an authorized institution's credit risk for non-securitization exposures set out in Part 5;

"basic indicator approach" ( ) means the method of calculating an authorized institution's operational risk set out in Division 2 of Part 8;

"BIA approach" ( ) means the basic indicator approach;

"bond" ( ) means an interest-bearing or zero-coupon debt security –

(a) which is an acknowledgment of a debt promising payment of a specified sum to the holder of the debt security; and

(b) which describes a time to maturity which is, or will become, definite;

"BSC approach" ( ) means the basic approach;

"business day" ( ), in relation to a country, means any day other than –

(a) a public holiday in that country; or

(b) a day on which the financial markets are not generally open for business in that country;

"calendar quarter" ( ) means a consecutive period of 3 calendar months ending on a calendar quarter end date;

"calendar quarter end date" ( ) means the last day of March, June, September or December;

"capital charge" ( ), in relation to an authorized institution, means a measure of regulatory capital which the institution is required to hold for an exposure to a relevant risk which, if multiplied by 12.5, becomes the risk-weighted amount for that risk;

"CCF" ( ) means a credit conversion factor;

"clean-up call" ( ) has the meaning assigned to it by section 7.1(1);

"collective investment scheme" ( ) –

(a) subject to paragraph (b), has the meaning assigned to it by Part 1 of Schedule 1 to the Securities and Futures Ordinance (Cap. 571);

(b) does not include a restricted collective investment scheme;

"collective provisions" ( ), in relation to the exposures of an authorized institution, means an allowance for impairment loss arising from a collective assessment of the exposures for impairment;

"commodity" ( ) means any precious metal (other than gold), base metal, non-precious metal, energy, agricultural asset or any other physical product which is traded on an exchange;

"commodity contract" ( ) means a forward contract, swap contract, option contract or similar derivative contract the value of which is derived from the value of commodities;

"commodity-related derivative contract" ( ) has the meaning assigned to it by section 9.2;

"comprehensive approach" ( ) has the meaning assigned to it by section 4.2;

"confidence interval" ( ) means a statistical range with a specified probability that a given parameter lies within the range;

"consolidated basis" ( ) has the meaning assigned to it by section 2.1;

"consolidation group" ( ) has the meaning assigned to it by section 2.1;

"core capital" ( ) has the meaning assigned to it by section 3.1;

"counter-guarantee" ( ), in relation to an authorized institution, means a guarantee (or other undertaking) given by one party for the payment of money by a guarantor upon the guarantor being required to make payment under the terms of a guarantee given by the guarantor to the institution in relation to the exposure of the institution to a third party;

"country" ( ) includes –

(a) subject to paragraph (b), any part of a country; and

(b) any jurisdiction except a restricted jurisdiction;

"credit conversion factor" ( ), in relation to an off-balance sheet exposure of an authorized institution, means a percentage by which the principal amount (within the meaning of section 4.2, 5.2, 6.2(1) or 7.1(1), as the case requires) of the exposure is multiplied as a part of the process to determine the credit equivalent amount (within the meaning of section 4.2, 5.2, 6.2(1) or 7.1(1), as the case requires) of the exposure;

"credit default swap" ( ) means a credit derivative contract under which the protection buyer pays a fee to the protection seller in return for compensation in the event of a default (or similar credit event) by a reference entity;

"credit derivative contract" ( ) means a forward contract, swap contract, option contract or similar derivative contract entered into by 2 parties with the intention to transfer credit risk in relation to a reference obligation from one party ("protection buyer") to the other party ("protection seller");

"credit enhancement" ( ) has the meaning assigned to it by section 7.1(1);

"credit event" ( ), in relation to a credit derivative contract, means an event specified in the contract which, if it occurs, obliges the protection seller to make a payment to the protection buyer;

"credit-linked note" ( ) means a form of structured note with an embedded credit default swap which allows the issuer of the note ("protection buyer") to transfer credit risk to the buyer of the note ("protection seller");

"credit protection" ( ), in relation to an exposure of an authorized institution, means the protection afforded to the exposure by recognized credit risk mitigation;

"credit protection provider" ( ), in relation to credit protection, means the guarantor under a guarantee, or the protection seller under a credit derivative contract, constituting the credit protection;

"credit quality grade" ( ) means a grade represented by a numeral to which an ECAI rating is mapped for determining the appropriate risk-weight for an exposure of an authorized institution;

"credit risk" ( ), in relation to an authorized institution, means the institution's credit risk as referred to in paragraph (a) of the definition of "capital adequacy ratio" in section 2(1) of the Ordinance;

"credit risk components" ( ) has the meaning assigned to it by section 6.2(1);

"currency mismatch" ( ), in relation to an exposure of an authorized institution, means the exposure and the credit protection afforded to the exposure are denominated in different currencies;

"current exposure" ( ), in relation to an off-balance sheet exposure of an authorized institution which is an OTC derivative transaction (referred to in this definition as "existing transaction") or credit derivative contract (referred to in this definition as "existing contract"), means the replacement cost –

(a) which would be incurred by the institution if it were required to enter into another OTC derivative transaction or credit derivative contract, as the case may be, to replace the existing transaction or existing contract, as the case may be, with another counterparty with substantially the same economic consequences for the institution; and

(b) which is calculated by marking-to-market the existing transaction or existing contract, as the case may be, and –

(i) if the resultant value is positive for the institution, taking the resultant value of the existing transaction or existing contract, as the case may be;

(ii) if the resultant value is negative for the institution, taking the resultant value of the existing transaction or existing contract, as the case may be, as zero;

"debt-related derivative contract" ( ) has the meaning assigned to it by section 9.2;

"delivery-versus-payment basis" ( ), in relation to a transaction, means the thing provided under the transaction and the payment therefor occur simultaneously;

"derivative contract" ( ) means a financial instrument the value of which depends on the value of one or more than one underlying exposure;

"dilution risk" ( ) has the meaning assigned to it by section 6.2(1);

"direct credit substitute" ( ), in relation to an authorized institution –

(a) means an irrevocable off-balance sheet exposure of the institution which carries the same credit risk to the institution as a direct extension of credit by the institution; and

(b) includes –

(i) guarantees by the institution;

(ii) standby letters of credit serving as financial guarantees for loans;

(iii) acceptances; and

(iv) financial liabilities arising from the selling of credit protection under credit derivative contracts in the form of total return swaps or credit default swaps booked in the institution's banking book;

"domestic currency exposure" ( ) means an exposure of an authorized institution which is –

(a) denominated in the local currency of the obligor in respect of the exposure; and

(b) funded by liabilities entered into by the institution in that currency;

"domestic public sector entity" ( ) means an entity specified in Part 1 of Schedule 1.1;

"EAD" ( ) has the meaning assigned to it by section 6.2(1);

"early amortization provision" ( ) has the meaning assigned to it by section 7.1(1);

"ECAI" ( ) means an external credit assessment institution;

"ECAI issue specific rating" ( ), in relation to an exposure, subject to subsection (7), means –

(a) in sections 4.6 and 4.8, a long-term credit assessment rating –

(i) which is assigned to the exposure by an ECAI; and

(ii) which is for the time being neither withdrawn nor suspended by that ECAI;

(b) in sections 4.10, 4.11 and 4.12 and Parts 7 and 9, a short-term or long-term credit assessment rating –

(i) which is assigned to the exposure by an ECAI; and

(ii) which is for the time being neither withdrawn nor suspended by that ECAI; or

(c) in the case of an exposure to a collective investment scheme which only holds fixed income assets, a credit assessment rating –

(i) which is assigned to the exposure by an ECAI based on the credit quality of those assets; and

(ii) which is for the time being neither withdrawn nor suspended by that ECAI;

"ECAI issuer rating" ( ), in relation to any person (however described), means a long-term credit assessment rating –

(a) which is assigned to the person by an ECAI; and

(b) which is for the time being neither withdrawn nor suspended by that ECAI;

"ECAI rating" ( ) means –

(a) an ECAI issuer rating; or

(b) an ECAI issue specific rating;

"EL amount" ( ) has the meaning assigned to it by section 6.2(1);

"equity contract" ( ) means a forward contract, swap contract, option contract or similar derivative contract the value of which is derived from the value of underlying equities or equity indices;

"equity-related derivative contract" ( ) has the meaning assigned to it by section 9.2;

"exception" ( ), in relation to back-testing by an authorized institution, means an instance in which the daily losses in the value of a portfolio of exposures of the institution are above the daily VaR generated from the institution's internal model applicable to that portfolio;

"excess spread" ( ) has the meaning assigned to it by section 7.1(1);

"exchange controls" ( ) means controls or restrictions imposed by the government of a country on the exchange of the currency of that country for the currency of another country;

"exchange rate contract" ( ) –

(a) means a forward foreign exchange contract, cross-currency interest rate swap contract, currency option contract or similar derivative contract; and

(b) includes a forward contract, swap contract, option contract or similar derivative contract the value of which is derived from the value of gold;

"exchange rate-related derivative contract" ( ) has the meaning assigned to it by section 9.2;

"external credit assessment institution" ( ) means –

(a) Standard & Poor's Ratings Services;

(b) Moody's Investors Service;

(c) Fitch Ratings; or

(d) Rating and Investment Information, Inc.;

"facility grade" ( ) has the meaning assigned to it by section 6.2(1);

"fair value" (　　) –

(a) in relation to an asset, means the amount for which the asset could be exchanged between knowledgeable, willing parties in an arm's length transaction;

(b) in relation to a liability, means the amount for which the liability could be settled between knowledgeable, willing parties in an arm's length transaction;

"first-to-default credit derivative contract" (　　) means a credit derivative contract under which –

(a) the protection buyer obtains credit protection for a basket of exposures held by it; and

(b) the first default among the obligations specified in the contract for the purposes of determining whether a credit event has occurred triggers the credit protection and terminates the contract;

"Fitch Ratings" (　　) means that organization which –

(a) consists of members of the group of companies of which Fitch, Inc. is the ultimate holding company; and

(b) issues credit assessment ratings under the name of Fitch Ratings;

"foreign public sector entity" ( ) means an entity specified by a relevant banking supervisory authority (whether by means of legislation or a public notice or otherwise) to be a public sector entity for the purposes of applying preferential risk-weighting treatment under capital adequacy standards formulated in accordance with –

(a) the document entitled "International Convergence of Capital Measurement and Capital Standards" published by the Basel Committee on Banking Supervision in July 1988; or

(b) the document entitled "International Convergence of Capital Measurement and Capital Standards – A Revised Framework (Comprehensive Version)" published by the Basel Committee on Banking Supervision in June 2006;

"forward asset purchase" ( ), in relation to an authorized institution –

(a) means a contractually binding commitment by the institution to purchase at a specified future date, and on pre-arranged terms, a loan, security or other asset from another party; and

(b) includes a contractually binding commitment under a put option written by the institution;

"forward forward deposit placed" ( ), in relation to an authorized institution, means an agreement between the institution and another party whereby the institution will place a deposit at an agreed rate of interest with the party at a specified future date;

"foundation IRB approach" ( ) has the meaning assigned to it by section 6.2(1);

"gain-on-sale" ( ) has the meaning assigned to it by section 7.1(1);

"general market risk" ( ) has the meaning assigned to it by section 9.2;

"gross income" ( ) has the meaning assigned to it by section 8.1;

"group of companies" ( ) has the meaning assigned to it by section 2(1) of the Companies Ordinance (Cap. 32);

"guarantee" ( ) includes an indemnity;

"haircut" ( ), in relation to an authorized institution, means an adjustment to be applied to the credit protection held by the institution, or the institution's exposure, to take into account possible future price fluctuations or fluctuations in exchange rates;

"IMM approach" ( ) means the internal models approach;

"impairment loss" ( ), in relation to an exposure of an authorized institution, means the amount by which the carrying amount of the exposure exceeds the exposure's recoverable amount;

"incorporated" ( ) includes established;

"insurance firm" ( ) –

(a) means an entity –

(i) which is authorized and supervised by an insurance regulator pursuant to the law of a country other than Hong Kong; and

(ii) which is subject to supervisory arrangements regarding the maintenance of adequate capital to support its business activities comparable to those prescribed for authorized institutions under the Ordinance and these Rules; and

(b) includes an authorized insurer within the meaning of the Insurance Companies Ordinance (Cap. 41);

"insurance regulator" ( ) does not include a restricted insurance regulator;

"interest rate contract" ( ) means a single-currency forward rate contract, interest rate swap contract, interest rate option contract or similar derivative contract;

"interest rate derivative contract" ( ) has the meaning assigned to it by section 9.2;

"internal capital" ( ), in relation to an authorized institution, means the amount of capital which the institution holds and allocates internally as a result of the institution's assessment of the risks faced by the institution;

"internal model" ( ) means a model used by an authorized institution to measure the institution's credit risk, operational risk or market risk;

"internal models approach" ( ) means the method of calculating an authorized institution's market risk set out in Part 10;

"internal ratings-based approach" ( ) means the method of calculating an authorized institution's credit risk for non-securitization exposures set out in Part 6;

"internal ratings-based (securitization) approach" ( ) means the method of calculating an authorized institution's credit risk for securitization exposures set out in Divisions 4, 5 and 6 of Part 7;

"IRB approach" ( ) means the internal ratings-based approach;

"IRB class" ( ) has the meaning assigned to it by section 6.2(1);

"IRB coverage ratio" ( ) has the meaning assigned to it by section 2.1;

"IRB(S) approach" ( ) means the internal ratings-based (securitization) approach;

"IRB subclass" ( ) has the meaning assigned to it by section 6.2(1);

"last 3 years" ( ) has the meaning assigned to it by section 8.1;

"LGD" ( ) has the meaning assigned to it by section 6.2(1);

"liquidity facility" ( ) has the meaning assigned to it by section 7.1(1);

"local currency" ( ), in relation to a country, means the currency issued by the central government, the central bank, the monetary authority, or an authorized note-issuing bank, of that country;

"long-term ECAI issue specific rating" ( ), in relation to an exposure, means an ECAI issue specific rating for the exposure which is a long-term credit assessment rating;

"main index" ( ) has the meaning assigned to it by section 4.2;

"market risk" ( ), in relation to an authorized institution, means the institution's market risk as referred to in paragraph (b) of the definition of "capital adequacy ratio" in section 2(1) of the Ordinance;

"market risk capital charge" ( ) has the meaning assigned to it by section 9.2;

"mark-to-market" ( ), in relation to any transaction, position, exposure or contract, means to revalue the transaction, position, exposure or contract, as the case may be, at current market price;

"mark-to-model" ( ) has the meaning assigned to it by section 9.2;

"minimum holding period" ( ), in relation to the use of the STC approach, has the meaning assigned to it by section 4.2;

"Moody's Investors Service" ( ) means that organization which –

(a) consists of members of the group of companies of which Moody's Corporation is the ultimate holding company; and

(b) issues credit assessment ratings under the name of Moody's Investors Service;

"net book value" ( ), in relation to any thing, means the thing's book value after deducting the amount of any allowance for impairment loss arising from an individual assessment of the thing for impairment loss;

"nettable" ( ), in relation to an exposure of an authorized institution (however described), means that the exposure is subject to a valid bilateral netting agreement;

"non-securitization exposure" ( ), in relation to an authorized institution, means an exposure of the institution which is not a securitization exposure;

"note issuance and revolving underwriting facilities" ( ) means any facility in respect of the issue of debt securities to the market where –

(a) an issuer may draw down funds, up to a prescribed limit, over a pre-defined period, should any issue of the debt securities prove unable to be placed in the market; and

(b) the unplaced amount is to be taken up, or funds made available, by the underwriter of the facility;

"notional amount" ( ), in relation to an off-balance sheet exposure of an authorized institution, means the reference amount used to calculate payment streams between the parties to the exposure;

"obligor" ( ) means –

(a) a person –

(i) to whom an authorized institution has an exposure; and

(ii) who has the primary obligation to repay, pay or otherwise settle the exposure; or

(b) in the case of such an exposure in respect of a guarantee or credit derivative contract, the guarantor or protection seller, as the case may be;

"obligor grade" ( ) has the meaning assigned to it by section 6.2(1);

"operational risk" ( ), in relation to an authorized institution, means the institution's operational risk as referred to in paragraph (c) of the definition of "capital adequacy ratio" in section 2(1) of the Ordinance;

"originating institution" ( ) has the meaning assigned to it by section 7.1(1);

"OTC derivative transaction" ( ) means an over-the-counter derivative transaction;

"other commodity contract" ( ) means a forward contract, swap contract, option contract or similar derivative contract the value of which is derived from the value of commodities (other than precious metals);

"over-the-counter derivative transaction" ( ) –

(a) subject to paragraph (b), means an exchange rate contract, interest rate contract, equity contract, precious metal contract or other commodity contract;

(b) does not include a contract referred to in paragraph (a) –

(i) which is traded on an exchange; and

(ii) which is subject to daily re-margining requirements;

"parent bank" ( ), in relation to an authorized institution, means any holding company of the institution which is authorized as a bank in the overseas country in which the holding company is incorporated;

"partly paid-up shares and securities" ( ), in relation to an authorized institution, means shares or securities the unpaid portion of which the institution may be called upon by the issuer to pay at a specified or unspecified date in the future;

"past due exposure" ( ), in relation to the use of the STC approach, has the meaning assigned to it by section 4.2;

"PD" ( ) has the meaning assigned to it by section 6.2(1);

"PD/LGD approach" ( ) has the meaning assigned to it by section 6.2(1);

"pool" ( ), in relation to an authorized institution which uses the IRB approach, has the meaning assigned to it by section 6.2(1);

"position" ( ), in relation to an authorized institution's calculation of market risk, has the meaning assigned to it by section 9.2;

"positive current exposure" ( ), in relation to a transaction of an authorized institution referred to in paragraph (*i*) or (j) of the definition of "cash items" in section 4.2 or 5.2 or referred to in paragraph (h) or (*i*) of the definition of "cash items" in section 6.2(1), means the risk of loss to the institution on the difference between –

(a) the transaction valued at the agreed settlement price; and

(b) the transaction valued at the current market price;

"potential exposure" ( ), in relation to an off-balance sheet exposure of an authorized institution which is an OTC derivative transaction or a credit derivative contract, means the principal amount (within the meaning of section 4.2, 5.2, 6.2(1) or 7.1(1), as the case requires) of the transaction or contract, as the case may be, multiplied by the applicable CCF;

"precious metal contract" ( ) means a forward contract, swap contract, option contract or similar derivative contract the value of which is derived from the value of precious metals (including silver, platinum and palladium);

"prior consent" ( ) means prior consent in writing;

"property-holding shell company" ( ) means a company which does not trade or engage in any business activity except for the holding of residential properties;

"public sector entity" ( ) means –

(a) a domestic public sector entity; or

(b) a foreign public sector entity;

"rated" ( ), in relation to a securitization exposure, has the meaning assigned to it by section 7.1(1);

"rating system" ( ) has the meaning assigned to it by section 6.2(1);

"ratings-based method" ( ) has the meaning assigned to it by section 7.1(1);

"recognized credit risk mitigation" ( ), in relation to an exposure of an authorized institution, means the use by the institution of –

(a) recognized netting;

(b) recognized collateral (within the meaning of section 4.2, 5.2 or 6.2(1), as the case requires);

(c) a recognized guarantee (within the meaning of section 4.2, 5.2 or 6.2(1), as the case requires); or

(d) a recognized credit derivative contract (within the meaning of section 4.2, 5.2 or 6.2(1), as the case requires),

for the purposes of reducing the risk-weighted amount of the exposure pursuant to these Rules;

"recognized exchange" ( ) means –

(a) a recognized stock exchange; or

(b) a recognized futures exchange;

"recognized futures exchange" ( ) means a futures exchange specified in Part 2 of Schedule 1 to the Securities and Futures Ordinance (Cap. 571);

"recognized netting" ( ) means any netting done pursuant to a valid bilateral netting agreement;

"recognized stock exchange" ( ) means a stock exchange specified in Part 3 of Schedule 1 to the Securities and Futures Ordinance (Cap. 571);

"reference entity" ( ), in relation to a credit derivative contract, means the entity upon whose credit status that contract is based;

"reference obligation" ( ), in relation to a credit derivative contract, means the specified obligation of a specified reference entity in the contract, pursuant to which the basis for the settlement of the contract is determined;

"regulatory capital" ( ), in relation to an authorized institution, means the amount of capital the institution is required to hold in accordance with the Ordinance and these Rules in respect of its risk-weighted amount for each relevant risk;

"regulatory capital arbitrage" ( ) has the meaning assigned to it by section 2.1;

"relevant international organization" ( ) means an international organization specified in Part 10 of Schedule 1.1;

"relevant risk" ( ), in relation to an authorized institution, means the credit risk, operational risk or market risk of the institution;

"repo-style transaction" ( ), in relation to an authorized institution, means a transaction entered into by the institution whereby the institution –

(a) agrees to sell securities to a counterparty for a sum of money with a commitment to repurchase the securities at an agreed price on an agreed future date from the counterparty;

(b) lends securities to a counterparty and receives a sum of money or other securities from the counterparty in exchange as collateral;

(c) agrees to acquire securities from a counterparty for a sum of money with a commitment to resell the securities at an agreed price on an agreed future date to the counterparty; or

(d) borrows securities from a counterparty and provides a sum of money or other securities to the counterparty in exchange as collateral;

"residential mortgage loan" ( ), in relation to an authorized institution, means a credit facility provided by the institution to a borrower –

(a) which is secured on one or more than one residential property; and

(b) which is directly attributable to the financing, or the refinancing, of the acquisition of one or more than one residential property;

"restricted collective investment scheme" ( ) means a collective investment scheme specified in Part 3 of Schedule 1.1;

"restricted debt securities" ( ) means debt securities specified in Part 4 of Schedule 1.1;

"restricted foreign public sector entity" ( ) means a foreign public sector entity specified in Part 5 of Schedule 1.1;

"restricted insurance regulator" ( ) means an insurance regulator specified in Part 6 of Schedule 1.1;

"restricted jurisdiction" ( ) means a jurisdiction specified in Part 7 of Schedule 1.1;

"restricted securities regulator" ( ) means a securities regulator specified in Part 8 of Schedule 1.1;

"restricted sovereign" ( ) means a sovereign specified in Part 9 of Schedule 1.1;

"risk category" ( ), in relation to an authorized institution's calculation of market risk, has the meaning assigned to it by section 9.2;

"risk-weighted amount" ( ) –

(a) in relation to the calculation of the credit risk of a non-securitization exposure of an authorized institution, means the amount of the institution's exposure to credit risk calculated in accordance with Part 4, 5 or 6, as the case requires;

(b) in relation to the calculation of the credit risk of a securitization exposure of an authorized institution, means the amount of the institution's exposure to credit risk calculated in accordance with Part 7;

(c) in relation to the calculation of the operational risk of an authorized institution, means the amount of the institution's exposure to operational risk calculated in accordance with Part 8;

(d) in relation to the calculation of the market risk of an authorized institution, means the amount of the institution's exposure to market risk calculated in accordance with Part 9 or 10, as the case requires;

"risk-weighted amount for credit risk" ( ), in relation to an authorized institution, means the total risk-weighted amount of –

(a) the institution's non-securitization exposures to credit risk calculated in accordance with Part 4, 5 or 6, as the case requires; and

(b) the institution's securitization exposures to credit risk calculated in accordance with Part 7;

"risk-weighted amount for market risk" ( ), in relation to an authorized institution, means the total risk-weighted amount of the institution's exposures to market risk calculated in accordance with Part 9 or 10, as the case requires;

"risk-weighted amount for operational risk" ( ), in relation to an authorized institution, means the risk-weighted amount of the institution's exposures to operational risk calculated in accordance with Part 8;

"second-to-default credit derivative contract" ( ) means a credit derivative contract under which –

(a) the protection buyer obtains credit protection for a basket of exposures held by it; and

(b) the second default among the obligations specified in the contract for the purposes of determining whether a credit event has occurred triggers the credit protection and terminates the contract;

"section 79A(1) requirement" ( ), in relation to an authorized institution, means a requirement in a notice under section 79A(1) of the Ordinance whereby a provision of Part XV of the Ordinance is to apply to the institution on –

(a) a consolidated basis in respect of all the subsidiaries of the institution;

(b) a consolidated basis in respect of such subsidiaries of the institution as specified in the notice;

(c) the consolidated basis referred to in paragraph (a) and an unconsolidated basis unless otherwise specified in the notice; or

(d) the consolidated basis referred to in paragraph (b) and an unconsolidated basis unless otherwise specified in the notice;

"section 98(2) requirement" ( ), in relation to an authorized institution, means a requirement in a notice under section 98(2) of the Ordinance whereby the capital adequacy ratio of the institution is to be calculated on –

(a) a consolidated basis in respect of all the subsidiaries of the institution;

(b) a consolidated basis in respect of such subsidiaries of the institution as specified in the notice;

(c) the consolidated basis referred to in paragraph (a) and an unconsolidated basis unless otherwise specified in the notice; or

(d) the consolidated basis referred to in paragraph (b) and an unconsolidated basis unless otherwise specified in the notice;

"securities firm" ( ) –

(a) means an entity –

(i) authorized and supervised by a securities regulator pursuant to the law of a country other than Hong Kong; and

(ii) which is subject to supervisory arrangements regarding the maintenance of adequate capital to support its business activities comparable to those prescribed for authorized institutions under the Ordinance and these Rules; and

(b) includes a licensed corporation which has been granted a licence to carry on a regulated activity by the Securities and Futures Commission of Hong Kong;

"securities regulator" ( ) does not include a restricted securities regulator;

"securitization exposure" ( ) has the meaning assigned to it by section 7.1(1);

"securitization issues" ( ) has the meaning assigned to it by section 7.1(1);

"securitization transaction" ( ) has the meaning assigned to it by section 7.1(1);

"senior management" ( ), in relation to an authorized institution, includes the chief executives and managers of the institution;

"servicer cash advance facility" ( ) has the meaning assigned to it by section 7.1(1);

"short-term ECAI issue specific rating" ( ), in relation to an exposure, means an ECAI issue specific rating for the exposure which is a short-term credit assessment rating;

"solo basis" ( ) has the meaning assigned to it by section 2.1;

"solo-consolidated basis" ( ) has the meaning assigned to it by section 2.1;

"solo-consolidated subsidiary" ( ) has the meaning assigned to it by section 2.1;

"sovereign" ( ) means –

(a) the Government;

(b) the central government of a country;

(c) the central bank of a country;

(d) an authority of a country which performs in the country functions similar to the functions performed by the Monetary Authority; or

(e) a relevant international organization;

"sovereign foreign public sector entity" ( ) has the meaning assigned to it by section 4.2;

"specific provisions" ( ), in relation to an exposure of an authorized institution, means an allowance for impairment loss of that exposure which is individually assessed for impairment;

"specific risk" ( ) has the meaning assigned to it by section 9.2;

"Standard & Poor's Ratings Services" ( ) means that organization which –

(a) consists of business units within members of the group of companies of which The McGraw-Hill Companies, Inc. is the ultimate holding company; and

(b) issues credit assessment ratings under the name of Standard & Poor's Ratings Services;

"standard supervisory haircut" ( ) has the meaning assigned to it by section 4.2;

"standardized business line" ( ) has the meaning assigned to it by section 8.1;

"standardized (credit risk) approach ( ) means the method of calculating an authorized institution's credit risk for non-securitization exposures set out in Part 4;

"standardized (market risk) approach" ( ) means the method of calculating an authorized institution’s market risk set out in Part 9;

"standardized (operational risk) approach" ( ) means the method of calculating an authorized institution's operational risk set out in Division 3 of Part 8;

"standardized (securitization) approach" ( ) means the method of calculating an authorized institution's credit risk for securitization exposures set out in Division 3 of Part 7;

"STC approach" ( ) means the standardized (credit risk) approach;

"STC(S) approach" ( ) means the standardized (securitization) approach;

"STM approach" ( ) means the standardized (market risk) approach;

"STO approach" ( ) means the standardized (operational risk) approach;

"stress-testing" ( ), in relation to an authorized institution, means the use by the institution of a risk management technique to evaluate the potential impact on the institution of a specific event, or movements in a set of financial variables, or both, under market conditions depicting various levels of market movement and financial distress;

"supervisory formula method" ( ) has the meaning assigned to it by section 7.1(1);

"supplementary capital" ( ) has the meaning assigned to it by section 3.1;

"synthetic securitization transaction" ( ) has the meaning assigned to it by section 7.1(1);

"title transfer" ( ), in relation to collateral, means an outright transfer of the legal and beneficial ownership in the collateral from the collateral provider to the collateral taker;

"total EL amount" ( ) has the meaning assigned to it by section 6.2(1);

"total eligible provisions" ( ) has the meaning assigned to it by section 6.2(1);

"total return swap" ( ) means a credit derivative contract under which the protection buyer –

(a) agrees to pay the protection seller all cash flows which arise from a reference obligation together with any appreciation in the market value of the reference obligation; and

(b) receives, in return for that agreement, a spread over a specified index together with any depreciation in the value of the reference obligation during the term of the contract;

"trade-related contingency" ( ) –

(a) means a contingent liability which relates to trade-related obligations; and

(b) includes liabilities arising from issuing and confirming letters of credit, acceptances on trade bills, and shipping guarantees;

"trading book" ( ), in relation to an authorized institution, means the institution's positions in financial instruments and commodities where –

(a) the financial instruments and commodities are held –

(i) with the intention of trading; or

(ii) for the purpose of hedging one or more than one of the positions in other financial instruments and commodities which are held with the intention of trading;

(b) the financial instruments and commodity contracts are free of any restrictive covenants on tradability, or the positions in the financial instruments and commodity contracts are able to be completely hedged; and

(c) the positions are frequently and accurately valued and actively managed;

"trading day" ( ) means a day on which a financial market is open for trading;

"traditional securitization transaction" ( ) has the meaning assigned to it by section 7.1(1);

"transaction-related contingency" ( ), in relation to an authorized institution –

(a) means a contingent liability which involves an irrevocable obligation of the institution to pay a beneficiary when a customer fails to perform a contractual and non-financial obligation; and

(b) includes a performance bond, bid bond, warranty and standby letter of credit related to a particular transaction;

"transitional period" ( ) has the meaning assigned to it by section 2.1;

"underlying exposures" ( ), in relation to a securitization transaction, has the meaning assigned to it by section 7.1(1);

"unrated" ( ), in relation to a securitization exposure, has the meaning assigned to it by section 7.1(1);

"valid bilateral netting agreement" ( ), in relation to an authorized institution, means an agreement in respect of which the following conditions are satisfied –

(a) the agreement is in writing;

(b) the agreement creates a single legal obligation for all individual contracts covered by the agreement, and provides, in effect, that the institution would have a single claim or obligation to receive or pay only the net amount of the sum of the positive and negative mark-to-market values of the individual contracts covered by the agreement in the event that a counterparty to the agreement, or a counterparty to whom the agreement has been validly assigned, fails to comply with any obligation under the agreement due to default, insolvency, bankruptcy, or similar circumstance;

(c) the institution has been given legal advice in writing to the effect that in the event of a challenge in a court of law, including a challenge resulting from default, insolvency, bankruptcy, or similar circumstance, the relevant court or administrative authority would find the institution's exposure to be the net amount under –

(i) the law of the jurisdiction in which the counterparty is incorporated or the equivalent location in the case of non-corporate entities, and if a branch of the counterparty is involved, then also

under the law of the jurisdiction in which the branch is located;

(ii) the law which governs the individual contracts covered by the agreement; and

(iii) the law which governs the agreement;

(d) the institution establishes and maintains procedures to monitor developments in any law relevant to the agreement and to ensure that the agreement continues to satisfy this definition;

(e) the institution manages the transactions covered by the agreement on a net basis;

(f) the institution maintains in its files documentation adequate to support the netting of the contracts covered by the agreement; and

(g) the agreement is not subject to a provision that permits the non-defaulting counterparty to make only limited payment, or no payment at all, to the defaulter or the estate of the defaulter, regardless of whether or not the defaulter is a net creditor under the agreement;

"value-at-risk" ( ), in relation to a portfolio of exposures, means a measure of the worst expected loss on the portfolio resulting from market movement over a period of time within a given confidence interval;

"VaR" ( ) means value-at-risk.

(2) A reference in these Rules to a table or formula followed by a number is a reference to the table or formula, as the case may be, in these Rules bearing that number.

(3) Where, under these Rules, the prior consent of the Monetary Authority is required by an authorized institution in respect of any matter, the institution shall seek the prior consent by making an application in the specified form, if any, to the Monetary Authority.

(4) Where, under a section of these Rules, the Monetary Authority is required to give notice of any matter to all authorized institutions incorporated in Hong Kong, or to a class of such institutions, it is sufficient compliance with that provision if the Monetary Authority publishes the notice in the Gazette.

(5) Where any matter specified in a section of these Rules is qualified by the word "appropriate", "material" or "relevant", then, for the purposes of assisting in ascertaining the nature of that qualification insofar as it relates to that matter, regard shall be had to the guidelines, if any, issued under the Ordinance which are applicable to that section.

(6) A reference in these Rules to an exposure of an authorized institution to a guarantor arising in respect of a guarantee, or to a counterparty arising in respect of a credit derivative contract purchased by the institution, is an exposure for the purposes of these Rules whether or not any event has occurred which may give rise to a right to sue, or a claim on, the guarantor or the counterparty, as the case may be.

(7) For the purposes of these Rules, an authorized institution shall not use an ECAI issue specific rating allocated to an exposure which has ceased to be outstanding for the purpose of determining the risk-weight to be applied to another exposure to the same issuer.

1.3 Calculation of capital adequacy ratio

For the purposes of these Rules as read with the Ordinance, the capital adequacy ratio of an authorized institution shall be calculated, subject to sections 2.26, 2.27 and 2.28, as the ratio, expressed as a percentage, of the institution's capital base as determined in accordance with Part 3, to the sum of –

(a) the institution's risk-weighted amount for credit risk;

(b) the institution's risk-weighted amount for operational risk; and

(c) the institution's risk-weighted amount for market risk.

PART 2

PRESCRIBED APPROACHES IN RELATION TO CALCULATION OF CAPITAL ADEQUACY RATIO

Division 1 – General

2.1 Interpretation of Part 2

In this Part, unless the context otherwise requires –

"consolidated basis" ( ), in relation to the calculation of an authorized institution's capital adequacy ratio, means the basis set out in section 2.28 on which the institution calculates that ratio;

"consolidation group" ( ), in relation to an authorized institution, means –

(a) the institution; and

(b) such subsidiaries of the institution as specified in a section 98(2) requirement given to the institution;

"IRB coverage ratio" ( ), in relation to an authorized institution which uses the IRB approach, means the ratio, expressed as a percentage, of the sum of the following risk-weighted amounts to the institution's risk-weighted amount for credit risk –

(a) the risk-weighted amount for credit risk of the institution's non-securitization exposures calculated under the IRB approach; and

(b) the risk-weighted amount for credit risk of the institution's securitization exposures calculated under the IRB(S) approach;

"regulatory capital arbitrage" ( ), in relation to an authorized institution, means the use by the institution of a combination of different calculation approaches or methods in respect of the institution's exposures with the intention of minimizing its regulatory capital by selectively choosing a given calculation approach or method for certain exposures predominantly to achieve a lower regulatory capital;

"solo basis" ( ), in relation to the calculation of an authorized institution's capital adequacy ratio, means the basis set out in section 2.26 on which the institution calculates that ratio;

"solo-consolidated basis" ( ), in relation to the calculation of an authorized institution's capital adequacy ratio, means the basis set out in section 2.27 on which the institution calculates that ratio;

"solo-consolidated subsidiary" ( ), in relation to an authorized institution, means a subsidiary of the institution specified in an approval granted to the institution under section 2.25(2)(a);

"transitional period" ( ) means the period from 1 January 2007 to 31 December 2009, both days inclusive.

Division 2 – Prescribed approaches to calculation of credit risk for non-securitization exposures

2.2 Authorized institution shall only use STC approach, BSC approach or IRB approach to calculate its credit risk for non-securitization exposures

(1) An authorized institution shall –

(a) subject to paragraphs (b) and (c), only use the STC approach to calculate its credit risk for non-securitization exposures;

(b) subject to paragraph (c), only use the BSC approach to calculate its credit risk for non-securitization exposures if it has the approval to do so under section 2.3(2)(a);

(c) only use the IRB approach to calculate its credit risk for non-securitization exposures if it has the approval to do so under section 2.5(2)(a).

(2) Subsection (1) does not prevent an authorized institution from using any combination of the STC approach, BSC approach and IRB approach to calculate its credit risk for non-securitization exposures if that combination is expressly permitted by, and in accordance with, another section of these Rules.

2.3 Authorized institution may apply for approval to use BSC approach to calculate its credit risk for non-securitization exposures

(1) An authorized institution may apply to the Monetary Authority for approval to use the BSC approach to calculate its credit risk for non-securitization exposures.

(2) Subject to subsection (3), the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) granting approval to the institution to use the BSC approach to calculate its credit risk for non-securitization exposures; or

(b) refusing to grant the approval.

(3) Without prejudice to the generality of subsection (2)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to use the BSC approach to calculate its credit risk for non-securitization exposures if any one or more of the requirements specified in section 2.4(a) or (b) are not satisfied with respect to the institution.

(4) Where an authorized institution is granted an approval under subsection (2)(a) to use the BSC approach on the ground specified in section 2.4(b) –

(a) if the institution has obtained the prior consent of the Monetary Authority, the institution may, before it uses the IRB approach to calculate its credit risk for non-securitization exposures, use a combination of the STC approach and BSC approach to calculate its credit risk for non-securitization exposures during the transitional period; and

(b) subject to section 2.7(5)(a), the institution shall, not later than the expiration of the transitional period –

(i) use the STC approach to calculate its credit risk for non-securitization exposures to which an exemption under section 2.9(2)(a) relates;

(ii) use the IRB approach to calculate its credit risk for all other non-securitization exposures.

2.4 Minimum requirements to be satisfied for approval under section 2.3(2)(a) to use BSC approach

An authorized institution which makes an application under section 2.3(1) to use the BSC approach shall demonstrate to the satisfaction of the Monetary Authority –

(a) that –

(i) at the end of the financial year immediately preceding the date of the application, the institution and its consolidation group, if any, each had total assets, before deducting any specific provisions or collective provisions, of not more than $10 billion; and

(ii) there is no cause to believe that the use by the institution of the BSC approach to calculate its credit risk for non-securitization exposures would not adequately identify, assess and reflect the credit risk of the institution's non-securitization exposures taking into account the nature of the institution's business; or

(b) that –

(i) the institution has an implementation plan for the use of the IRB approach to calculate its credit risk for non-securitization exposures which, in form and substance, is adequate for that purpose; and

(ii) the institution is reasonably likely to satisfy, not later than the end of the transitional period, the requirements specified in Schedule 2.1 applicable to and in relation to an authorized institution seeking to use the IRB approach to calculate its credit risk for non-securitization exposures.

2.5 Authorized institution may apply for approval to use IRB approach to calculate its credit risk for non-securitization exposures

(1) An authorized institution may apply to the Monetary Authority for approval to use the IRB approach to calculate its credit risk for non-securitization exposures.

(2) Subject to subsection (3) and section 2.6, the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) granting approval to the institution to use the IRB approach to calculate its credit risk for non-securitization exposures; or

(b) refusing to grant the approval.

(3) Without prejudice to the generality of subsection (2)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to use the IRB approach to calculate its credit risk for non-securitization exposures if any one or more of the requirements specified in Schedule 2.1 applicable to or in relation to the institution are not satisfied with respect to the institution.

(4) Where an authorized institution is granted an approval under subsection (2)(a) to use the IRB approach to calculate its credit risk for non-securitization exposures –

(a) subject to sections 2.7(5)(a) and 2.9, the institution shall not, except with the prior consent of the Monetary Authority, use any approach other than the IRB approach to calculate its credit risk for non-securitization exposures;

(b) the institution shall not, without the prior consent of the Monetary Authority, make any significant changes to any rating system which is the subject of the approval.

2.6 Circumstances in which Monetary Authority shall take into account assessment outside Hong Kong of rating system used by authorized institution

(1) Where –

(a) an authorized institution uses a rating system which has been used by a bank incorporated outside Hong Kong to calculate the institution's credit risk for non-securitization exposures; and

(b) the bank is a member of a group of companies of which the institution is also a member,

the Monetary Authority shall, for the purposes of Schedule 2.1, take into account, insofar as is practicable and reasonable in all the circumstances of the case –

(c) subject to subsection (2), the assessment of the relevant banking supervisory authority of the bank as to the accuracy, verifiability, internal consistency and integrity of the rating system; and

(d) the appropriateness of the rating system for the purposes of assessing the credit risk characteristics of the institution's exposures.

(2) The Monetary Authority shall take into account the assessment referred to in subsection (1)(c) if, and only if, the Monetary Authority is satisfied that the capital adequacy standards adopted by the relevant banking supervisory authority for assessing credit risk under the IRB approach are not materially different from those set out in Part 6 and Schedule 2.1.

2.7 Measures which may be taken by Monetary Authority if authorized institution using BSC approach or IRB approach no longer satisfies specified requirements

(1) Where –

(a) an authorized institution uses the BSC approach to calculate its credit risk for non-securitization exposures; and

(b) the Monetary Authority is satisfied that, if the institution were to make a fresh application under section 2.3(1) for approval to use the BSC approach to calculate its credit risk for non-securitization exposures, the approval would be refused by virtue of section 2.3(3),

the Monetary Authority may, by notice in writing given to the institution, require the institution to use the STC approach to calculate its credit risk for non-securitization exposures instead of the BSC approach.

(2) A notice given to an authorized institution under subsection (1) may require the institution to use the STC approach to calculate its credit risk for non-securitization exposures in respect of all of its business, or such parts of its business as specified in the notice, beginning on such date, or the occurrence of such event, as specified in the notice.

(3) An authorized institution shall comply with the requirements of a notice given to it under subsection (1).

(4) Where –

(a) an authorized institution uses the IRB approach to calculate its credit risk for non-securitization exposures; and

(b) the Monetary Authority is satisfied that, if the institution were to make a fresh application under section 2.5(1) for approval to use the IRB approach to calculate its credit risk for non-securitization exposures, the approval would be refused by virtue of section 2.5(3) (but, insofar as Schedule 2.1 is concerned, only section 1 of that Schedule shall be taken into account),

the Monetary Authority may take one or more than one of the measures set out in subsection (5).

(5) The measures referred to in subsection (4) are that –

(a) the Monetary Authority may, by notice in writing given to the institution, require the institution to use the STC approach to calculate its credit risk for non-securitization exposures instead of the IRB approach in respect of all of its business, or such parts of its business as specified in the notice, beginning on such date, or the occurrence of such event, as specified in the notice;

(b) the Monetary Authority may, by notice in writing given to the institution, require the institution to –

(i) submit to the Monetary Authority a plan, within such period (being a period which is reasonable in all the circumstances of the case) as specified in the notice, which satisfies the Monetary Authority that, if it were implemented by the institution, the institution would cease to fall within subsection (4)(b) within a period which is reasonable in all the circumstances of the case; and

(ii) implement the plan;

(c) the Monetary Authority may, by notice in writing given to the institution, advise the institution that the Monetary Authority is considering exercising the Monetary Authority's power under section 101 of the Ordinance to vary the capital adequacy ratio of the institution by increasing it;

(d) the Monetary Authority may, by notice in writing given to the institution, require the institution to be subject to a capital floor for such period, or until the occurrence of such event, as specified in the notice (for which purpose section 6.89 applies to the calculation of the capital floor

(within the meaning of section 6.2(1)) and the Monetary Authority may specify in the notice an adjustment factor for the calculation); and

(e) the Monetary Authority may, by notice in writing given to the institution, require the institution to reduce its credit exposures in such manner, or adopt such measures, as specified in the notice which, in the opinion of the Monetary Authority, will cause the institution to cease to fall within subsection (4)(b) within a period which is reasonable in all the circumstances of the case, or will otherwise mitigate the effect of the institution falling within that subsection.

(6) An authorized institution shall comply with the requirements of a notice given to it under subsection (5)(a), (b),(d) or (e).

(7) For the avoidance of doubt, it is hereby declared that –

(a) the requirements specified in Schedule 2.1 are also applicable to and in relation to an authorized institution which uses the IRB approach in respect of the use by the institution of a rating system to which a significant change referred to in section 2.5(4)(b) relates (and whether or not the institution has, in respect of that change, been given the prior consent referred to in section 2.5(4)(b)), and subsection (4)(b) and the other

provisions of this section apply to the institution accordingly; and

(b) subsection (5)(c) does not operate to prejudice the generality of the circumstances in respect of which the Monetary Authority may exercise the power under section 101 of the Ordinance in the case of an authorized institution to which that subsection applies.

Division 3 – Specific requirements relating to use of IRB approach

2.8 Minimum IRB coverage ratio

(1) Subject to section 2.9, an authorized institution which uses the IRB approach to calculate its credit risk for non-securitization exposures shall have –

(a) subject to paragraph (b), an IRB coverage ratio of not less than 85%, or not less than such other percentage as agreed in writing between the institution and the Monetary Authority, on a solo basis, solo-consolidated basis or consolidated basis as required pursuant to Division 7;

(b) subject to subsection (2), if section 2.11(4) is applicable to the institution, an IRB coverage ratio of not less than 75%, or not less than such other percentage as agreed in writing between the institution and the Monetary Authority, on a solo basis, solo-consolidated basis or consolidated basis as required pursuant to Division 7;

(2) Where section 2.11(4) ceases to apply to an authorized institution, subsection (1)(a) applies to the institution.

(3) Subject to section 2.9, where an authorized institution uses the IRB approach to calculate its credit risk for an IRB class or an IRB subclass of retail exposures, the institution shall use the IRB approach to calculate its credit risk for all exposures which fall within that class or subclass, as the case may be.

(4) Where –

(a) an authorized institution uses the IRB approach to calculate its credit risk for non-securitization exposures; and

(b) an event (referred to in this subsection as "relevant event"), which could reasonably be construed as causing, or potentially causing, whether by itself or in conjunction with any other event, a failure by the institution to comply with subsection (1), occurs,

the institution shall, as soon as is practicable after the relevant event occurs, give notice in writing to the Monetary Authority of the relevant event.

2.9 Exemption for exposures

(1) An authorized institution which uses the IRB approach to calculate its credit risk for non-securitization exposures (referred to in this section as "relevant calculation") may apply to the Monetary Authority to have such of its non-securitization exposures as specified in the application exempted from inclusion in the relevant calculation.

(2) Subject to subsections (4) and (5), the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) exempting from inclusion in the relevant calculation –

(i) the exposures in an IRB class (or, in the case of retail exposures, an IRB subclass) which are specified in the application; or

(ii) the exposures falling within a business unit which are specified in the application,

if the Monetary Authority is satisfied that the exemption will not materially prejudice the calculation of the institution's regulatory capital for credit risk; or

(b) refusing to grant the exemption.

(3) An authorized institution to which an exemption under subsection (2)(a) is granted –

(a) subject to paragraph (b), shall use the STC approach to calculate its credit risk for non-securitization exposures to which the exemption relates; or

(b) may use, during the transitional period, the BSC approach to calculate its credit risk for non-securitization exposures to which the exemption relates if the institution has been granted approval under section 2.3(2)(a) to use the BSC approach to calculate its credit risk for non-securitization exposures on the ground specified in section 2.4(b).

(4) The Monetary Authority shall not grant an exemption under subsection (2)(a) to an authorized institution unless the institution demonstrates to the satisfaction of the Monetary Authority that, if the exemption were granted –

(a) the aggregate risk-weighted amount of –

(i) the non-securitization exposures to which the exemption would relate; and

(ii) the securitization exposures which would be subject to the STC(S) approach in consequence of the exemption,

would not cause the institution to fail to comply with the IRB coverage ratio applicable to the institution under section 2.8(1);

(b) if subsection (2)(a)(i) is applicable –

(i) in the case of non-securitization exposures which are not equity exposures, the aggregate risk-weighted amount of the institution's exposures in an IRB class (or, in the case of retail exposures, an IRB subclass) to which the exemption would relate would not exceed 5% of the institution's risk-weighted amount for credit risk;

(ii) in the case of non-securitization exposures which are equity exposures –

(A) subject to sub-subparagraph (B), the average aggregate EAD of the institution's equity exposures over the past 12 months (being the 12 months immediately preceding the date on which the institution applies to the Monetary Authority for the exemption) to which the

exemption would relate would not exceed 10% of the institution's capital base as determined in accordance with Part 3;

(B) if the institution's equity exposures consist of less than 10 individual holdings, the average aggregate EAD of the institution's equity exposures over the past 12 months (being the 12 months immediately preceding the date on which the institution applies to the Monetary Authority for the exemption) to which the exemption would relate would not exceed 5% of the institution's capital base as determined in accordance with Part 3.

(5) The Monetary Authority shall not grant an exemption under subsection (2)(a) in respect of an IRB class (or, in the case of retail exposures, an IRB subclass), or in respect of exposures falling within a business unit, of an authorized institution if the Monetary Authority is satisfied that the institution can use the IRB approach to calculate its credit risk for those exposures without incurring significant cost or expending significant resources.

(6) Where –

(a) an authorized institution is granted an exemption (referred to in this subsection as "existing exemption") under subsection (2); and

(b) the institution is at any time thereafter satisfied that if it were to make a fresh application under subsection (1) for an exemption (referred to in this subsection as "new exemption") in respect of the exposures to which the existing exemption relates, the new exemption would be, or may be, refused by virtue of subsection (4) or (5),

the institution shall, as soon as is practicable after it is so satisfied, give notice in writing to the Monetary Authority of the case.

2.10 Revocation of exemption under section 2.9

(1) Where –

(a) an authorized institution uses the STC approach or BSC approach to calculate its credit risk for certain non-securitization exposures to which an exemption under section 2.9(2)(a) relates; and

(b) the Monetary Authority is satisfied that, if the institution were to make a fresh application under section 2.9(1) for an exemption in respect of those non-securitization exposures, the exemption would be refused by virtue of section 2.9(2)(b), (4) or (5),

the Monetary Authority may, by notice in writing given to the institution –

(c) require the institution to –

(i) submit to the Monetary Authority a plan, within such period (being a period reasonable in all the circumstances of the case) as specified in the notice, which satisfies the Monetary Authority that, if it were implemented by the institution, the institution would be able to use the IRB approach to calculate its credit risk for those non-securitization exposures within a period

which is reasonable in all the circumstances of the case; and

(ii) implement the plan; or

(d) revoke the exemption on such date, or the occurrence of such event, as specified in the notice.

(2) An authorized institution shall comply with the requirements of a notice given to it under subsection (1)(c).

(3) For the avoidance of doubt, it is hereby declared that an authorized institution's compliance with a requirement referred to in subsection (1)(c) does not prejudice the generality of the Monetary Authority's power under subsection (1)(d).

2.11 Transitional arrangements

(1) Subject to subsection (2), an authorized institution which commences using the IRB approach to calculate its credit risk for non-securitization exposures during the transitional period may comply with this section instead of Part 6 to the extent that this section is inconsistent with the provisions in that Part.

(2) Subject to subsection (3), for the purposes of subsection (1), an authorized institution may, in the case of an IRB class specified in column 1 of Table 2.1, replace the minimum data requirement specified in column 2 of that Table opposite that class with the transitional data requirement specified in column 3 of that Table opposite that minimum data requirement.

TABLE 2.1

TRANSITIONAL DATA REQUIREMENTS

IRB class	Minimum data requirement	Transitional data requirement
Observation period for PD under – (a) the foundation IRB approach for corporate, sovereign and bank exposures; and (b) the PD/LGD approach for equity exposures	Not less than 5 years as set out in section 6.22(1)(d)(ii) for corporate, sovereign and bank exposures and as set out in section 6.57(1) for equity exposures	2 years during the transitional period, increasing by 1 year for each of 2010, 2011 and 2012
Observation period for the PD, LGD and EAD for retail exposures	Not less than 5 years as set out in section 6.40(1)(e)(ii) for PD, as set out in section 6.41(1)(g)(ii) for LGD and as set out in section 6.43(3)(b)(ii) for EAD	2 years during the transitional period, increasing by 1 year for each of 2010, 2011 and 2012

(3) An authorized institution which applies subsection (2) shall demonstrate to the satisfaction of the Monetary Authority that –

(a) the institution is prudent in assigning exposures to obligor grades, facility grades, or pools of exposures, as the case requires;

(b) the institution is prudent in its default and loss estimates; and

(c) the rating system used by the institution fully enables it to comply with paragraphs (a) and (b).

(4) Subject to subsection (5), an authorized institution may, with the prior consent of the Monetary Authority, during the transitional period use the IRB approach to calculate its credit risk for non-securitization exposures in phases (referred to in this section as "phased rollout").

(5) The Monetary Authority shall not consent to a phased rollout by an authorized institution unless the institution demonstrates to the satisfaction of the Monetary Authority that the institution has, and will implement, a plan for the phased rollout –

(a) which is realistically achievable having regard to the nature of the institution's business; and

(b) which has been developed in good faith for the purpose of introducing a method of calculating the institution's regulatory capital and not for the purpose of regulatory capital arbitrage.

Division 4 – Prescribed approaches to calculation of credit risk for securitization exposures

2.12 Authorized institution shall only use STC(S) approach or IRB(S) approach to calculate its credit risk for securitization exposures

(1) Subject to subsections (2) and (3) and section 2.13, where –

(a) an authorized institution holds a securitization exposure in a securitization transaction; and

(b) the underlying exposures in the securitization transaction are of a class which would fall within section 4.5, 5.5 or 6.5 (referred to in this section as "relevant class") if the institution were to classify those underlying exposures as if they were not securitized,

the institution shall –

(c) only use the STC(S) approach to calculate its credit risk for the securitization exposure if it would use the STC approach or BSC approach to calculate its credit risk for the relevant class;

(d) only use the IRB(S) approach to calculate its credit risk for the securitization exposure if it would use the IRB approach to calculate its credit risk for the relevant class.

(2) Where –

(a) an authorized institution holds a securitization exposure in a securitization transaction;

(b) the underlying exposures in the securitization transaction are of 2 or more relevant classes; and

(c) the institution would use any combination of the STC approach, BSC approach and IRB approach to calculate its credit risk for the relevant classes,

the institution shall, subject to subsection (4), after consultation with the Monetary Authority and unless otherwise directed by the Monetary Authority –

(d) use the STC(S) approach to calculate its credit risk for the securitization exposure if –

(i) the STC approach or BSC approach would be used to calculate its credit risk for the majority of the underlying exposures if they were classified into the relevant classes; or

(ii) no single approach would be used to calculate its credit risk for the majority of the underlying exposures if they were classified into the relevant classes;

(e) use the IRB(S) approach to calculate its credit risk for the securitization exposure if the IRB approach would be used to calculate its credit risk for the majority of underlying exposures if they were classified into the relevant classes.

(3) Where an authorized institution which holds a securitization exposure in a securitization transaction uses the IRB approach to calculate its credit risk for non-securitization exposures, and either –

(a) the IRB approach has no specific treatment for the relevant class for the underlying exposures in the securitization transaction; or

(b) the institution does not have the prior consent of the Monetary Authority to use the IRB approach to calculate its credit risk for the relevant class,

the institution shall use the STC(S) approach to calculate its credit risk for the securitization exposure.

(4) For the purposes of subsection (2), an authorized institution shall determine the majority of the underlying exposures referred to in that subsection by –

(a) calculating an amount for each relevant class by –

(i) if the institution would use the STC approach or BSC approach in respect of such a class, aggregating the principal amount of on-balance sheet underlying exposures and the credit equivalent

amount of off-balance sheet underlying exposures which would be classified within that class pursuant to subsection (1)(b);

(ii) if the institution would use the IRB approach in respect of such a class, aggregating the EAD of the on-balance sheet and off-balance sheet underlying exposures which would be classified within that class pursuant to subsection (1)(b);

(b) aggregating the amounts calculated under paragraph (a)(i) and aggregating the amounts calculated under paragraph (a)(ii); and

(c) taking, as such majority, the larger of the 2 amounts resulting from the aggregation under paragraph (b).

(5) In this section, the following expressions have the respective meanings assigned to them by section 7.1(1) –

(a) credit equivalent amount; and

(b) principal amount.

2.13 Authorized institution using IRB(S) approach shall use ratings-based method or supervisory formula method to calculate its credit risk for securitization exposures

An authorized institution which uses the IRB(S) approach to calculate its credit risk for securitization exposures –

(a) shall use the ratings-based method to calculate the risk-weighted amount of its rated securitization exposures;

(b) subject to paragraph (c), shall, with the prior consent of the Monetary Authority, use the supervisory formula method to calculate the capital charge for its unrated securitization exposures;

(c) subject to paragraph (d), shall deduct from its core capital and supplementary capital any unrated securitization exposures in respect of which the supervisory formula method cannot be used because the institution lacks the consent referred to in paragraph (b);

(d) may, with the prior consent of the Monetary Authority, apply the method specified in section 7.51(3) to calculate the risk-weighted amount of –

(i) liquidity facilities provided by the institution which fall within section 7.26(1) and are unrated; and

(ii) servicer cash advance facilities provided by the institution which fall within section 7.26(2), are unrated and satisfy the requirements set out in section 7.26(1) as if the facilities were liquidity facilities provided by the institution.

Division 5 – Prescribed approaches to calculation of operational risk

2.14 Authorized institution shall only use BIA approach, STO approach or ASA approach to calculate its operational risk

(1) An authorized institution shall –

(a) subject to paragraphs (b) and (c), only use the BIA approach to calculate its operational risk;

(b) subject to paragraph (c) and section 2.16, only use the STO approach to calculate its operational risk if it has the approval to do so under section 2.15(2)(a);

(c) subject to section 2.16, only use the ASA approach to calculate its operational risk if it has the approval to do so under section 2.15(2)(a).

(2) Subsection (1) does not prevent an authorized institution from using any combination of the BIA approach, STO approach and ASA approach to calculate its operational risk if that combination is expressly permitted by, and in accordance with, another section of these Rules.

2.15 Authorized institution may apply for approval to use STO approach or ASA approach to calculate its operational risk

(1) An authorized institution may apply to the Monetary Authority for approval to use the STO approach or ASA approach to calculate its operational risk.

(2) Subject to subsections (3) and (4), the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) granting approval to the institution to use the STO approach or ASA approach to calculate its operational risk; or

(b) refusing to grant the approval.

(3) Without prejudice to the generality of subsection (2)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to use the STO approach or ASA approach to calculate its operational risk if any one or more of the requirements specified in Schedule 2.2 applicable to or in relation to the institution are not satisfied with respect to the institution.

(4) The Monetary Authority shall not grant approval to an authorized institution to use the ASA approach to calculate its operational risk unless the institution demonstrates to the satisfaction of the Monetary Authority that the use of the ASA approach would provide a more accurate assessment of the degree of operational risk to which the institution is exposed than would the use of the STO approach.

2.16 Measures which may be taken by Monetary Authority if authorized institution using STO approach or ASA approach no longer satisfies specified requirements

(1) Where –

(a) an authorized institution uses the STO approach or ASA approach to calculate its operational risk; and

(b) the Monetary Authority is satisfied that, if the institution were to make a fresh application under section 2.15(1) for approval to use the STO approach or ASA approach to calculate its operational risk, the approval would be refused by virtue of section 2.15(3),

the Monetary Authority may, by notice in writing given to the institution, require the institution to use the BIA approach to calculate its operational risk instead of the STO approach or ASA approach, as the case may be.

(2) A notice given to an authorized institution under subsection (1) may require the institution to use the BIA approach to calculate its operational risk in respect of all of its business, or such parts of its business as specified in the notice, during the period beginning on such date, or the occurrence of such event, as specified in the notice and ending on such date, or the occurrence of such event, as specified in the notice.

(3) An authorized institution shall comply with the requirements of a notice given to it under subsection (1).

Division 6 – Prescribed approaches to calculation of market risk

2.17 Authorized institution shall only use STM approach, IMM approach or approach used by parent bank to calculate its market risk

(1) An authorized institution (other than an authorized institution exempted under section 2.22(1)) shall –

(a) subject to paragraphs (b) and (c), only use the STM approach to calculate its market risk;

(b) subject to paragraph (c) and section 2.18(5), only use the IMM approach to calculate its market risk if it has the approval to do so under section 2.18(2)(a);

(c) only use the approach used by the parent bank of the institution to calculate its market risk if it has the approval to do so under section 2.20(2)(a).

(2) Subsection (1) does not prevent an authorized institution from using any combination of the STM approach, the IMM approach or the approach used by its parent bank to calculate its market risk if that combination is expressly permitted by, and in accordance with, another section of these Rules.

2.18 Authorized institution may apply for approval to use IMM approach to calculate its market risk

(1) An authorized institution may apply to the Monetary Authority for approval to use the IMM approach to calculate its market risk.

(2) Subject to subsections (3) and (5), the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) granting approval to the institution to use the IMM approach to calculate its market risk; or

(b) refusing to grant the approval.

(3) Without prejudice to the generality of subsection (2)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to use the IMM approach to calculate its market risk if any one or more of the requirements specified in Schedule 2.3 applicable to or in relation to the institution are not satisfied with respect to the institution.

(4) Where an authorized institution uses the IMM approach to calculate its market risk, the institution shall not, without the prior consent of the Monetary Authority, make any significant change to any internal model which was the subject of the approval granted to the institution under subsection (2)(a).

(5) The Monetary Authority may grant an approval under subsection (2)(a) to an authorized institution to use the IMM approach to calculate its market risk in respect of general market risk or specific risk, or both, for such risk categories, or such local or overseas business of the institution, as specified in the approval, beginning on such date, or the occurrence of such event, as specified in the approval.

(6) Subject to section 2.19(2)(a), where an authorized institution is granted an approval under subsection (2)(a) and uses the IMM approach to calculate its market risk in respect of general market risk or specific risk, or both, for its positions in all or any risk categories or business, it shall not, in respect of those positions, use the STM approach to calculate its market risk except with the prior consent of the Monetary Authority.

(7) For the avoidance of doubt, it is hereby declared that an authorized institution which has an approval under subsection (5) shall use the STM approach to calculate its market risk for the risk categories or business which are or is not the subject of the approval.

2.19 Measures which may be taken by Monetary Authority if authorized institution using IMM approach no longer satisfies specified requirements

(1) Where –

(a) an authorized institution uses the IMM approach to calculate its market risk; and

(b) the Monetary Authority is satisfied that, if the institution were to make a fresh application under section 2.18(1) for approval to use the IMM approach to calculate its market risk, the approval would be refused by virtue of section 2.18(3),

the Monetary Authority may take one or more than one of the measures set out in subsection (2).

(2) The measures referred to in subsection (1) are that –

(a) the Monetary Authority may, by notice in writing given to the institution, require the institution to use the STM approach instead of the IMM approach for the calculation of the market risk capital charge for general market risk or specific risk, or both, for its positions in all risk categories or all of its business, or such risk categories or such part of its business as specified in the notice, beginning on such date, or the occurrence of such event, as specified in the notice;

(b) the Monetary Authority may, by notice in writing given to the institution, require the institution to –

(i) submit to the Monetary Authority a plan, within such period (being a period which is reasonable in all the circumstances of the case) as specified in the notice, which satisfies the Monetary Authority that, if it were implemented by the institution, the institution would cease to fall within subsection (1)(b) within a period which is reasonable in all the circumstances of the case; and

(ii) implement the plan;

(c) the Monetary Authority may, by notice in writing given to the institution, advise the institution that the Monetary Authority is considering exercising the Monetary Authority's power under section 101 of the Ordinance to vary the capital adequacy ratio of the institution by increasing it;

(d) the Monetary Authority may, by notice in writing given to the institution, require the institution to calculate its market risk capital charge by the use of such higher multiplication factor as specified in the notice in accordance with section 10.6(3); and

(e) the Monetary Authority may, by notice in writing given to the institution, require the institution to reduce its market risk exposures in such manner, or to adopt such measures, specified in the notice which, in the opinion of the Monetary Authority, will cause the institution to cease to fall within subsection (1)(b) within a period which is reasonable in all the circumstances of the case, or will otherwise mitigate the effect of the institution falling within that subsection.

(3) An authorized institution shall comply with the requirements of a notice given to it under subsection (2)(a), (b), (d) or (e).

(4) For the avoidance of doubt, it is hereby declared that –

(a) the requirements specified in Schedule 2.3 are also applicable to and in relation to an authorized institution using the IMM approach to calculate its market risk in respect of the use by it of an internal model to which a significant change referred to in section 2.18(4) relates (and whether

or not the institution has, in respect of that change, been given the prior consent referred to in section 2.18(4)), and subsection (1)(b) and the other provisions of this section apply to the institution accordingly;

(b) subsection (2)(c) does not operate to prejudice the generality of the circumstances in respect of which the Monetary Authority may exercise the power under section 101 of the Ordinance in the case of an authorized institution to which that subsection applies.

2.20 Authorized institution may apply for approval to use approach used by parent bank to calculate its market risk

(1) An authorized institution may apply to the Monetary Authority for approval to use the approach used by its parent bank to calculate its market risk.

(2) Subject to subsection (3), the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) granting approval to the institution to use the approach used by its parent bank to calculate its market risk; or

(b) refusing to grant the approval.

(3) Without prejudice to the generality of subsection (2)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to use the approach used by its parent bank to calculate its market risk unless –

(a) the institution demonstrates to the satisfaction of the Monetary Authority that use of that approach will not materially prejudice the calculation of the institution's regulatory capital for market risk; and

(b) in the opinion of the Monetary Authority, the parent bank is adequately supervised by the relevant banking supervisory authority.

2.21 Measures which may be taken by Monetary Authority if authorized institution using approach used by parent bank no longer satisfies specified requirements

(1) Where –

(a) an authorized institution uses the approach used by its parent bank to calculate its market risk; and

(b) the Monetary Authority is satisfied that, if the institution were to make a fresh application under section 2.20(1) for approval to use that approach to calculate its market risk, the approval would be refused –

(i) by virtue of section 2.20(3); or

(ii) because the entity which was the parent bank of the institution has ceased to be the parent bank of the institution,

the Monetary Authority may, by notice in writing given to the institution, revoke the approval concerned under section 2.20(2)(a) beginning on such date, or the occurrence of such event, as specified in the notice.

(2) Immediately upon the revocation under subsection (1) of an approval under section 2.20(2)(a) granted to an authorized institution, section 2.17(1)(a) and (b) applies to the institution.

2.22 Exemption from section 2.17

(1) The Monetary Authority may, by notice in writing given to an authorized institution (other than an authorized institution which uses the IRB approach to calculate its credit risk), exempt the institution from section 2.17 if the institution demonstrates to the satisfaction of the Monetary Authority that –

(a) the institution's market risk positions –

(i) never exceed 5% of its total on-balance sheet and off-balance sheet exposures; or

(ii) only sporadically exceed 5%, and never exceed 6%, of its total on-balance sheet and off-balance sheet exposures; and

(b) the institution's market risk positions –

(i) never exceed $50 million; or

(ii) only sporadically exceed $50 million and never exceed $60 million.

(2) For the purposes of subsection (1) –

(a) the amount of an authorized institution's market risk positions is calculated by aggregating –

(i) the institution's total gross (long plus short) positions in debt securities and debt-related derivative contracts;

(ii) the arithmetic average of the institution's total long and total short positions in interest rate derivative contracts;

(iii) the institution's total gross (long plus short) positions in equities and equity-related derivative contracts;

(iv) the institution's total net open position in foreign exchange exposures as derived in section 9.16; and

(v) the institution's total gross (long plus short) positions in commodities and commodity-related derivative contracts; and

(b) an authorized institution's total on-balance sheet and off-balance sheet exposures are derived by -

(i) aggregating the institution's total liabilities, total assets less specific and collective provisions, and the principal amount (within the meaning of section 4.2) of all of the institution's off-balance sheet exposures; and

(ii) deducting therefrom the institution's paid-up capital, reserves, current profit and loss, and perpetual or term subordinated debt.

(3) The time at which the institution's market risk positions are assessed for the purposes of subsection (1) shall be those positions as at –

(a) subject to paragraph (b), the calendar quarter end date of each of the 4 consecutive calendar quarters of the same calendar year; or

(b) the calendar quarter end date of such consecutive calendar quarters, being not more than 4 consecutive calendar quarters, as the Monetary Authority specifies in writing given to the institution.

(4) Where an authorized institution is exempted under this section from section 2.17, the institution –

(a) shall not, except with the prior consent of the Monetary Authority, include market risk in the calculation of its capital adequacy ratio;

(b) shall give notice in writing to the Monetary Authority of –

(i) an increase in its market risk positions which causes, or could reasonably be construed as potentially causing, whether by itself or in conjunction with any other event, the institution to cease to fall within subsection (1)(a) and (b); or

(ii) an intention to increase its market risk positions which will cause, or could reasonably be construed as potentially causing, whether by itself or in conjunction with any other event, the institution to cease to fall within subsection (1)(a) and (b);

(c) shall apply Part 4, 5 or 7, as the case requires, to calculate the credit risk for the institution's market risk positions except for its total net open position in foreign exchange exposures as derived in section 9.16.

(5) In this section, the following expressions have the respective meanings assigned to them by section 9.2 –

(a) debt security; and

(b) equity.

2.23 Revocation of exemption under section 2.22

(1) Where –

(a) an authorized institution is exempted under section 2.22(1) from section 2.17; and

(b) the Monetary Authority is satisfied that, if the institution were not already so exempted, the exemption would be refused by virtue of the institution failing to satisfy the Monetary Authority as specified in section 2.22(1),

the Monetary Authority may, by notice in writing given to the institution, revoke the exemption granted under section 2.22(1), beginning on such date, or the occurrence of such event, as specified in the notice.

(2) Section 2.17 applies to an authorized institution immediately upon the revocation under this section of an exemption under section 2.22(1).

Division 7 – Calculation of capital adequacy ratio : solo basis, solo-consolidated basis and consolidated basis

2.24 Authorized institution shall calculate its capital adequacy ratio on solo basis, solo-consolidated basis or consolidated basis

(1) An authorized institution shall –

(a) calculate its capital adequacy ratio on a solo basis or, if it has the approval to do so under section 2.25(2)(a), calculate its capital adequacy ratio on a solo-consolidated basis; and

(b) subject to section 2.30, calculate its capital adequacy ratio on a consolidated basis.

(2) Subject to section 2.30, the Monetary Authority may, in a section 98(2) requirement, require the capital adequacy ratio of an authorized institution to be calculated on a consolidated basis in respect of a subsidiary of the institution (other than a subsidiary which is an insurance firm or securities firm) where –

(a) more than 50% of the total assets or total income of the subsidiary relate to or arise from the carrying out of one or more than one relevant financial activity; or

(b) the Monetary Authority is satisfied that, after taking into account the nature of the business undertaken by the subsidiary, the institution should calculate its capital adequacy ratio on a consolidated basis in respect of that subsidiary if a relevant risk of the institution is to be adequately identified and assessed.

(3) In subsection (2) –

"relevant financial activity" ( ), in relation to a subsidiary of an authorized institution, means –

(a) an activity which is ancillary to a principal activity of the institution, including –

(i) owning and managing the institution's property; and

(ii) performing information technology functions for the institution;

(b) lending, including –

(i) the provision of consumer or mortgage credit;

(ii) factoring;

(iii) forfeiting; and

(iv) the provision of guarantees and other financial commitments;

(c) financial leasing;

(d) money transmission services;

(e) issuing and administering a means of payment, including –

(i) credit cards;

(ii) travellers' cheques; and

(iii) bank drafts;

(f) trading for the subsidiary's own account, or for accounts of the subsidiary's customers, in –

(i) money market instruments;

(ii) foreign exchange;

(iii) financial instruments which are traded on an exchange;

(iv) OTC derivative transactions; or

(v) transferable securities;

(g) participating in securities issues, including the provision of services relating to the issues;

(h) the provision of –

(i) advice to undertakings on capital structure or industrial strategy, including any matter relating to capital structure or industrial strategy; or

(ii) advice and services relating to mergers and the purchase of undertakings;

(*i*) money broking; or

(j) portfolio management and the provision of advice in relation to portfolio management.

(4) An authorized institution which calculates its capital adequacy ratio on a consolidated basis shall give notice in writing to the Monetary Authority of any of the following matters as soon as is practicable after the institution is aware of the matter or ought to be aware of the matter –

(a) a member of the institution's consolidation group ceasing to be a subsidiary of the institution;

(b) a subsidiary of the institution becoming a member of its consolidation group;

(c) the principal activities of a subsidiary referred to in paragraph (b);

(d) any significant change to the principal activities of the institution or any of its subsidiaries (including a subsidiary referred to in paragraph (b)).

2.25 Authorized institution may apply for approval to calculate its capital adequacy ratio on solo-consolidated basis

(1) An authorized institution may apply to the Monetary Authority for approval to calculate its capital adequacy ratio on a solo-consolidated basis instead of a solo basis in respect of such of its subsidiaries which are members of its consolidation group as specified in the application.

(2) Subject to subsection (3), the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) granting approval to the institution to calculate its capital adequacy ratio on a solo-consolidated basis instead of a solo basis in respect of such subsidiaries of the institution as specified in the approval, and giving the institution a section 98(2) requirement to give effect to the approval; or

(b) refusing to grant the approval.

(3) Without prejudice to the generality of subsection (2)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to calculate its capital adequacy ratio on a solo-consolidated basis instead of a solo basis in respect of a subsidiary of the institution unless the institution demonstrates to the satisfaction of the Monetary Authority that –

(a) the subsidiary is wholly owned by, and managed as if it were an integral part of, the institution;

(b) the subsidiary is wholly financed by the institution such that the subsidiary has no depositors or other external creditors except external creditors for –

(i) audit fees;

(ii) company secretarial services; and

(iii) sundry operating expenses; and

(c) there are no regulatory, legal or taxation constraints on the transfer of the subsidiary's capital to the institution.

(4) Where –

(a) an authorized institution has been granted an approval under subsection (2)(a); and

(b) an event (referred to in this subsection as "relevant event") which could reasonably be construed as causing, or potentially causing, whether by itself or in conjunction with any other event, a subsidiary of the institution to fall outside subsection (3)(a), (b) or (c), occurs,

the institution shall, as soon as is practicable after the relevant event occurs, give notice in writing to the Monetary Authority of the relevant event.

2.26 Solo basis for calculation of capital adequacy ratio

(1) An authorized institution shall in calculating its capital adequacy ratio on a solo basis –

(a) aggregate the institution's (including the institution's local branches' and overseas branches') risk-weighted amounts for –

(i) credit risk;

(ii) operational risk; and

(iii) market risk;

(b) deduct from the aggregate amount derived under paragraph (a) –

(i) that portion, as determined on a solo basis, of the total regulatory reserve of the institution for general banking risks and collective provisions apportioned to the STC approach or BSC approach, or both, and to the STC(S) approach, which is not included in the supplementary capital of the institution; and

(ii) that amount, if any, determined on a solo basis, by which the net book value of the institution's reserves attributable to fair value gains arising from the revaluation of the institution's holdings of land and buildings referred to in section 3.8(1)(a)(i) is in excess of the net book value of those reserves as at the end of December 1998 or the relevant date (within the meaning of section 3.9(8)); and

(c) determine the institution's capital base, in accordance with Part 3, to reflect the fact that it is calculating its capital adequacy ratio on a solo basis.

(2) For the avoidance of doubt, it is hereby declared that –

(a) for the purposes of this section, an authorized institution shall risk-weight the exposures of an overseas branch of the institution in accordance with these Rules;

(b) for the purposes of subsection (1)(b)(ii), if an authorized institution has approval under section 3.9(4)(b) to include the fair value gains on revaluation of land and buildings referred to in section 3.8(1)(a)(i) arising from a merger or acquisition, then the net book value of reserves as

at the end of December 1998 or the relevant date (within the meaning of section 3.9(8)) shall be deemed to include the fair value gains approved under section 3.9(4)(b).

2.27 Solo-consolidated basis for calculation of capital adequacy ratio

(1) Subject to subsection (2), an authorized institution shall in calculating its capital adequacy ratio on a solo-consolidated basis –

(a) aggregate the institution's (including the institution's local branches' and overseas branches') and its solo-consolidated subsidiaries' risk-weighted amounts for –

(i) credit risk;

(ii) operational risk; and

(iii) market risk;

(b) deduct from the aggregate amount derived under paragraph (a) –

(i) that portion, as determined on a solo-consolidated basis, of the total regulatory reserve of the institution and its solo-consolidated subsidiaries for general banking risks and collective provisions apportioned to the STC approach or BSC approach, or both, and to the STC(S) approach, which is not included in the supplementary capital of the institution and its solo-consolidated subsidiaries; and

(ii) that amount, if any, determined on a solo-consolidated basis, by which the net book value of the institution's and its solo-consolidated subsidiaries' reserves attributable to fair value gains arising from the revaluation of the institution's and its solo-consolidated subsidiaries' holdings of land and buildings referred to section 3.8(1)(a)(i) is in excess of the net book value of those reserves as at the end of December 1998 or the relevant date (within the meaning of section 3.9(8)); and

(c) determine the capital base of the institution and its solo-consolidated subsidiaries, in accordance with Part 3, to reflect the fact that it is calculating its capital adequacy ratio on a solo-consolidated basis.

(2) For the avoidance of doubt, it is hereby declared that, for the purposes of this section, an authorized institution shall risk-weight the exposures of an overseas branch of the institution in accordance with these Rules.

(3) An authorized institution which calculates its capital adequacy ratio on a solo-consolidated basis shall ensure that, in calculating that ratio, the risk-weighting of a relevant risk does not include inter-company balances with, and transactions between, the institution and its solo-consolidated subsidiaries.

(4) For the purposes of subsection (1)(b)(ii), if an authorized institution has approval under section 3.9(4)(b) to include the fair value gains on revaluation of land and buildings referred to in section 3.8(1)(a)(i) arising from a merger or acquisition, the net book value of reserves as at the end of December 1998 or the relevant date (within the meaning of section 3.9(8)) shall be deemed to include the fair value gains approved under section 3.9(4)(b).

2.28 Consolidated basis for calculation of capital adequacy ratio

(1) An authorized institution shall in calculating its capital adequacy ratio on a consolidated basis –

(a) aggregate the institution's consolidation group's (including the institution's local branches' and overseas branches') risk-weighted amounts for –

(i) credit risk;

(ii) operational risk; and

(iii) market risk;

(b) deduct from the aggregate amount derived under paragraph (a) –

(i) that portion, as determined on a consolidated basis, of the total regulatory reserve of the institution's consolidation group for general banking risks and collective provisions apportioned to the STC approach or BSC approach, or both, and to the STC(S) approach, which is not included in the supplementary capital of the institution's consolidation group; and

(ii) that amount, if any, as determined on a consolidated basis, by which the net book value of the institution's consolidation group's reserves attributable to fair value gains arising from the revaluation of the institution's consolidation group's holdings of land and buildings referred to section 3.8(1)(a)(i) is in excess of the net book value of those reserves as at the end of December 1998 or the relevant date (within the meaning of section 3.9(8)); and

(c) determine the institution's consolidation group's capital base, in accordance with Part 3, to reflect the fact that it is calculating its capital adequacy ratio on a consolidated basis.

(2) Subject to section 2.29(3), it is hereby declared that, under the consolidated basis for the calculation of the capital adequacy ratio of an authorized institution, the institution shall ensure that –

(a) the risk-weighting of a relevant risk does not relate to the exposures of a subsidiary of the institution which is not a member of its consolidation group; and

(b) the risk-weighting of a relevant risk does not include inter-company balances with, and transactions between, members of its consolidation group.

(3) An authorized institution which calculates its capital adequacy ratio on a consolidated basis may, insofar as its market risk is concerned, offset market risk positions between members of its consolidation group if those market risk positions are monitored and managed on a group basis.

(4) For the avoidance of doubt, it is hereby declared that –

(a) for the purposes of this section, an authorized institution shall risk-weight the exposures of an overseas branch of the institution in accordance with these Rules;

(b) for the purpose of subsection (1)(b)(ii), if an authorized institution has approval under section 3.9(4)(b) to include the fair value gains on revaluation of land and buildings referred to in section 3.8(1)(a)(i) arising from a merger or acquisition, the net book value of reserves as at the end of December 1998 or the relevant date (within the meaning of section 3.9(8)) shall be deemed to include the fair value gains approved under section 3.9(4)(b).

2.29 Provisions supplementary to section 2.28

(1) Subject to subsection (2), an authorized institution which calculates its capital adequacy ratio on a consolidated basis shall do so using the same approach in calculating a relevant risk as it would be required to use if it were calculating that ratio on a solo basis.

(2) With the prior consent of the Monetary Authority, an authorized institution which calculates its capital adequacy ratio on a consolidated basis is not required to comply with subsection (1) if the institution demonstrates to the satisfaction of the Monetary Authority that it is not practical for every member of its consolidation group to use the same approach to calculate the relevant risk of the group on that basis.

(3) Where an authorized institution which calculates its capital adequacy ratio on a consolidated basis uses the BIA approach to calculate its operational risk –

(a) subject to paragraph (b), the institution may, in calculating the gross income of its consolidation group in any given year of the last 3 years, offset a positive gross income of a member of the group in the given year with a negative gross income of another member of the group in that given year;

(b) the institution shall not, pursuant to paragraph (a), offset positive gross income with negative gross income between any of the last 3 years.

(4) Where an authorized institution which calculates its capital adequacy ratio on a consolidated basis uses the STO approach or ASA approach to calculate its operational risk –

(a) subject to paragraph (b), the institution may, in calculating the gross income of its consolidation group in any given year of the last 3 years, offset a positive gross income of a standardized business line of a member of the group in the given year with a negative gross income of that standardized business line of another member of the group in that given year;

(b) the institution shall not, pursuant to paragraph (a), offset positive gross income with negative gross income between any of the last 3 years.

2.30 Exceptions to section 2.24

(1) Where –

(a) an authorized institution calculates its capital adequacy ratio on a consolidated basis; and

(b) a subsidiary of the institution which is a member of its consolidation group and is incorporated in a country other than Hong Kong calculates its capital adequacy ratio on a solo basis in accordance with the capital adequacy standards applicable in that country,

the institution may apply to the Monetary Authority for approval to risk-weight the exposures of that subsidiary in accordance with those standards instead of in accordance with these Rules.

(2) Subject to subsection (3), the Monetary Authority shall determine an application under subsection (1) from an authorized institution by –

(a) granting approval to the institution to risk-weight the exposures of the subsidiary specified in the application in accordance with the capital adequacy standards applicable in the country where the subsidiary is incorporated instead of in accordance with these Rules, and giving the institution a section 98(2) requirement to give effect to the approval; or

(b) refusing to grant the approval.

(3) Without prejudice to the generality of subsection (2)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to risk-weight the exposures of a subsidiary which is a member of the institution's consolidation group in accordance with the capital adequacy standards applicable in the country in which the subsidiary is incorporated instead of in accordance with these Rules unless the institution demonstrates to the satisfaction of the Monetary Authority that the use of those standards would not materially prejudice the calculation of the institution's capital adequacy ratio.

(4) An authorized institution which calculates its capital adequacy ratio on a consolidated basis may apply to the Monetary Authority for approval to calculate that ratio by excluding one or more than one member from its consolidation group.

(5) Subject to subsection (6), the Monetary Authority shall determine an application under subsection (4) from an authorized institution by –

(a) granting approval to the institution to calculate its capital adequacy ratio by excluding from its consolidation group such members of the group as the Monetary Authority specifies and giving the institution a section 98(2) requirement to give effect to the approval; or

(b) refusing to grant the approval.

(6) Without prejudice to the generality of subsection (5)(b), the Monetary Authority shall refuse to grant approval to an authorized institution to calculate its capital adequacy ratio by excluding from its consolidation group any member of the group unless the institution demonstrates to the satisfaction of the Monetary Authority that the inclusion of that member in the group –

(a) would be inappropriate or misleading; or

(b) is not practicable due to regulatory, legal or taxation constraints on the transfer of information necessary to enable the institution to calculate that ratio on a consolidated basis in respect of that member.

Division 8 – Decisions to which section 101B(1) of Ordinance applies

2.31 Reviewable decisions

A decision made by the Monetary Authority under section 2.3(2), 2.5(2), 2.15(2) or 2.18(2) is a decision to which section 101B(1) of the Ordinance applies.

PART 3

DETERMINATION OF CAPITAL BASE

Division 1 – General

3.1 Interpretation of Part 3

In this Part, unless the context otherwise requires –

"available-for-sale" ( ) –

(a) in relation to financial assets other than derivative contracts, means that the financial assets –

(i) are designated by an authorized institution as available for sale;

(ii) are not classified by an authorized institution as –

(A) loans and receivables; or

(B) financial assets at fair value through profit or loss; or

(iii) are not classified by an authorized institution as held to maturity investments;

(b) in relation to financial instruments other than derivative contracts, means that the financial instruments –

(i) are designated by an authorized institution as available for sale;

(ii) are not classified by an authorized institution as –

(A) loans and receivables; or

(B) financial instruments at fair value through profit or loss; or

(iii) are not classified by an authorized institution as held to maturity investments;

(c) in relation to loans, means that the loans are designated by an authorized institution upon initial recognition as available for sale;

"cash flow hedge" ( ), in relation to a hedging relationship of an authorized institution, means a hedge of an exposure of the institution to variability in cash flows which –

(a) is attributable to –

(i) a particular risk associated with an asset or liability recognized on the institution’s balance sheet; or

(ii) a highly probable forecast transaction; and

(b) could affect the institution's profit or loss;

"connected company" ( ), in relation to an authorized institution, means –

(a) a subsidiary, or the holding company, of the institution; or

(b) a company which falls within section 64(1)(b), (c), (d) or (e) of the Ordinance in respect of the institution;

"consolidation requirement" ( ), in relation to a subsidiary of an authorized institution, means –

(a) a section 79A(1) requirement whereby a provision in Part XV of the Ordinance is to apply to the institution on a consolidated basis in respect of that subsidiary; or

(b) a section 98(2) requirement whereby the capital adequacy ratio of the institution is to be calculated on a consolidated basis in respect of that subsidiary;

"core capital" ( ), in relation to an authorized institution, means the sum, calculated in Hong Kong dollars, of the net book values of the institution's capital items specified in section 3.4;

"debentures" ( ) has the meaning assigned to it by section 2(1) of the Companies Ordinance (Cap. 32);

"debt securities" ( ) means any securities other than shares, stocks or import or export trade bills;

"forecast transaction" ( ) means an uncommitted but anticipated future transaction;

"irredeemable" ( ), in relation to non-cumulative preference shares, means that the shares are –

(a) irredeemable; or

(b) irredeemable except with the prior consent of the Monetary Authority;

"other regulatory capital instrument" ( ) means –

(a) subordinated debt –

(i) issued by an authorized institution incorporated in Hong Kong; and

(ii) included in the institution's supplementary capital; or

(b) a capital instrument –

(i) which is similar to subordinated debt described in paragraph (a); and

(ii) which is issued by a company which is not an authorized institution incorporated in Hong Kong but is –

(A) subject to supervision by the relevant banking supervisory authority, or the securities regulator or insurance regulator of the company, as the case may be; and

(B) subject to capital requirements imposed on it in the country by the relevant banking supervisory authority, or the securities regulator or insurance regulator of the company, as the case may be;

"securities not held for trading purposes" ( ), in relation to an authorized institution, means any securities –

(a) held by the institution except –

(i) securities which are acquired principally for the purpose of selling in the near term; and

(ii) securities which form part of a portfolio of financial instruments –

(A) which are managed collectively; and

(B) for which there is evidence of a recent actual pattern of short-term profit-taking; and

(b) designated by the institution as securities not held for trading purposes;

"special purpose vehicle" ( ), in relation to an authorized institution, means a company or any other entity –

(a) which is established by the institution for the sole purpose of raising capital for the institution; and

(b) which does not trade or conduct any business except raising capital for the institution;

"specified amount" ( ), in relation to an authorized institution, means any amount which the institution is required under section 3.14(2) to deduct from its core capital and supplementary capital;

"subsidiary undertaking" ( ) shall be construed in accordance with section 2B of the Companies Ordinance (Cap. 32) as read with the Twenty-third Schedule to that Ordinance;

"supplementary capital" ( ), in relation to an authorized institution, means the sum, calculated in Hong Kong dollars, of the net book values of the institution's capital items specified in section 3.8.

3.2 Determination of capital base

(1) Subject to subsection (2), an authorized institution shall determine its capital base by adding together the institution's core capital and supplementary capital.

(2) The supplementary capital of an authorized institution, before making any deductions therefrom required by section 3.14(2), which may be included in the determination of the institution's capital base shall not exceed the institution's core capital –

(a) after making the deductions therefrom required by section 3.14(1); but

(b) before making the deductions therefrom required by section 3.14(2).

3.3 Essential characteristics of core capital and supplementary capital

(1) An authorized institution shall not include any capital in its core capital unless –

(a) the capital is subordinated;

(b) the capital is perpetual; and

(c) the capital is non-cumulative.

(2) An authorized institution shall not include any capital in its core capital or supplementary capital unless –

(a) the capital is freely available to absorb the institution's losses;

(b) the capital ranks behind the claims of depositors and other creditors of the institution in a winding-up of the institution;

(c) where the capital takes the form of shares or debt instruments –

(i) the shares permit, without restrictions, the non-payment of a dividend; and

(ii) the debt instruments are subject to a contractual right to defer interest payments; and

(d) the capital is unsecured and fully paid-up.

(3) For the avoidance of doubt, it is hereby declared that guarantees and other types of contingent liability shall not be included in an authorized institution's core capital or supplementary capital.

(4) An authorized institution shall not issue any capital instrument other than ordinary shares (including issue by way of a subsidiary of the institution or a special purpose vehicle of the institution) unless it has consulted with the Monetary Authority to ascertain whether, under these Rules, the instrument proposed to be issued –

(a) can be included in the institution's core capital;

(b) can be included in the institution's supplementary capital; or

(c) cannot be included in the institution's core capital or supplementary capital.

(5) An authorized institution shall not include, in its core capital or supplementary capital, a capital instrument issued at a discount, or only partly in a paid-up form, except to the extent that the proceeds paid-up on the instrument have been received by, and are immediately available to, the issuer of the instrument.

Division 2 – Core capital

3.4 Core capital of authorized institution

Subject to sections 3.3, 3.9(6), 3.10(2), 3.11(3)(a) and 3.14, for the purposes of determining an authorized institution's capital base, the core capital of the institution shall consist of the following capital items –

(a) the institution's paid-up ordinary share capital except any shares issued by the institution by virtue of capitalizing any property revaluation reserves of the institution referred to in section 3.8(1)(a);

(b) the institution's paid-up irredeemable non-cumulative preference shares;

(c) the amount standing to the credit of the institution's share premium account;

(d) subject to section 3.5, the institution's published reserves except –

(i) unrealized fair value gains or losses on revaluation of available-for-sale loans;

(ii) cumulative fair value gains or losses on the hedged items and the hedging instrument in respect of cash flow hedges created for –

(A) available-for-sale financial instruments; and

(B) financial instruments measured at amortized cost;

(iii) cumulative fair value gains or losses on the hedging instrument which are recognized directly in equity through the statement of changes in equity in respect of cash flow hedges created for forecast transactions;

(iv) unaudited profit or loss of the current financial year, and the institution's profit or loss of the immediately preceding financial year pending audit completion; and

(v) any capital items referred to in section 3.8(1)(a), (b), (c) or (d);

(e) subject to section 3.6, the institution's unaudited profit or loss of the current financial year, and the institution's profit or loss of the immediately preceding financial year pending audit completion, except –

(i) any unrealized fair value gains or losses, without deduction of any deferred tax provisions attributable to the fair value gains or losses, on –

(A) loans designated at fair value through profit or loss; and

(B) financial liabilities arising from any change in the institution's credit worthiness; and

(ii) any capital items referred to in section 3.8(1)(a), (b), (c) or (d); and

(f) subject to section 3.7, minority interests in the equity of the institution's subsidiaries arising from a consolidation requirement except any such minority interests which are not freely transferable to –

(i) the institution; or

(ii) members of the group of companies of which the institution is a member,

after taking into account any relevant regulatory, legal or taxation constraints on the transfer of capital.

3.5 Provisions supplementary to section 3.4(d)

An authorized institution's published reserves falling within section 3.4(d) as at a particular date shall be net of dividends –

(a) which are proposed or declared by the institution after that date; and

(b) which, as at that date, are recognized, or are required to be recognized, as equity on the institution's balance sheet.

3.6 Provisions supplementary to section 3.4(e)

(1) An authorized institution's profit or loss falling within section 3.4(e) as at a particular date shall be net of dividends –

(a) which are proposed or declared by the institution after that date; and

(b) which, as at that date, are recognized, or are required to be recognized, as equity on the institution's balance sheet.

(2) An authorized institution may, with the prior consent of the Monetary Authority, include in its profit or loss falling within section 3.4(e) any unrealized fair value gains arising from the institution's holdings of equities and debt securities designated at fair value through profit or loss in its profit or loss account.

3.7 Provisions supplementary to section 3.4(f)

(1) Where –

(a) an authorized institution's core capital consists of minority interests falling within section 3.4(f); and

(b) the minority interests arise on consolidation in the paid-up irredeemable non-cumulative preference shares of the institution's subsidiaries which are special purpose vehicles,

that part of the institution’s core capital shall not constitute more than 15% of the institution's core capital (including the minority interests) –

(c) after making the deductions therefrom required by section 3.14(1); but

(d) before making the deductions therefrom required by section 3.14(2).

(2) Where an authorized institution's core capital consists of minority interests falling within section 3.4(f) as at a particular date, that part of the institution’s core capital shall be net of dividends –

(a) which are proposed or declared by the institution's subsidiaries after that date; and

(b) which, as at that date, are recognized, or are required to be recognized, as equity on the subsidiaries' balance sheets.

Division 3 – Supplementary capital

3.8 Supplementary capital of authorized institution

(1) Subject to sections 3.3 and 3.14, for the purposes of determining an authorized institution's capital base, the supplementary capital of the institution shall consist of the following capital items –

(a) subject to section 3.9, that part of the institution's reserves which is attributable to fair value gains in profit or loss arising from –

(i) the revaluation of the institution's holdings of land and buildings except land and buildings mortgaged to the institution to secure a debt; and

(ii) the revaluation of the institution's share of the net asset value of any subsidiary of the institution to the extent that the value has changed as a result of the revaluation of the subsidiary's holdings of land and buildings except land and buildings mortgaged to the subsidiary to secure a debt;

(b) subject to section 3.10, that part of the institution's reserves which is attributable to fair value gains arising from –

(i) the revaluation of the institution's holdings of equities and debt securities not held for trading purposes; and

(ii) the institution's holdings of equities and debt securities designated at fair value through profit or loss which do not fall within section 3.4(e);

(c) with the prior consent of the Monetary Authority, that part of the institution's reserves which is attributable to fair value gains arising from the institution's holdings of any other financial assets not held for trading purposes, including such assets (other than unrealized gains or losses on loans) which are available-for-sale or designated at fair value through profit or loss;

(d) subject to section 3.11, the institution's regulatory reserve for general banking risks and collective provisions;

(e) the institution's perpetual subordinated debt where, under the terms on which the debt instrument is to be issued, the Monetary Authority is satisfied that the following conditions are met (and, after issue, will continue to be met) –

(i) the claims of the lender against the institution are fully subordinated to those of all unsubordinated creditors;

(ii) the debt is not secured against any assets of the institution;

(iii) the money advanced to the institution is permanently available to it;

(iv) the debt is not repayable without the prior consent of the Monetary Authority;

(v) the money advanced to the institution is available to meet losses without the institution being obliged to cease trading;

(vi) the institution is entitled to defer the payment of interest where its profitability will not support such payment; and

(vii) if the rate of interest payable on the debt is liable to be increased under the terms of the debt instrument –

(A) the rate of interest will not be increased until the expiry of 10 years from the day on which the debt is issued;

(B) the rate of interest will not be increased more than once; and

(C) the rate of interest will not be increased beyond a limit considered appropriate by the Monetary Authority;

(f) the institution's paid-up irredeemable cumulative preference shares where, under the terms on which the shares are to be issued, the Monetary Authority is satisfied that the following conditions are met (and, after issue, will continue to be met) –

(i) the shares are not redeemable without the prior consent of the Monetary Authority;

(ii) the money raised by the issue of the shares is available to meet losses without the institution being obliged to cease trading; and

(iii) if the dividends payable on the shares are liable to be increased under the terms –

(A) such dividends will not be increased until the expiry of 10 years from the day on which the shares are issued;

(B) such dividends will not be increased more than once; and

(C) such dividends will not be increased beyond a limit considered appropriate by the Monetary Authority;

(g) subject to section 3.12, the institution's term subordinated debt where, under the terms on which the debt instrument is to be issued, the Monetary Authority is satisfied that the following conditions are met (and, after issue, will continue to be met) –

(i) the claims of the lender against the institution are fully subordinated to those of all unsubordinated creditors;

(ii) the debt is not secured against any assets of the institution;

(iii) the debt has a minimum initial period to maturity of more than 5 years (even though that period may be subsequently reduced with the prior consent of the Monetary Authority);

(iv) any debt repayable prior to maturity will not be so repaid without the prior consent of the Monetary Authority; and

(v) if the rate of interest payable on the debt is liable to be increased under the terms of the debt instrument –

(A) the rate of interest will not be increased until the expiry of 5 years from the day on which the debt is issued;

(B) the rate of interest will not be increased more than once; and

(C) the rate of interest will not be increased beyond a limit considered appropriate by the Monetary Authority;

(h) subject to section 3.12, the institution's paid-up term preference shares where, under the terms on which the shares are to be issued, the Monetary Authority is satisfied that the following conditions are met (and, after issue, will continue to be met) –

(i) the shares have a minimum initial period to maturity of more than 5 years (even though that period may be subsequently reduced with the prior consent of the Monetary Authority);

(ii) any shares redeemable prior to maturity will not be so redeemed without the prior consent of the Monetary Authority; and

(iii) if the dividends payable on the shares are liable to be increased under the terms –

(A) such dividends will not be increased until the expiry of 5 years from the day on which the shares are issued;

(B) such dividends will not be increased more than once; and

(C) such dividends will not be increased beyond a limit considered appropriate by the Monetary Authority; and

(*i*) subject to section 3.13, minority interests in the paid-up irredeemable cumulative preference shares and paid-up term preference shares of the institution's subsidiaries arising from a consolidation requirement imposed on the institution, and minority interests which are not included in the institution's core capital pursuant to section 3.4(f) by virtue only of section 3.7.

(2) In subsection (1)(a) and (b) -

"reserves" ( ), in relation to an authorized institution -

(a) means the institution's reserves without deduction of any deferred tax provisions attributable to the reserves; and

(b) includes, in relation to subsection (1)(a), shares issued by the institution through capitalizing reserves falling within that part of the institution's reserves referred to in that subsection.

3.9 Provisions supplementary to section 3.8(1)(a)

(1) An authorized institution's reserves shall not fall within that part of reserves referred to in section 3.8(1)(a) unless –

(a) the institution has a clearly documented policy on the frequency and method of revaluation of its holdings of land and buildings which is satisfactory to the Monetary Authority;

(b) the institution does not depart from that policy except after consultation with the Monetary Authority;

(c) subject to paragraph (d), any revaluation of the institution's holdings of land and buildings is undertaken by an independent professional valuer;

(d) in any case where the institution demonstrates to the satisfaction of the Monetary Authority that, despite all reasonable efforts, the institution has been unable to obtain the services of an independent professional valuer to undertake the revaluation of all or part, as the case may be, of the institution's holdings of land and buildings, any revaluation of such holdings undertaken by a person who is not an independent professional valuer is endorsed in writing by an independent professional valuer;

(e) any revaluation of the institution's holdings of land and buildings is –

(i) approved by the institution's external auditors; and

(ii) explicitly reported in the institution's audited accounts; and

(f) the fair value gains referred to in section 3.8(1)(a) are recognized in accordance with relevant accounting standards and any such gains not recognized on the balance sheet of the institution are excluded from the part of reserves referred to in that section.

(2) Subject to subsections (3) and (4), an authorized institution shall not include in its supplementary capital more than 45% of any fair value gains of any item referred to in section 3.8(1)(a) arising from any revaluation referred to in that section.

(3) Subject to subsection (4), an authorized institution shall only include in its supplementary capital –

(a) that amount of fair value gains referred to in section 3.8(1)(a) which arise from revaluations referred to in section 3.8(1)(a)(i) as does not exceed –

(i) where the institution was an authorized institution on 31 December 1998, the amount included in the institution's supplementary capital as at that date in respect of the like gains as at that date; or

(ii) where the institution became an authorized institution after 31 December 1998, the amount included in the institution's supplementary capital as at the relevant date in respect of the like gains as at that date; and

(b) that amount of fair value gains referred to in section 3.8(1)(a) which arise from revaluations referred to in section 3.8(1)(a)(ii) as does not exceed –

(i) where the institution was an authorized institution on 31 December 1998, the amount included in the institution's supplementary capital as at that date in respect of the like gains as at that date;

(ii) where the institution became an authorized institution after 31 December 1998, the amount included in the institution's supplementary capital as at the relevant date in respect of the like gains as at that date.

(4) An authorized institution shall not include any fair value gains referred to in section 3.8(1)(a) for the purposes of determining its capital base unless –

(a) the gains comprise –

(i) where the institution was an authorized institution on 31 December 1998, any amount of fair value gains which as at that date were reported to the Monetary Authority; or

(ii) where the institution became an authorized institution after 31 December 1998, any amount of fair value gains which as at the relevant date were reported to the Monetary Authority; or

(b) the gains arise from a merger or acquisition and the institution has the prior consent of the Monetary Authority to so use the gains.

(5) An authorized institution shall not, in calculating its supplementary capital, set-off losses in respect of land and buildings which are for the institution's own use where the losses are recognized in the institution's profit or loss against unrealized gains that are reflected directly in equity through the statement of changes in equity.

(6) An authorized institution shall deduct from its core capital any cumulative losses of the institution arising from the institution's holdings of land and buildings below the depreciated cost value (whether or not any such land and buildings are held for the institution's own use or for investment purposes).

(7) In subsection (3)(a) and (b) –

"supplementary capital" ( ), in relation to an authorized institution, has the meaning assigned to "Supplementary Capital" by the Third Schedule to the Ordinance –

(a) as in force on 31 December 1998 if the institution was an authorized institution on that date; or

(b) as in force on the relevant date in any other case if, and only if, the relevant date is a date before the date on which this section comes into operation.

(8) In subsections (3) and (4) –

"relevant date" (　　), in relation to an authorized institution, means that date after 31 December 1998 on which the institution became an authorized institution.

3.10 Provisions supplementary to section 3.8(1)(b)

(1) An authorized institution shall not include in its supplementary capital more than 45% of any fair value gains referred to in section 3.8(1)(b).

(2) An authorized institution –

(a) shall deduct from its core capital –

(i) cumulative unrealized losses of the institution –

(A) which arise from the institution's holdings of equities and debt securities not held for trading purposes; and

(B) which fall below the cost of those securities; and

(ii) impairment losses in respect of the institution's holdings of equities and debt securities not held for trading purposes; and

(b) shall not, for the purposes of paragraph (a)(ii), set-off any impairment losses in respect of securities referred to in that paragraph against any unrealized gains in respect of those securities.

(3) An authorized institution shall deduct from its supplementary capital any overall deficit arising from the revaluation of its holdings of equities and debt securities falling within section 3.8(1)(b) (but excluding any losses falling within subsection (2)(a)).

3.11 Provisions supplementary to section 3.8(1)(d)

(1) Subject to subsections (2) and (3), an authorized institution which uses the STC approach or BSC approach, or both, shall not include in its supplementary capital that amount of its total regulatory reserve for general banking risks and collective provisions which exceeds 1.25% of the institution's total risk-weighted amount for relevant risks, being the sum of all the institution's risk-weighted amounts for –

(a) all the institution's non-securitization exposures to credit risk subject to the STC approach or BSC approach, or both;

(b) all the institution's securitization exposures to credit risk subject to the STC(S) approach;

(c) all the institution's exposures to operational risk; and

(d) all the institution's exposures to market risk.

(2) An authorized institution which uses any combination of the STC approach, BSC approach and IRB approach –

(a) subject to paragraph (b), shall apportion its total regulatory reserve for general banking risks and collective provisions between the STC approach, BSC approach, IRB approach, STC(S) approach or IRB(S) approach on a pro rata basis in accordance with the proportions of the institution's risk-weighted amount for credit risk which are calculated by

using the STC approach, BSC approach, IRB approach, STC(S) approach or IRB(S) approach, as the case requires;

(b) may, with the prior consent of the Monetary Authority, use its own method to apportion its total regulatory reserve for general banking risks and collective provisions between the STC approach, BSC approach, IRB approach, STC(S) approach or IRB(S) approach;

(c) shall, after it has carried out the apportionment referred to in paragraph (a) or (b) –

(i) comply with subsection (1) in respect of that portion of its total regulatory reserve for general banking risks and collective provisions which is apportioned to the STC approach or BSC approach, or both, and the STC(S) approach; and

(ii) exclude from its supplementary capital that portion of its total regulatory reserve for general banking risks and collective provisions which is apportioned to the IRB approach and IRB(S) approach.

(3) Where an authorized institution uses the IRB approach –

(a) subject to subsection (2)(c)(ii) and paragraph (b), the institution shall deduct the excess of its total EL amount over its total eligible provisions from its core capital and supplementary capital in accordance with section 3.14(2)(b);

(b) if the total EL amount referred to in paragraph (a) is less than the total eligible provisions referred to in that paragraph, the institution may include the excess of all the total eligible provisions over the total EL amount in its supplementary capital up to 0.6% of its risk-weighted amount for credit risk calculated by using the IRB approach.

3.12 Provisions supplementary to section 3.8(1)(g) and (h)

An authorized institution shall –

(a) in the case of a debt instrument falling within section 3.8(1)(g) or a share falling within section 3.8(1)(h), for the purposes of calculating its supplementary capital, discount by 20% the original amount of the debt instrument or share, as the case may be, each year during the 4 years immediately preceding the maturity of the debt instrument or share, as the case may be; and

(b) exclude from its supplementary capital any amount by which the sum of the amounts falling within section 3.8(1)(g) and (h) exceeds 50% of the institution's core capital –

(i) after making the deductions therefrom required by section 3.14(1); but

(ii) before making the deductions therefrom required by section 3.14(2).

3.13 Provisions supplementary to section 3.8(1)(*i*)

An authorized institution's minority interests falling within section 3.8(1)(*i*) as at a particular date shall be net of dividends –

(a) which are proposed or declared by the institution's subsidiaries after that date; and

(b) which, as at that date, are recognized, or are required to be recognized, as equity on the subsidiaries' balance sheets.

Division 4 – Deductions from core capital and supplementary capital

3.14 Deductions from core capital and supplementary capital

(1) An authorized institution shall deduct from its core capital –

(a) the amount of goodwill of the institution reported as at the calendar quarter end date, including –

(i) any goodwill relating to the institution's holdings of shares and other regulatory capital instruments which are subject to any deduction required by subsection (2); and

(ii) any goodwill relating to the subsidiaries of the institution;

(b) the amount of other intangible assets of the institution reported as at the calendar quarter end date;

(c) the amount of net deferred tax assets of the institution reported as at the calendar quarter end date;

(d) the amount of any gain-on-sale arising from a securitization transaction in which the institution is the originating institution; and

(e) any other securitization exposure specified in a notice given to the institution under subsection (4).

(2) Subject to section 3.15(1), an authorized institution shall deduct from both of its core capital and supplementary capital –

(a) subject to subsection (1)(a)(i), the amount of the institution's holding of shares in a holding company of the institution;

(b) if the institution uses the IRB approach and the institution's total EL amount referred to in section 3.11(3)(a) exceeds the institution's total eligible provisions referred to in that section, the excess of the total EL amount over the total eligible provisions;

(c) subject to subsection (1)(a)(i), the amount of the institution's holdings of shares and other regulatory capital instruments issued by a company in which the institution is entitled to exercise, or control the exercise of, more than 20% of the voting power at any general meeting of the company (and whether or not the company is a subsidiary of the institution) but excluding –

(i) any such shares and other regulatory capital instruments held by the institution in a subsidiary of the institution the subject of a consolidation requirement; or

(ii) the institution's reserves which arise from the revaluation of the holdings of land and buildings of a subsidiary of the institution and do not fall within the definition of "reserves" in section 3.8(2);

(d) subject to subsection (1)(a)(i), the amount of the institution's holdings of shares and other regulatory capital instruments in any relevant subsidiary undertaking of the institution but excluding –

(i) any such holdings falling within paragraph (c); or

(ii) any such holdings excluded from paragraph (c) by virtue of falling within subparagraph (i) or (ii) of paragraph (c);

(e) subject to subsection (1)(a)(i), the amount of any of the institution's holdings of shares and other regulatory capital instruments issued by any bank not falling within paragraph (a), (c) or (d) except where the institution demonstrates to the satisfaction of the Monetary Authority that the holding –

(i) is not the subject of an arrangement whereby 2 or more persons agree to hold each other's capital; or

(ii) is not otherwise a strategic investment;

(f) subject to subsection (1)(a)(i), the amount of –

(i) any of the institution's loans to a connected company of the institution not falling within paragraph (a), (c), (d) or (e);

(ii) any of the institution's holdings of shares and debentures issued by a connected company of the institution not falling within paragraph (a), (c), (d) or (e); and

(iii) any of the institution's guarantees of the liabilities of a connected company of the institution not falling within paragraph (a), (c), (d) or (e),

except where the institution demonstrates to the satisfaction of the Monetary Authority that the loan was made, the shares and debentures are being held, or the guarantee was given, as the case may be, in the ordinary course of the institution's business;

(g) subject to subsection (1)(a)(i), in the case of the institution's holdings of shares in any company not falling within paragraph (a), (c), (d), (e) or (f), where the net book value of the holdings exceeds 15% of the capital base of the institution as reported in the institution's capital adequacy ratio return as at the immediately preceding calendar quarter end date, that amount of the net book value of the holdings which exceeds that 15%;

(h) subject to subsection (3) and section 3.15(2), the amount of any relevant capital shortfall in respect of a subsidiary of the institution –

(i) which is a securities firm or insurance firm; and

(ii) which is not the subject of a consolidation requirement imposed on the institution;

(*i*) if the institution uses the PD/LGD approach to calculate its credit risk in respect of equity exposures, the EL amount of such exposures as calculated in accordance with section 6.86; and

(j) other amounts specified in Schedule 3.1 for the purposes of this paragraph.

(3) Where a subsidiary of an authorized institution which is a securities firm or insurance firm fails to meet the minimum capital requirements applicable to it and fails to remedy the breach within a period as determined or prescribed by the securities regulator or insurance regulator of the securities firm or insurance firm, as the case may be, then –

(a) the institution shall, as soon as practicable after it becomes aware of the failure, give notice in writing to the Monetary Authority of particulars of the securities firm or insurance firm, as the case may be, and the details of the failure; and

(b) the Monetary Authority may, by notice in writing given to the institution, and beginning on such date, or the occurrence of such event, as is specified in the notice, and ending on such date, or the occurrence of such event, as is specified in the notice, require the institution to deduct in its determination of capital base an amount which, in the opinion of the Monetary Authority, represents the shortfall of the securities firm or insurance firm, as the case may be, in meeting those minimum capital requirements.

(4) The Monetary Authority may, by notice in writing given to an authorized institution, require the institution to deduct from its core capital a securitization exposure of the institution specified in the notice.

(5) For the avoidance of doubt, it is hereby declared that –

(a) the exclusion under subsection (2)(c)(i) does not apply only when an authorized institution is calculating its capital adequacy ratio on a solo basis;

(b) in the case of an authorized institution calculating its capital adequacy ratio on a solo-consolidated basis, the reference to "subsidiary" in subsection (2)(c)(i) means a solo-consolidated subsidiary of the institution.

(6) In this section –

"relevant capital shortfall" ( ), in relation to a subsidiary of an authorized institution, means the amount specified in a notice under subsection (3) given to the institution in respect of that subsidiary;

"relevant subsidiary undertaking" ( ), in relation to an authorized institution, means a subsidiary undertaking of the institution –

(a) which does not fall within the range of consolidation specified in a section 79A(1) requirement or section 98(2) requirement in relation to the institution; and

(b) which falls within the range of consolidation specified in accounting standards issued by the Council of the Hong Kong Institute of Certified Public Accountants pursuant to section 18A of the Professional Accountants Ordinance (Cap. 50).

3.15 Provisions supplementary to section 3.14(2)

(1) An authorized institution shall –

(a) subject to paragraph (c) and subsection (2), deduct from its core capital 50% of any specified amount;

(b) subject to paragraph (c) and subsection (2), deduct from its supplementary capital 50% of any specified amount; and

(c) deduct from its core capital such amount of any specified amount which cannot be deducted under paragraph (b) because it exceeds the amount of supplementary capital available for such deduction under that paragraph.

(2) It is hereby declared that the amount to be deducted under section 3.14(2)(h) by an authorized institution from its core capital and supplementary capital –

(a) is in addition to any other deduction the institution is required to make under section 3.14(2) from its core capital and supplementary capital in respect of the subsidiary concerned of the institution; and

(b) represents the amount by which that subsidiary is deficient in meeting its minimum capital requirements.

PART 4

CALCULATION OF CREDIT RISK FOR NON-SECURITIZATION EXPOSURES : STC APPROACH

Division 1 – General

4.1 Application of Part 4

(1) This Part applies to an authorized institution which uses the STC approach to calculate its credit risk for non-securitization exposures.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Part is a reference to an authorized institution which uses the STC approach to calculate its credit risk for non-securitization exposures.

4.2 Interpretation of Part 4

In this Part, unless the context otherwise requires –

"attributed risk-weight" ( ), in relation to a person to whom an authorized institution has an exposure –

(a) if –

(i) the risk-weight of the exposure is determined in accordance with any of sections 4.6 to 4.12; and

(ii) the person has an ECAI issuer rating,

means the risk-weight which would be attributable, in accordance with those sections, to a senior and unsecured debt obligation of the person based on that ECAI issuer rating, and on the assumption that no ECAI issue specific rating has been assigned to any debt obligation of the person;

(b) if –

(i) the risk-weight of the exposure is determined in accordance with any of sections 4.6 to 4.12; and

(ii) the person has no ECAI issuer rating,

means the risk-weight which would be attributable, in accordance with those sections, to an exposure to the person as an obligor who has neither an ECAI issuer rating nor any ECAI issue specific rating assigned to any debt obligation of the person;

(c) if the risk-weight of the exposure is determined in accordance with section 4.15, 4.17 or 4.18, means the risk-weight which would be attributable to the exposure pursuant to those sections;

"cash items" ( ), in relation to an authorized institution, means all or any of the following –

(a) legal tender notes or other notes, and coins, representing the lawful currency of a country held by the institution;

(b) the institution's holdings of certificates of indebtedness issued by the Government for the issue of legal tender notes;

(c) gold bullion held by the institution, or gold bullion held on an allocated basis for the institution by another person, which is backed by gold bullion liabilities;

(d) gold bullion held on an unallocated basis for the institution by another person which is backed by gold bullion liabilities;

(e) gold bullion held by the institution, or gold bullion held for the institution by another person, which is not backed by gold bullion liabilities;

(f) cheques, drafts and other items drawn on other banks –

(i) which are payable to the account of the institution immediately upon presentation; and

(ii) which are in the process of collection;

(g) unsettled clearing items of the institution which are being processed through any interbank clearing system in Hong Kong;

(h) receivables from transactions in securities (other than repo-style transactions), foreign exchange, and commodities which are not yet due for settlement;

(*i*) positive current exposure incurred by the institution under transactions in securities (other than repo-style transactions), foreign exchange, and commodities –

(i) which are entered into on a delivery-versus-payment basis; and

(ii) which are outstanding after the due settlement date in respect of the transaction concerned;

(j) the amounts of payment made or the current market value of the thing delivered, and the positive current exposure incurred, by the institution under transactions in securities (other than repo-style transactions), foreign exchange, and commodities –

(i) which are entered into on a non-delivery-versus-payment basis; and

(ii) which are outstanding up to and including the fourth business day after the due settlement date in respect of the transaction concerned;

"comprehensive approach" ( ), in relation to the use by an authorized institution of recognized collateral which falls within section 4.31 to reduce the risk-weighted amount of the institution's exposures, means the method of using the recognized collateral set out in Division 7;

"corporate" ( ) means –

(a) a partnership or company; or

(b) an unincorporated business owned by not more than one person,

which is neither –

(c) a public sector entity, bank or securities firm; nor

(d) an obligor to which the institution has an exposure which falls within the definition of "regulatory retail exposure" in this section;

"credit equivalent amount" ( ), in relation to an off-balance sheet exposure, means the credit equivalent amount of the exposure calculated under section 4.22 or 4.24, as the case requires;

"debt securities" ( ) means any securities other than shares, stocks or import or export trade bills;

"exposure" ( ), in relation to an authorized institution, means a credit exposure (including an asset) of the institution;

"main index" ( ) means an index by reference to which futures contracts or option contracts are traded on a recognized exchange;

"minimum holding period" ( ), in relation to collateral or any other thing held by an authorized institution, or by another person, for the institution's benefit (however described), means a period –

(a) which is reasonably likely to be required by the institution to realize the collateral or thing;

(b) which commences on the date of the default by the obligor giving rise to the right on the part of the institution to realize the collateral or thing; and

(c) which ends on the business day (being a day which is not a public holiday in any relevant market for the collateral or thing) on which the institution would be reasonably likely to be able to realize the collateral or thing;

"non-qualifying reference obligation" ( ) means a reference obligation which is not a qualifying reference obligation;

"past due exposure" ( ) means an exposure which –

(a) is overdue for more than 90 days; or

(b) has been rescheduled;

"principal amount" ( ) –

(a) in relation to an on-balance sheet exposure of an authorized institution, means the book value (including accrued interest and revaluations) of the exposure;

(b) in relation to an off-balance sheet exposure of an authorized institution, means –

(i) subject to subparagraph (ii), in the case of an exposure listed in Table 4.9, the contracted amount of the exposure;

(ii) in the case of an exposure listed in Table 4.9 which is an undrawn or partially drawn facility, the amount of the undrawn commitment;

(iii) subject to subparagraph (iv), in the case of an exposure listed in Table 4.10, the notional amount of the exposure;

(iv) in the case of an exposure listed in Table 4.10 where the stated notional amount of the exposure is leveraged or enhanced by the structure of the exposure, the effective notional amount of the exposure taking into account that the stated notional amount is so leveraged or enhanced, as the case may be;

"qualifying reference obligation" ( ) means a reference obligation which falls within section 9.7(4) or is issued by a sovereign with a credit quality grade of 1, 2 or 3 as determined in accordance with section 9.7;

"recognized collateral" ( ) means collateral recognized under section 4.28;

"recognized credit derivative contract" ( ) means –

(a) a credit derivative contract recognized under section 4.50(1); or

(b) a credit derivative contract which falls within section 4.50(2) or (3) to the extent that it is deemed under that section to be a recognized credit derivative contract;

"recognized guarantee" ( ) means a guarantee recognized under section 4.49;

"regulatory retail exposure" ( ) means an exposure of an institution which shall be allocated a risk-weight of 75% under section 4.15;

"rescheduled" ( ), in relation to an on-balance sheet exposure of an authorized institution –

(a) subject to paragraph (b), means the original terms of repayment of the exposure have been revised because of the inability of the obligor to meet the original repayment terms;

(b) does not include an exposure, the original terms of repayment of which have been revised as referred to in paragraph (a), where the exposure has subsequently been serviced by the obligor in accordance with the revised repayment terms continuously for –

(i) in the case of an exposure with monthly payments (including both interest and principal), a period of not less than 6 months; or

(ii) in any other cases, a period of not less than 12 months;

"simple approach" ( ), in relation to the use by an authorized institution of recognized collateral which falls within section 4.30 to reduce the risk-weighted amount of the institution's exposures, means the method of using the recognized collateral set out in Division 6;

"small business" ( ), in relation to a regulatory retail exposure –

(a) means –

(i) subject to paragraph (b), an unlisted company with an annual turnover not exceeding $50 million which, if required to give consent under the small business consent provisions, has given its consent for the disclosure of its credit data to a commercial credit reference agency; or

(ii) an unincorporated enterprise with an annual turnover not exceeding $50 million which, if required to give consent under the small business consent provisions, has given its consent for disclosure of its credit data to a commercial credit reference agency;

(b) does not include an unlisted company belonging to a group of companies with an annual turnover in excess of $50 million;

"small business consent provisions" ( ) means the provisions of –

(a) the Commercial Credit Reference Agency framework set out in the Monetary Authority's Supervisory Policy Manual Module 1C – 7 entitled "The Sharing and Use of Commercial Credit Data through a Commercial Credit Reference Agency"; or

(b) any guidelines issued by the Monetary Authority, The Hong Kong Association of Banks, or The DTC Association, relating to the framework referred to in paragraph (a);

"sovereign foreign public sector entity" (　　) –

(a) subject to paragraph (b), means a foreign public sector entity which is regarded as a sovereign for the purpose of calculating the capital adequacy ratio of a bank by the relevant banking supervisory authority of the jurisdiction in which the entity and the bank are incorporated;

(b) does not include a restricted foreign public sector entity;

"standard supervisory haircut" (　　), in relation to the comprehensive approach to the treatment of recognized collateral, means a haircut specified in Schedule 4.2.

Division 2 – Calculation of credit risk under STC approach, exposures to be covered in calculation, and classification of exposures

4.3 Calculation of risk-weighted amount of exposures

(1) Subject to section 4.4, an authorized institution shall calculate an amount representing the degree of credit risk to which the institution is exposed by aggregating –

(a) the risk-weighted amount of the institution's on-balance sheet exposures; and

(b) the risk-weighted amount of the institution's off-balance sheet exposures.

(2) For the purposes of subsection (1)(a) –

(a) subject to paragraph (b), an authorized institution shall calculate the risk-weighted amount of the institution's on-balance sheet exposures by multiplying the principal amount of each such exposure net of specific provisions by the relevant risk-weight attributable to the exposure determined under sections 4.6 to 4.19;

(b) subject to paragraph (c), an authorized institution may reduce the risk-weighted amount of the institution's on-balance sheet exposure by taking into account the effect of any recognized credit risk mitigation in respect of the exposure in the manner set out in Divisions 5 to 10;

(c) where an on-balance sheet exposure of an authorized institution has an ECAI issue specific rating, the institution shall not under paragraph (b) take into account the effect of any recognized credit risk mitigation applicable to the exposure which has already been taken into account in that rating.

(3) For the purposes of subsection (1)(b) –

(a) subject to paragraph (b), an authorized institution shall calculate the risk-weighted amount of the institution's off-balance sheet exposures by –

(i) in the case of any such exposure which is an OTC derivative transaction or credit derivative contract –

(A) converting the principal amount of the exposure into its credit equivalent amount in the manner set out in section 4.22 or 4.24, as the case requires; and

(B) multiplying the credit equivalent amount, net of specific provisions, by the exposure's relevant risk-weight determined under section 4.25;

(ii) in any other case –

(A) converting the principal amount of each such exposure, net of specific provisions, into its credit equivalent amount in the manner set out in section 4.22 or 4.24, as the case requires; and

(B) multiplying the credit equivalent amount by the exposure's relevant risk-weight determined under section 4.25;

(b) subject to paragraph (c), an authorized institution may reduce the risk-weighted amount of the institution's off-balance sheet exposure by taking into account the effect of any recognized credit risk mitigation in respect of the exposure in the manner set out in Divisions 5 to 10;

(c) where an off-balance sheet exposure of an authorized institution has an ECAI issue specific rating, the institution shall not under paragraph (b) take into account the effect of any recognized credit risk mitigation applicable to the exposure which has already been taken into account in that rating.

4.4 On-balance sheet exposures and off-balance sheet exposures to be covered

An authorized institution shall, for the purposes of calculating an amount representing the degree of credit risk to which the institution is exposed under section 4.3, take into account and risk-weight –

(a) all of its on-balance sheet exposures and off-balance sheet exposures booked in its banking book except such exposures –

(i) which under sections 3.14 and 3.15 are required to be deducted from any of the institution's core capital and supplementary capital; or

(ii) which are subject to the requirements of Part 7;

(b) all of its exposures to counterparties under credit derivative contracts, OTC derivative transactions, or repo-style transactions, booked in its trading book; and

(c) all of its market risk exposures which are exempted from section 2.17 under section 2.22, except for its total net open position in foreign exchange exposures as derived in accordance with section 9.16.

4.5 Classification of exposures

An authorized institution shall classify each of its exposures, according to the obligor or the nature of the exposure, into one only of the following classes –

(a) sovereign exposures;

(b) public sector entity exposures;

(c) multilateral development bank exposures;

(d) bank exposures;

(e) securities firm exposures;

(f) corporate exposures;

(g) collective investment scheme exposures;

(h) cash items;

(*i*) regulatory retail exposures;

(j) residential mortgage loans;

(k) other exposures which are not past due exposures; or

(*l*) past due exposures.

Division 3 – Determination of risk-weights applicable to on-balance sheet exposures

4.6 Sovereign exposures

(1) Where a sovereign has an ECAI issuer rating, or an ECAI issue specific rating assigned to a debt obligation issued or undertaken by the sovereign, an authorized institution shall map the ECAI issuer rating or ECAI issue specific rating, as the case may be, to a scale of credit quality grades represented by the numerals 1, 2, 3, 4, 5 and 6 in accordance with Table A in Schedule 4.1.

(2) Subject to sections 4.7 and 4.20, an authorized institution shall allocate a risk-weight to a sovereign exposure which falls within subsection (1) in accordance with Table 4.1.

TABLE 4.1

RISK-WEIGHTS FOR SOVEREIGN EXPOSURES

Credit quality grade (sovereigns)	Risk-weight
1	0%
2	20%
3	50%
4	100%
5	100%
6	150%

(3) Where a sovereign has neither an ECAI issuer rating, nor an ECAI issue specific rating assigned to a debt obligation issued or undertaken by the sovereign, an authorized institution shall allocate a risk-weight of 100% to an exposure of the institution to the sovereign.

4.7 Exceptions to section 4.6

(1) Where a sovereign exposure of an authorized institution consists of a domestic currency exposure to the Government (including an exposure to the Exchange Fund), the institution shall allocate a risk-weight of 0% to the exposure.

(2) Where –

(a) a sovereign exposure of an authorized institution consists of a domestic currency exposure to a sovereign (other than the Government or a restricted sovereign); and

(b) the relevant banking supervisory authority for the jurisdiction of the sovereign would permit banks carrying on banking business in the jurisdiction to allocate a risk-weight to the exposure which is lower than the risk-weight which would be allocated under section 4.6 to the exposure,

the institution may allocate the lower risk-weight to the exposure.

(3) Where –

(a) a sovereign exposure of an authorized institution consists of a domestic currency exposure to a sovereign (other than the Government or a restricted sovereign); and

(b) subsection (2) is not applicable to the exposure,

the institution may allocate to the exposure a risk-weight of –

(c) 0% if the exposure arises from a loan by the institution or a deposit payable on demand made with the sovereign by the institution;

(d) 10% if the exposure arises from fixed rate securities with a residual maturity of less than one year or floating rate securities of any maturity; or

(e) 20% if the exposure arises from fixed rate securities with a residual maturity of not less than one year.

(4) Where a sovereign exposure of an authorized institution consists of an exposure to a relevant international organization, the institution shall allocate a risk-weight of 0% to the exposure.

4.8 Public sector entity exposures

(1) Subject to subsection (2), where a public sector entity exposure of an authorized institution consists of an exposure to a domestic public sector entity, the institution shall allocate a risk-weight to the exposure which is –

(a) the next higher risk-weight than the risk-weight attributable to the credit quality grade applicable to the Government in accordance with section 4.6 on the basis of an ECAI issuer rating assigned to the Government;

(b) if there is no such higher risk-weight, the risk-weight so attributed to the credit quality grade applicable to the Government; or

(c) if the Government does not have an ECAI issuer rating, a risk-weight of 100%.

(2) Where a public sector entity exposure of an authorized institution consists of an exposure to a foreign public sector entity –

(a) subject to paragraphs (b), (c) and (d), the institution shall allocate a risk-weight to the exposure which is –

(i) the next higher risk-weight than the risk-weight attributable to the credit quality grade applicable to the sovereign of the jurisdiction in which that entity is incorporated in accordance with section 4.6 on the basis of an ECAI issuer rating assigned to the sovereign; or

(ii) if there is no such higher risk-weight, the risk-weight so attributed to the credit quality grade applicable to the sovereign;

(b) if the entity is a sovereign foreign public sector entity, section 4.6, with all necessary modifications, applies to the exposure as if the entity were a sovereign, using the ECAI issuer rating of the sovereign of the jurisdiction in which that entity is incorporated;

(c) if credit quality grade 5 has been allocated to the sovereign referred to in paragraph (a) on the basis of an ECAI issuer rating assigned to the sovereign, the institution shall allocate a risk-weight of 100% to the exposure;

(d) if the sovereign referred to in paragraph (a) does not have an ECAI issuer rating, the institution shall allocate a risk-weight of 100% to the exposure.

4.9 Multilateral development bank exposures

An authorized institution shall allocate a risk-weight of 0% to an exposure of the institution to a multilateral development bank.

4.10 Bank exposures

(1) Subject to subsection (2), where a bank has an ECAI issuer rating, or an ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank, an authorized institution shall map the ECAI issuer rating or ECAI issue specific rating, as the case may be, to a scale of credit quality grades represented by the numerals 1, 2, 3, 4 and 5 in accordance with Table B in Schedule 4.1.

(2) Where an ECAI issue specific rating referred to in subsection (1) is a short-term ECAI issue specific rating as referred to in subsection (6), then subsections (6) and (7) apply.

(3) Subject to subsections (4) to (11) and section 4.20, an authorized institution shall allocate a risk-weight to a bank exposure in accordance with Table 4.2.

TABLE 4.2

RISK-WEIGHTS FOR BANK EXPOSURES

Credit quality grade (banks)	Risk-weight for general exposures	Risk-weight for 3 months' exposures (other than an exposure which has a short-term ECAI issue specific rating)
1	20%	20%
2	50%	20%
3	50%	20%
4	100%	50%
5	150%	150%

(4) Subject to subsections (8) to (11), where an authorized institution has an exposure to a bank which has none of the following –

(a) an ECAI issuer rating;

(b) a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank;

(c) a short-term ECAI issue specific rating assigned to the exposure,

subject to subsection (5), the institution shall allocate –

(d) a risk-weight of 50% to the exposure if it is a general exposure; or

(e) a risk-weight of 20% to the exposure if it is a 3 months' exposure.

(5) Where a bank falls within subsection (4) –

(a) subject to paragraph (b), an authorized institution shall not allocate a risk-weight to an exposure to the bank which is lower than the risk-weight applicable to the credit quality grade allocated to the sovereign of the jurisdiction in which the bank is incorporated in accordance with section 4.6 on the basis of an ECAI issuer rating assigned to the sovereign;

(b) if the sovereign referred to in paragraph (a) does not have an ECAI issuer rating, an authorized institution shall allocate a risk-weight of 100% to the exposure.

(6) Where a bank has a short-term ECAI issue specific rating assigned to an exposure of an authorized institution to the bank, the institution shall map that rating to a scale of credit quality grades represented by the numerals 1, 2, 3 and 4 in accordance with Table E in Schedule 4.1.

(7) Subject to subsection (11) and section 4.20, where a bank has a short-term ECAI issue specific rating assigned to an exposure of an authorized institution to the bank, the institution shall allocate a risk-weight to the exposure in accordance with Table 4.3.

TABLE 4.3

RISK-WEIGHTS FOR BANK EXPOSURES WITH A SHORT-TERM ECAI ISSUE SPECIFIC RATING

Credit quality grade (banks)	Risk-weight for exposures to banks with a short-term ECAI issue specific rating
1	20%
2	50%
3	100%
4	150%

(8) Subject to subsections (10) and (11), where –

(a) a 3 months' exposure (referred to in this subsection as "concerned exposure") of an authorized institution to a bank does not have a short-term ECAI issue specific rating;

(b) the institution or another person (including another authorized institution) has another exposure (referred to in this subsection as "reference exposure") to the bank which has a short-term ECAI issue specific rating; and

(c) if subsections (6) and (7) applied to the reference exposure, the risk-weight which would be allocated pursuant to those subsections to the reference exposure would be –

(i) higher than the risk-weight which would be allocated to the concerned exposure pursuant to subsection (3) if –

(A) the bank has an ECAI issuer rating, or a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank; and

(B) subsection (3) is applied to the concerned exposure; or

(ii) higher than 20% if the bank has neither an ECAI issuer rating, nor a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank,

the institution shall allocate to the concerned exposure the same risk-weight which would be allocated to the reference exposure pursuant to subsections (6) and (7).

(9) Subject to subsections (10) and (11), where –

(a) a 3 months' exposure (referred to in this subsection as "concerned exposure") of an authorized institution to a bank does not have a short-term ECAI issue specific rating;

(b) the institution or another person (including another authorized institution) has another exposure (referred to in this subsection as "reference exposure") to the bank which has a short-term ECAI issue specific rating; and

(c) if subsections (6) and (7) applied to the reference exposure, the risk-weight which would be allocated pursuant to those subsections to the reference exposure would be –

(i) lower than the risk-weight which would be allocated to the concerned exposure pursuant to subsection (3) if –

(A) the bank has an ECAI issuer rating or a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank; and

(B) subsection (3) is applied to the concerned exposure; or

(ii) 20% if the bank has neither an ECAI issuer rating nor a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank,

the institution shall allocate to the concerned exposure –

(d) the risk-weight which would be allocated to the concerned exposure pursuant to subsection (3) if the bank has an ECAI issuer rating, or a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank; or

(e) a risk-weight of 20% if the bank has neither an ECAI issuer rating, nor a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the bank.

(10) Where –

(a) pursuant to subsections (6) and (7), an authorized institution allocates a risk-weight of 150% to an exposure to a bank; or

(b) the institution knows that –

(i) another person (including another authorized institution) has an exposure to the bank which has a short-term ECAI issue specific rating; and

(ii) if subsections (6) and (7) applied to the exposure referred to in subparagraph (i), it would be allocated a risk-weight of 150% pursuant to those subsections,

the institution shall allocate a risk-weight of 150% to each other general exposure or 3 months' exposure it has to the bank which does not have an ECAI issue specific rating.

(11) Notwithstanding any other provision of this section, an authorized institution may allocate a risk-weight of 20% to a 3 months' exposure to a bank if the exposure is denominated and funded in Hong Kong dollars.

(12) In this section –

"general exposure" ( ) means any exposure of an authorized institution to a bank other than a 3 months' exposure;

"3 months' exposure" ( ) means an exposure of an authorized institution to a bank with an original contractual period of time for full repayment of not more than 3 months where the institution does not expect or anticipate that the facility to which the exposure relates will be rolled over at the expiration of the contractual period.

4.11 Securities firm exposures

(1) Subject to subsection (2), where a securities firm has an ECAI issuer rating, or an ECAI issue specific rating assigned to a debt obligation issued or undertaken by the firm, an authorized institution shall map the ECAI issuer rating or ECAI issue specific rating, as the case may be, to a scale of credit quality grades represented by the numerals 1, 2, 3, 4 and 5 in accordance with Table B in Schedule 4.1.

(2) Where an ECAI issue specific rating referred to in subsection (1) is a short-term ECAI issue specific rating as referred to in subsection (6), then subsections (6) and (7) apply.

(3) Subject to subsections (4) to (9) and section 4.20, an authorized institution shall allocate a risk-weight to a securities firm exposure in accordance with Table 4.4.

TABLE 4.4

RISK-WEIGHTS FOR SECURITIES FIRM EXPOSURES

Credit quality grade (securities firms)	Risk-weight
1	20%
2	50%
3	50%
4	100%
5	150%

(4) Subject to subsections (8) and (9), where an authorized institution has an exposure to a securities firm which has none of the following –

(a) an ECAI issuer rating;

(b) a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by it;

(c) a short-term ECAI issue specific rating assigned to the exposure,

subject to subsection (5), the institution shall allocate a risk-weight of 50% to the exposure.

(5) Where a securities firm falls within subsection (4) –

(a) subject to paragraph (b), an authorized institution shall not allocate a risk-weight to an exposure to the firm which is lower than the risk-weight applicable to the credit quality grade allocated to the sovereign of the jurisdiction in which the firm is incorporated in accordance with section 4.6 on the basis of an ECAI issuer rating assigned to the sovereign;

(b) if the sovereign referred to in paragraph (a) does not have an ECAI issuer rating, the institution shall allocate a risk-weight of 100% to the exposure.

(6) Where a securities firm has a short-term ECAI issue specific rating assigned to an exposure of an authorized institution to the firm, the institution shall map that rating to a scale of credit quality grades represented by the numerals 1, 2, 3 and 4 in accordance with Table E in Schedule 4.1.

(7) Subject to section 4.20, where a securities firm has a short-term ECAI issue specific rating assigned to an exposure of an authorized institution to the securities firm, the institution shall allocate a risk-weight to the exposure in accordance with Table 4.5.

TABLE 4.5

RISK-WEIGHTS FOR SECURITIES FIRM EXPOSURES WITH A SHORT-TERM ECAI ISSUE SPECIFIC RATING

Credit quality grade (securities firms)	Risk-weight for exposures to securities firms with a short-term ECAI issue specific rating
1	20%
2	50%
3	100%
4	150%

(8) Where –

(a) pursuant to subsections (6) and (7), an authorized institution allocates a risk-weight of 150% to an exposure to a securities firm; or

(b) the institution knows that –

(i) another person (including another authorized institution) has an exposure to the securities firm which has a short-term ECAI issue specific rating; and

(ii) if subsections (6) and (7) applied to the exposure referred to in subparagraph (i), it would be allocated a risk-weight of 150% pursuant to those subsections,

the institution shall allocate a risk-weight of 150% to each other exposure it has to the securities firm which does not have an ECAI issue specific rating.

(9) Where –

(a) pursuant to subsections (6) and (7), an authorized institution allocates a risk-weight of 50% or 100% to an exposure to a securities firm; or

(b) the institution knows that –

(i) another person (including another authorized institution) has an exposure to the securities firm which has a short-term ECAI issue specific rating; and

(ii) if subsections (6) and (7) applied to the exposure referred to in subparagraph (i), it would be allocated a risk-weight of 50% or 100% pursuant to those subsections,

the institution shall –

(c) subject to paragraph (d), allocate a risk-weight of 100% to each other exposure it has to the securities firm which –

(i) does not have an ECAI issue specific rating; and

(ii) has a residual maturity of not greater than –

(A) the original maturity of the exposure referred to in paragraph (a); or

(B) the original maturity of the exposure referred to in paragraph (b),

whichever is the greater;

(d) if the securities firm has an ECAI issuer rating, or an exposure of another person (including another authorized institution) to the securities firm has a long-term ECAI issue specific rating, which maps to a risk-weight of 150% in accordance with subsections (1) and (3), allocate a risk-weight of 150% to an exposure which would otherwise fall within paragraph (c).

4.12 Corporate exposures

(1) Subject to subsection (2), where a corporate has an ECAI issuer rating, or an ECAI issue specific rating assigned to a debt obligation issued or undertaken by the corporate, an authorized institution shall map the ECAI issuer rating or ECAI issue specific rating, as the case may be, to a scale of credit quality grades represented by the numerals 1, 2, 3, 4 and 5 in accordance with Table C in Schedule 4.1.

(2) Where an ECAI issue specific rating referred to in subsection (1) is a short-term ECAI issue specific rating as referred to in subsection (6), then subsections (6) and (7) shall apply.

(3) Subject to subsections (4) to (9) and section 4.20, an authorized institution shall allocate a risk-weight to a corporate exposure in accordance with Table 4.6.

TABLE 4.6

RISK-WEIGHTS FOR CORPORATE EXPOSURES

Credit quality grade (corporates)	Risk-weight
1	20%
2	50%
3	100%
4	100%
5	150%

(4) Subject to subsections (8) and (9), where an authorized institution has an exposure to a corporate which has none of the following –

(a) an ECAI issuer rating;

(b) a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by it;

(c) a short-term ECAI issue specific rating assigned to the exposure,

subject to subsection (5), the institution shall allocate a risk-weight of 100% to the exposure.

(5) Where a corporate falls within subsection (4) –

(a) subject to paragraph (b), an authorized institution shall not allocate a risk-weight to an exposure to the corporate which is lower than the risk-weight applicable to the credit quality grade allocated to the sovereign of the jurisdiction in which the corporate is incorporated in accordance with section 4.6 on the basis of an ECAI issuer rating assigned to the sovereign;

(b) if the sovereign referred to in paragraph (a) does not have an ECAI issuer rating, an authorized institution shall allocate a risk-weight of 100% to the exposure.

(6) Where a corporate has a short-term ECAI issue specific rating assigned to an exposure of an authorized institution to the corporate, the institution shall map the ECAI issue specific rating to a scale of credit quality grades represented by the numerals 1, 2, 3 and 4 in accordance with Table E in Schedule 4.1.

(7) Subject to section 4.20, where a corporate has a short-term ECAI issue specific rating assigned to an exposure of an authorized institution to the corporate, the institution shall allocate a risk-weight to the exposure in accordance with Table 4.7.

TABLE 4.7

RISK-WEIGHTS FOR CORPORATE EXPOSURES WITH A SHORT-TERM ECAI ISSUE SPECIFIC RATING

Credit quality grade (corporates)	Risk-weight for exposures to corporates with a short-term ECAI issue specific rating
1	20%
2	50%
3	100%
4	150%

(8) Where –

(a) pursuant to subsections (6) and (7), an authorized institution allocates a risk-weight of 150% to an exposure to a corporate; or

(b) the institution knows that –

(i) another person (including another authorized institution) has an exposure to the corporate which has a short-term ECAI issue specific rating; and

(ii) if subsections (6) and (7) applied to the exposure referred to in subparagraph (i), it would be allocated a risk-weight of 150% pursuant to those subsections,

the institution shall allocate a risk-weight of 150% to each other exposure it has to the corporate which does not have an ECAI issue specific rating.

(9) Where –

(a) pursuant to subsections (6) and (7), an authorized institution allocates a risk-weight of 50% or 100% to an exposure to a corporate; or

(b) the institution knows that –

(i) another person (including another authorized institution) has an exposure to the corporate which has a short-term ECAI issue specific rating; and

(ii) if subsections (6) and (7) applied to the exposure referred to in subparagraph (i), it would be allocated a risk-weight of 50% or 100% pursuant to those subsections,

the institution shall –

(c) subject to paragraph (d), allocate a risk-weight of 100% to each other exposure it has to the corporate which –

(i) does not have an ECAI issue specific rating; and

(ii) has a residual maturity of not greater than –

(A) the original maturity of the exposure referred to in paragraph (a); or

(B) the original maturity of the exposure referred to in paragraph (b),

whichever is the greater;

(d) if the corporate has an ECAI issuer rating, or an exposure of another person (including another authorized institution) to the corporate has a long-term ECAI issue specific rating, which maps to a risk-weight of 150% in accordance with subsections (1) and (3), allocate a risk-weight of 150% to an exposure which would otherwise fall within paragraph (c).

4.13 Collective investment scheme exposures

(1) Subject to subsection (2), where a collective investment scheme has an ECAI issue specific rating, an authorized institution which has a collective investment scheme exposure arising from the holding of units or shares in the scheme shall map the ECAI issue specific rating to a scale of credit quality grades represented by the numerals 1, 2, 3, 4 and 5 in accordance with Table D in Schedule 4.1.

(2) Subject to subsection (3) and section 4.20(1) and (2), an authorized institution shall allocate a risk-weight to the collective investment scheme exposure held by it in accordance with Table 4.8.

TABLE 4.8

RISK-WEIGHTS FOR COLLECTIVE INVESTMENT SCHEME EXPOSURES

Credit quality grade (collective investment schemes)	Risk-weight
1	20%
2	50%
3	100%
4	100%
5	150%

(3) Where an authorized institution has an exposure to a collective investment scheme and the scheme has no ECAI issue specific rating, the institution shall allocate a risk-weight of 100% to the exposure.

4.14 Cash items

An authorized institution shall allocate a risk-weight of 0% to all cash items in relation to the institution except that –

(a) in the case of cash items which fall within paragraph (d) of the definition of "cash items" in section 4.2, the institution shall allocate a risk-weight which is the same as the attributed risk-weight of the person who holds the gold bullion concerned;

(b) in the case of cash items which fall within paragraph (e) of the definition of "cash items" in section 4.2, the institution shall allocate a risk-weight of 100%;

(c) in the case of cash items which fall within paragraph (f) of the definition of "cash items" in section 4.2, the institution shall allocate a risk-weight of 20%;

(d) in the case of cash items which fall within paragraph (*i*) of the definition of "cash items" in section 4.2, and remain outstanding for 5 or more business days after the due settlement date, the institution shall allocate a risk-weight of –

(i) 100% for such items which remain so outstanding from 5 to 15 business days (both days inclusive);

(ii) 625% for such items which remain so outstanding from 16 to 30 business days (both days inclusive);

(iii) 937.5% for such items which remain so outstanding from 31 to 45 business days (both days inclusive);

(iv) 1,250% for such items which remain so outstanding for 46 or more business days; and

(e) in the case of cash items which fall within paragraph (j) of the definition of "cash items" in section 4.2, the institution shall allocate a risk-weight which is the same as the attributed risk-weight of the obligor in respect of the transaction concerned.

4.15 Regulatory retail exposures

(1) Where –

(a) the maximum aggregate exposure of an authorized institution to a single obligor, or to a group of obligors considered by the institution as a group of obligors for risk management purposes (including, but not limited to, those grouped under section 81(1)(a), (b), (c) or (d) of the Ordinance), does not exceed $10 million; and

(b) that single obligor, or a particular obligor in the group of obligors, is an individual or small business,

subject to subsections (3) and (4) and section 4.16(4)(a), the institution shall allocate a risk-weight of 75% to any exposure of the institution to that single obligor or that particular obligor arising from a transaction, whether drawn down or not, which takes the form of an advance or extension of credit that is –

(c) an overdraft or other line of credit;

(d) an instalment loan, auto loan or lease or other personal term loan or advance by way of leasing facilities;

(e) a credit card or other revolving credit; or

(f) a credit facility or commitment to lend funds or advance a credit facility to a small business.

(2) For the purposes of subsection (1)(a) –

(a) the maximum aggregate exposure shall be calculated on the assumptions that –

(i) in the case of an on-balance sheet exposure, the amount of the exposure is the principal amount of the exposure;

(ii) in the case of an off-balance sheet exposure which is an OTC derivative transaction or credit derivative contract, the amount of the exposure is the credit equivalent amount of the exposure; and

(iii) in the case of an off-balance sheet exposure which does not fall within subparagraph (ii), the amount of the exposure is the principal amount multiplied by the applicable CCF; and

(b) the following exposures shall be excluded from the calculation of the maximum aggregate exposure –

(i) an exposure which is a residential mortgage loan falling within section 4.16(1) or (9);

(ii) an exposure which is a holding of securities, whether listed or unlisted.

(3) An authorized institution shall not allocate a risk-weight of 75% to any exposure of the institution under subsection (1) if the exposure –

(a) is a residential mortgage loan falling within section 4.16(1) or (9);

(b) is a holding of securities, whether listed or unlisted; or

(c) is a past due exposure.

(4) Where a regulatory retail exposure of an authorized institution is an exposure to a small business in respect of which consent under the small business consent provisions is required, the institution shall comply with those provisions as in force from time to time.

4.16 Residential mortgage loans

(1) Subject to subsections (3) and (6), an authorized institution shall allocate a risk-weight of 35% to a residential mortgage loan in relation to the institution where –

(a) the borrower under the loan is –

(i) an individual or individuals; or

(ii) a property-holding shell company;

(b) the loan is secured by a first legal charge on a residential property or more than one residential property;

(c) each residential property which falls within paragraph (b) is –

(i) if paragraph (a)(i) is applicable, used as the residence of the borrower or as a residence of a tenant of the borrower;

(ii) if paragraph (a)(ii) is applicable, used as the residence of the directors or shareholders of the borrower or as a residence of a tenant of the borrower;

(d) subject to subsections (2) and (5), the loan-to-value ratio of the loan does not exceed 70% at the time a commitment to extend the loan was made by the institution, or in relation to a residential mortgage loan purchased by the institution, at the time the loan was purchased;

(e) the loan-to-value ratio of the loan does not exceed 100% of the current open market value of the property the subject of the loan after the time the loan was drawn by the borrower or purchased by the institution, as the case may be; and

(f) if the borrower under the loan is a property-holding shell company –

(i) all of the borrowed-monies obligations of the company arising under the loan are the subject of a personal guarantee –

(A) which is entered into by one or more than one director or shareholder (referred to in this paragraph as "guarantor") of the company; and

(B) which fully and effectively covers those obligations;

(ii) the institution, having due regard to the guarantor's financial obligations (including, in particular, all the guarantor's borrowed-monies obligations and obligations of suretyship), is satisfied that the guarantor is able to discharge all the guarantor's obligations under the guarantee; and

(iii) the loan has been assessed by reference to substantially similar credit underwriting standards (including loan purpose and loan-to-value and debt service ratios) as would normally be applied by the institution to an individual.

(2) Where a residential mortgage loan is made by an authorized institution to a member of its staff (whether solely or jointly with another person), the loan-to-value ratio of the loan shall not exceed 90% at the time a commitment to extend the loan was made by the institution.

(3) Where, in respect of a residential mortgage loan made or purchased by an authorized institution, any residential property which falls within subsection (1)(b) is situated outside Hong Kong, the institution may allocate a risk-weight to the loan generally provided for under the supervisory treatment, or capital adequacy requirements, applicable to banks carrying on banking business in the jurisdiction in which the residential property is situated.

(4) An authorized institution shall allocate a risk-weight of –

(a) subject to subsections (5) and (9), 75% to a residential mortgage loan made or purchased by it where –

(i) the loan does not fall within subsection (1) but does satisfy section 4.15(1)(a);

(ii) the borrower under the loan is –

(A) an individual or more than one individual;

(B) a property-holding shell company; or

(C) a small business; and

(iii) subject to subsection (6), the loan-to-value ratio of the loan does not exceed 90% at the time a commitment to extend the loan was made by the institution, or in relation to a residential mortgage loan purchased by the institution, at the time the loan was purchased;

(b) 100% to a residential mortgage loan made or purchased by it which does not fall within subsection (1) or paragraph (a).

(5) Subsections (1)(d), (2) and (4)(a)(iii) do not apply, in the case of a residential mortgage loan secured on a property situated in Hong Kong, to –

(a) a commitment referred to in that subsection which was made before 1 January 2007; or

(b) a purchase referred to in that subsection, of a residential mortgage loan, which was made before 1 January 2007.

(6) Subject to subsection (7), an authorized institution shall, for the purposes of the application of subsection (1)(d) and (e), (2) or (4)(a)(iii) to a residential mortgage loan, exclude from the calculation of the loan-to-value ratio –

(a) any portion of the loan amount which has been provided by a property developer which is not a member of the group of companies of which the institution is a member; and

(b) any portion of the loan amount which is –

(i) the subject of a guarantee referred to in section 4.49 whose guarantor has an attributed risk-weight of not more than 20%;

(ii) the subject of insurance given by an insurance firm which has an attributed risk-weight of not more than 20%; or

(iii) the subject of cash on deposit falling within section 4.30(a) which is eligible for a risk-weight of not more than 20% under the use of the STC approach.

(7) The Monetary Authority may, by notice in writing given to an authorized institution, direct the institution, in calculating –

(a) the loan-to-value ratio of a residential mortgage loan specified in the notice; or

(b) the loan-to-value ratio of a residential mortgage loan belonging to a class of residential mortgage loans specified in the notice,

to include a portion of the loan amount which would otherwise be excluded pursuant to subsection (6).

(8) An authorized institution given a notice under subsection (7) shall comply with the notice.

(9) Subsection (4)(a) shall not apply to a residential mortgage loan made or purchased by an authorized institution if the inclusion of the loan in the calculation of the institution's maximum aggregate exposure referred to in section 4.15(1)(a) would cause the institution's maximum aggregate exposure to exceed $10 million.

(10) In this section –

"loan-to-value ratio" ( ), in relation to a residential mortgage loan, means the ratio of the sum of the following amounts to the market value of the security –

(a) the principal amount of that loan; and

(b) the principal amount of all other residential mortgage loans in respect of which the residential property which falls within subsection (1)(b) is also used as security.

4.17 Other exposures which are not past due exposures

(1) This section applies to –

(a) equities held by an authorized institution; and

(b) any other on-balance sheet exposures of the institution which do not fall within any of sections 4.6 to 4.16 or section 4.18 (including accrued interest if subsection (5) is applicable).

(2) Subject to subsections (3) and (4), an authorized institution shall allocate a risk-weight of 100% to an exposure to which this section applies.

(3) The Monetary Authority may, by notice in writing given to an authorized institution, direct the institution to allocate to an exposure, or an exposure belonging to a class of exposures, to which this section applies, a risk-weight specified in the notice, being a risk-weight greater than 100%.

(4) An authorized institution given a notice under subsection (3) shall comply with the notice.

(5) Where in respect of an on-balance sheet exposure of an authorized institution, the institution has difficulty in allocating any accrued interest under the exposure to the obligors of the institution, the institution may, with the prior consent of the Monetary Authority, treat the accrued interest as an exposure to which this section applies.

4.18 Past due exposures

(1) Notwithstanding sections 4.6 to 4.17, an authorized institution shall allocate a risk-weight of 150% to the relevant amount of a past due exposure.

(2) In this section, "relevant amount" ( ), in relation to a past due exposure, means the amount which is calculated by deducting from the gross outstanding amount of the exposure –

(a) the value of any specific provisions made in respect of the exposure; and

(b) the sum representing the effect of any recognized credit risk mitigation on the exposure.

4.19 Credit-linked notes

An authorized institution which has an exposure in respect of a credit-linked note held by the institution shall allocate a risk-weight to the exposure which is the greater of –

(a) the risk-weight attributable to the reference obligation of the note as determined in accordance with sections 4.6 to 4.18 as if the institution had a direct exposure to the reference obligation; and

(b) the attributed risk-weight of the issuer of the note.

4.20 Application of ECAI ratings

(1) An authorized institution shall, in complying with the requirements under any subsection of section 4.6, 4.8, 4.10, 4.11, 4.12 or 4.13 in relation to an exposure (referred to in subsection (2) as "concerned exposure A") of the institution consisting of a debt obligation issued or undertaken by any person or, for the purposes of section 4.13, consisting of an interest in a collective investment scheme, where the debt obligation, or collective investment scheme, as the case may be, has one or more than one ECAI issue specific rating assigned to it, determine the rating to be used in accordance with subsection (2).

(2) An authorized institution shall, in complying with the requirements under subsection (1) in relation to concerned exposure A –

(a) if the exposure has only one ECAI issue specific rating, use that rating;

(b) if the exposure has 2 or more ECAI issue specific ratings the use of which by the institution would result in the allocation by the institution of different risk-weights to the exposure, use any one of those ratings except the one or more of those ratings which would result in the allocation by the institution of the lowest of those different risk-weights.

(3) Subject to subsections (5) and (8), where –

(a) an exposure (however described) of an authorized institution which falls within any subsection of section 4.6, 4.8, 4.10, 4.11 or 4.12 does not have an ECAI issue specific rating;

(b) the person to whom the institution has the exposure has an long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the person; and

(c) the person to whom the institution has the exposure does not have an ECAI issuer rating,

the institution shall, in complying with the requirements under that subsection in relation to the exposure, use the long-term ECAI issue specific rating referred to in paragraph (b) in relation to the exposure subject to the condition that, if the use of that long-term ECAI issue specific rating by the institution would result in the allocation by the institution of a risk-weight to the exposure which would be lower than the risk-weight allocated by the institution to the exposure on the basis that the person has neither an ECAI issuer rating nor an ECAI issue specific rating assigned to a debt obligation issued or undertaken by it, the exposure must rank pari passu with, or senior in respect of payment or repayment to, the debt obligation referred to in paragraph (b).

(4) Subject to subsections (5) and (8), where –

(a) an exposure (however described) of an authorized institution which falls within any subsection of section 4.6, 4.8, 4.10, 4.11 or 4.12 does not have an ECAI issue specific rating;

(b) the person to whom the institution has the exposure has an ECAI issuer rating; and

(c) the person to whom the institution has the exposure does not have a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the person,

the institution shall, in complying with the requirements under that subsection in relation to the exposure, use the ECAI issuer rating referred to in paragraph (b) in relation to the exposure subject to the condition that, if the use of that ECAI issuer rating by the institution would result in the allocation by the institution of a risk-weight to the exposure which would be lower than the risk-weight allocated by the institution to the exposure on the basis that the person has neither an ECAI issuer rating nor an ECAI issue specific rating assigned to a debt obligation issued or undertaken by it –

(d) that ECAI issuer rating must only be applicable to unsecured exposures to the person as an issuer which are not subordinated to other exposures to that person; and

(e) the exposure to the person must be unsecured and not subordinated to other exposures to the person as an issuer.

(5) An authorized institution shall, in determining pursuant to subsection (3) or (4) the risk-weight for an exposure which falls within paragraph (a) of that subsection (referred to in this subsection as "concerned exposure B") based on one or more than one ECAI issue specific rating of another debt obligation issued or undertaken by the person to whom the institution has concerned exposure B (referred to in this subsection as "reference exposure"), or based on one or more than one ECAI issuer rating of that person (referred to in this subsection as "issuer") –

(a) if the reference exposure has only one ECAI issue specific rating, or the issuer has only one ECAI issuer rating, as the case may be, use that rating;

(b) if the reference exposure has 2 or more ECAI issue specific ratings, or the issuer has 2 or more ECAI issuer ratings, as the case may be, the use of which by the institution would result in the allocation by the institution of different risk-weights to concerned exposure B, use any one of those ratings except the one or more of those

ratings which would result in the allocation by the institution of the lowest of those different risk-weights.

(6) Subject to subsections (7) and (8), where –

(a) an exposure (however described) of an authorized institution which falls within any subsection of section 4.6, 4.8, 4.10, 4.11 or 4.12 does not have an ECAI issue specific rating;

(b) the person to whom the institution has the exposure has –

(i) an ECAI issuer rating; and

(ii) a long-term ECAI issue specific rating assigned to a debt obligation issued or undertaken by the person; and

(c) the use, in accordance with subsection (3) or (4), of the ECAI issuer rating and the ECAI issue specific rating referred to in paragraph (b) by the institution would result in the allocation by the institution of 2 different risk-weights to the exposure,

the institution, in complying with the requirements under that subsection in relation to the exposure, may allocate the lower of the 2 risk-weights to the exposure.

(7) An authorized institution –

(a) shall, in determining pursuant to subsection (6) the risk-weight for an exposure which falls within paragraph (a) of that subsection (referred to in this subsection as "concerned exposure C") based on one or more than one ECAI issue specific rating of another debt obligation issued or undertaken by the person against whom the institution has concerned exposure C (referred to in this subsection as "reference exposure"), and one or more than one ECAI issuer rating of that person –

(i) apply subsection (5) to the one, or more than one, as the case may be, ECAI issue specific rating to determine the issue specific rating to be used; and

(ii) apply subsection (5) to the one, or more than one, ECAI issuer rating to determine the issuer rating to be used; and

(b) may, if the risk-weight allocated by the institution to the issue specific rating determined pursuant to paragraph (a)(i) is different from the risk-weight allocated by the institution to the issuer rating determined pursuant to paragraph (a)(ii), allocate the lower of the 2 risk-weights to concerned exposure C.

(8) The operation of subsections (1) and (2) is subject to the operation of section 4.10(11), and the operation of subsections (3), (4), (5), (6) and (7) is subject to the operation of sections 4.10(10) and (11), 4.11(8) and (9) and 4.12(8) and (9).

(9) Where an authorized institution allocates a risk-weight to an exposure of the institution pursuant to subsection (3), (4), (5), (6) or (7) –

(a) subject to paragraph (b), the institution shall –

(i) use ECAI ratings applicable to foreign currency, if available, to the extent that the exposure is denominated in foreign currency; and

(ii) use ECAI ratings applicable to local currency, if available, to the extent that the exposure is denominated in local currency;

(b) the institution may use the obligor's ECAI rating applicable to the obligor's local currency, if available, for the purpose of –

(i) risk-weighting an exposure arising pursuant to the institution's participation in an exposure created by a multilateral development bank which is denominated in another currency; or

(ii) risk-weighting an exposure denominated in another currency to the extent that the exposure is guaranteed by a multilateral development bank against the risk of the obligor not being able to repay the exposure to the institution due to exchange controls of the country within which the obligor is located.

4.21 Authorized institutions required to nominate ECAIs to be used

(1) Subject to subsection (2), an authorized institution shall –

(a) nominate, for each of its ECAI ratings based portfolios which does not fall within paragraph (b), the name of the ECAI the credit assessment ratings issued by which it will use, for the purposes of this Part, in respect of the ECAI ratings based portfolio concerned; or

(b) nominate, for each of its ECAI ratings based portfolios which does not fall within paragraph (a), the names of the ECAIs the credit assessment ratings issued by which it will use, for the purposes of this Part, in respect of the ECAI ratings based portfolio concerned.

(2) An authorized institution –

(a) shall nominate under subsection (1)(a) the name of an ECAI for an ECAI ratings based portfolio of the institution in respect of which, having regard to the obligors in respect of the institution's exposures which fall within that portfolio and to the geographical regions where those exposures arise or may require to be enforced, it can reasonably be concluded that the ECAI so nominated

issues a range of credit assessment ratings which provides a reasonable coverage for that portfolio;

(b) shall nominate under subsection (1)(b) the names of ECAIs for an ECAI ratings based portfolio of the institution in respect of which, having regard to the obligors in respect of the institution's exposures which fall within that portfolio and to the geographical regions where those exposures arise or may require to be enforced, it can reasonably be concluded that the ECAIs so nominated, and taken collectively, issue a range of credit assessment ratings which provides a reasonable coverage for that portfolio.

(3) An authorized institution shall, as soon as is practicable after making a nomination under subsection (1), give notice in writing to the Monetary Authority of the nomination.

(4) An authorized institution shall not, in respect of an ECAI ratings based portfolio of the institution, use, for the purposes of this Part, the credit assessment ratings of an ECAI unless –

(a) the ECAI has been nominated under subsection (1) in respect of that portfolio; and

(b) notice of that nomination has been given to the Monetary Authority pursuant to subsection (3).

(5) An authorized institution may, with the prior consent of the Monetary Authority, amend a nomination under subsection (1) (including a nomination amended pursuant to this subsection).

(6) Subsections (2), (3) and (4), with all necessary modifications, apply to a nomination to be amended, or amended, pursuant to subsection (5) as they apply to a nomination under subsection (1).

(7) For the avoidance of doubt, it is hereby declared that an authorized institution shall, for the purposes of this Part, treat as not having an ECAI rating any person, debt obligation, or collective investment scheme, which, although falling within an ECAI ratings based portfolio of the institution, does not have an ECAI rating assigned to it by an ECAI nominated under subsection (1) by that institution in respect of that portfolio.

(8) In this section –

"ECAI ratings based portfolio" ( ), in relation to an authorized institution, means –

(a) the institution's sovereign exposures;

(b) the institution's public sector entity exposures;

(c) the institution's bank exposures;

(d) the institution's securities firm exposures;

(e) the institution's corporate exposures; or

(f) the institution's collective investment scheme exposures.

Division 4 – Calculation of risk-weighted amount of authorized institution's off-balance sheet exposures

4.22 Off-balance sheet exposures

(1) An authorized institution shall, in calculating the risk-weighted amount of an off-balance sheet exposure of the institution –

(a) specified in column 2 of Table 4.9; and

(b) booked in the institution's banking book,

calculate the credit equivalent amount of the off-balance sheet exposure by multiplying the principal amount of the exposure, after deducting any specific provisions applicable to the exposure, by the CCF specified in column 3 of Table 4.9 opposite the exposure.

TABLE 4.9

DETERMINATION OF CCF FOR OFF-BALANCE SHEET EXPOSURES OTHER THAN OTC DERIVATIVE TRANSACTIONS OR CREDIT DERIVATIVE CONTRACTS

Item	Off-balance sheet exposures	CCF
1.	Direct credit substitutes	100%
2.	Transaction-related contingencies	50%
3.	Trade-related contingencies	20%
4.	Asset sales with recourse	100%
5.	Forward asset purchases	100%
6.	Partly paid-up shares and securities	100%

7.	Forward forward deposits placed	100%	
8.	Note issuance and revolving underwriting facilities	50%	
9.	Commitments which do not fall within any of items 1 to 8 and –		
	(a) subject to paragraph (d), which have an original maturity of not more than one year;	20%	
	(b) subject to paragraph (d), which have an original maturity of more than one year;	50%	
	(c) which may be cancelled at any time unconditionally by the authorized institution or which provide for automatic cancellation due to a deterioration in the creditworthiness of the person to whom the institution has made the commitment;	0%	
	(d) the drawdown of which will give rise to an off-balance sheet exposure falling within any of items 1 to 8 or any item specified in section 4.24,		the lower of the CCF applicable to the commitment based on its original maturity or the CCF applicable to the off-balance sheet exposure arising from the drawdown of the commitment concerned

where –

"original maturity" ( ), in relation to an off-balance sheet exposure of an authorized institution, means the period between the date on which the exposure is entered into by the institution and the earliest date on which the institution can, at its option, unconditionally cancel the exposure.

(2) Subject to section 4.23, an authorized institution shall, in calculating the risk-weighted amount of an off-balance sheet exposure of the institution being an OTC derivative transaction or credit derivative contract –

(a) specified in column 2 of Table 4.10; and

(b) booked in the institution's banking book or trading book,

calculate the credit equivalent amount of the off-balance sheet exposure –

(c) subject to paragraph (d) and to any exceptions specified in column 2 of Table 4.10 applicable to the off-balance sheet exposure, by multiplying the principal amount of the off-balance sheet exposure by the CCF specified in column 3 of Table 4.10 opposite the off-balance sheet exposure and aggregating the resultant figure with the current exposure of the off-balance sheet exposure;

(d) if the off-balance sheet exposure is a single currency floating rate against floating rate interest rate swap, by taking the current exposure of the off-balance sheet exposure as the credit equivalent amount.

TABLE 4.10

DETERMINATION OF CCF FOR OTC DERIVATIVE TRANSACTIONS OR CREDIT DERIVATIVE CONTRACTS

Item	Off-balance sheet exposures	CCF
1.	Exchange rate contracts (other than an excluded exchange rate contract) -	
	(a) with a residual maturity of not more than one year;	1%
	(b) with a residual maturity of more than one year but not more than 5 years;	5%
	(c) with a residual maturity of more than 5 years,	7.5%

where -

"excluded exchange rate contract" ( ) means -

(a) an exchange rate contract (except a contract the value of which is derived from the value of gold) which has an original maturity of not more than 14 calendar days; or

(b) a forward exchange rate contract entered into by the authorized institution pursuant to a swap deposit arrangement with an obligor;

"swap deposit arrangement" ( ) means an arrangement entered into by the authorized institution with an obligor whereby the institution sells foreign currency at spot rate to the obligor against another currency, and at the same time, the obligor deposits the

foreign currency so purchased with the institution and enters into a forward exchange rate contract with the institution to sell the foreign currency so purchased back to the institution against another currency at a specified exchange rate on a future date.

2.	Interest rate contracts –	
	(a) with a residual maturity of not more than one year;	0%
	(b) with a residual maturity of more than one year but not more than 5 years;	0.5%
	(c) with a residual maturity of more than 5 years.	1.5%
3.	Equity contracts –	
	(a) with a residual maturity of not more than one year;	6%
	(b) with a residual maturity of more than one year but not more than 5 years;	8%
	(c) with a residual maturity of more than 5 years.	10%
4.	Precious metal contracts –	
	(a) with a residual maturity of not more than one year;	7%
	(b) with a residual maturity of more than one year but not more than 5 years;	7%
	(c) with a residual maturity of more than 5 years.	8%

5.	Other commodity contracts –		
	(a)	with a residual maturity of not more than one year;	10%
	(b)	with a residual maturity of more than one year but not more than 5 years;	12%
	(c)	with a residual maturity of more than 5 years.	15%
6.	Credit derivative contracts consisting of –		
	(a)	credit default swaps booked in the trading book –	
		(i) where the authorized institution is a protection buyer and the reference obligation is –	
		(A) a qualifying reference obligation;	5%
		(B) a non-qualifying reference obligation;	10%
		(ii) where the authorized institution is a protection seller and the credit default swap is subject to close-out upon the insolvency of the protection buyer while the reference entity is still solvent and the reference obligation is –	

		(A) a qualifying reference obligation;	5%
		(B) a non-qualifying reference obligation;	10%
	(iii)	where the authorized institution is a protection seller and the credit default swap does not fall within subparagraph (ii) and the reference obligation is –	
		(A) a qualifying reference obligation;	0%
		(B) a non-qualifying reference obligation;	0%
(b)	total return swaps booked in the trading book –		
	(i)	where the authorized institution is the protection buyer and the reference obligation is –	
		(A) a qualifying reference obligation;	5%
		(B) a non-qualifying reference obligation;	10%
	(ii)	where the authorized institution is the protection seller and the reference obligation is –	

(A)	a qualifying reference obligation;	5%
(B)	a non-qualifying reference obligation,	10%

where the amount of the potential exposure for a credit derivative contract which falls within paragraph (a)(ii) shall be capped at the amount of the unpaid premium under the contract.

(3) For the avoidance of doubt, it is hereby declared that an authorized institution is not required to hold regulatory capital in respect of an excluded exchange rate contract specified in Table 4.10.

4.23 Provisions supplementary to section 4.22

For the purposes of the operation of section 4.22 in relation to an authorized institution and its off-balance sheet exposures –

(a) in the case of an off-balance sheet exposure which has multiple exchanges of principal, the institution shall calculate its potential exposure to the off-balance sheet exposure by multiplying the product of the number of payments remaining to be made under the off-balance sheet exposure and the principal by the CCF required to be used under that section in respect of the off-balance sheet exposure;

(b) in the case of an off-balance sheet exposure –

(i) which is structured to settle the outstanding exposures under the off-balance sheet exposure on specified payment dates; and

(ii) the terms of which are reset so that the market value of the off-balance sheet exposure is zero on the specified payment dates referred to in subparagraph (i),

the institution –

(iii) subject to subparagraph (iv), shall treat the residual maturity of the off-balance sheet exposure as being equal to the period until the next specified payment date; and

(iv) if the off-balance sheet exposure is an interest rate contract where the remaining time to final maturity of the contract is more than one year, shall not use a CCF of less than 0.5% in respect of the off-balance sheet exposure;

(c) in the case of an off-balance sheet exposure booked in the institution's trading book which is a first-to-default credit derivative contract, the institution shall use the CCF for non-qualifying reference obligation 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 is to be used;

(d) in the case of an off-balance sheet exposure booked in the institution's trading book which is a second-to-default credit derivative contract or any other subsequent-to-default credit derivative contract, the institution shall –

(i) for the second-to-default credit derivative contract, use the CCF for non-qualifying reference obligation if there are at least 2 non-qualifying reference obligations in the basket of reference obligations specified in the second-to-default credit derivative contract, otherwise the CCF for qualifying reference obligation is to be used;

(ii) for any other subsequent-to-default credit derivative contract, determine the CCF for the other subsequent-to-default credit derivative contract with reference to the corresponding number of non-qualifying reference obligations in the basket of reference obligations specified in the contract based on the approach taken in subparagraph (i);

(e) in the case of an off-balance sheet exposure which is a commitment in the form of a general banking facility consisting of 2 or more credit lines, where under each credit line, an authorized institution is obliged either to provide funds or create off-balance sheet exposures in the future, the institution shall assign a CCF to the commitment in accordance with item 9(a), (b) or (c) of Table 4.9 based on the original maturity of the commitment.

4.24 Calculation of credit equivalent amount of other off-balance sheet exposures not specified in Table 4.9 or 4.10

An authorized institution shall, in calculating the risk-weighted amount of an off-balance sheet exposure which is not specified in Table 4.9 or 4.10, calculate the credit equivalent amount of the off-balance sheet exposure by applying –

(a) subject to paragraph (b), a CCF of 100%;

(b) the CCF applicable to the exposure pursuant to Part 2 of Schedule 1.1,

in accordance with section 4.22(1) or (2), as the case requires, with all necessary modifications.

4.25 Determination of risk-weights applicable to off-balance sheet exposures

(1) Subject to subsection (2), an authorized institution shall determine the risk-weight attributable to an off-balance sheet exposure in accordance with sections 4.6 to 4.12 and 4.15 to 4.18 as if the exposure were an on-balance sheet exposure.

(2) Where an off-balance sheet exposure referred to in subsection (1) of an authorized institution is –

(a) an asset sale with recourse;

(b) a forward asset purchase;

(c) partly paid-up shares and securities; or

(d) a direct credit substitute arising from the selling of credit derivative contracts in the form of total return swaps or credit default swaps in the institution's banking book,

the institution shall determine the risk-weight attributable to the exposure –

(e) in the case of paragraph (a) or (b), by reference to the risk-weight allocated to the assets or the attributed risk-weight of the obligor in respect of the assets;

(f) in the case of paragraph (c), as 100%;

(g) in the case of paragraph (d), subject to subsections (3) to (6), by reference to the risk-weight of the relevant reference obligation in respect of the exposure.

(3) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is a first-to-default credit derivative contract –

(a) if the contract has an ECAI issue specific rating, the institution shall allocate to its exposure in respect of the contract the risk-weight, or deduct the exposure from the institution's core capital and supplementary capital, as determined in accordance with section 7.11;

(b) if the contract does not have an ECAI issue specific rating, the institution –

(i) subject to subparagraph (ii), shall aggregate the risk-weights of the reference obligations in the basket of reference obligations specified in the contract to determine the risk-weight to be allocated to its exposure in respect of the contract; and

(ii) shall not allocate to its exposure in respect of the contract a risk-weight greater than 1,250%.

(4) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is a second-to-default credit derivative contract –

(a) if the contract has an ECAI issue specific rating, the institution shall allocate to its exposure in respect of the contract the risk-weight, or deduct the exposure from the institution's core capital and supplementary capital, as determined in accordance with section 7.11;

(b) if the contract does not have an ECAI issue specific rating, the institution –

(i) subject to subparagraph (ii), shall aggregate the risk-weights of the reference obligations in the basket of reference obligations specified in the contract to determine the risk-weight to be allocated to its exposure in respect of the contract but excluding the lowest of those risk-weights; and

(ii) shall not allocate to its exposure in respect of the contract a risk-weight greater than 1,250%.

(5) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is any other subsequent-to-default credit derivative contract, the institution shall, for the purposes of that subsection, and with all necessary modification, apply subsection (4) to that contract as that subsection is applied to a second-to-default credit derivative contract so that the reference to "lowest" in subsection (4)(b)(i) is construed to mean "lowest and second lowest" in the case of a third-to-default credit derivative contract and "lowest, second lowest and third lowest" in the case of a fourth-to-default credit derivative contract and likewise for other subsequent-to-default credit derivative contracts.

(6) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is a credit derivative contract which provides credit protection proportionately in respect of the reference obligations in the basket of reference obligations as specified in the contract, the institution shall calculate the risk-weight of its exposure in respect of the contract by taking a weighted average of the risk-weights attributable to the reference obligations in the basket by the use of Formula 4.1.

FORMULA 4.1

CALCULATION OF RISK-WEIGHT OF CREDIT DERIVATIVE CONTRACT WHICH FALLS WITHIN SECTION 4.25(6)

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

where –

RW_a = average risk-weight in a basket of reference obligations;

a_i = proportion of credit protection allocated to a reference obligation; and

RW_i = risk-weight of a reference obligation.

(7) For the avoidance of doubt, it is hereby declared that where an off-balance sheet exposure referred to in subsection (1) of an authorized institution is a commitment to extend a residential mortgage loan, the institution shall allocate a risk-weight in accordance with section 4.16 to the exposure only if the institution has no reason to believe that any of the provisions of that section will not be satisfied immediately after the loan that is the subject of that commitment is drawn down.

4.26 Calculation of risk-weighted amount of exposures in respect of repo-style transactions booked in banking book

(1) An authorized institution shall calculate the risk-weighted amount of an exposure in respect of a repo-style transaction booked in its banking book in accordance with the following provisions.

(2) Where the repo-style transaction falls within paragraph (a) or (b) of the definition of "repo-style transaction" in section 1.2(1), an authorized institution shall treat the securities sold or lent under the transaction as an on-balance sheet exposure of the institution as if the institution had never entered into the transaction and, accordingly, calculate the risk-weighted amount of the institution's exposure in respect of the transaction by reference to the risk-weight attributable to the securities.

(3) Where the repo-style transaction falls within paragraph (c) of the definition of "repo-style transaction" in section 1.2(1), an authorized institution shall treat the money paid by the institution under the transaction as a loan to the counterparty secured on the securities which are provided to, or to the order of, the institution under the transaction and, accordingly, calculate the risk-weighted amount of the institution's exposure in respect of the transaction by reference to the attributed risk-weight of the counterparty subject to the

application of any recognized credit risk mitigation in respect of collateralized transactions.

(4) Where the repo-style transaction falls within paragraph (d) of the definition of "repo-style transaction" in section 1.2(1) –

(a) if and to the extent an authorized institution has provided collateral in the form of money under the transaction, the institution shall treat the money paid by the institution under the transaction as a loan to the counterparty secured on the securities borrowed by the institution and, accordingly, calculate the risk-weighted amount of institution's exposure in respect of the transaction by reference to the attributed risk-weight of the counterparty subject to the application of any recognized credit risk mitigation in respect of collateralized transactions;

(b) if and to the extent an authorized institution has provided collateral in the form of securities under the transaction, the institution shall treat those securities as its on-balance sheet exposure as if the institution had never entered into the transaction and, accordingly, calculate the risk-weighted amount of the institution's exposure in respect of the transaction by reference to the risk-weight attributable to the securities.

4.27 Calculation of risk-weighted amount of exposures in respect of repo-style transactions booked in trading book

An authorized institution shall calculate the risk-weighted amount of an exposure in respect of a repo-style transaction booked in its trading book –

(a) by reference to Parts 9 and 10 in any case where the transaction falls within paragraph (a) or (b) of the definition of "repo-style transactions", or paragraph (d) of the definition where the collateral provided by the institution is in the form of securities;

(b) by the application of section 4.26(3) or (4)(a) to the transaction as if the transaction were booked in the banking book in any case where the transaction falls within paragraph (c) of the definition of "repo-style transaction", or paragraph (d) of the definition where the collateral provided by the institution is in the form of a sum of money.

Division 5 – Use of recognized collateral in credit risk mitigation : general

4.28 Recognized collateral

Collateral is recognized for the purposes of calculating the risk-weighted amount of an exposure of an authorized institution where –

(a) all documentation creating the collateral and providing for the obligations of the parties with respect to each other in respect of the collateral is binding on all the parties and legally enforceable in all the relevant jurisdictions;

(b) the legal mechanism by which the collateral is pledged or transferred ensures that the institution has the right to realize, or to take legal possession of, the collateral in a timely manner in the event of a default by, or the insolvency or bankruptcy of, or any other event specified in the relevant legal documentation applicable to any of –

(i) the obligor in respect of the exposure; or

(ii) the custodian, if any, holding the collateral;

(c) the institution has clear and adequate procedures for the timely realization of collateral in respect of an event referred to in paragraph (b);

(d) the institution has taken all steps to fulfil requirements under the law applicable to the institution's interest in the collateral which are necessary to obtain and maintain an enforceable security interest, whether by registration or otherwise, or to exercise a right to set-off in relation to title transfer collateral;

(e) if the collateral is to be held by a custodian, the institution has taken reasonable steps to ensure that the custodian segregates the collateral from the custodian's assets;

(f) there is no material positive correlation between the credit quality of the obligor in respect of which the institution has an exposure and the current market value of the collateral provided in respect of the exposure such that the current market value of the collateral would be likely to fall in the case of any material deterioration in the financial condition of the obligor;

(g) if the simple approach to the treatment of recognized collateral applies to the collateral, the collateral –

(i) is pledged for not less than the life of the exposure;

(ii) subject to subparagraph (iii), is re-valued not less than every 6 months from the date upon which the collateral is taken in respect of the exposure; and

(iii) in the case of an exposure which is a past due exposure, is re-valued not less than every 3 months from the date upon which the exposure is classified as a past due exposure;

(h) if the simple approach to the treatment of recognized collateral applies to the collateral, the institution may, in the case of a past due exposure, take into account collateral in the form of real property (whether residential or otherwise) the current market value of which is subject to re-valuation not less than every 3 months from the date upon which the exposure is classified as a past due exposure;

(*i*) if the comprehensive approach to the treatment of recognized collateral applies to the collateral, the institution has in place a written internal policy and systems and procedures –

(i) adequate to enable the institution to manage collateral provided to it in respect of any relevant exposure; and

(ii) to revalue the collateral as necessary and take account of the assumed minimum holding periods for collateral in the calculation of the risk-weighted amount of its exposures in respect of collateralized transactions; and

(j) the collateral falls within –

(i) section 4.30(a), (b), (c), (d), (e), (f), (g), (h), (*i*), (j), (k), (*l*), (m), (n), (o) or (p) if the institution uses the simple approach in its treatment of recognized collateral; or

(ii) section 4.31(a), (b), (c) or (d) if the institution uses the comprehensive approach in its treatment of recognized collateral.

4.29 Approaches to use of recognized collateral

(1) Subject to subsection (2), an authorized institution may use the simple approach or the comprehensive approach in its treatment of recognized collateral for the purposes of calculating the risk-weighted amount of its exposures.

(2) An authorized institution shall –

(a) for exposures booked in the institution's banking book which are not past due exposures, use only the simple approach or only the comprehensive approach to the treatment of recognized collateral;

(b) for past due exposures booked in the institution's banking book, use only the simple approach to the treatment of recognized collateral; and

(c) for exposures booked in the institution's trading book, use only the comprehensive approach to the treatment of recognized collateral.

4.30 Collateral which may be recognized for purposes of section 4.28(j)(i)

For the purposes of section 4.28(j)(i), only collateral of the following description may be recognized in relation to an authorized institution which uses the simple approach in its treatment of recognized collateral –

(a) cash on deposit with the institution or held at a third-party bank;

(b) certificates of deposit issued by the institution;

(c) instruments issued by the institution which are comparable to instruments referred to in paragraph (b);

(d) gold bullion;

(e) debt securities issued by a sovereign which have a long-term ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table A in Schedule 4.1, would result in the debt securities being assigned a credit quality grade of 1, 2, 3 or 4;

(f) debt securities (other than restricted debt securities) issued by a sovereign foreign public sector entity which have a long-term ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table A in Schedule 4.1, would result in the debt securities being assigned a credit quality grade of 1, 2, 3 or 4;

(g) debt securities issued by a domestic public sector entity, or a foreign public sector entity which is not a sovereign foreign public sector entity, which have a long-term ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table A in Schedule 4.1, would result in the debt securities being assigned a credit quality grade of 1, 2 or 3;

(h) debt securities issued by a multilateral development bank;

(*i*) debt securities issued by a bank or securities firm which have a long-term ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table B in Schedule 4.1, would result in the debt securities being assigned a credit quality grade of 1, 2 or 3;

(j) debt securities issued by a corporate which have a long-term ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table C in Schedule 4.1, would result in the debt securities being assigned a credit quality grade of 1, 2 or 3;

(k) debt securities issued by a sovereign which have a short-term ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table E in Schedule 4.1 as if they were securities issued by a bank, securities firm or corporate, would result in the debt securities being assigned a credit quality grade of 1, 2 or 3;

(*l*) debt securities issued by a bank, securities firm or corporate which have a short-term ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table E in Schedule 4.1, would result in the debt securities being assigned a credit quality grade of 1, 2 or 3;

(m) debt securities issued by a bank or securities firm which do not have an ECAI issue specific rating where –

(i) the debt securities are not subordinated to any other debt obligations of the issuer of the debt securities;

(ii) the debt securities are listed on a recognized exchange and the institution is of the reasonable opinion that, having regard to current market conditions, there is sufficient liquidity in the market for the debt securities to enable

the institution to dispose of the debt securities at an open market price;

(iii) other debt securities issued by the same issuer which have an ECAI issue specific rating and rank pari passu with the first-mentioned debt securities, have an ECAI issue specific rating which, if mapped to the scale of credit quality grades in Table B in Schedule 4.1 (or, in the case of exposures with short-term ECAI issue specific ratings, in Table E in Schedule 4.1) would result in the debt securities being assigned a credit quality grade of 1, 2 or 3; and

(iv) the institution is not aware, and has no reason to be aware, of information suggesting that an assignment of a credit quality grade of 4 or 5 in Table B in Schedule 4.1 (or, in the case of short-term ECAI issue specific ratings, a credit quality grade of 4 in Table E in Schedule 4.1) would be justified in respect of the debt securities;

(n) equities (including convertible bonds) which are included in any main indices;

(o) units or shares in a collective investment scheme where –

(i) the price of the units or shares in that scheme is quoted publicly on a daily basis; and

(ii) that scheme is restricted by its investment guidelines or objects to investing in those items listed in these Rules as being recognized collateral for the purposes of using the simple approach to the treatment of recognized collateral; or

(p) collateral in the form of real property (whether residential or otherwise) insofar as the collateral relates to a past due exposure.

4.31 Collateral which may be recognized for purposes of section 4.28(j)(ii)

For the purposes of section 4.28(j)(ii), only collateral of the following description may be recognized in relation to an authorized institution which uses the comprehensive approach in its treatment of recognized collateral –

(a) recognized collateral falling within section 4.30(a), (b), (c), (d), (e), (f), (g), (h), (*i*), (j), (k), (*l*), (m), (n) or (o);

(b) equities (including convertible bonds) which are not included in a main index but are listed on a recognized exchange;

(c) collective investment schemes which may invest in equities referred to in paragraph (b); or

(d) securities received by the institution under a transaction –

(i) which falls within paragraph (c) or (d) of the definition of "repo-style transaction" in section 1.2(1); and

(ii) which is booked in the institution's trading book.

Division 6 – Use of recognized collateral in credit risk mitigation: simple approach

4.32 Calculation of risk-weighted amount of exposures taking into account credit risk mitigation effect of recognized collateral under simple approach

(1) Where an authorized institution uses the simple approach in its treatment of recognized collateral, the institution shall, in respect of an exposure of the institution to which the collateral relates –

(a) subject to subsections (2), (3) and (4), substitute the risk-weight of the collateral for the risk-weight of the exposure for that proportion of the exposure which is equivalent to the current market value of the collateral (referred to in this Division as "credit protection covered portion"); and

(b) allocate to that proportion of the exposure which is not the credit protection covered portion (referred to in this Division as "uncovered portion") the risk-weight of the exposure.

(2) Where the recognized collateral consists of collateral –

(a) which falls within section 4.30(a), (b) or (c),

(b) which is held at a third-party bank in a non-custodial arrangement; and

(c) which is unconditionally and irrevocably pledged or assigned to the institution,

an authorized institution shall substitute the attributed risk-weight of the third-party bank for the risk-weight of the exposure for the credit protection covered portion.

(3) Where –

(a) the exposure concerned is a past due exposure; and

(b) the recognized collateral provided in respect of the exposure is real property,

an authorized institution shall allocate a risk-weight of 100% to the credit protection covered portion.

(4) Where the recognized collateral is real property, an authorized institution shall, for the purposes of making a substitution pursuant to subsection (1)(a), reduce the current market value of the real property by –

(a) 10% in the case of residential property;

(b) 20% in the case of any other real property.

4.33 Determination of risk-weight to be allocated to recognized collateral under simple approach

(1) Where an authorized institution uses the simple approach in its treatment of recognized collateral, the institution –

(a) subject to paragraph (b), shall determine the risk-weight to be allocated to the recognized collateral in accordance with sections 4.6 to 4.14, 4.17 and 4.19 as if the collateral were an on-balance sheet exposure; and

(b) subject to subsections (2), (3) and (4), shall not allocate a risk-weight of less than 20% to the collateral.

(2) Subject to subsection (3), an authorized institution may under subsection (1) allocate a risk-weight of 0% to recognized collateral provided under a repo-style transaction booked in the institution's banking book which falls within paragraph (c) or (d) of the definition of "repo-style transaction" in section 1.2(1) where –

(a) the counterparty is –

(i) a sovereign;

(ii) a public sector entity;

(iii) a multilateral development bank;

(iv) a bank or securities firm;

(v) a corporate (other than a bank or securities firm) –

(A) which is an investment company, insurance firm, finance company or other like financial institution; and

(B) which has an attributed risk-weight of not more than 20%; or

(vi) a clearing organization (other than a restricted clearing organization) the activities or objects of which include –

(A) the provision of services for the clearing and settlement of transactions in, or the day-to-day adjustment of the financial position of, futures contracts or option contracts effected on an exchange;

(B) the provision of services for the clearing and settlement of transactions in securities effected on an exchange;

(C) the provision of services for the clearing and settlement of payment obligation; or

(D) the provision of guarantees for the settlement of any transactions which fall within sub-subparagraph (A), (B) or (C);

(b) the exposure to which the collateral relates and the collateral are –

(i) cash; or

(ii) securities issued by a sovereign, or a sovereign foreign public sector entity, which would be allocated a risk-weight of 0% under the use of the STC approach;

(c) the exposure and the collateral are denominated in the same currency;

(d) either –

(i) the exposure is only an overnight exposure; or

(ii) the exposure and the collateral are re-valued daily by marking-to-market, and based on the marked-to-market value of the exposure and the collateral –

(A) the value of any excess collateral (referred to in this subsection as "margin") is calculated daily; and

(B) if the margin is below the value required under the terms of the transaction, the counterparty is required to bring the margin up to the required value on the same day;

(e) the institution reasonably expects, if the counterparty fails to deliver any shortfall in margin required to be delivered to the institution under the terms of the transaction, to be able to realize the collateral for its benefit within 4 business days after the counterparty's failure to deliver the shortfall in margin;

(f) the transaction is settled by means of a settlement system customarily used for repo-style transactions;

(g) the transaction is documented using standard market documentation for the securities which are the subject matter of the transaction; and

(h) the documentation setting out the transaction provides that –

(i) the institution may terminate the transaction immediately if –

(A) the counterparty commits an event of default under the transaction; or

(B) an event of default occurs in respect of the counterparty; and

(ii) the institution has, immediately upon any such default, an unfettered and legally enforceable right to seize and realize the collateral for its benefit, whether or not the counterparty is insolvent or bankrupt.

(3) Where the recognized collateral is provided to an authorized institution under a repo-style transaction which satisfies all the provisions of subsection (2) except paragraph (a) of that subsection, the institution may under subsection (1) allocate a risk-weight of 10% to the collateral.

(4) An authorized institution may under subsection (1) –

(a) allocate a risk-weight of 0% to recognized collateral provided under an OTC derivative transaction where –

(i) the transaction is marked-to-market daily and is collateralized by cash provided to the institution; and

(ii) the settlement currency of the transaction is the same currency as the cash provided to the institution as collateral;

(b) allocate a risk-weight of 10% to recognized collateral which is provided under an OTC derivative transaction where the collateral provided to the institution is debt securities issued by a sovereign, or a sovereign foreign public sector entity, which would under section 4.6 or 4.8, as the case may be, be allocated a risk-weight of 0%;

(c) allocate a risk-weight of 0% to recognized collateral which falls within paragraph (c) of the definition of "cash items" in section 4.2;

(d) allocate a risk-weight of 0% to recognized collateral provided in the case of any financial transaction where –

(i) the collateral is denominated in the same currency as the exposure to which the collateral relates; and

(ii) the collateral is either –

(A) cash; or

(B) debt securities –

(I) which are issued by a sovereign, or sovereign foreign public sector entity, and would under section 4.6 or 4.8, as the case may be, be allocated a risk-weight of 0%; and

(II) the current market value of which has been reduced by a haircut of 20%.

(5) In this section, "cash" ( ) –

(a) in relation to an exposure, means money paid by an authorized institution to a counterparty under a repo-style transaction;

(b) in relation to a collateral, means recognized collateral which falls within section 4.30(a), (b) or (c), other than collateral held at a third-party bank in a non-custodial arrangement.

4.34 Calculation of risk-weighted amount of on-balance sheet exposures

An authorized institution shall calculate the risk-weighted amount of each of its on-balance sheet exposures by –

(a) dividing the principal amount of the exposure, net of specific provisions, into –

(i) the credit protection covered portion; and

(ii) the uncovered portion;

(b) multiplying the credit protection covered portion by the risk-weight attributable to the recognized collateral and multiplying the uncovered portion by the risk-weight attributable to the exposure; and

(c) adding together the 2 products derived from the application of paragraph (b).

4.35 Calculation of risk-weighted amount of off-balance sheet exposures other than OTC derivative transactions

An authorized institution shall calculate the risk-weighted amount of each of its off-balance sheet exposures which is not an OTC derivative transaction by –

(a) dividing the principal amount of the exposure, net of specific provisions, into –

(i) the credit protection covered portion; and

(ii) the uncovered portion;

(b) multiplying the credit protection covered portion and the uncovered portion by the CCF applicable to the off-balance sheet exposure to produce 2 credit equivalent amounts;

(c) multiplying the credit equivalent amount of the credit protection covered portion by the risk-weight attributable to the recognized collateral and multiplying the credit equivalent amount of the uncovered portion by the risk-weight attributable to the exposure; and

(d) adding together the 2 products derived from the application of paragraph (c).

4.36 Calculation of risk-weighted amount of OTC derivative transactions

An authorized institution shall calculate the risk-weighted amount of each of its off-balance sheet exposures which is an OTC derivative transaction by –

(a) multiplying the principal amount of the transaction by the applicable CCF to ascertain the potential exposure of the institution in respect of the transaction and adding the current exposure of the institution in respect of the transaction to derive the credit equivalent amount of the transaction;

(b) dividing the credit equivalent amount, net of any specific provisions in respect of the transaction, into the credit protection covered portion and the uncovered portion;

(c) multiplying the credit equivalent amount of the credit protection covered portion by the risk-weight attributable to the recognized collateral and multiplying the credit equivalent amount of the uncovered portion by the risk-weight attributable to the exposure; and

(d) adding together the 2 products derived from the application of paragraph (c).

Division 7 – Use of recognized collateral in credit risk mitigation : comprehensive approach

4.37 Calculation of risk-weighted amount of exposures taking into account credit risk mitigation effect of recognized collateral under comprehensive approach

(1) Where an authorized institution uses the comprehensive approach in its treatment of recognized collateral, the institution shall calculate the risk-weighted amount of its on-balance sheet exposures and off-balance sheet exposures in accordance with sections 4.38 to 4.44.

(2) Schedule 4.2 contains provisions relating to the use of standard supervisory haircut in the treatment of recognized collateral.

4.38 Calculation of net credit exposure of on-balance sheet exposures

An authorized institution shall calculate its net credit exposure to an obligor in respect of an on-balance sheet exposure by the use of Formula 4.2.

FORMULA 4.2

CALCULATION OF NET CREDIT EXPOSURE TO OBLIGOR UNDER ON-BALANCE SHEET EXPOSURE

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

where –

E^* = net credit exposure;

E = principal amount of on-balance sheet exposure net of specific provisions, if any;

H_e = haircut applicable to the institution's exposure to the obligor pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43;

C = current market value of the recognized collateral before adjustment required by the comprehensive approach to the treatment of recognized collateral;

H_c = haircut applicable to the recognized collateral pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43; and

H_{fx} = haircut applicable in consequence of a currency mismatch, if any, pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43.

4.39 Calculation of net credit exposure of off-balance sheet exposures other than credit derivative contracts booked in trading book or OTC derivative transactions

An authorized institution shall calculate its net credit exposure to an obligor in respect of an off-balance sheet exposure (other than a credit derivative contract booked in the trading book of the institution or an OTC derivative transaction) by the use of Formula 4.3.

FORMULA 4.3

CALCULATION OF NET CREDIT EXPOSURE TO OBLIGOR UNDER OFF-BALANCE SHEET EXPOSURE OTHER THAN CREDIT DERIVATIVE CONTRACT BOOKED IN THE TRADING BOOK AND OTC DERIVATIVE TRANSACTION

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

where –

E^* = net credit exposure;

E = principal amount of off-balance sheet exposure net of specific provisions, if any;

H_e = haircut applicable to the authorized institution's exposure to the obligor pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43;

C = current market value of the recognized collateral before adjustment required by the comprehensive approach to the treatment of recognized collateral;

H_c = haircut applicable to the recognized collateral pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43;

H_{fx} = haircut applicable in consequence of a currency mismatch, if any, pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43; and

CCF = CCF applicable to the off-balance sheet exposure.

4.40 Calculation of net credit exposure of credit derivative contracts booked in trading book and OTC derivative transactions

An authorized institution shall calculate its net credit exposure to a counterparty in respect of a credit derivative contract booked in the institution's trading book, or an OTC derivative transaction, by the use of Formula 4.4.

FORMULA 4.4

CALCULATION OF NET CREDIT EXPOSURE TO COUNTERPARTY UNDER CREDIT DERIVATIVE CONTRACT BOOKED IN TRADING BOOK OR OTC DERIVATIVE TRANSACTION

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

where –

E^* = net credit exposure;

E = credit equivalent amount of off-balance sheet exposure (calculated by aggregating the potential exposure and current exposure in respect of the credit derivative contract or OTC derivative transaction, as the case may be) net of specific provisions, if any;

H_e = haircut applicable to the authorized institution's exposure to the counterparty pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43;

C = current market value of the recognized collateral before adjustment required by the comprehensive approach to the treatment of recognized collateral;

H_c = haircut applicable to the recognized collateral pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43; and

H_{fx} = haircut applicable in consequence of a currency mismatch, if any, pursuant to the standard supervisory haircuts for the comprehensive approach to treatment of recognized collateral subject to adjustment as set out in section 4.43.

4.41 Haircuts

Where a basket of recognized collateral which consists of more than one type of recognized collateral is provided to an authorized institution in respect of an exposure of the institution, the institution shall calculate the haircut applicable to the basket of recognized collateral by the use of Formula 4.5.

FORMULA 4.5

CALCULATION OF HAIRCUT WHERE MORE THAN ONE TYPE OF RECOGNIZED COLLATERAL IS PROVIDED IN RESPECT OF THE SAME EXPOSURE

$$H_a = \sum_i a_i \times H_i$$

where –

H_a = haircut applicable to the basket of recognized collateral;

a_i = weight of a given type of recognized collateral provided in respect of the exposure in relation to the aggregate value of all types of recognized collateral provided in respect of that exposure; and

H_i = haircut applicable to that given type of recognized collateral pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43.

4.42 Minimum holding periods

Where in respect of an exposure of an authorized institution, there is –

(a) a daily re-valuation of the exposure and the recognized collateral provided in respect of the exposure; or

(b) a requirement that the obligor in respect of the exposure has to bring the value of the recognized collateral provided in respect of the exposure up to a value required under the terms of the transaction giving rise to the exposure based upon the daily mark-to-market value of the exposure and the collateral (referred to in this Division as "daily remargining"),

the institution shall, for the purposes of determining whether adjustment of the standard supervisory haircuts applicable to the recognized collateral and the exposure under section 4.43 is needed, take the assumed minimum holding periods to be as set out in Table 4.11 based on the type of the transaction giving rise to the exposure.

TABLE 4.11

ASSUMED MINIMUM HOLDING PERIODS

Type of transaction	Assumed minimum holding period	Condition
Repo-style transactions	5 business days	Daily remargining
Other capital market transactions	10 business days	Daily remargining
Secured lending transactions	20 business days	Daily revaluation

4.43 Adjustment of standard supervisory haircuts in certain circumstances

Where for the purposes of section 4.38, 4.39, 4.40, 4.41, 4.45, 4.46, 4.47 or 4.51 –

(a) the assumed minimum holding period of a transaction giving rise to an exposure of an authorized institution is not 10 business days; or

(b) the exposure of an authorized institution and the recognized collateral provided to the institution in respect of the exposure, are not subject to daily remargining or revaluation as assumed in the standard supervisory haircuts,

the institution shall adjust the standard supervisory haircuts by the use of Formula 4.6.

FORMULA 4.6

ADJUSTMENT OF STANDARD SUPERVISORY HAIRCUTS FOR CIRCUMSTANCES SET OUT IN SECTION 4.43

$$H = H_{10} \times \sqrt{\frac{N_R + (T_M - 1)}{10}}$$

where –

H = haircut after adjustment for differences in assumed minimum holding period and remargining and revaluation frequency;

H_{10} = standard supervisory haircuts based on an assumed minimum holding period of 10 business days, daily remargining and daily revaluation;

T_M = assumed minimum holding period for a particular type of transaction as set out in Table 4.11; and

N_R = actual number of days between each remargining or each revaluation of the recognized collateral.

4.44 Calculation of risk-weighted amount of collateralized transactions under comprehensive approach

An authorized institution shall calculate the risk-weighted amount of each of its exposures which is a collateralized transaction by multiplying the net credit exposure of the institution to the obligor by the risk-weight attributable to the exposure.

Division 8 – Use of recognized netting in credit risk mitigation

4.45 On-balance sheet netting

(1) Where amounts owed by an obligor to an authorized institution in respect of on-balance sheet exposures of the institution are subject to recognized netting, the institution –

(a) may take into account the effect of the recognized netting in calculating its exposure to the obligor; and

(b) if a net credit exposure for the institution is the result of so taking into account the effect of the recognized netting, shall use the net credit exposure in calculating the risk-weighted amount of the exposure.

(2) An authorized institution shall calculate its net credit exposure, if any, referred to in subsection (1)(b) by the use of Formula 4.7.

FORMULA 4.7

CALCULATION OF NET CREDIT EXPOSURE
UNDER RECOGNIZED NETTING

Net credit exposure = max [0, exposures – liabilities x (1 – H_{fx})]

where –

exposures	=	the amounts, net of specific provisions, subject to recognized netting owed by the obligor to the authorized institution;
liabilities	=	the amounts subject to recognized netting owed by the authorized institution to the obligor; and
H_{fx}	=	haircut applicable in consequence of a currency mismatch, if any, between the currencies in which the exposures and liabilities are denominated pursuant to the standard supervisory haircut applicable to currency mismatch set out in Schedule 4.2 subject to adjustment as set out in section 4.43.

(3) Where an authorized institution has a net credit exposure in respect of an on-balance sheet exposure after taking into account recognized netting, it shall calculate the risk-weighted amount of the on-balance sheet exposure to which the net credit exposure relates by multiplying the net credit exposure by the attributed risk-weight of the obligor.

4.46 Netting of OTC derivative transactions and netting of credit derivative contracts booked in trading book

(1) Where an authorized institution's exposure to a counterparty is under a nettable derivative transaction (whether or not the recognized netting concerned relates to more than one type of nettable derivative transaction), the institution may in accordance with subsections (2) and (3), take into account the effect of the recognized netting in calculating the risk-weighted amount of its net credit exposure to the counterparty.

(2) Subject to subsection (3), an authorized institution shall calculate the credit equivalent amount of its net credit exposure to a counterparty by adding together –

(a) the net current exposure (being the net amount of the sum of the positive and negative mark-to-market replacement costs of the individual nettable derivative transactions subject to recognized netting if the net amount is positive); and

(b) the net potential exposure calculated by the use of Formula 4.8.

FORMULA 4.8

CALCULATION OF NET POTENTIAL EXPOSURE UNDER NETTABLE DERIVATIVE TRANSACTIONS

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

where –

A_{Net} = the net potential exposure;

A_{Gross} = the sum of the individual amounts derived by multiplying the principal amounts of all of the individual nettable derivative transactions by the applicable CCFs; and

NGR = the ratio of net replacement cost for the nettable derivative transactions (that is, the non-negative sum of positive and negative mark-to-market replacement costs of the transactions) to gross replacement cost for the nettable derivative transactions (that is, the sum of positive mark-to-market replacement costs of the transactions).

(3) An authorized institution, in the application of Formula 4.8 in respect of its nettable derivative transactions, shall calculate the NGR either on a per counterparty basis, or on an aggregate basis.

(4) An authorized institution shall allocate to the credit equivalent amount of its net credit exposure to the counterparty calculated in accordance with subsection (2), net of specific provisions, the attributed risk-weight of the counterparty.

(5) Where a net credit exposure to a counterparty is covered by recognized collateral under the comprehensive approach to the treatment of recognized collateral, Formula 4.4 shall, with all necessary modifications, be used by the institution to calculate the credit equivalent amount after taking into account the effect of the recognized collateral.

(6) In this section –

"aggregate basis" ( ), in relation to the calculation of the NGR in Formula 4.8, means the ratio of the sum of the net replacement costs for all nettable derivative transactions with each counterparty to the sum of gross replacement costs for all nettable derivative transactions with each counterparty;

"derivative transaction" ( ) means –

(a) an OTC derivative transaction; or

(b) a credit derivative contract booked in the trading book;

"per counterparty basis" ( ), in relation to the calculation of the NGR in Formula 4.8, means the ratio of net replacement cost to gross replacement cost for the nettable derivative transactions with a particular counterparty.

4.47 Netting of repo-style transactions

(1) An authorized institution which uses the comprehensive approach to the treatment of recognized collateral shall not take into account the effect of recognized netting covering the institution's repo-style transactions in the calculation of its capital adequacy ratio insofar as it relates to credit risk other than in accordance with the provisions of this section.

(2) Where under nettable repo-style transactions the subject of recognized netting an authorized institution has the same counterparty, the institution shall calculate –

(a) the aggregate value of all money and securities sold, transferred, loaned or paid to the counterparty; and

(b) the aggregate value of money, and securities received by the institution consisting of –

(i) in the case of repo-style transactions booked in the institution's banking book, securities which would be recognized collateral falling within section 4.31(a), (b) or (c) under the comprehensive approach to the treatment of recognized collateral; and

(ii) in the case of repo-style transactions booked in the institution's trading book, any securities.

(3) Subject to section 4.48, where, in respect of a calculation under subsection (2) made by an authorized institution in respect of a counterparty, the aggregate value referred to in subsection (2)(a) is greater than the aggregate value referred to in subsection (2)(b), the institution shall calculate its net credit exposure to the counterparty by the use of Formula 4.9.

FORMULA 4.9

CALCULATION OF NET CREDIT EXPOSURE TO COUNTERPARTY WHERE AGGREGATE VALUE REFERRED TO IN SECTION 4.47(2)(a) IS GREATER THAN AGGREGATE VALUE REFERRED TO IN SECTION 4.47(2)(b)

$$E^{\#} = \max \{0, [(\Sigma(E) - \Sigma(C)) + \Sigma(E_s \times H_s) + \Sigma(E_{fx} \times H_{fx})]\}$$

where –

$E^{\#}$ = net credit exposure;

E = current market value of money and securities sold, transferred, loaned or paid by the authorized institution;

C = current market value of money and securities received by the authorized institution;

E_s = absolute value (irrespective of positive or negative) of the net position in the same securities;

H_s = haircut applicable to the absolute value of the net position in the same securities (that is, E_s) pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43;

E_{fx} = absolute value of the net position in a currency different from the settlement currency; and

H_{fx} = haircut applicable in consequence of a currency mismatch, if any, between the currency in which a net position is denominated and the settlement currency pursuant to the standard supervisory haircut for currency mismatch set out in Schedule 4.2 subject to adjustment as set out in section 4.43.

(4) An authorized institution shall allocate to its net credit exposure to a counterparty, calculated in accordance with subsection (3), the attributed risk-weight of the counterparty.

(5) An authorized institution –

(a) subject to paragraph (b), shall net its nettable repo-style transactions booked in its banking book separately from netting its nettable repo-style transactions booked in its trading book and vice versa;

(b) may net repo-style transactions booked in its banking book with repo-style transactions booked in its trading book in respect of the same counterparty if –

(i) all those repo-style transactions are marked-to-market daily; and

(ii) all the securities received by the institution in respect of all those repo-style transactions are recognized collateral falling within section 4.31(a), (b) or (c) under the comprehensive approach to the treatment of recognized collateral.

4.48 Use of value-at-risk model instead of Formula 4.9

(1) Where under Part 2 the Monetary Authority has approved the use by an authorized institution of an internal model to measure the institution's exposure to market risk, the institution may, with the approval of the Monetary Authority under subsection (3) and in accordance with that approval, use an internal model based on VaR (referred to in this section as "VaR model") as an alternative to the use of Formula 4.9 for the purposes of calculating the institution's net credit exposure to a given counterparty under nettable repo-style transactions the subject of recognized netting.

(2) An authorized institution referred to in subsection (1) may make an application to the Monetary Authority for the Monetary Authority's approval to the institution using a VaR model for the purposes referred to in that subsection.

(3) Subject to subsections (4) and (5), the Monetary Authority shall determine an application under subsection (2) from an authorized institution by notice in writing given to the institution granting, or refusing to grant, the approval sought.

(4) The Monetary Authority shall refuse to grant approval under subsection (3) to an authorized institution unless the institution satisfies the Monetary Authority that, in the case of the VaR model in respect of which the approval is sought –

(a) the model will take into account any price relationship between the value of money and securities sold, transferred, loaned or paid by the institution and the value of money and securities received by the institution under nettable repo-style transactions, and, in particular in this regard, whether the prices have a positive relationship (that is, their prices move in the same direction) or negative relationship (that is, their prices move in the opposite direction), or have no relationship at all;

(b) the model will assume a minimum holding period of 5 days and this minimum holding period will be subject to increase to the extent that the liquidity of the securities provided by way of collateral under the nettable repo-style transactions is such that a longer minimum holding period should be assumed; and

(c) the quality of the model has proved acceptable pursuant to a prescribed demonstration of the model carried out by the institution.

(5) The Monetary Authority shall, in deciding whether or not to grant approval under subsection (3) in respect of a VaR model, take into account quantitative and qualitative criteria set out in Schedule 2.3.

(6) Where an authorized institution is granted approval under subsection (3) to use a VaR model for the purposes referred to in subsection (1), the institution shall calculate its net credit exposure to the counterparty under a nettable repo-style transaction by the use of Formula 4.10.

FORMULA 4.10

CALCULATION OF NET CREDIT EXPOSURE TO COUNTERPARTY UNDER NETTABLE REPO-STYLE TRANSACTION USING VaR MODEL

$$E^{*} = \max \{0, [(\Sigma(E) - \Sigma(C)) + \text{VaR output} \times \text{multiplier}]\}$$

where –

E^{*}	=	net credit exposure;
E	=	current market value of money or securities sold, transferred, loaned or paid by the authorized institution;
C	=	current market value of money and securities received by the authorized institution as collateral;

VaR output	=	the VaR number generated by the VaR model in respect of the previous business day; and
multiplier	=	the relevant multiplier derived in accordance with subsection (7) and Table 4.12.

TABLE 4.12

MULTIPLIER FOR EXCEPTIONS

Number of exceptions	Multiplier
0 – 19	None (=1)
20 – 39	None (=1)
40 – 59	None (=1)
60 – 79	None (=1)
80 – 99	None (=1)
100 – 119	1.13
120 – 139	1.17
140 – 159	1.22
160 – 179	1.25
180 – 199	1.28
200 or more	1.33

(7) The multiplier to be applied under Formula 4.10 shall be derived by reference to the number of exceptions identified, during back-testing pursuant to the method used in a prescribed demonstration, over the most recent 250 trading days and by mapping the number of exceptions in column 1 of Table 4.12 and taking as the multiplier the figure in column 2 of that Table against the relevant number of exceptions in column 1 of that Table.

(8) In this section –

"prescribed demonstration" ( ), in relation to a VaR model proposed to be used by an authorized institution for the purposes referred to in subsection (1), means a demonstration –

(a) which back-tests the output of the model using a sample of 20 counterparties in respect of repo-style transactions with data covering a one year period where the counterparties include –

(i) the institution's 10 largest counterparties; and

(ii) 10 counterparties selected at random; and

(b) in which for each day and for the sample of 20 counterparties the institution compares the previous day's VaR estimate of the institution's exposure in respect of the sample of 20 counterparties (collectively referred to in this paragraph as "counterparty portfolio") to the

change in the institution's actual exposure in respect of the counterparty portfolio in the previous day, and –

(i) where the change is calculated as the difference between the net value of the counterparty portfolio on the previous day calculated using today's market prices and the net value of that counterparty portfolio calculated using the previous day's market prices;

(ii) where if the change exceeds the previous day's estimate, an exception occurs.

Division 9 – Use of recognized guarantees and recognized credit derivative contracts in credit risk mitigation

4.49 Recognized guarantees

A guarantee provided to an authorized institution is recognized for the purposes of calculating the risk-weighted amount of an exposure of the institution where –

(a) the guarantee is provided by –

(i) a sovereign;

(ii) a public sector entity;

(iii) a multilateral development bank;

(iv) a bank;

(v) a securities firm; or

(vi) a corporate which has an ECAI issuer rating which, if mapped to the scale of credit quality grades in Table C in Schedule 4.1, would result in the corporate being assigned a credit quality grade of 1 or 2,

in each case having been allocated a lower risk-weight than that allocated to the exposure in respect of which the guarantee has been provided (referred to in this section as "guaranteed exposure");

(b) the guarantee gives the institution a direct claim against the guarantor;

(c) the credit protection provided by the guarantee relates to a specific exposure, specific exposures, or specific pools of exposures, of the institution;

(d) the undertaking of the guarantor to make payment in specified circumstances relating to the guaranteed exposure is clearly documented so that the extent of the credit protection provided by the guarantee is clearly defined;

(e) there is no clause in the guarantee, the satisfaction of which is outside the direct control of the institution, which would allow the guarantor to cancel the guarantee unilaterally or which would increase the effective cost of the credit protection offered by the guarantee as a result of the deteriorating credit quality of the guaranteed exposure except for a clause permitting termination in the event of a failure by the institution to pay sums due from it under the terms of the guarantee;

(f) there is no clause in the guarantee, the satisfaction of which is outside the direct control of the institution, which could operate to prevent the guarantor from being obliged to pay out promptly in the event that the obligor in respect of the guaranteed exposure defaults in making any

payments due to the institution in respect of the guaranteed exposure;

(g) the country in which the guarantor is located and from which the guarantor may be obliged to make payment has no existing exchange controls in place or, if there are existing exchange controls in place, approval has been obtained for the funds to be remitted freely in the event that the guarantor is called upon under the terms of the guarantee to make payment to the institution;

(h) the guarantor has no recourse to the institution for any losses suffered as a result of the guarantor being obliged to make any payment to the institution pursuant to the guarantee;

(*i*) the institution has the right to receive payments from the guarantor without first having to take legal action to pursue the obligor in respect of the guaranteed exposure for payment; and

(j) the guarantee is binding on all parties and legally enforceable in all relevant jurisdictions.

4.50 Recognized credit derivative contracts

(1) A credit derivative contract entered into by an authorized institution as a protection buyer is recognized for the purposes of calculating the risk-weighted amount of an exposure of the institution where –

(a) the contract is a credit default swap or total return swap (other than a restricted return swap);

(b) the protection seller of the credit derivative contract is –

(i) a sovereign;

(ii) a public sector entity;

(iii) a multilateral development bank;

(iv) a bank;

(v) a securities firm; or

(vi) a corporate which has an ECAI issuer rating which, if mapped to the scale of credit quality grades in Table C in Schedule 4.1, would result in the corporate being assigned a credit quality grade of 1 or 2,

in each case having been allocated a lower risk-weight than that allocated to the exposure in respect of which the credit derivative contract has been entered into (referred to in this section as "protected exposure");

(c) the economic benefit derived by the institution would make good the economic loss suffered by the institution in consequence of the default of the obligor in respect of the protected exposure in a manner substantially similar to that of a recognized guarantee;

(d) the credit derivative contract gives the institution a direct claim against the protection seller;

(e) the credit protection provided by the credit derivative contract relates to a specific exposure, specific exposures, or specific pools of exposures, of the institution;

(f) the undertaking of the protection seller under the credit derivative contract to make payment in specified circumstances relating to the protected exposure is clearly documented so that the extent of the credit protection provided by the credit derivative contract is clearly defined;

(g) there is no clause in the credit derivative contract, the satisfaction of which is outside the direct control of the institution, which would allow the protection seller to cancel the contract unilaterally or which would increase the effective cost of the credit protection offered by the credit derivative contract as a result of the deteriorating credit quality of the protected exposure except for a clause permitting termination in the event of a failure by the institution to pay sums due from it under the terms of the credit derivative contract;

(h) there is no clause in the credit derivative contract, the satisfaction of which is outside the direct control of the institution, which could operate to prevent the protection seller from being obliged to pay out promptly in the event that the obligor in respect of the protected exposure defaults in making any payments due to the institution in respect of the protected exposure;

(*i*) the country in which the protection seller is located and from which the protection seller may be obliged to make payment has no existing exchange controls in place or, if there are existing exchange controls in place, approval has been obtained for the funds to be remitted freely in the

event that the protection seller is called upon under the terms of the credit derivative contract to make payment to the institution;

(j) the protection seller has no recourse to the institution for any losses suffered as a result of the protection seller being obliged to make any payment to the institution pursuant to the credit derivative contract;

(k) the credit derivative contract obliges the protection seller to make payment to the institution in the following credit events –

(i) any failure by the obligor in respect of the protected exposure to pay amounts due under the terms of the protected exposure (subject to any grace period in the contract which is of substantially similar duration to any grace period provided for in the terms of the protected exposure);

(ii) the bankruptcy or insolvency of (or analogous events affecting) the obligor in respect of the protected exposure or the obligor's failure or inability to pay its debts as they fall due or the obligor's admission in writing of the

obligor's inability generally to pay its debts as they fall due; or

(iii) subject to subsections (2) and (3), the protected exposure is restructured, involving forgiveness or postponement of payment of any principal or interest or fees, which results in the institution making a deduction or specific provision or other similar debit to the institution's profit and loss account;

(*l*) in any case where the protected exposure provides a grace period within which the obligor may make good a default in payment, the credit derivative contract is not capable of terminating prior to the expiry of the grace period;

(m) in any case where the credit derivative contract provides for settlement in cash, it provides an adequate mechanism for valuation of the loss occasioned to the institution in respect of the protected exposure and specifies a reasonable period within which that valuation is to be arrived at following a credit event;

(n) in any case where the reference obligation or the obligation used for the purposes of determining whether a credit event has occurred as specified in the credit derivative contract (referred to in this paragraph as "specified obligation") does not include or is different from the protected exposure –

(i) the specified obligation of the credit derivative contract ranks for payment or repayment pari passu with, or junior to, the protected exposure; and

(ii) the obligor in respect of the protected exposure is the same person as the obligor in respect of the specified obligation and legally enforceable cross default or cross acceleration clauses are included in the terms of both the protected exposure and the specified obligation;

(o) in any case where under the terms of the credit derivative contract it is a condition of settlement that the institution transfers its rights in respect of the protected exposure to the protection seller, the terms of the protected exposure provide that any consent which may be required from the

obligor in respect of the protected exposure shall not be unreasonably withheld;

(p) the credit derivative contract specifies clearly the identity of the person who is empowered to determine whether a credit event has occurred, that person is not solely the protection seller and the institution is, under the terms of the protected exposure, entitled to inform the protection seller of the occurrence of a credit event; and

(q) the credit derivative contract is binding on all parties and legally enforceable in all relevant jurisdictions.

(2) Where any restructuring of the protected exposure to which a credit derivative contract relates does not, under the terms of the contract, require payment by the protection seller to the authorized institution concerned but the amount payable to the institution under the credit derivative contract is more than the protected exposure, the contract shall be deemed to be a recognized credit derivative contract to the extent of 60% of the protected exposure.

(3) Where any restructuring of the protected exposure to which a credit derivative contract relates does not, under the terms of the contract, require payment by the protection seller to the authorized institution concerned but the amount payable to the institution under the credit derivative contract is less than, or equal to, the protected exposure, the contract shall be deemed to

be a recognized credit derivative contract to the extent of 60% of the amount payable to the institution under the credit derivative contract.

(4) In this section –

"restricted return swap" ( ), in relation to an authorized institution, means a total return swap where –

(a) the institution is the protection buyer under the swap; and

(b) the institution records the net payments received by it under the swap as net income but does not record, through deductions in fair value in the accounts of the institution or by an addition to reserves or provisions, the extent to which the value of the protected exposure has deteriorated.

4.51 Capital treatment of recognized guarantees and recognized credit derivative contracts

(1) Subject to subsections (2), (5), (6), (7), (8) and (9), where an authorized institution's exposure is covered by a recognized guarantee or recognized credit derivative contract, the institution may allocate to the exposure the attributed risk-weight of the credit protection provider.

(2) Subject to subsections (3) to (9), where –

(a) only part of an authorized institution's exposure (referred to in this Division as "credit protection covered portion") is covered by a recognized guarantee or recognized credit derivative contract; and

(b) the credit protection covered portion and the remainder of the exposure (referred to in this Division as "uncovered portion") rank pari passu,

the institution shall –

(c) allocate to so much of the exposure as constitutes the credit protection covered portion the attributed risk-weight of the credit protection provider;

(d) allocate to the remainder of the exposure which constitutes the uncovered portion the risk-weight attributable to the exposure.

(3) Sections 4.34, 4.35 and 4.36, with all necessary modifications, apply to an authorized institution in relation to the calculation of the risk-weighted amount of exposures covered by recognized guarantees or recognized credit derivative contracts.

(4) Where in respect of the institution's exposure covered by a recognized guarantee or recognized credit derivative contract there is a currency mismatch, then, to the extent that a calculation required by subsection (3) by an authorized institution relates to that guarantee or contract, as the case may be, the institution shall reduce the credit protection covered portion by a standard supervisory haircut by the use of Formula 4.11.

FORMULA 4.11

CALCULATION OF AMOUNT OF CREDIT PROTECTION OF RECOGNIZED GUARANTEE OR RECOGNIZED CREDIT DERIVATIVE CONTRACT WHERE THERE IS CURRENCY MISMATCH

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

where –

G_a = credit protection covered portion adjusted for a currency mismatch;

G = amount payable to the authorized institution under the credit protection; and

H_{fx} = haircut applicable in consequence of a currency mismatch pursuant to the standard supervisory haircuts for the comprehensive approach to the treatment of recognized collateral subject to adjustment as set out in section 4.43.

(5) Where –

(a) section 4.7(2) is applicable to domestic currency exposure to a sovereign; and

(b) the credit protection covered portion of an authorized institution's exposure –

(i) is funded in the local currency of that sovereign; and

(ii) is the subject of a recognized guarantee by that sovereign denominated in the local currency,

the institution may allocate the lower risk-weight provided for by section 4.7(2) to that credit protection covered portion.

(6) Where –

(a) section 4.7(3) is applicable to domestic currency exposure to a sovereign; and

(b) the credit protection covered portion of an authorized institution's exposure –

(i) is funded in the local currency of that sovereign;

(ii) is an exposure arising from a loan or a deposit payable on demand; and

(iii) is the subject of a recognized guarantee by that sovereign denominated in the local currency,

the institution may allocate the risk-weight provided for by section 4.7(3)(a) to that credit protection covered portion.

(7) Where –

(a) section 4.7(3) is applicable to domestic currency exposure to a sovereign; and

(b) the credit protection covered portion of an authorized institution's exposure –

(i) is funded in the local currency of that sovereign;

(ii) is an exposure arising from fixed rate securities with a residual maturity of less than one year or floating rate securities of any maturity; and

(iii) is the subject of a recognized guarantee by that sovereign denominated in the local currency,

the institution may allocate the risk-weight provided for by section 4.7(3)(b) to that credit protection covered portion.

(8) Where –

(a) section 4.7(3) is applicable to domestic currency exposure to a sovereign; and

(b) the credit protection covered portion of an authorized institution's exposure –

(i) is funded in the local currency of that sovereign;

(ii) is an exposure arising from fixed rate securities with a residual maturity of not less than one year; and

(iii) is the subject of a recognized guarantee by that sovereign denominated in the local currency,

the institution may allocate the risk-weight provided for by section 4.7(3)(c) to that credit protection covered portion.

(9) Where the credit protection covered portion of an authorized institution's exposure –

(a) is such credit protection covered portion by virtue of a recognized guarantee (referred to in this subsection as "original guarantee"); and

(b) is the subject of a counter-guarantee issued by a sovereign,

the institution may, in respect of the credit protection covered portion, treat the counter-guarantee as if it were the original guarantee if –

(c) the counter-guarantee covers all credit risk elements of the exposure to the extent that it relates to the credit protection covered portion;

(d) the counter-guarantee is granted in such terms that it can be called if for any reason the obligor in respect of the exposure to which the original guarantee relates fails to make payments due in respect of the exposure and if the original guarantee could be called;

(e) the original guarantee and the counter-guarantee meet all of the requirements for guarantees set out in section 4.49 (except that the counter-guarantee need not be a guarantee given directly and explicitly with respect to the institution's exposure to which the original guarantee relates); and

(f) the institution reasonably considers the cover of the counter-guarantee to be adequate and effective and there is no evidence to suggest that the coverage of the counter-guarantee is less effective than that of a direct and explicit guarantee by the sovereign which provides the counter-guarantee.

4.52 Provisions supplementary to section 4.51

(1) Where the credit protection in respect of an authorized institution's exposure consists of a recognized credit derivative contract which is a credit default swap or total return swap –

(a) if upon the happening of a credit event the protection seller is obliged to pay the amount specified in the contract to the institution in exchange for delivery by the institution of the deliverable obligation specified in the contract of the same amount, the institution may treat the exposure as being fully covered;

(b) if upon the happening of a credit event the protection seller is obliged to pay the amount specified in the contract to the institution less the market value of the reference obligation specified in the contract, calculated by specified calculation agents at some specified point in time after the credit event has occurred, the institution may treat the exposure as being fully covered; and

(c) if upon the happening of a credit event the protection seller is obliged to pay a fixed amount to the institution, the institution may only treat that amount of the exposure which is equivalent to the fixed amount as being fully covered.

(2) Where the credit protection in respect of an authorized institution's exposure consists of a recognized credit derivative contract which provides that, upon the happening of a credit event –

(a) the protection seller is not obliged to make a payment in respect of any loss until the loss exceeds a specified amount (referred to in this subsection as "first loss portion"); and

(b) the protection seller is not obliged to make a payment in respect of any loss except to the extent that the loss exceeds the first loss portion,

the institution shall, in calculating its capital adequacy ratio, deduct the first loss portion from its core capital and supplementary capital.

(3) Where the credit protection in respect of a basket of exposures of an authorized institution consists of a recognized first-to-default credit derivative contract –

(a) the institution shall only recognize that credit protection for the exposure in the basket of exposures which would carry the lowest risk-weighted amount in the absence of the credit protection amongst the exposures in the basket only if the principal amount of the exposure is not more than the notional amount of the contract; and

(b) in the case of such credit protection so recognized, the institution may substitute the attributed risk-weight of the credit protection provider for the risk-weight of the exposure within the basket which would carry the lowest risk-weighted amount in the absence of the credit protection.

(4) Where the credit protection in respect of a basket of exposures of an authorized institution consists of a recognized second-to-default credit derivative contract, the institution may, to the extent of the coverage of the credit protection, substitute the attributed risk-weight of the credit protection provider for the risk-weight of the exposure within the basket which would carry the second lowest risk-weighted amount in the absence of the credit protection only if –

(a) the institution has, as a protection buyer, entered into a recognized first-to-default credit derivative contract in respect of which the basket of reference obligations or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in the contract is the same as the basket of reference obligations or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in the second-to-default credit derivative contract (referred to in this subsection as "relevant basket"); or

(b) an exposure in the relevant basket has defaulted.

(5) Where the credit protection in respect of a basket of exposures of an authorized institution consists of a recognized subsequent-to-default credit derivative contract, the institution may, with all necessary modifications, apply subsection (4) to that contract as that subsection is applied to a second-to-default credit derivative contract so that –

(a) the reference to "a recognized first-to-default credit derivative contract in respect of which the basket of reference obligations or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in the contract" in subsection (4)(a) is construed to mean "recognized first-to-default and second-to-

default credit derivative contracts in respect of which the basket of reference obligations or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in each contract"; and

(b) the reference to "an exposure in the relevant basket has" in subsection (4)(b) is construed to mean "2 exposures in the relevant basket have",

in the case of a third-to-default credit derivative contract and likewise for other subsequent-to-default credit derivative contracts.

(6) Where the credit protection in respect of a basket of exposures of an authorized institution is a credit derivative contract which provides credit protection proportionately to reference obligations in the basket of reference obligations as specified in the contract, the institution shall calculate the risk-weighted amount of its exposure by substituting the attributed risk-weight of the credit protection provider for the risk-weights of the exposures to the extent of the coverage of the credit protection.

(7) Where –

(a) an authorized institution has entered into a transaction under which a portion of the credit risk of an exposure it has is transferred in one or more tranches to one or more credit protection providers, and the other portion of the credit risk of the exposure is retained by the institution; and

(b) the portion of credit risk transferred and the portion of the credit risk retained are of different seniority,

the institution shall treat the transaction as a securitization transaction and determine the treatment of the exposure in accordance with the relevant provisions under Part 7.

(8) Where the credit protection in respect of an authorized institution's exposure takes the form of an issue of credit-linked notes by the institution, the institution –

(a) may only treat that amount of the exposure which is equivalent to the cash funding received from the notes as being fully covered;

(b) shall treat the credit protection covered portion of the exposure as an exposure collateralized by cash deposit; and

(c) shall deduct from the institution's core capital and supplementary capital the first loss portion, being any specified amount of loss, upon the happening of a credit event, below which the protection seller is not obliged to share in the loss.

Division 10 – Multiple recognized credit risk mitigation and maturity mismatches

4.53 Multiple recognized credit risk mitigation

(1) Where in respect of a single exposure of an authorized institution to an obligor, 2 or more forms of recognized credit risk mitigation have been used by the institution, the institution shall calculate the risk-weighted amount of the exposure in accordance with these Rules by dividing the exposure into the portions which respectively represent the proportions of the exposure covered by each of the forms of credit risk mitigation so used.

(2) Where in respect of a single exposure of an authorized institution to an obligor, there is an overlap of coverage between 2 or more forms of recognized credit risk mitigation used by the institution, the institution may select, in respect of the portion of the exposure covered by the overlap, the credit risk mitigation which result in the lowest risk-weighted amount of that portion of the exposure covered by the overlap.

(3) Where an authorized institution has an exposure to an obligor in respect of which credit protection has been provided by a single credit protection provider in circumstances where the relevant credit protection has different maturities, the institution shall calculate the risk-weighted amount of the exposure in accordance with these Rules by dividing the exposure

into different portions reflecting the maturity of the credit protection respectively attributable to the different portions.

(4) Where an authorized institution has an exposure to an obligor in the form of a general banking facility consisting of 2 or more credit lines –

(a) the institution may, in calculating its risk-weighted amount in respect of the credit lines, allocate any credit protection taken in respect of the exposure amongst the individual exposures under each of the credit lines; and

(b) if the institution exercises its discretion under paragraph (a), the institution shall aggregate the risk-weighted amounts of the individual exposures under each of the credit lines to determine the total risk-weighted amount of the exposure in respect of the general banking facility.

4.54 Maturity mismatches

(1) Where the credit protection provided in respect of an exposure of an authorized institution (other than the netting of repo-style transactions, OTC derivative transactions and credit derivative contracts) has a residual maturity which is shorter than the residual maturity of the exposure (referred to in this section as "maturity mismatch"), the institution shall adjust the value of the credit protection by the use of Formula 4.12.

FORMULA 4.12

ADJUSTMENT OF CALCULATION OF VALUE OF CREDIT PROTECTION WHERE THERE IS MATURITY MISMATCH

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

where –

P_a = value of credit protection adjusted for maturity mismatch;

P = value of credit protection adjusted by standard supervisory haircuts for price volatility of collateral and currency mismatch (if applicable);

t = Min (T, residual maturity of credit protection) expressed in years; and

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

(2) Where there is a maturity mismatch, the institution, in calculating its risk-weighted amount of the exposure –

(a) shall only take into account the credit protection if the credit protection has an original maturity of not less than one year;

(b) shall not take into account the credit protection once it has a residual maturity of not more than 3 months; and

(c) shall not take into account the credit protection if the credit protection is in the form of recognized collateral and the risk-weighted amount of the exposure is calculated by using the simple approach to the treatment of recognized collateral.

(3) For the purposes of calculating the respective maturities of an exposure of an authorized institution and any credit protection covering the exposure –

(a) if the credit protection is in the form of recognized collateral, guarantees or credit derivative contracts, the institution shall, at any time before the obligor in respect of the exposure to which the credit protection relates performs the obligor's obligations, take the effective maturity of the exposure to be the longest possible remaining time after taking into account any applicable grace period provided for in the terms of the exposure;

(b) if the terms of the credit protection provide for an option which may reduce the term of that credit protection, the institution shall take into account the option and the earliest possible date upon which it may be exercised;

(c) if the terms of the credit protection provide that the credit protection provider may terminate the credit protection before its maturity, the institution shall take the maturity of the credit protection to be the first date upon which the credit protection provider may so terminate the credit protection; and

(d) if the terms of the credit protection permit the institution to terminate the credit protection before its maturity and there is a positive incentive for the institution to exercise its discretion so to do, the institution shall take the maturity of the credit protection to be the time left to run before the earliest date upon which the institution may exercise the discretion.

(4) For the purposes of this section, the residual maturity of credit protection which is recognized collateral falling within section 4.30(a) shall be taken to be the period for which it will continue to fulfil the requirements of section 4.28 applicable to the credit protection.

PART 5

CALCULATION OF CREDIT RISK FOR NON-SECURITIZATION EXPOSURES : BSC APPROACH

Division 1 – General

5.1 Application of Part 5

(1) This Part applies to an authorized institution which uses the BSC approach to calculate its credit risk for non-securitization exposures.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Part is a reference to an authorized institution which uses the BSC approach to calculate its credit risk for non-securitization exposures.

5.2 Interpretation of Part 5

In this Part, unless the context otherwise requires –

"attributed risk-weight" ( ), in relation to a person to whom an authorized institution has an exposure, means the risk-weight which would be attributable, in accordance with sections 5.6 to 5.10 and 5.13 to –

(a) the person as the obligor; or

(b) the exposure;

"cash items" ( ), in relation to an authorized institution, means all or any of the following –

(a) legal tender notes or other notes, and coins, representing the lawful currency of a country held by the institution;

(b) the institution's holdings of certificates of indebtedness issued by the Government for the issue of legal tender notes;

(c) gold bullion held by the institution, or gold bullion held on an allocated basis for the institution by another person, which is backed by gold bullion liabilities;

(d) gold bullion held on an unallocated basis for the institution by another person which is backed by gold bullion liabilities;

(e) gold bullion held by the institution, or gold bullion held for the institution by another person, which is not backed by gold bullion liabilities;

(f) cheques, drafts and other items drawn on other banks –

(i) which are payable to the account of the institution immediately upon presentation; and

(ii) which are in the process of collection;

(g) unsettled clearing items of the institution which are being processed through any interbank clearing system in Hong Kong;

(h) receivables from transactions in securities (other than repo-style transactions), foreign exchange, and commodities which are not yet due for settlement;

(*i*) positive current exposure incurred by the institution under transactions in securities (other than repo-style transactions), foreign exchange, and commodities –

(i) which are entered into on a delivery-versus-payment basis; and

(ii) which are outstanding after the due settlement date in respect of the transaction concerned;

(j) the amounts of payment made or the current market value of the thing delivered, and the positive current exposure incurred, by the institution under transactions in securities (other than repo-style transactions), foreign exchange, and commodities –

(i) which are entered into on a non-delivery-versus-payment basis; and

(ii) which are outstanding up to and including the fourth business day after the due settlement date in respect of the transaction concerned;

"credit equivalent amount" ( ), in relation to an off-balance sheet exposure, means the credit equivalent amount of the exposure calculated under section 5.15 or 5.17, as the case requires;

"debt securities" ( ) means any securities other than shares, stocks or import or export trade bills;

"exposure" ( ), in relation to an authorized institution, means a credit exposure (including an asset) of the institution;

"principal amount" ( ) –

(a) in relation to an on-balance sheet exposure of an authorized institution, means the book value (including accrued interest and revaluations) of the exposure;

(b) in relation to an off-balance sheet exposure of an authorized institution, means –

(i) subject to subparagraph (ii), in the case of an exposure listed in Table 5.1, the contracted amount of the exposure;

(ii) in the case of an exposure listed in Table 5.1 which is an undrawn or partially drawn facility, the amount of the undrawn commitment;

(iii) subject to subparagraph (iv), in the case of an exposure listed in Table 5.2, the notional amount of the exposure;

(iv) in the case of an exposure listed in Table 5.2 where the stated notional amount of the exposure is leveraged or enhanced by the structure of the exposure, the effective notional amount of the exposure taking into account that the stated notional amount is so leveraged or enhanced, as the case may be;

"recognized collateral" ( ) means collateral recognized under section 5.21;

"recognized credit derivative contract" ( ) means –

(a) a credit derivative contract recognized under section 5.30(1); or

(b) a credit derivative contract which falls within section 5.30(2) or (3) to the extent that it is deemed under that section to be a recognized credit derivative contract;

"recognized guarantee" ( ) means a guarantee recognized under section 5.29;

"Tier 2 country" ( ) means any country which is not a Tier 1 country.

Division 2 – Calculation of credit risk under BSC approach, exposures to be covered in calculation, and classification of exposures

5.3 Calculation of risk-weighted amount of exposures

(1) Subject to section 5.4, an authorized institution shall calculate an amount representing the degree of credit risk to which the institution is exposed by aggregating –

(a) the risk-weighted amount of the institution's on-balance sheet exposures; and

(b) the risk-weighted amount of the institution's off-balance sheet exposures.

(2) For the purposes of subsection (1)(a) –

(a) subject to paragraph (b), an authorized institution shall calculate the risk-weighted amount of the institution's on-balance sheet exposures by multiplying the principal amount of each such exposure net of specific provisions by the relevant risk-weight attributable to the exposure determined under Division 3;

(b) an authorized institution may reduce the risk-weighted amount of the institution's on-balance sheet exposure by taking into account the effect of any recognized credit risk mitigation in respect of the exposure in the manner set out in Divisions 5 to 8.

(3) For the purposes of subsection (1)(b) –

(a) subject to paragraph (b), an authorized institution shall calculate the risk-weighted amount of the institution's off-balance sheet exposures by –

(i) in the case of any such exposure which is an OTC derivative transaction or credit derivative contract –

(A) converting the principal amount of the exposure into its credit equivalent amount in the manner set out in section 5.15 or 5.17, as the case requires; and

(B) multiplying the credit equivalent amount net of specific provisions by the exposure's relevant risk-weight determined under section 5.18;

(ii) in any other case –

(A) converting the principal amount of each such exposure net of specific provisions into its credit equivalent amount in the manner set out in section 5.15 or 5.17, as the case requires; and

(B) multiplying the credit equivalent amount by the exposure's relevant risk-weight determined under section 5.18;

(b) an authorized institution may reduce the risk-weighted amount of the institution's off-balance sheet exposure by taking into account the effect of any recognized credit risk mitigation in respect of the exposure in the manner set out in Divisions 5 to 8.

5.4 On-balance sheet exposures and off-balance sheet exposures to be covered

An authorized institution shall, for the purposes of calculating an amount representing the degree of credit risk to which the institution is exposed under section 5.3, take into account and risk-weight –

(a) all of its on-balance sheet exposures and off-balance sheet exposures booked in its banking book except such exposures –

(i) which under sections 3.14 and 3.15 are required to be deducted from any of the institution's core capital and supplementary capital; or

(ii) which are subject to the requirements of Part 7;

(b) all of its exposures to counterparties under credit derivative contracts, OTC derivative transactions, or repo-style transactions, booked in its trading book; and

(c) all of its market risk exposures which are exempted from section 2.17 under section 2.22 except for its total net open position in foreign exchange exposures as derived in section 9.16.

5.5 Classification of exposures

An authorized institution shall classify each of its exposures, according to the obligor or the nature of the exposure, into one only of the following classes –

(a) sovereign exposures;

(b) public sector entity exposures;

(c) multilateral development bank exposures;

(d) bank exposures;

(e) cash items;

(f) residential mortgage loans; or

(g) other exposures.

Division 3 – Determination of risk-weights applicable to on-balance sheet exposures

5.6 Sovereign exposures

(1) Subject to section 5.7, an authorized institution shall allocate a risk-weight to a sovereign exposure in accordance with the following provisions.

(2) Where an exposure of an authorized institution to a sovereign of a Tier 1 country arises from a loan by the institution to the sovereign, the institution shall allocate a risk-weight of 0% to the exposure.

(3) Where an exposure of an authorized institution to a sovereign of a Tier 1 country arises from –

(a) fixed rate securities with a residual maturity of less than one year, which are issued by the sovereign and held by the institution; or

(b) floating rate securities of any maturity, which are issued by the sovereign and held by the institution,

the institution shall allocate a risk-weight of 10% to the exposure.

(4) Where an exposure of an authorized institution to a sovereign of a Tier 1 country arises from fixed rate securities with a residual maturity of not less than one year, which are issued by the sovereign and held by the institution, the institution shall allocate a risk-weight of 20% to the exposure.

(5) Where an exposure of an authorized institution arises in respect of a guarantee by a sovereign of a Tier 1 country of –

(a) any fixed rate securities with a residual maturity of less than one year, which are held by the institution; or

(b) any floating rate securities of any maturity, which are held by the institution,

the institution shall allocate a risk-weight of 10% to the exposure.

(6) Where an exposure of an authorized institution arises in respect of a guarantee by a sovereign of a Tier 1 country of any fixed rate securities with a residual maturity of not less than one year, which are held by the institution, the institution shall allocate a risk-weight of 20% to the exposure.

(7) Where –

(a) an exposure of an authorized institution to a sovereign of a Tier 2 country arises from a loan by the institution to the sovereign; and

(b) the exposure is a domestic currency exposure,

the institution shall allocate a risk-weight of 0% to the exposure.

(8) Where –

(a) an exposure of an authorized institution to a sovereign of a Tier 2 country arises from –

(i) fixed rate securities with a residual maturity of less than one year, which are issued by the sovereign and held by the institution; or

(ii) floating rate securities of any maturity, which are issued by the sovereign and held by the institution, and

(b) the exposure is a domestic currency exposure,

the institution shall allocate a risk-weight of 10% to the exposure.

(9) Where –

(a) an exposure of an authorized institution to a sovereign of a Tier 2 country arises from fixed rate securities with a residual maturity of not less than one year, which are issued by the sovereign and held by the institution; and

(b) the exposure is a domestic currency exposure,

the institution shall allocate a risk-weight of 20% to the exposure.

(10) Where –

(a) an exposure of an authorized institution arises in respect of a guarantee by a sovereign of a Tier 2 country of –

(i) any fixed rate securities with a residual maturity of less than one year, which are held by the institution; or

(ii) any floating rate securities of any maturity, which are held by the institution; and

(b) the securities are denominated in the local currency of the Tier 2 country, and funded by liabilities entered into by the institution in that currency,

the institution shall allocate a risk-weight of 10% to the exposure.

(11) Where –

(a) an exposure of an authorized institution arises in respect of a guarantee by a sovereign of a Tier 2 country of any fixed rate securities with a residual maturity of not less than one year, which are held by the institution; and

(b) the securities are denominated in the local currency of the Tier 2 country, and funded by liabilities entered into by the institution in that currency,

the institution shall allocate a risk-weight of 20% to the exposure.

(12) Where an exposure of an authorized institution to a sovereign of a Tier 2 country does not fall within subsection (7), (8), (9), (10) or (11), the institution shall allocate a risk-weight of 100% to the exposure.

(13) For the avoidance of doubt, it is hereby declared that, for the purposes of this section, an exposure of an authorized institution to the Government includes an exposure of the institution to the Exchange Fund.

5.7 Exceptions to section 5.6

Where an exposure of an authorized institution to a sovereign consists of an exposure to a relevant international organization, the institution shall allocate a risk-weight of 0% to the exposure.

5.8 Public sector entity exposures

An authorized institution shall allocate a risk-weight of –

(a) 20% to an exposure of the institution to a public sector entity of a Tier 1 country; and

(b) 100% to an exposure of the institution to a public sector entity of a Tier 2 country.

5.9 Multilateral development bank exposures

An authorized institution shall allocate a risk-weight of 0% to an exposure of the institution to a multilateral development bank.

5.10 Bank exposures

An authorized institution shall allocate a risk-weight of –

(a) 20% to an exposure of the institution to a bank which falls within paragraph (a) of the definition of "bank" in section 1.2(1);

(b) 20% to an exposure of the institution to a bank which falls within paragraph (b) of the definition of "bank" in section 1.2(1) and which is incorporated in a Tier 1 country;

(c) 20% to an exposure of the institution, with a residual maturity of less than one year, to a bank which falls within paragraph (b) of the definition of "bank" in section 1.2(1) and which is incorporated in a Tier 2 country; and

(d) 100% to an exposure of the institution, with a residual maturity of not less than one year, to a bank which falls within paragraph (b) of the definition of "bank" in section 1.2(1) and which is incorporated in a Tier 2 country.

5.11 Cash items

An authorized institution shall allocate a risk-weight of 0% to all cash items in relation to the institution except that –

(a) in the case of cash items which fall within paragraph (d) of the definition of "cash items" in section 5.2, the institution shall allocate a risk-weight which is the same as the attributed risk-weight of the person who holds the gold bullion concerned;

(b) in the case of cash items which fall within paragraph (e) of the definition of "cash items" in section 5.2, the institution shall allocate a risk-weight of 100%;

(c) in the case of cash items which fall within paragraph (f) of the definition of "cash items" in section 5.2, the institution shall allocate a risk-weight of 20%;

(d) in the case of cash items which fall within paragraph (*i*) of the definition of "cash items" in section 5.2 and remain outstanding for 5 or more business days after the due settlement date, the institution shall allocate a risk-weight of –

(i) 100% for such items which remain so outstanding from 5 to 15 business days (both days inclusive);

(ii) 625% for such items which remain so outstanding from 16 to 30 business days (both days inclusive);

(iii) 937.5% for such items which remain so outstanding from 31 to 45 business days (both days inclusive); and

(iv) 1,250% for such items which remain so outstanding for 46 or more business days; and

(e) in the case of cash items which fall within paragraph (j) of the definition of "cash items" in section 5.2, the institution shall allocate a risk-weight which is the same as the attributed risk-weight of the obligor in respect of the transaction concerned.

5.12 Residential mortgage loans

(1) Subject to subsections (2) and (3), an authorized institution shall allocate a risk-weight of 50% to a residential mortgage loan in relation to the institution where –

(a) the borrower under the loan is –

(i) an individual or individuals; or

(ii) a property-holding shell company;

(b) the loan is secured by a first legal charge on a residential property or more than one residential property;

(c) each residential property which falls within paragraph (b) is –

(i) if paragraph (a)(i) is applicable, used as the residence of the borrower or as a residence of a tenant of the borrower;

(ii) if paragraph (a)(ii) is applicable, used as the residence of the directors or shareholders of the borrower or as a residence of a tenant of the borrower;

(d) the loan-to-value ratio of the loan does not exceed 90% at the time a commitment to extend the loan was made by the institution, or in relation to a residential mortgage loan purchased by the institution, at the time the loan was purchased; and

(e) if the borrower under the loan is a property-holding shell company –

(i) all of the borrowed-monies obligations of the company arising under the loan are the subject of a personal guarantee –

(A) which is entered into by one or more than one director or shareholder (referred to in this paragraph as "guarantor") of the company; and

(B) which fully and effectively covers those obligations;

(ii) the institution, having due regard to the guarantor's financial obligations (including, in particular, all the guarantor's borrowed-monies obligations and obligations of suretyship), is satisfied that the guarantor is able to discharge all the guarantor's obligations under the guarantee; and

(iii) the loan has been assessed by reference to substantially similar credit underwriting standards (including loan purpose and loan-to-value and debt service ratios) as would normally be applied by the institution to an individual.

(2) Where, in respect of a residential mortgage loan by an authorized institution, any residential property which falls within subsection (1)(b) is situated outside Hong Kong, the institution may allocate a risk-weight to the loan generally provided for under the supervisory treatment, or capital adequacy requirements, applicable to banks carrying on banking business in the jurisdiction in which the residential property is situated.

(3) Subject to subsection (4), an authorized institution shall, for the purposes of the application of subsection (1)(d) to a residential mortgage loan, exclude from the calculation of the loan-to-value ratio of a residential mortgage loan made or purchased by it any portion of the loan amount which has been provided by a property developer which is not a member of the group of companies of which the institution is a member.

(4) The Monetary Authority may, by notice in writing given to an authorized institution, direct the institution, in calculating –

(a) the loan-to-value ratio of a residential mortgage loan specified in the notice; or

(b) the loan-to-value ratio of a residential mortgage loan belonging to a class of residential mortgage loans specified in the notice,

to include a portion of the loan amount which would otherwise be excluded pursuant to subsection (3).

(5) An authorized institution given a notice under subsection (4) shall comply with the notice.

(6) In this section –

"loan-to-value ratio" ( ), in relation to a residential mortgage loan, means the ratio of the sum of the following amounts to the market value of the security –

(a) the principal amount of that loan; and

(b) the principal amount of all other residential mortgage loans in respect of which the residential property falling within subsection (1)(b) is also used as security.

5.13 Other exposures

(1) This section applies to –

(a) equities held by an authorized institution; and

(b) any other on-balance sheet exposures of the institution which do not fall within any of sections 5.6 to 5.12 (including accrued interest if subsection (5) is applicable).

(2) Subject to subsections (3) and (4), an authorized institution shall allocate a risk-weight of 100% to an exposure to which this section applies.

(3) The Monetary Authority may, by notice in writing given to an authorized institution, direct the institution to allocate to an exposure, or an exposure belonging to a class of exposures, to which this section applies, a risk-weight specified in the notice, being a risk-weight greater than 100%.

(4) An authorized institution given a notice under subsection (3) shall comply with the notice.

(5) Where in respect of an on-balance sheet exposure of an authorized institution, the institution has difficulty in allocating any accrued interest under the exposure to the obligors of the institution, the institution may, with the prior consent of the Monetary Authority, treat the accrued interest as an exposure to which this section applies.

5.14 Credit-linked notes

An authorized institution which has an exposure in respect of a credit-linked note held by the institution shall allocate a risk-weight to the exposure which is the greater of –

(a) the risk-weight attributable to the reference obligation of the note as determined in accordance with sections 5.6 to 5.13 as if the institution had a direct exposure to the reference obligation; and

(b) the attributed risk-weight of the issuer of the note.

Division 4 – Calculation of risk-weighted amount of authorized institution's off-balance sheet exposures

5.15 Off-balance sheet exposures

(1) An authorized institution shall, in calculating the risk-weighted amount of an off-balance sheet exposure of the institution –

(a) specified in column 2 of Table 5.1; and

(b) booked in the institution's banking book,

calculate the credit equivalent amount of the off-balance sheet exposure by multiplying the principal amount of the exposure, after deducting any specific provisions applicable to the exposure, by the CCF specified in column 3 of Table 5.1 opposite the exposure.

TABLE 5.1

DETERMINATION OF CCF FOR OFF-BALANCE SHEET EXPOSURES OTHER THAN OTC DERIVATIVE TRANSACTIONS OR CREDIT DERIVATIVE CONTRACTS

Item	Off-balance sheet exposures	CCF
1.	Direct credit substitutes	100%
2.	Transaction-related contingencies	50%

3.	Trade-related contingencies	20%
4.	Asset sales with recourse	100%
5.	Forward asset purchases	100%
6.	Partly paid-up shares and securities	100%
7.	Forward forward deposits placed	100%
8.	Note issuance and revolving underwriting facilities	50%
9.	Commitments which do not fall within any of items 1 to 8 and–	
	(a) subject to paragraph (d), which have an original maturity of not more than one year;	20%
	(b) subject to paragraph (d), which have an original maturity of more than one year;	50%
	(c) which may be cancelled at any time unconditionally by the authorized institution or which provide for automatic cancellation due to a deterioration in the creditworthiness of the person to whom the institution has made the commitment;	0%

(d)	the drawdown of which will give rise to an off-balance sheet exposure falling within any of items 1 to 8 or any item specified in section 5.17,	the lower of the CCF applicable to the commitment based on its original maturity or the CCF applicable to the off-balance sheet exposure arising from the drawdown of the commitment concerned

where –

"original maturity" ( ), in relation to an off-balance sheet exposure of an authorized institution, means the period between the date on which the exposure is entered into by the institution and the earliest date on which the institution can, at its option, unconditionally cancel the exposure.

(2) Subject to section 5.16, an authorized institution shall, in calculating the risk-weighted amount of an off-balance sheet exposure of the institution being an OTC derivative transaction or credit derivative contract –

(a) specified in column 2 of Table 5.2; and

(b) booked in the institution's banking book or trading book,

calculate the credit equivalent amount of the off-balance sheet exposure –

(c) subject to paragraph (d) and to any exceptions specified in column 2 of Table 5.2 applicable to the off-balance sheet exposure, by multiplying the principal amount of the off-balance sheet exposure by the CCF specified in column 3 of Table 5.2 opposite the off-balance sheet exposure and aggregating the resultant figure with the current exposure of the off-balance sheet exposure;

(d) if the off-balance sheet exposure is a single currency floating rate against floating rate interest rate swap, by taking the current exposure of the off-balance sheet exposure as the credit equivalent amount.

TABLE 5.2

DETERMINATION OF CCF FOR OTC DERIVATIVE TRANSACTIONS OR CREDIT DERIVATIVE CONTRACTS

Item	Off-balance sheet exposures	CCF
1.	Exchange rate contracts (other than an excluded exchange rate contract) –	
	(a) with a residual maturity of not more than one year;	1%
	(b) with a residual maturity of more than one year but not more than 5 years;	5%
	(c) with a residual maturity of more than 5 years,	7.5%

where –

"excluded exchange rate contract" ( ) means –

(a) an exchange rate contract (except a contract the value of which is derived from the value of gold) which has an original maturity of not more than 14 calendar days; or

(b) a forward exchange rate contract entered into by the authorized institution pursuant to a swap deposit arrangement with an obligor;

"swap deposit arrangement"
( ) means an arrangement entered into by the authorized institution with an obligor whereby the institution sells foreign currency at spot rate to the obligor against another currency, and at the same time, the obligor deposits the foreign currency so purchased with the institution and enters into a forward exchange rate contract with the institution to sell the foreign currency so purchased back to the institution against another currency at a specified exchange rate on a future date.

2.	Interest rate contracts –	
	(a) with a residual maturity of not more than one year;	0%
	(b) with a residual maturity of more than one year but not more than 5 years;	0.5%
	(c) with a residual maturity of more than 5 years.	1.5%
3.	Equity contracts –	
	(a) with a residual maturity of not more than one year;	6%

(b)	with a residual maturity of more than one year but not more than 5 years;	8%
(c)	with a residual maturity of more than 5 years.	10%

4. Precious metal contracts –

(a)	with a residual maturity of not more than one year;	7%
(b)	with a residual maturity of more than one year but not more than 5 years;	7%
(c)	with a residual maturity of more than 5 years.	8%

5. Other commodity contracts –

(a)	with a residual maturity of not more than one year;	10%
(b)	with a residual maturity of more than one year but not more than 5 years;	12%
(c)	with a residual maturity of more than 5 years.	15%

6. Credit derivative contracts consisting of –

(a) credit default swaps booked in the trading book –

(i) where the authorized institution is a protection buyer and the reference obligation is –

	(A)	a qualifying reference obligation;	5%
	(B)	a non-qualifying reference obligation;	10%
(ii)	where the authorized institution is a protection seller and the credit default swap is subject to close-out upon the insolvency of the protection buyer while the reference entity is still solvent and the reference obligation is –		
	(A)	a qualifying reference obligation;	5%
	(B)	a non-qualifying reference obligation;	10%
(iii)	where the authorized institution is a protection seller and the credit default swap does not fall within subparagraph (ii) and the reference obligation is –		
	(A)	a qualifying reference obligation;	0%

(B) a non-qualifying reference obligation; 0%

(b) total return swaps booked in the trading book –

(i) where the authorized institution is the protection buyer and the reference obligation is –

(A) a qualifying reference obligation; 5%

(B) a non-qualifying reference obligation; 10%

(ii) where the authorized institution is the protection seller and the reference obligation is –

(A) a qualifying reference obligation; 5%

(B) a non-qualifying reference obligation, 10%

where the amount of the potential exposure for a credit derivative contract which falls within paragraph (a)(ii) shall be capped at the amount of the unpaid premium under the contract.

(3) For the avoidance of doubt, it is hereby declared that an authorized institution is not required to hold regulatory capital in respect of an excluded exchange rate contract specified in Table 5.2.

5.16 Provisions supplementary to section 5.15

For the purposes of the operation of section 5.15 in relation to an authorized institution and its off-balance sheet exposures –

(a) in the case of an off-balance sheet exposure which has multiple exchanges of principal, the institution shall calculate its potential exposure to the off-balance sheet exposure by multiplying the product of the number of payments remaining to be made under the off-balance sheet exposure and the principal by the CCF required to be used under that section in respect of the off-balance sheet exposure;

(b) in the case of an off-balance sheet exposure –

(i) which is structured to settle the outstanding exposures under the off-balance sheet exposure on specified payment dates; and

(ii) the terms of which are reset so that the market value of the off-balance sheet exposure is zero on the specified payment dates referred to in subparagraph (i),

the institution –

(iii) subject to subparagraph (iv), shall treat the residual maturity of the off-balance sheet exposure as being equal to the period until the next specified payment date; and

(iv) if the off-balance sheet exposure is an interest rate contract where the remaining time to final maturity of the contract is more than one year, shall not use a CCF of less than 0.5% in respect of the off-balance sheet exposure;

(c) in the case of an off-balance sheet exposure booked in the institution's trading book which is a first-to-default credit derivative contract, the institution shall use the CCF for non-qualifying reference obligation 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 is to be used;

(d) in the case of an off-balance sheet exposure booked in the institution's trading book which is a second-to-default credit derivative contract or any other subsequent-to-default credit derivative contract, the institution shall –

(i) for the second-to-default credit derivative contract, use the CCF for non-qualifying reference obligation if there are at least 2 non-qualifying reference obligations in the basket of reference obligations specified in the second-to-default credit derivative contract, otherwise the CCF for qualifying reference obligation is to be used;

(ii) for any other subsequent-to-default credit derivative contract, determine the CCF for the other subsequent-to-default credit derivative contract with reference to the corresponding number of non-qualifying reference obligations in the basket of reference obligations specified in the contract based on the approach taken in subparagraph (i);

(e) in the case of an off-balance sheet exposure which is a commitment in the form of a general banking facility consisting of 2 or more credit lines, where under each credit line, an authorized institution is obliged either to provide funds or create off-balance sheet exposures in the future, the institution shall assign a CCF to the commitment in accordance with item 9(a), (b) or (c) of Table 5.1 based on the original maturity of the commitment.

5.17 Calculation of credit equivalent amount of other off-balance sheet exposures not specified in Table 5.1 or 5.2

An authorized institution shall, in calculating the risk-weighted amount of an off-balance sheet exposure which is not specified in Table 5.1 or 5.2, calculate the credit equivalent amount of the off-balance sheet exposure by applying –

(a) subject to paragraph (b), a CCF of 100%;

(b) the relevant CCF applicable to the exposure pursuant to Part 2 of Schedule 1.1,

in accordance with section 5.15(1) or (2), as the case requires, with all necessary modifications.

5.18 Determination of risk-weights applicable to off-balance sheet exposures

(1) Subject to subsection (2), an authorized institution shall determine the risk-weight attributable to an off-balance sheet exposure in accordance with sections 5.6 to 5.10, 5.12 and 5.13 as if the exposure were an on-balance sheet exposure.

(2) Where an off-balance sheet exposure referred to in subsection (1) of an authorized institution is –

(a) an asset sale with recourse;

(b) a forward asset purchase;

(c) partly paid-up shares and securities; or

(d) a direct credit substitute arising from the selling of credit derivative contracts in the form of total return swaps or credit default swaps in the institution's banking book,

the institution shall determine the risk-weight attributable to the exposure –

(e) in the case of paragraph (a) or (b), by reference to the risk-weight allocated to the assets or the attributed risk-weight of the obligor in respect of the assets;

(f) in the case of paragraph (c), as 100%;

(g) in the case of paragraph (d) and subject to subsection (3), by reference to the risk-weight of the relevant reference obligation in respect of the exposure.

(3) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is a first-to-default credit derivative contract –

(a) subject to paragraph (b), the institution shall, for the purposes of that subsection, aggregate the risk-weights of the reference obligations in the basket of reference obligations specified in the contract to determine the risk-weight to be allocated to its exposure in respect of the contract; and

(b) the institution shall not allocate to its exposure in respect of the contract a risk-weight greater than 1,250%.

(4) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is a second-to-default credit derivative contract –

(a) subject to paragraph (b), the institution shall, for the purposes of that subsection, aggregate the risk-weights of the reference obligations in the basket of reference obligations specified in the contract to determine the risk-weight to be allocated to its exposure in respect of the contract but excluding the lowest of those risk-weights; and

(b) the institution shall not allocate to its exposure in respect of the contract a risk-weight greater than 1,250%.

(5) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is any other subsequent-to-default credit derivative contract, the institution shall, for the purposes of that subsection, and with all necessary modifications, apply subsection (4) to that contract as that subsection is applied to a second-to-default credit derivative contract so that the reference to "lowest" in subsection (4)(a) is construed to mean "lowest and second lowest" in the case of a third-to-default credit derivative contract and "lowest, second lowest and third lowest" in the case of a fourth-to-default credit derivative contract and likewise for other subsequent-to-default credit derivative contracts.

(6) Where an off-balance sheet exposure referred to in subsection (2)(d) of an authorized institution is a credit derivative contract which provides credit protection proportionately in respect of the reference obligations in the basket of reference obligations as specified in the contract, then the institution shall calculate the risk-weight of its exposure in respect of the contract by taking a weighted average of the risk-weights attributable to the reference obligations in the basket by the use of Formula 5.1.

FORMULA 5.1

CALCULATION OF RISK-WEIGHT OF CREDIT DERIVATIVE CONTRACT WHICH FALLS WITHIN SECTION 5.18(6)

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

where –

RW_a = average risk-weight in a basket of reference obligations;

a_i = proportion of credit protection allocated to a reference obligation; and

RW_i = risk-weight of a reference obligation.

(7) For the avoidance of doubt, it is hereby declared that where an off-balance sheet exposure referred to in subsection (1) of an authorized institution is a commitment to extend a residential mortgage loan, the institution shall allocate a risk-weight in accordance with section 5.12 to the exposure only if the institution has no reason to believe that any of the provisions of that section will not be satisfied immediately after the loan that is the subject of that commitment is drawn down.

5.19 Calculation of risk-weighted amount of exposures in respect of repo-style transactions booked in banking book

(1) An authorized institution shall calculate the risk-weighted amount of an exposure in respect of a repo-style transaction booked in its banking book in accordance with the following provisions.

(2) Where the repo-style transaction falls within paragraph (a) or (b) of the definition of "repo-style transaction" in section 1.2(1), an authorized institution shall treat the securities sold or lent under the transaction as an on-balance sheet exposure of the institution as if the institution had never entered into the transaction and, accordingly, calculate the risk-weighted amount of the institution’s exposure in respect of the transaction by reference to the risk-weight attributable to the securities.

(3) Where the repo-style transaction falls within paragraph (c) of the definition of "repo-style transaction" in section 1.2(1), an authorized institution shall treat the money paid by the institution under the transaction as a loan to the counterparty secured on the securities which are provided to, or to the order of, the institution under the transaction and, accordingly, calculate the risk-weighted amount of the institution's exposure in respect of the transaction by reference to the attributed risk-weight of the counterparty subject to the

application of any recognized credit risk mitigation in respect of collateralized transactions.

(4) Where the repo-style transaction falls within paragraph (d) of the definition of "repo-style transaction" in section 1.2(1) –

(a) if and to the extent an authorized institution has provided collateral in the form of money under the transaction, the institution shall treat the money paid by the institution under the transaction as a loan to the counterparty secured on the securities borrowed by the institution and, accordingly, calculate the risk-weighted amount of the institution's exposure in respect of the transaction by reference to the attributed risk-weight of the counterparty subject to the application of any recognized credit risk mitigation in respect of collateralized transactions;

(b) if and to the extent an authorized institution has provided collateral in the form of securities under the transaction, the institution shall treat those securities as its on-balance sheet exposure as if the institution had never entered into the transaction and, accordingly, calculate the risk-weighted amount of the institution's exposure in

respect of the transaction by reference to the risk-weight attributable to the securities.

5.20 Calculation of risk-weighted amount of exposures in respect of repo-style transactions booked in trading book

An authorized institution shall calculate the risk-weighted amount of an exposure in respect of a repo-style transaction booked in its trading book –

(a) by reference to Parts 9 and 10 in any case where the transaction falls within paragraph (a) or (b) of the definition of "repo-style transaction" in section 1.2(1), or paragraph (d) of the definition where the collateral provided by the institution is in the form of securities;

(b) by the application of section 5.19(3) or (4)(a) to the transaction as if the transaction were booked in the banking book in any case where the transaction falls within paragraph (c) of the definition of "repo-style transaction" in section 1.2(1), or paragraph (d) of the definition where the collateral provided by the institution is in the form of a sum of money.

Division 5 – Use of recognized collateral in credit risk mitigation

5.21 Recognized collateral

Collateral is recognized for the purposes of calculating the risk-weighted amount of an authorized institution's exposures where –

(a) all documentation creating the collateral and providing for the obligations of the parties with respect to each other in respect of the collateral is binding on all the parties and legally enforceable in all the relevant jurisdictions;

(b) the legal mechanism by which the collateral is pledged or transferred ensures that the institution has the right to realize, or to take legal possession of, the collateral in a timely manner in the event of a default by, or the insolvency or bankruptcy of, or any other event specified in the relevant legal documentation applicable to any of –

(i) the obligor in respect of the exposure; or

(ii) the custodian, if any, holding the collateral;

(c) the institution has clear and adequate procedures for the timely realization of collateral in respect of an event referred to in paragraph (b);

(d) the institution has taken all steps to fulfil requirements under the law applicable to the institution's interest in the collateral which are necessary to obtain and maintain an enforceable security interest, whether by registration or otherwise, or to exercise a right to set-off in relation to title transfer collateral;

(e) if the collateral is to be held by a custodian, the institution has taken reasonable steps to ensure that the custodian segregates the collateral from the custodian's assets;

(f) there is no material positive correlation between the credit quality of the obligor in respect of which the institution has an exposure and the current market value of the collateral provided in respect of the exposure such that the current market value of the collateral would be likely to fall in the case of any material deterioration in the financial condition of the obligor;

(g) the collateral –

(i) is pledged for not less than the life of the exposure; and

(ii) is re-valued not less than every 6 months from the date upon which the collateral is taken in respect of the exposure; and

(h) the collateral falls within section 5.22(a), (b), (c), (d), (e), (f) or (g).

5.22 Collateral which may be recognized for purposes of section 5.21(h)

For the purposes of section 5.21(h), only collateral of the following description may be recognized in relation to an authorized institution –

(a) cash on deposit with the institution or held at a third-party bank;

(b) certificates of deposit issued by the institution;

(c) instruments issued by the institution which are comparable to instruments referred to in paragraph (b);

(d) debt securities issued or guaranteed by a sovereign of a Tier 1 country;

(e) debt securities issued or guaranteed by a relevant international organization;

(f) debt securities issued by a public sector entity of a Tier 1 country; or

(g) debt securities issued by a multilateral development bank.

5.23 Calculation of risk-weighted amount of exposures taking into account credit risk mitigation effect of recognized collateral

(1) An authorized institution shall, in respect of an exposure of the institution to which the recognized collateral relates –

(a) subject to subsections (2) and (3), substitute the risk-weight of the collateral for the risk-weight of the exposure for that proportion of the exposure which is equivalent to the current market value of the collateral (referred to in this Division as "credit protection covered portion"); and

(b) allocate to that proportion of the exposure which is not the credit protection covered portion (referred to in this Division as "uncovered portion"), the risk-weight of the exposure.

(2) Where the recognized collateral consists of collateral –

(a) which falls within section 5.22(a), (b) or (c);

(b) which is held at a third-party bank in a non-custodial arrangement; and

(c) which is unconditionally and irrevocably pledged or assigned to the institution,

an authorized institution shall substitute the attributed risk-weight of the third-party bank for the risk-weight of the exposure for the credit protection covered portion.

(3) An authorized institution shall, for the purposes of making a substitution pursuant to subsection (1)(a) or (2) where the exposure and the recognized collateral are denominated in different currencies, reduce the value of the collateral by a standard haircut of 8%.

(4) An authorized institution shall determine the risk-weight to be allocated to the recognized collateral in accordance with sections 5.6 to 5.13.

5.24 Calculation of risk-weighted amount of on-balance sheet exposures

An authorized institution shall calculate the risk-weighted amount of each of its on-balance sheet exposures by –

(a) dividing the principal amount of the exposure, net of any specific provisions in respect of it, into –

(i) the credit protection covered portion; and

(ii) the uncovered portion;

(b) multiplying the credit protection covered portion by the risk-weight attributable to the recognized collateral and multiplying the uncovered portion by the risk-weight attributable to the exposure; and

(c) adding together the 2 products derived from the application of paragraph (b).

5.25 Calculation of risk-weighted amount of off-balance sheet exposures other than OTC derivative transactions

An authorized institution shall calculate the risk-weighted amount of each of its off-balance sheet exposures which is not an OTC derivative transaction by –

(a) dividing the principal amount of the exposure, net of any specific provisions in respect of it, into –

(i) the credit protection covered portion; and

(ii) the uncovered portion;

(b) multiplying the credit protection covered portion and the uncovered portion by the CCF applicable to the off-balance sheet exposure to produce 2 credit equivalent amounts;

(c) multiplying the credit equivalent amount of the credit protection covered portion by the risk-weight attributable to the recognized collateral and multiplying the credit equivalent amount of the uncovered portion by the risk-weight attributable to the exposure; and

(d) adding together the 2 products derived from the application of paragraph (c).

5.26 Calculation of risk-weighted amount of OTC derivative transactions

An authorized institution shall calculate the risk-weighted amount of each of its off-balance sheet exposures which is an OTC derivative transaction by –

(a) multiplying the principal amount of the transaction by the applicable CCF to ascertain the potential exposure of the institution in respect of the transaction and adding the current exposure of the institution in respect of the transaction to derive the credit equivalent amount of the transaction;

(b) dividing the credit equivalent amount, net of any specific provisions in respect of the transaction, into the credit protection covered portion and the uncovered portion;

(c) multiplying the credit equivalent amount of the credit protection covered portion by the risk-weight attributable to the recognized collateral and multiplying the credit equivalent amount of the uncovered portion by the risk-weight attributable to the exposure; and

(d) adding together the 2 products derived from the application of paragraph (c).

Division 6 – Use of recognized netting in credit risk mitigation

5.27 On-balance sheet netting

(1) Where amounts owed by an obligor to an authorized institution in respect of on-balance sheet exposures of the institution are subject to recognized netting, the institution –

(a) may take into account the effect of the recognized netting in calculating its exposure to the obligor; and

(b) if a net credit exposure for the institution is the result of so taking into account the effect of the recognized netting, shall use the net credit exposure in calculating the risk-weighted amount of the exposure.

(2) An authorized institution shall calculate its net credit exposure, if any, referred to in subsection (1)(b) by the use of Formula 5.2.

FORMULA 5.2

CALCULATION OF NET CREDIT EXPOSURE UNDER RECOGNIZED NETTING

$$\text{Net credit exposure} = \max [0, \text{exposures} - \text{liabilities} \times (1 - H_{fx})]$$

where –

exposures	=	the amounts, net of specific provisions, subject to recognized netting owed by the obligor to the authorized institution;
liabilities	=	the amounts subject to recognized netting owed by the authorized institution to the obligor; and
H_{fx}	=	the 8% haircut to be applicable in consequence of a currency mismatch, if any, between the currencies in which the exposures and liabilities are denominated.

(3) Where an authorized institution has a net credit exposure in respect of an on-balance sheet exposure after taking into account recognized netting, it shall calculate the risk-weighted amount of the on-balance sheet exposure to which the net credit exposure relates by multiplying the net credit exposure by the attributed risk-weight of the obligor.

5.28 Netting of OTC derivative transactions and netting of credit derivative contracts booked in trading book

(1) Where an authorized institution's exposure to a counterparty is under a nettable derivative transaction (whether or not the recognized netting concerned relates to more than one type of nettable derivative transaction), the institution may in accordance with subsections (2) and (3), take into account the effect of the recognized netting in calculating the risk-weighted amount of its net credit exposure to the counterparty.

(2) Subject to subsection (3), an authorized institution shall calculate the credit equivalent amount of its net credit exposure to a counterparty by adding together –

(a) the net current exposure (being the net amount of the sum of the positive and negative mark-to-market replacement costs of the individual nettable derivative transactions subject to recognized netting if the net amount is positive); and

(b) the net potential exposure calculated by the use of Formula 5.3.

FORMULA 5.3

CALCULATION OF NET POTENTIAL EXPOSURE UNDER NETTABLE DERIVATIVE TRANSACTIONS

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

where –

A_{Net} = the net potential exposure;

A_{Gross} = the sum of the individual amounts derived by multiplying the principal amounts of all of the individual nettable derivative transactions by the applicable CCFs; and

NGR = the ratio of net replacement cost for the nettable derivative transactions (that is, the non-negative sum of positive and negative mark-to-market replacement costs of the transactions) to gross replacement cost for the nettable derivative transactions (that is, the sum of positive mark-to-market replacement costs of the transactions).

(3) An authorized institution, in the application of Formula 5.3 in respect of its nettable derivative transactions, shall calculate the NGR either on a per counterparty basis, or on an aggregate basis.

(4) An authorized institution shall allocate to the credit equivalent amount of its net credit exposure to the counterparty calculated in accordance with subsection (2), net of specific provisions, the attributed risk-weight of the counterparty.

(5) In this section –

"aggregate basis" ( ), in relation to the calculation of the NGR in Formula 5.3, means the ratio of the sum of the net replacement costs for all nettable derivative transactions with each counterparty to the sum of gross replacement costs for all nettable derivative transactions with each counterparty;

"derivative transaction" ( ) means –

(a) an OTC derivative transaction; or

(b) a credit derivative contract booked in the trading book;

"per counterparty basis" ( ), in relation to the calculation of the NGR in Formula 5.3, means the ratio of net replacement cost to gross replacement cost for the nettable derivative transactions with a particular counterparty.

Division 7 – Use of recognized guarantees and recognized credit derivative contracts in credit risk mitigation

5.29 Recognized guarantees

A guarantee provided to an authorized institution is recognized for the purposes of calculating the risk-weighted amount of an exposure of the institution where –

(a) the guarantee is provided by –

(i) a sovereign of a Tier 1 country;

(ii) a sovereign of a Tier 2 country where the underlying exposures are –

(A) denominated in the local currency of that country; and

(B) funded by liabilities entered into by the institution in that currency;

(iii) a relevant international organization;

(iv) a public sector entity of a Tier 1 country;

(v) a multilateral development bank;

(vi) a bank which falls within paragraph (a) of the definition of "bank" in section 1.2(1);

(vii) a bank which falls within paragraph (b) of the definition of "bank" in section 1.2(1) and which is incorporated in a Tier 1 country; or

(viii) a bank which falls within paragraph (b) of the definition of "bank" in section 1.2(1) and which is incorporated in a Tier 2 country but only in respect of exposures by the institution with a residual maturity of less than one year,

in each case having been allocated a lower risk-weight than that allocated to the exposure in respect of which the guarantee has been provided (referred to in this section as "guaranteed exposure");

(b) the guarantee gives the institution a direct claim against the guarantor;

(c) the credit protection provided by the guarantee relates to a specific exposure, specific exposures, or specific pools of exposures, of the institution;

(d) the undertaking of the guarantor to make payment in specified circumstances relating to the guaranteed exposure is clearly documented so that the extent of the credit protection provided by the guarantee is clearly defined;

(e) there is no clause in the guarantee, the satisfaction of which is outside the direct control of the institution, which would allow the guarantor to cancel the guarantee unilaterally or which would increase the effective cost of the credit protection offered by the guarantee as a result of the deteriorating credit quality of the guaranteed exposure except for a clause permitting termination in the event of a failure by the institution to pay sums due from it under the terms of the guarantee;

(f) there is no clause in the guarantee, the satisfaction of which is outside the direct control of the institution, which could operate to prevent the guarantor from being obliged to pay out promptly in the event that the obligor in respect of the guaranteed exposure defaults in making any payments due to the institution in respect of the guaranteed exposure;

(g) the country in which the guarantor is located and from which the guarantor may be obliged to make payment has no existing exchange controls in place or, if there are existing exchange controls in place, approval has been obtained for the funds to be remitted freely in the event that the guarantor is called upon under the terms of the guarantee to make payment to the institution;

(h) the guarantor has no recourse to the institution for any losses suffered as a result of the guarantor being obliged to make any payment to the institution pursuant to the guarantee;

(*i*) the institution has the right to receive payments from the guarantor without first having to take legal action to pursue the obligor in respect of the guaranteed exposure for payment; and

(j) the guarantee is binding on all parties and legally enforceable in all relevant jurisdictions.

5.30 Recognized credit derivative contracts

(1) A credit derivative contract entered into by an authorized institution as a protection buyer is recognized for the purposes of calculating the risk-weighted amount of an exposure of the institution where –

(a) the contract is a credit default swap or total return swap (other than a restricted return swap);

(b) the protection seller of the credit derivative contract is –

(i) a sovereign of a Tier 1 country;

(ii) a sovereign of a Tier 2 country where the institution's exposures to which the credit derivative contract relates are –

(A) denominated in the local currency of that country; and

(B) funded by liabilities entered into by the institution in that currency;

(iii) a relevant international organization;

(iv) a public sector entity of a Tier 1 country;

(v) a multilateral development bank;

(vi) a bank which falls within paragraph (a) of the definition of "bank" in section 1.2(1);

(vii) a bank which falls within paragraph (b) of the definition of "bank" in section 1.2(1) and which is incorporated in a Tier 1 country; or

(viii) a bank which falls within paragraph (b) of the definition of "bank" in section 1.2(1) and which is incorporated in a Tier 2 country but only in respect of exposures of the institution with a residual maturity of less than one year,

in each case having been allocated a lower risk-weight than that allocated to the exposure in respect of which the credit derivative contract has been entered into (referred to in this section as "protected exposure");

(c) the economic benefit derived by the institution would make good the economic loss suffered by the institution in consequence of the default of the obligor in respect of the protected exposure in a manner substantially similar to that of a recognized guarantee;

(d) the credit derivative contract gives the institution a direct claim against the protection seller;

(e) the credit protection provided by the credit derivative contract relates to a specific exposure, specific exposures, or specific pools of exposures, of the institution;

(f) the undertaking of the protection seller under the credit derivative contract to make payment in specified circumstances relating to the protected exposure is clearly documented so that the extent of the credit protection provided by the credit derivative contract is clearly defined;

(g) there is no clause in the credit derivative contract, the satisfaction of which is outside the direct control of the institution, which would allow the protection seller to cancel the contract unilaterally or which would increase the effective cost of the credit protection offered by the credit derivative contract as a result of the deteriorating credit quality of the protected exposure except for a clause permitting termination in the event of a failure by the institution to pay sums due from it under the terms of the credit derivative contract;

(h) there is no clause in the credit derivative contract, the satisfaction of which is outside the direct control of the institution, which could operate to prevent the protection seller from being obliged to pay out promptly in the event that the obligor in respect of the protected exposure defaults in making any payments due to the institution in respect of the protected exposure;

(*i*) the country in which the protection seller is located and from which the protection seller may be obliged to make payment has no existing exchange controls in place or, if there are existing exchange controls in place, approval has been obtained for the funds to be remitted freely in the event that the protection seller is called upon under the terms of the credit derivative contract to make payment to the institution;

(j) the protection seller has no recourse to the institution for any losses suffered as a result of the protection seller being obliged to make any payment to the institution pursuant to the credit derivative contract;

(k) the credit derivative contract obliges the protection seller to make payment to the institution in the following credit events –

(i) any failure by the obligor in respect of the protected exposure to pay amounts due under the terms of the protected exposure (subject to any grace period in the contract which is of substantially similar duration to any grace period provided for in the terms of the protected exposure);

(ii) the bankruptcy or insolvency of (or analogous events affecting) the obligor in respect of the protected exposure or the obligor's failure or inability to pay its debts as they fall due or the obligor's admission in writing of the obligor's inability generally to pay its debts as they fall due; or

(iii) subject to subsections (2) and (3), the protected exposure is restructured, involving forgiveness or postponement of payment of any principal or interest or fees, which results in the institution making any deduction or specific provision or other similar debit to the institution's profit and loss account;

(*l*) in any case where the protected exposure provides a grace period within which the obligor may make good a default in payment, the credit derivative contract is not capable of terminating prior to the expiry of the grace period;

(m) in any case where the credit derivative contract provides for settlement in cash, it provides an adequate mechanism for valuation of the loss occasioned to the institution in respect of the protected exposure and specifies a reasonable period within which that valuation is to be arrived at following a credit event;

(n) in any case where the reference obligation or the obligation used for the purposes of determining whether a credit event has occurred as specified in the credit derivative contract (referred to in this paragraph as "specified obligation") does not include or is different from the protected exposure –

(i) the specified obligation of the credit derivative contract ranks for payment or repayment pari passu with, or junior to, the protected exposure; and

(ii) the obligor in respect of the protected exposure is the same person as the obligor in respect of the specified obligation and legally enforceable cross default or cross acceleration clauses are included in the terms of both the protected exposure and the specified obligation;

(o) in any case where under the terms of the credit derivative contract it is a condition of settlement that the institution transfers its rights in respect of the protected exposure to the protection seller, the terms of the protected exposure provide that any consent which may be required from the obligor in respect of the protected exposure shall not be unreasonably withheld;

(p) the credit derivative contract specifies clearly the identity of the person who is empowered to determine whether a credit event has occurred, that person is not solely the protection seller and the institution is, under the terms of the protected exposure, entitled to inform the protection seller of the occurrence of a credit event; and

(q) the credit derivative contract is binding on all parties and legally enforceable in all relevant jurisdictions.

(2) Where any restructuring of the protected exposure to which a credit derivative contract relates does not, under the terms of the contract, require payment by the protection seller to the authorized institution concerned but the amount payable to the institution under the credit derivative contract is more than the protected exposure, then the contract shall be deemed to be a recognized credit derivative contract to the extent of 60% of the protected exposure.

(3) Where any restructuring of the protected exposure to which a credit derivative contract relates does not, under the terms of the contract, require payment by the protection seller to the authorized institution concerned but the amount payable to the institution under the credit derivative contract is less than, or equal to, the protected exposure, the contract shall be deemed to be a recognized credit derivative contract to the extent of 60% of the amount payable to the institution under the credit derivative contract.

(4) In this section –

"restricted return swap" ( ), in relation to an authorized institution, means a total return swap where –

(a) the institution is the protection buyer under the swap; and

(b) the institution records the net payments received by it under the swap as net income but does not record, through deductions in fair value in the accounts of the institution or by an addition to reserves or provisions, the extent to which the value of the protected exposure has deteriorated.

5.31 Capital treatment of recognized guarantees and recognized credit derivative contracts

(1) Subject to subsections (2), (3), (4) and (5), where an authorized institution's exposure is covered by a recognized guarantee or recognized credit derivative contract, the institution may allocate to the exposure, the attributed risk-weight of the credit protection provider.

(2) Subject to subsections (3), (4) and (5), where –

(a) only part of an authorized institution's exposure (referred to in this Division as "credit protection covered portion") is covered by a recognized guarantee or recognized credit derivative contract; and

(b) the credit protection covered portion and the remainder of the exposure (referred to in this Division as "uncovered portion") rank pari passu,

the institution shall –

(c) allocate to so much of the exposure as constitutes the credit protection covered portion the attributed risk-weight of the credit protection provider;

(d) allocate to the remainder of the exposure which constitutes the uncovered portion the risk-weight attributable to the exposure.

(3) Where a guarantor referred to in subsection (1) is a sovereign, then, for the purposes of that subsection, the risk-weight attributable to the guarantor shall be that attributable under section 5.6(2), (7) or (12), as the case requires.

(4) Sections 5.24, 5.25 and 5.26 shall, with all necessary modifications, be used by an authorized institution to calculate the risk-weighted amount of exposures covered by recognized guarantees or recognized credit derivative contracts.

(5) Where in respect of an institution's exposure covered by a recognized guarantee or recognized credit derivative contract there is a currency mismatch, then, to the extent that a calculation required by subsection (4) by an authorized institution relates to that guarantee or contract, as the case may be, the institution shall reduce the credit protection covered portion by a standard haircut of 8%.

(6) Where the credit protection covered portion of an authorized institution's exposure –

(a) is such credit protection covered portion by virtue of a recognized guarantee (referred to in this subsection as "original guarantee"); and

(b) is the subject of a counter-guarantee issued by a sovereign,

the institution may, in respect of the credit protection covered portion, treat the counter-guarantee as if it were the original guarantee if –

(c) the counter-guarantee covers all credit risk elements of the exposure to the extent that it relates to the credit protection covered portion;

(d) the counter-guarantee is granted in such terms that it can be called if for any reason the obligor in respect of the exposure to which the original guarantee relates fails to make payments due in respect of the exposure and if the original guarantee could be called;

(e) the original guarantee and the counter-guarantee meet all of the requirements for guarantees set out in section 5.29 (except that the counter-guarantee need not be a guarantee given directly and explicitly with respect to the institution's exposure to which the original guarantee relates); and

(f) the institution reasonably considers the cover of the counter-guarantee to be adequate and effective and there is no evidence to suggest that the coverage of the counter-guarantee is less effective than that of a direct and explicit guarantee by the sovereign which provides the counter-guarantee.

5.32 Provisions supplementary to section 5.31

(1) Where the credit protection in respect of an authorized institution's exposure consists of a recognized credit derivative contract which is a credit default swap or total return swap –

(a) if upon the happening of a credit event the protection seller is obliged to pay the amount specified in the contract to the institution in exchange for delivery by the institution of the deliverable obligations specified in the contract of the same amount, the institution may treat the exposure as being fully covered;

(b) if upon the happening of a credit event the protection seller is obliged to pay the amount specified in the contract to the institution less the market value of the reference obligation specified in the contract, calculated by specified calculation agents at some specified point in time after the credit event has occurred, the institution may treat the exposure as being fully covered; and

(c) if upon the happening of a credit event the protection seller is obliged to pay a fixed amount to the institution, the institution may only treat that amount of the exposure which is equivalent to the fixed amount as being fully covered.

(2) Where the credit protection in respect of an authorized institution's exposure consists of a recognized credit derivative contract which provides that, upon the happening of a credit event–

(a) the protection seller is not obliged to make a payment in respect of any loss until the loss exceeds a specified amount (referred to in this subsection as "first loss portion"); and

(b) the protection seller is not obliged to make a payment in respect of any loss except to the extent that the loss exceeds the first loss portion,

the institution shall, in calculating its capital adequacy ratio, deduct the first loss portion from its core capital and supplementary capital.

(3) Where the credit protection in respect of a basket of exposures of an authorized institution consists of a recognized first-to-default credit derivative contract –

(a) the institution shall only recognize that credit protection for the exposure in the basket of exposures which would carry the lowest risk-weighted amount in the absence of the credit protection amongst the exposures in the basket only if the principal amount of the exposure is not more than the notional amount of the contract; and

(b) in the case of such credit protection so recognized, the institution may substitute the attributed risk-weight of the credit protection provider for the risk-weight of the exposure within the basket which would carry the lowest risk-weighted amount in the absence of the credit protection.

(4) Where the credit protection in respect of a basket of exposures of an authorized institution consists of a recognized second-to-default credit derivative contract, the institution may, to the extent of the coverage of the credit protection, substitute the attributed risk-weight of the credit protection provider for the risk-weight of the exposure within the basket which would carry the second lowest risk-weighted amount in the absence of the credit protection only if –

(a) the institution has, as a protection buyer, entered into a recognized first-to-default credit derivative contract in respect of which the basket of reference obligations, or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in the contract, is the same as the basket of reference obligations or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in the second-to-default credit derivative contract (referred to in this subsection as "relevant basket"); or

(b) an exposure in the relevant basket has defaulted.

(5) Where the credit protection in respect of a basket of exposures of an authorized institution consists of a recognized subsequent-to-default credit derivative contract, the institution may, with all necessary modifications, apply subsection (4) to that contract as that subsection is applied to a second-to-default credit derivative contract so that –

(a) the reference to "a recognized first-to-default credit derivative contract in respect of which the basket of reference obligations, or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in the contract" in subsection (4)(a) is construed to mean "recognized first-to-default and second-to-default credit derivative contracts in respect of which the basket of reference obligations, or the basket of obligations used for the purposes of determining whether a credit event has occurred as specified in each contract"; and

(b) the reference to "an exposure in the relevant basket has" in subsection (4)(b) is construed to mean "2 exposures in the relevant basket have",

in the case of a third-to-default credit derivative contract and likewise for other subsequent-to-default credit derivative contracts.

(6) Where the credit protection in respect of a basket of exposures of an authorized institution is a credit derivative contract which provides credit protection proportionately to reference obligations in the basket of reference obligations as specified in the contract, the institution shall calculate the risk-weighted amount of its exposure by substituting the attributed risk-weight of the credit protection provider for the risk-weights of the exposures to the extent of the coverage of the credit protection.

(7) Where –

(a) an authorized institution has entered into a transaction under which a portion of the credit risk of an exposure it has is transferred in one or more tranches to one or more credit protection providers and the other portion of the credit risk of the exposure is retained by the institution; and

(b) the portion of credit risk transferred and the portion of the credit risk retained are of different seniority,

the institution shall treat the transaction as a securitization transaction and determine the treatment of the exposure in accordance with the relevant provisions under Part 7.

(8) Where the credit protection in respect of an authorized institution's exposure takes the form of an issue of credit-linked notes by the institution, the institution –

(a) may only treat that amount of the exposure which is equivalent to the cash funding received from the notes as being fully covered;

(b) shall treat the credit protection covered portion of the exposure as an exposure collateralized by cash deposit; and

(c) shall deduct from the institution's core capital and supplementary capital the first loss portion, being any specified amount of loss, upon the happening of a credit event, below which the protection seller is not obliged to share in the loss.

Division 8 – Multiple recognized credit risk mitigation and maturity mismatches

5.33 Multiple recognized credit risk mitigation

(1) Where in respect of a single exposure of an authorized institution to an obligor, 2 or more forms of recognized credit risk mitigation have been used by the institution, the institution shall calculate the risk-weighted amount of the exposure in accordance with these Rules by dividing the exposure into the portions which respectively represent the proportions of the exposure covered by each of the forms of credit risk mitigation so used.

(2) Where in respect of a single exposure of an authorized institution to an obligor, there is an overlap of coverage between 2 or more forms of recognized credit risk mitigation used by the institution, the institution may select, in respect of the portion of the exposure covered by the overlap, the credit risk mitigation which result in the lowest risk-weighted amount of that portion of the exposure covered by the overlap.

(3) Where an authorized institution has an exposure to an obligor in the form of a general banking facility consisting of 2 or more credit lines –

(a) the institution may, in calculating its risk-weighted amount in respect of the credit lines, allocate any credit protection taken in respect of the exposure amongst the individual exposures under each of the credit lines; and

(b) if the institution exercises its discretion under paragraph (a), the institution shall aggregate the risk-weighted amounts of the individual exposures under each of the credit lines to determine the total risk-weighted amount of the exposure in respect of the general banking facility.

5.34 Maturity mismatches

(1) Where the credit protection provided in respect of an exposure of an authorized institution (other than the netting of OTC derivative transactions and credit derivative contracts) has a residual maturity which is shorter than the residual maturity of the exposure (referred to in this section as "maturity mismatch"), the institution shall not take into account the credit risk mitigation effect of that credit protection for the purposes of this Part.

(2) For the purposes of calculating the respective maturities of an exposure of an authorized institution and any credit protection covering the exposure –

(a) if the credit protection is in the form of recognized collateral, guarantees or credit derivative contracts, the institution shall, at any time before the obligor in respect of the exposure to which the credit protection relates performs the obligor's obligations, take the effective maturity of the exposure to be the longest possible remaining time after taking into account any applicable grace period provided for in the terms of the exposure;

(b) if the terms of the credit protection provide for an option which may reduce the term of that credit protection, the institution shall take into account the option and the earliest possible date upon which it may be exercised;

(c) if the terms of the credit protection provide that the credit protection provider may terminate the credit protection before its maturity, the institution shall take the maturity of the credit protection to be the first date upon which the credit protection provider may so terminate the credit protection; and

(d) if the terms of the credit protection permit the institution to terminate the credit protection before its maturity and there is a positive incentive for the institution to exercise its discretion so to do, the institution shall take the maturity of the credit protection to be the time left to run before the earliest date upon which the institution may exercise the discretion.

(3) For the purposes of this section, the residual maturity of credit protection which is recognized collateral falling within section 5.22(a) shall be taken to be the period for which it will continue to fulfil the requirements of section 5.21 applicable to the credit protection.

PART 6

CALCULATION OF CREDIT RISK FOR NON-SECURITIZATION EXPOSURES : IRB APPROACH

Division 1 – General

6.1 Application of Part 6

(1) This Part applies to an authorized institution which uses the IRB approach to calculate its credit risk for non-securitization exposures.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Part is a reference to an authorized institution which uses the IRB approach to calculate its credit risk for non-securitization exposures.

6.2 Interpretation of Part 6

(1) In this Part, unless the context otherwise requires –

"advanced IRB approach" ( ) means an approach under which an authorized institution calculates its credit risk for corporate, sovereign or bank exposures by –

(a) providing its own estimates of the PD, LGD and EAD of those exposures; and

(b) measuring the M of those exposures,

in accordance with Divisions 4, 5, 9, 10 and 11;

"capital floor" ( ) means the minimum regulatory capital of an authorized institution calculated in accordance with section 6.89(2) to (6);

"cash items" ( ), in relation to an authorized institution, means all or any of the following –

(a) legal tender notes or other notes, and coins, representing the lawful currency of a country and held by the institution;

(b) the institution's holdings of certificates of indebtedness issued by the Government for the issue of legal tender notes;

(c) gold bullion held by the institution, or gold bullion held on an allocated basis for the institution by another person, which is backed by gold bullion liabilities;

(d) gold bullion held by the institution, or gold bullion held for the institution by another person, which is not backed by gold bullion liabilities;

(e) cheques, drafts and other items drawn on other banks –

(i) which are payable to the account of the institution immediately upon presentation; and

(ii) which are in the process of collection;

(f) unsettled clearing items of the institution which are being processed through any interbank clearing system in Hong Kong;

(g) receivables from transactions in securities (other than repo-style transactions), foreign exchange, and commodities which are not yet due for settlement;

(h) positive current exposure incurred by the institution under transactions in securities (other than repo-style transactions), foreign exchange, and commodities –

(i) which are entered into on a delivery-versus-payment basis; and

(ii) which are outstanding after the due settlement date for the transaction; or

(*i*) the amounts of payment made or the current market value of the thing delivered, and the positive current exposure incurred, by the institution under transactions in securities (other than repo-style transactions), foreign exchange, and commodities –

(i) which are entered into on a non-delivery-versus-payment basis; and

(ii) which are outstanding up to and including the fourth business day after the due settlement date for the transaction,

where the sum of the amount of payment made (or the current market value of the thing delivered) and the positive current exposure incurred is less than $10 million in respect of each such transaction;

"corporate" ( ) means a company, a partnership or an unincorporated business, which is not a public sector entity, bank or securities firm;

"credit equivalent amount" ( ), in relation to an off-balance sheet exposure of an authorized institution, means the value obtained by –

(a) in the case of an exposure which is not an OTC derivative transaction or credit derivative contract, multiplying the principal amount of the exposure by the applicable CCF;

(b) in the case of an exposure which is an OTC derivative transaction or credit derivative contract, adding the current exposure of the OTC derivative transaction or credit derivative contract, as the case may be, to the potential exposure of the OTC derivative transaction or credit derivative contract, as the case may be;

"credit risk components" ( ) means the estimates of PD, LGD, EAD, EL and M which constitute inputs into the IRB risk-weight functions to determine the risk-weight to be allocated to –

(a) corporate, sovereign, bank or retail exposures; or

(b) if the PD/LGD approach is used, equity exposures;

"dilution risk" ( ), in relation to a receivable purchased by an authorized institution, means the possibility that the amount of the receivable is reduced through cash or non-cash credits to the obligor in respect of the receivable;

"double default" ( ), in relation to an authorized institution's exposure to which a recognized guarantee or recognized credit derivative contract relates, means the default of both the obligor and the credit protection provider in respect of the exposure;

"double default framework" ( ), in relation to a corporate exposure (excluding specialized lending under supervisory slotting criteria approach) or public sector entity exposure (excluding exposure to a sovereign foreign

public sector entity) of an authorized institution, means the method set out in section 6.81 for taking into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract in respect of the exposure;

"EAD" ( ) means exposure at default;

"EL" ( ) means expected loss;

"EL amount" ( ) means expected loss amount;

"eligible provisions" ( ), in relation to an authorized institution, means the sum of –

(a) the institution's specific provisions, partial write-offs and regulatory reserve for general banking risks and collective provisions attributed to non-securitization exposures which are subject to the IRB approach; and

(b) any discounts falling within section 6.26(3) or 6.27(5) on exposures referred to in paragraph (a) which are in default;

"expected long run loss rate" ( ), in relation to a pool of retail exposures of an authorized institution, means a loss rate calculated based on the realized losses over the total outstanding amount of exposures which fall within the pool of retail exposures, measured over a period of time, which is not less than the period required under section 6.41(1)(g);

"expected loss" ( ), in relation to an exposure of an authorized institution, means the estimated loss likely to be incurred by the institution on the exposure arising from the potential default of the obligor or dilution risk in respect of the exposure over a one-year period, expressed as a ratio, relative to the EAD of the exposure;

"expected loss amount" ( ), in relation to an exposure of an authorized institution, means the expected loss amount of the exposure calculated by multiplying the EL of the exposure by the EAD of the exposure;

"exposure" ( ), in relation to an authorized institution, means a credit exposure (including an asset) of the institution;

"exposure at default" ( ), in relation to an exposure of an authorized institution, means the expected amount (being, in the case of an off-balance sheet exposure, the credit equivalent amount) of the exposure upon the default of the obligor in respect of the exposure, which is measured without deduction of specific provisions and partial write-offs;

"facility grade" ( ), in relation to an authorized institution, means a rating of loss severity in the event of default within the facility rating scale of the institution's rating system, as measured by LGD, to which exposures are assigned on the basis of a specified and distinct set of internal rating criteria;

"facility type" ( ), in relation to an authorized institution, means a type of exposures with identical or similar transaction characteristics;

"financial firm" ( ), in relation to the recognition of a guarantee or credit derivative contract in respect of an exposure of an authorized institution under the double default framework, means –

(a) a bank;

(b) a securities firm;

(c) an insurance firm; or

(d) a corporate which has an ECAI issuer rating which, if mapped to the scale of credit quality grades in Table C in Schedule 4.1, would result in the corporate being assigned a credit quality grade of 1, 2 or 3,

which –

(e) has provided, in the normal course of business, credit protection for the exposure where the credit protection concerned is not the subject of any counter-guarantee provided by a sovereign;

(f) has had an exposure to it by the institution, at the time the credit protection was first provided or for any period of time thereafter, to an obligor grade with an estimate of PD which, if mapped to the scale of credit quality grades for banks and securities firms in Table B in Schedule 4.1 or

corporates in Table C in Schedule 4.1, as the case may be, would result in the entity being assigned a credit quality grade of 1 or 2; and

(g) currently has an exposure to it assigned by the institution to an obligor grade with an estimate of PD which, if mapped to the scale of credit quality grades for banks and securities firms in Table B in Schedule 4.1 or corporates in Table C in Schedule 4.1, as the case may be, would result in the entity being assigned a credit quality grade of 1, 2 or 3;

"foundation IRB approach" ( ) means an approach under which an authorized institution calculates its credit risk for corporate, sovereign or bank exposures by –

(a) providing its own estimates of the PD of those exposures; and

(b) using supervisory estimates for the other credit risk components of those exposures,

in accordance with Divisions 4, 5, 9, 10 and 11;

"hedged exposure" ( ), means a corporate exposure (excluding specialized lending under supervisory slotting criteria approach) or public sector entity exposure (excluding exposure to a sovereign foreign public sector entity) of an authorized institution which is covered by a recognized guarantee or recognized credit derivative contract under the double default framework;

"internal models method" ( ) means a method under which an authorized institution calculates its credit risk for equity exposures as set out in section 6.49;

"IRB class" ( ) means a class of non-securitization exposures specified in Table 6.1 (including the IRB subclasses which fall within that class);

"IRB subclass" ( ) means a subclass of non-securitization exposures specified in Table 6.1;

"LGD" ( ) means loss given default;

"loss given default" ( ), in relation to an exposure of an authorized institution, means the loss likely to be incurred by the institution upon the default of the obligor in respect of the exposure, expressed as a ratio, relative to the EAD of the exposure;

"M" ( ) means maturity;

"market-based approach" ( ) means –

(a) the internal models method; or

(b) the simple risk-weight method;

"maturity" ( ) means –

(a) in relation to a corporate, sovereign or bank exposure of an authorized institution which uses the foundation IRB approach or advanced IRB approach, means the effective maturity of the exposure as determined or calculated in accordance with section 6.30, 6.31 or 6.32, as the case requires;

(b) in relation to an equity exposure of an authorized institution which use the PD/LGD approach, means the effective maturity of the exposure as specified in section 6.57(1)(d);

"obligor grade" ( ), in relation to an authorized institution, means a rating within the obligor rating scale of the institution's rating system representing an assessment of the risk of default to which exposures to obligors are assigned on the basis of a specified and distinct set of internal rating criteria and from which estimates of PD are derived;

"PD" ( ) means probability of default;

"PD/LGD approach" ( ) means an approach under which an authorized institution calculates its credit risk for equity exposures as set out in sections 6.50 to 6.57;

"pool" ( ) means a category of exposures which have –

(a) similar obligor and transaction characteristics; and

(b) identical estimates of PD, LGD and EAD;

"principal amount" ( ) –

(a) in relation to an on-balance sheet exposure of an authorized institution, means the book value (including accrued interest) of the exposure;

(b) in relation to an off-balance sheet exposure of an authorized institution, means –

(i) subject to subparagraph (ii), in the case of an exposure listed in Table 4.10, the notional amount of the exposure;

(ii) in the case of an exposure listed in Table 4.10 where the stated notional amount of the exposure is leveraged or enhanced by the structure of the exposure, the effective notional amount of the exposure taking into account that the stated notional amount is so leveraged or enhanced, as the case may be;

(iii) subject to subparagraph (iv), in the case of an exposure listed in Table 6.5, the contracted amount of the exposure;

(iv) in the case of an exposure listed in Table 6.5 which is an undrawn or partially drawn facility, the amount of the undrawn commitment;

"probability of default" ( ), in relation to an exposure of an authorized institution, means the probability of default of the obligor in respect of the exposure over a one-year period;

"rating system" ( ) means all the methods, models, processes, controls, and data collection and information technology systems used by an authorized institution which enable the assessment of credit risk, the assignment of

internal credit risk ratings, and the quantification of default and loss estimates, by the institution;

"re-ageing" ( ) means a process by which an exposure of an authorized institution previously classified as past due exposure, the terms of which have not been changed, is subsequently classified as performing by reason of the subsequent good performance of the obligor in respect of the exposure, notwithstanding that all outstanding arrears in respect of the exposure have not been repaid;

"recognized collateral" ( ) –

(a) in relation to an authorized institution which uses the foundation IRB approach to calculate its credit risk for corporate, sovereign or bank exposures, means –

(i) recognized financial collateral;

(ii) recognized IRB collateral;

(b) in relation to an authorized institution which uses the advanced IRB approach to calculate its credit risk for corporate, sovereign or bank exposures or the retail IRB approach to calculate its credit risk for retail exposures, means any collateral –

(i) which is recognized by the institution for credit risk mitigation in accordance with its policies and procedures; and

(ii) which satisfy the requirements under section 4.28(a) to (f);

"recognized credit derivative contract" (　　) –

(a) in relation to an authorized institution which uses the substitution framework to take into account the credit risk mitigating effect of credit derivative contracts for its corporate, sovereign, bank, retail or equity exposures, means a credit derivative contract which falls within section 6.74 or 6.75, as the case requires;

(b) in relation to an authorized institution which uses the double default framework to take into account the credit risk mitigating effect of credit derivative contracts for its corporate exposures (excluding specialized lending under supervisory slotting criteria approach) or public sector entity exposures (excluding exposures to sovereign foreign public sector entities), means a credit derivative contract which falls within section 6.76;

"recognized financial collateral" (　　) means any collateral (except collateral in the form of real property) which falls within the description of section 4.31(a), (b), (c) or (d);

"recognized guarantee" (　　) –

(a) in relation to an authorized institution which uses the substitution framework to take into account the credit risk mitigating effect of guarantees for its corporate, sovereign, bank, retail or equity

exposures, means a guarantee which falls within section 6.74 or 6.75, as the case requires;

(b) in relation to an authorized institution which uses the double default framework to take into account the credit risk mitigating effect of guarantees for its corporate exposures (excluding specialized lending under supervisory slotting criteria approach) or public sector entity exposures (excluding exposures to sovereign foreign public sector entities), means a guarantee which falls within section 6.76;

"recognized IRB collateral" ( ) means any collateral in the form of –

(a) financial receivables which fall within section 6.68;

(b) commercial real estate or residential real estate which falls within section 6.69 or 6.71, as the case requires; or

(c) physical assets (except commercial real estate or residential real estate) which fall within section 6.70 or 6.71, as the case requires;

"residual value risk" ( ), in relation to a leasing arrangement entered into by an authorized institution, means the institution's exposure to potential loss due to the fair value of the leased asset declining below the residual value

estimated for the leased asset at the time of inception of the lease;

"retail IRB approach" ( ) means an approach under which an authorized institution calculates its credit risk for retail exposures in accordance with Divisions 4, 6, 9, 10 and 11;

"revolving" ( ), in relation to a retail exposure of an authorized institution, means the borrower's outstanding balances is permitted to fluctuate based on the borrower's decisions to borrow and repay, up to a limit established by the institution;

"risk-weight function" ( ) means a formula used by an authorized institution to determine the risk-weight to be allocated to –

(a) a corporate, sovereign, bank or retail exposure of the institution; or

(b) an equity exposure of the institution if the institution uses the PD/LGD approach;

"seasoning" ( ), in relation to an exposure of an authorized institution, means an expected change of risk parameters over the contractual period of the exposure;

"simple risk-weight method" ( ) means a method under which an authorized institution calculates its credit risk for equity exposures as set out in section 6.48;

"specialized lending" ( ), means an exposure of an authorized institution to a corporate owning or operating a specific asset –

(a) the terms of which give the institution a substantial degree of control over the specific asset and the income which the specific asset generates; and

(b) the primary source of repayment of which is the income generated by the specific asset;

"specific risk-weight approach" ( ) means an approach under which an authorized institution calculates its credit risk in accordance with Division 8 for non-securitization exposures which do not fall within the IRB class of corporate, sovereign, bank, retail or equity exposures;

"substitution framework" ( ), in relation to an exposure of an authorized institution, means the method set out in sections 6.78 to 6.80 for taking into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract;

"supervisory estimate" ( ), in relation to an exposure of an authorized institution, means –

(a) the risk-weight specified in this Part in respect of the exposure; or

(b) the value specified in this Part of a credit risk component to be input into a risk-weight function

to calculate the risk-weight to be allocated to the exposure under the use of the IRB approach;

"supervisory slotting criteria approach" ( ) means an approach under which an authorized institution calculates its credit risk for specialized lending in accordance with section 6.21(2);

"total EL amount" ( ), in relation to an authorized institution, means the sum of the institution's EL amounts attributed to corporate, sovereign, bank and retail exposures of the institution which –

(a) are subject to the IRB approach; and

(b) are not treated as hedged exposures under the double default framework;

"total eligible provisions" ( ), in relation to an authorized institution, means the sum of the institution's eligible provisions attributed to corporate, sovereign, bank and retail exposures of the institution which –

(a) are subject to the IRB approach; and

(b) are not treated as hedged exposures under the double default framework;

"unhedged exposure" ( ), means a corporate exposure (excluding specialized lending under supervisory slotting criteria approach) or public sector entity exposure (excluding exposure to a sovereign foreign public sector entity) of an authorized institution which is not a hedged exposure under the double default framework.

(2) For the purposes of an authorized institution calculating, in respect of an exposure of the institution, the EL or PD over a one-year period pursuant to these Rules, it shall be sufficient if the institution calculates its credit risk using the latest estimates of the EL or PD, as the case may be, made or generated at any time within the past 12 months provided that the institution has not received information which causes, or which could reasonably be expected to cause, the institution to consider there may have been a material variation in the EL or PD of the exposure, as the case may be (in which case the institution shall not use those estimates in such calculation).

(3) For the purposes of this Part, a reference to specialized lending under supervisory slotting criteria approach means specialized lending risk-weighted by mapping, pursuant to section 6.21(2), to the 5 supervisory rating grades set out in Table 6.3.

Division 2 – Calculation of credit risk under IRB approach, exposures to be covered in calculation, and classification of exposures

6.3 Calculation of risk-weighted amount of exposures

(1) Subject to subsection (2) and section 6.4, an authorized institution shall calculate the risk-weighted amount of the institution's exposure to credit risk by –

(a) subject to paragraph (b), multiplying the EAD of the exposure by the exposure's relevant risk-weight;

(b) in the case of an equity exposure in respect of which –

(i) the institution uses the internal models method; and

(ii) the relevant risk-weight set out in section 6.49(3)(a)(ii) does not apply,

multiplying the potential loss of the equity exposure as calculated using the institution's internal models by 12.5 in accordance with section 6.49; and

(c) aggregating the figures derived under paragraphs (a) and (b).

(2) An authorized institution may reduce the risk-weighted amount of an exposure by taking into account the effect of any

recognized credit risk mitigation in respect of the exposure in accordance with Division 10.

6.4 Exposures to be covered

Subject to section 2.9, an authorized institution shall, in accordance with this Part, take into account and risk-weight –

(a) all of the institution's exposures booked in its banking book except such exposures –

(i) which under sections 3.14 and 3.15 are required to be deducted from any of the institution's core capital and supplementary capital; or

(ii) which are subject to the requirements of Part 7; and

(b) all of the institution's exposures to counterparties under credit derivative contracts, OTC derivative transactions or repo-style transactions, booked in its trading book.

6.5 Classification of exposures

(1) Subject to subsections (2) and (3), an authorized institution shall, in accordance with sections 6.6 to 6.9 –

(a) classify each of its exposures which fall within section 6.4 into one only of the 6 IRB classes specified in column 2 of Table 6.1; and

(b) then, classify the exposures into one only of the 25 IRB subclasses of exposures specified in column 3 of Table 6.1.

TABLE 6.1

CLASSES AND SUBCLASSES OF EXPOSURES UNDER IRB APPROACH

Item	IRB class	IRB sub-class
1.	Corporate exposures	1. Specialized lending under supervisory slotting criteria approach (project finance)
		2. Specialized lending under supervisory slotting criteria approach (object finance)
		3. Specialized lending under supervisory slotting criteria approach (commodities finance)
		4. Specialized lending under supervisory slotting criteria approach (income-producing real estate)
		5. Small-and-medium sized corporates
		6. Other corporates
2.	Sovereign exposures	1. Sovereigns
		2. Sovereign foreign public sector entities

		3.	Multilateral development banks
3.	Bank exposures	1.	Banks
		2.	Securities firms
		3.	Public sector entities (excluding sovereign foreign public sector entities)
4.	Retail exposures	1.	Small business retail exposures
		2.	Residential mortgages to individuals
		3.	Residential mortgages to property-holding shell companies
		4.	Qualifying revolving retail exposures
		5.	Other retail exposures to individuals
5.	Equity exposures	1.	Equity exposures under market-based approach (simple risk-weight method)
		2.	Equity exposures under market-based approach (internal models method)
		3.	Equity exposures under PD/LGD approach (publicly traded equity exposures held for long-term investment)
		4.	Equity exposures under PD/LGD approach (privately owned equity exposures held for long-term investment)
		5.	Equity exposures under PD/LGD approach (other publicly traded equity exposures)
		6.	Equity exposures under PD/LGD approach (other equity exposures)
6.	Other exposures	1.	Cash items
		2.	Other items

(2) For the purposes of complying with subsection (1), an authorized institution shall demonstrate to the satisfaction of the Monetary Authority that its methodology for classifying, in accordance with that subsection, exposures referred to in that subsection is reliable and consistent over time.

(3) Where an exposure of an authorized institution which has been classified under subsection (1) would, if section 6.6(3) or 6.7(2) or (4)(c) were to apply to it at any time subsequently, be reclassified under that subsection, the institution shall so reclassify the exposure unless –

(a) in the case of an exposure denominated in a currency other than Hong Kong dollars, the exposure's falling within, or failure to remain within, the value threshold or exposure limit specified in that section arises solely as a result of short-term exchange rate fluctuations; or

(b) the outstanding balance of the exposure falls within the value threshold or exposure limit specified in that section primarily because of –

(i) repayments made by the obligor in respect of the exposure; or

(ii) write-offs made by the institution in respect of the outstanding balance of the exposure.

6.6 Corporate exposures

(1) For the purposes of section 6.5(1) as read with Table 6.1 –

(a) an authorized institution's specialized lending shall fall within project finance if the institution looks primarily to the revenue generated by a single project funded by the lending, both as the source of repayment of, and as collateral for, the lending;

(b) an authorized institution's specialized lending shall fall within object finance if the lending funds the acquisition of physical assets and the repayment of the lending is dependent on the cash flows generated by the assets which have been financed and pledged or assigned to the institution;

(c) an authorized institution's specialized lending shall fall within commodities finance if the lending is structured short-term lending to finance reserves, inventories, or receivables of exchange-traded commodities (including gold), and –

(i) the repayment of the lending will be from the proceeds of the sale of the commodities (including gold); and

(ii) the obligor in respect of the exposure has no independent capacity to repay the lending;

(d) an authorized institution's specialized lending shall fall within income-producing real estate if the lending funds the acquisition of real estate and the prospects for repayment and recovery of the lending depend primarily on the cash flows generated by the real estate acquired.

(2) Where an authorized institution is not able to estimate the credit risk components as required in this Part for corporate exposures in respect of the institution's specialized lending, the institution shall use the supervisory slotting criteria approach to calculate the risk-weighted amount of such specialized lending in accordance with section 6.21(2).

(3) Subject to subsection (4), for the purposes of section 6.5(1) as read with Table 6.1, an authorized institution may only classify an exposure to a corporate as a corporate exposure which falls within the IRB subclass of small-and-medium sized corporates if –

(a) subject to paragraphs (b) and (c), the corporate concerned has a reported total annual revenue, in its latest annual financial statements, of less than $500 million;

(b) subject to paragraph (c), in any case where the corporate concerned is a member of a group of companies, the group of companies has a consolidated reported total annual revenue, in the

group's latest consolidated annual financial statements, of less than $500 million;

(c) in any case where the corporate concerned is consolidated with other corporates by the institution for risk management purposes, the aggregate of the reported total annual revenue, in the latest annual financial statements of the corporate concerned and the other corporates, is less than $500 million.

(4) Where an authorized institution demonstrates to the satisfaction of the Monetary Authority, in respect of a corporate to which the institution has an exposure, that the corporate's scale of business is not accurately reflected in the corporate's total annual revenue, then the institution may, with the prior consent of the Monetary Authority, substitute the corporate's total assets for total annual revenue in determining whether or not the exposure falls within subsection (3) in respect of that corporate.

(5) For the purposes of section 6.5(1) as read with Table 6.1, an authorized institution shall classify all of its exposures to corporates which do not fall within –

(a) the IRB subclass of specialized lending under supervisory slotting criteria approach pursuant to subsection (2);

(b) the IRB subclass of small-and-medium sized corporates pursuant to subsection (3);

(c) the IRB subclass of small business retail exposures pursuant to section 6.7(2); or

(d) the IRB subclass of residential mortgages to property-holding shell companies pursuant to section 6.7(3)(b),

as exposures which fall within the IRB subclass of other corporates.

6.7 Retail exposures

(1) For the purposes of section 6.5(1) as read with Table 6.1, an authorized institution may only classify an exposure as a retail exposure which falls within the IRB subclass of small business retail exposures, residential mortgages to individuals, residential mortgages to property-holding shell companies, qualifying revolving retail exposures, or other retail exposures to individuals, as the case may be, if the exposure is included in a pool of exposures managed by the institution on a pooled or portfolio basis.

(2) Subject to subsection (1), for the purposes of section 6.5(1) as read with Table 6.1, an authorized institution may only classify an exposure to a corporate as a retail exposure which falls within the IRB subclass of small business retail exposures if the total exposure of the institution or its consolidation group to –

(a) subject to paragraph (b), the corporate;

(b) if applicable –

(i) a group of companies of which the corporate is a member; or

(ii) the corporate and other persons (including individuals) which are consolidated by the institution with the corporate for risk management purposes,

is less than $10 million.

(3) Subject to subsection (1), for the purposes of section 6.5(1) as read with Table 6.1 –

(a) an authorized institution shall classify a residential mortgage loan to one or more than one individual as a retail exposure which falls within the IRB subclass of residential mortgages to individuals where the property securing the residential mortgage loan concerned is used as the residence of the borrower or as a residence of a tenant of the borrower;

(b) an authorized institution shall classify a residential mortgage loan to a property-holding shell company as a retail exposure which falls within the IRB subclass of residential mortgages to property-holding shell companies where –

(i) the property securing the residential mortgage loan concerned is used as the residence of one or more than one director or shareholder of the property-holding shell company or as a residence of a tenant of the property-holding shell company;

(ii) all of the borrowed-monies obligations of the property-holding shell company arising under the residential mortgage

loan concerned are the subject of a personal guarantee –

(A) which is entered into by one or more than one director or shareholder of the property-holding shell company (referred to in this paragraph as "guarantor"); and

(B) which fully and effectively covers those obligations;

(iii) the institution, having due regard to the guarantor's financial obligations (including, in particular, all the guarantor's borrowed-monies obligations and obligations of suretyship), is satisfied that the guarantor is able to discharge all the guarantor’s obligations under the guarantee; and

(iv) the residential mortgage loan concerned made available to the property-holding shell company has been assessed by reference to substantially similar credit underwriting standards (including loan purpose, and loan-to-value and debt-service ratios) as would normally be applied by the institution to an individual.

(4) Subject to subsection (1), for the purposes of section 6.5(1) as read with Table 6.1, an authorized institution shall classify an exposure as a retail exposure which falls within the IRB subclass of qualifying revolving retail exposures if –

(a) the exposure is revolving, unsecured, and unconditionally cancellable (both contractually and in practice) by the institution;

(b) the exposure is to one or more than one individual and not explicitly for business purposes;

(c) the exposure is not more than $1 million;

(d) the exposure belongs to a pool of exposures which have exhibited, in comparison with other IRB subclasses of retail exposures, low loss rate volatility, relative to the institution's average level of loss rates for retail exposures, especially within the pools to which low estimates of PD are attributed;

(e) data on loss rates for qualifying revolving retail exposures are retained by the institution in order to allow analysis of the volatility of loss rates; and

(f) treatment of the exposure as falling within the IRB subclass of qualifying revolving retail exposures is consistent with the underlying risk characteristics of the exposure.

(5) Subject to subsections (1) and (6), for the purposes of section 6.5(1) as read with Table 6.1, an authorized institution shall classify all of its exposures to individuals which do not fall within –

(a) the IRB subclass of residential mortgages to individuals; or

(b) the IRB subclass of qualifying revolving retail exposures,

as exposures which fall within the IRB subclass of other retail exposures to individuals.

(6) An authorized institution shall treat any of its exposures to individuals which are not managed by the institution on a pooled or portfolio basis in accordance with subsection (1) as corporate exposures.

6.8 Equity exposures

(1) For the purposes of section 6.5(1) as read with Table 6.1 –

(a) subject to subsection (2) and paragraphs (b) and (c), an authorized institution shall classify under the IRB class of equity exposures all of its direct and indirect equity interests (whether voting or non-voting) in a corporate where those interests are not consolidated or deducted for the purposes of determining the institution's capital base in accordance with Part 3;

(b) an authorized institution shall classify under the IRB class of equity exposures –

(i) holdings of any share issued by a corporate;

(ii) holdings of any equity contract;

(iii) holdings in any collective investment scheme which is engaged principally in the business of investing in equity interests;

(iv) holdings of any instrument which would satisfy the requirements set out in section 3.4 for inclusion in the institution's core capital if the instrument were issued by the institution;

(v) holdings of any instrument –

(A) which is irredeemable;

(B) which does not embody an obligation on the part of the issuer except an obligation which falls within subparagraph (vi); and

(C) which conveys a residual claim on the assets or income of the issuer;

(vi) holdings of any instrument which embodies an obligation on the part of the issuer and in respect of which –

(A) the issuer may indefinitely defer the settlement of the obligation;

(B) the obligation requires (or permits at the issuer's discretion) settlement by the issuance of a fixed number of the issuer’s equity shares;

(C) the obligation requires (or permits at the issuer's discretion) settlement by the issuance of a variable number of the issuer's equity shares and, other things being equal, any change in the value of the obligation is attributable to, comparable to, and in the same direction as, the change in the

value of a fixed number of the issuer's equity shares; or

(D) the institution has the option to require that the obligation be settled in equity shares unless the institution has demonstrated to the satisfaction of the Monetary Authority that –

(I) in the case of a traded instrument, the instrument trades more like debt of the issuer than equity; or

(II) in the case of a non-traded instrument, the instrument should be treated as a debt holding;

(vii) holdings of any debt obligation, share, derivative contract, investment scheme or instrument, which is structured with the intent of conveying the economic substance of equity interests; and

(viii) any of the institution's liabilities on which the return is linked to that of equity interests; and

(c) an authorized institution shall not classify under the IRB class of equity exposures any equity

holding which is structured with the intent of conveying the economic substance of debt holdings or securitization exposures.

(2) The Monetary Authority may, by notice in writing given to an authorized institution, require the institution to treat a debt holding of the institution as an equity exposure for the purposes of calculating the institution's credit risk if the Monetary Authority is satisfied that the nature and economic substance of the debt holding are such that the debt holding should more realistically be characterized as an equity exposure than as a debt holding.

(3) An authorized institution shall comply with the requirements of a notice given to it under subsection (2).

6.9 Other exposures

(1) For the purposes of section 6.5(1) as read with Table 6.1, an authorized institution shall classify under the IRB class of other exposures any of the institution's exposures which do not fall within the IRB class of corporate, sovereign, bank, retail or equity exposures.

(2) For the purposes of section 6.5(1) as read with Table 6.1, an authorized institution shall classify under the IRB subclass of other items any of its other exposures which do not fall within the IRB subclass of cash items.

Division 3 – IRB calculation approaches

6.10 IRB calculation approaches

(1) Subject to subsections (2) and (3), an authorized institution shall, for the purposes of calculating the risk-weighted amount of its exposures, select IRB calculation approaches from the range of IRB calculation approaches set out in Table 6.2 available for each of the 6 IRB classes.

TABLE 6.2

IRB CALCULATION APPROACHES

Item	IRB class	IRB calculation approach
1.	Corporate exposures	1. Foundation IRB approach
		2. Advanced IRB approach
		3. Supervisory slotting criteria approach
2.	Sovereign exposures	1. Foundation IRB approach
		2. Advanced IRB approach
3.	Bank exposures	1. Foundation IRB approach
		2. Advanced IRB approach
4.	Retail exposures	Retail IRB approach
5.	Equity exposures	1. Market-based approach: simple risk-weight method
		2. Market-based approach: internal models method
		3. PD/LGD approach
6.	other exposures	Specific risk-weight approach

(2) An authorized institution shall not select an IRB calculation approach set out in Table 6.2 unless the institution satisfies the requirements specified in this Part applicable to or in relation to that IRB calculation approach.

(3) Where, under these Rules, an authorized institution may use more than one IRB calculation approach set out in Table 6.2 to calculate its credit risk for exposures which fall within an IRB class, the institution shall not, except with the prior consent of the Monetary Authority –

(a) use more than one such IRB calculation approach to calculate its credit risk for exposures which fall within that IRB class; or

(b) discontinue using one such IRB calculation approach, and commence using another such IRB calculation approach, to calculate its credit risk for exposures which fall within that IRB class.

(4) An authorized institution shall –

(a) subject to paragraphs (b) and (c), only use more than one rating system for exposures which fall within an IRB class if the institution has demonstrated to the satisfaction of the Monetary Authority that the rating systems concerned are necessary having regard to the characteristics and complexity of those exposures;

(b) only assign an exposure to a rating system referred to in paragraph (a) if that rating system accurately reflects the level of risk of the exposure; and

(c) document the reason for assigning an exposure to a particular rating system.

Division 4 – Risk-weighting framework under IRB approach

6.11 General requirements for estimation of probability of default, loss given default and exposure at default

An authorized institution shall, for the purposes of making estimates of PD and, where relevant, LGD and EAD (collectively referred to in this Division as "estimates") –

(a) conduct periodic assessments of its risk quantification process and update the process as necessary to ensure that new data and analytical techniques and evolving industry practices are incorporated into the process;

(b) update the institution's estimates produced by the institution's risk quantification process not less than once every 12 months;

(c) base the institution's estimates on historical experience and empirical evidence and not only on subjective or judgemental considerations, take into account all relevant data and information available and use appropriate methods;

(d) demonstrate to the satisfaction of the Monetary Authority that the data the institution uses in its estimates (whether internal data or data from external sources, or both) –

(i) are representative of its long run default experience and long run loss experience (covering a period which captures a reasonable mix of high-default and low-default years of at least one economic cycle); and

(ii) are based on economic or market conditions which are relevant to current and foreseeable economic or market conditions;

(e) ensure that adjustments to the estimates, based on data which fall within paragraph (d) –

(i) are only made or approved by officers of the institution with the necessary experience and expertise to make or approve such adjustments and who have been authorized by the institution to make or approve such adjustments; and

(ii) form part of the institution's risk quantification process and are based on the exercise in good faith of judgement by officers who fall within subparagraph (i) and are not biased towards reducing the institution's regulatory capital for credit risk; and

(f) demonstrate to the satisfaction of the Monetary Authority that the institution has –

(i) a set of procedures to evaluate the appropriateness of the method or data used in making the estimates; and

(ii) a mechanism for increasing the estimates when the evaluation referred to in subparagraph (i) indicates that the estimates fail to satisfy the institution's internal standards on the accuracy of estimates used by the institution.

6.12 Default of obligor

(1) For the purposes of this Part, a default of the obligor in respect of an exposure of an authorized institution has occurred if –

(a) the institution considers that the obligor is unlikely to pay in full the obligor's credit obligations to the institution (or to any member of the consolidation group of the institution) without recourse by the institution to realizing any collateral held by the institution or taking any other action in respect of the exposure; or

(b) subject to subsections (2), (3) and (8), the obligor is past due for more than 90 days in respect of the payment of any material portion of all of the obligor's outstanding credit obligations to the institution (or to any member of the consolidation group of the institution).

(2) Where the obligor in respect of a retail exposure is past due for more than 90 days in respect of any payment owing by the obligor in respect of that exposure –

(a) subject to paragraph (b), the institution shall treat the exposure as being in default and shall not apply subsection (1)(b) to the obligor;

(b) the institution shall disregard paragraph (a) if the obligor is also past due for more than 90 days in respect of any payment owing by the obligor in

respect of any other exposure which is not a retail exposure.

(3) For the purposes of subsections (1)(b) and (2), an overdraft provided by an authorized institution to an obligor (being a borrower under the overdraft) is past due if –

(a) the obligor has breached a maximum limit which was set by the institution, and the institution has advised the obligor of the maximum limit; or

(b) the institution has advised the obligor of a maximum limit which is less than the current outstanding balance of the overdraft; or

(c) the overdraft is not authorized by the institution.

(4) Subject to subsection (5), where an authorized institution intends to use, for a particular IRB class or IRB subclass of the institution, the default criteria (not being the prescribed default criteria) set by the relevant banking supervisory authority of the institution's parent bank, the institution shall not use those default criteria except with the prior consent of the Monetary Authority.

(5) The Monetary Authority shall not give an authorized institution the consent referred to in subsection (4) to use the default criteria referred to in that subsection in respect of a particular IRB class or IRB subclass of the institution unless the institution demonstrates to the satisfaction of the Monetary Authority that the differences between those default criteria and the prescribed default criteria will not materially affect the

accuracy of the estimates generated by the institution's rating system.

(6) Subject to subsection (7), an authorized institution shall –

(a) keep a record of defaults in exposures of the institution using the prescribed default criteria;

(b) use the prescribed default criteria to generate the estimates from the institution's rating system; and

(c) only use internal or external data which are inconsistent with the prescribed default criteria if the institution demonstrates to the satisfaction of the Monetary Authority that it has made adjustments to the data such that the data are consistent with the prescribed default criteria.

(7) Subsection (6) applies to and in relation to an authorized institution which uses the default criteria referred to in subsection (4) as it applies to and in relation to an authorized institution which uses the prescribed default criteria.

(8) An authorized institution shall not engage in the practice of re-ageing for the purposes of subsection (1).

(9) In this section, "prescribed default criteria" ( ) means the criteria specified in subsection (1).

Division 5 – Specific requirements for corporate, sovereign and bank exposures

6.13 Rating dimensions

(1) Subject to subsection (4), an authorized institution shall ensure that its rating system for corporate, sovereign and bank exposures has 2 distinct and separate rating scales, comprising –

(a) obligor grades which reflect, exclusively, the risk of default of obligors; and

(b) facility grades which reflect transaction-specific factors affecting loss severity in the case of default of obligors and, where relevant, the characteristics of obligors to the extent that they are predictive of LGD.

(2) An authorized institution which uses the foundation IRB approach shall be regarded as complying with subsection (1)(b) if its rating system for corporate, sovereign and bank exposures has a rating scale which reflects the EL of exposures assigned to each grade.

(3) An authorized institution shall, in respect of its corporate, sovereign and bank exposures –

(a) rank and assign each exposure to the obligor grades and facility grades in accordance with its rating criteria and based upon all relevant information

available regarding the creditworthiness of the obligor or loss severity of the exposure; and

(b) assign the same obligor grade to separate exposures to the same obligor unless the institution demonstrates to the satisfaction of the Monetary Authority that the risk of default of the obligor in respect of such exposures is different.

(4) An authorized institution may use a rating system for its specialized lending under supervisory slotting criteria approach which reflects EL by incorporating considerations about the creditworthiness of obligors and loss severity in respect of such lending.

6.14 Rating structure

(1) An authorized institution shall ensure that its process for assigning exposures to its obligor grades or facility grades results in a consistent, logical and cogent differentiation of credit risk inherent in those exposures –

(a) with no excessive concentrations in particular obligor grades or facility grades;

(b) with the level of perceived and measured credit risk increasing as credit quality declines from one grade to the next; and

(c) allowing for reasonably accurate, consistent and verifiable estimation of credit risk components for each exposure.

(2) Subject to subsection (3), an authorized institution shall ensure that its rating system for corporate, bank and sovereign exposures has –

(a) not less than 7 obligor grades for exposures to obligors who are not in default; and

(b) not less than one obligor grade for exposures to obligors who are in default.

(3) Where an authorized institution uses the supervisory slotting criteria approach for its specialized lending, the institution shall ensure that its rating system has –

(a) not less than 4 obligor grades for specialized lending to obligors who are not in default; and

(b) not less than one obligor grade for specialized lending to obligors who are in default.

6.15 Rating criteria

An authorized institution shall ensure that –

(a) its rating definitions in respect of obligor grades and facility grades; and

(b) its rating processes and criteria for assigning exposures to such grades,

are specific, logical, sufficiently detailed and consistently applied and result in a clear differentiation of credit risk inherent in the exposures.

6.16 Rating assignment horizon

An authorized institution shall –

(a) use a time horizon of more than one year for the purposes of assigning its exposures to obligor grades;

(b) subject to paragraph (c), ensure that an obligor grade accurately represents the institution's assessment of the willingness and ability of the obligor in respect of an exposure to perform the obligor's contractual obligations, after taking into account any potentially adverse economic conditions over a business cycle within the industry or geographic region relevant to the obligor; and

(c) prudently in assessing information relating to the willingness and ability of an obligor in respect of an exposure to perform the contractual obligations of the obligor.

6.17 Rating coverage

An authorized institution shall –

(a) in the case of each exposure which falls within the IRB classes of corporate, sovereign and bank exposures, assign the exposure to an obligor grade or facility grade as part of the institution's process for giving credit approvals; and

(b) in the case of each obligor to whom the institution has a corporate, sovereign or bank exposure, assign the exposure to the obligor grade which accurately reflects the level of credit risk of the obligor in respect of the exposure.

6.18 Integrity of rating process

An authorized institution shall ensure that –

(a) the institution has in place policies and procedures to ensure that the rating assignment process for corporate, sovereign and bank exposures is independent of the institution's staff and management responsible for originating such exposures;

(b) the assignment of exposures to obligor grades and facility grades is reviewed and updated not less than once in every 12 months and that exposures to obligors which are more likely to default are subject to more frequent review;

(c) whenever the institution becomes aware of any new material information on an exposure (including in relation to the obligor in respect of that exposure), a review is conducted, within a reasonable period after the institution becomes so aware, of whether or not the exposure should be assigned to a different obligor grade or facility grade, as the case may be;

(d) the institution has in place an effective process to obtain and update relevant information on the financial conditions and on other credit risk characteristics of the obligors in respect of the

institution's exposures which affect assigned estimates of PD, LGD and EAD; and

(e) the institution has in place an effective process for –

(i) identifying and documenting the circumstances in which officers of the institution may override the inputs to, or the outputs of, the institution's rating system; and

(ii) monitoring the nature and performance of such overrides which have occurred.

6.19 Calculation of risk-weighted amount of corporate, sovereign and bank exposures

(1) An authorized institution shall, for the purposes of calculating the risk-weighted amount of the institution's corporate, sovereign and bank exposures –

(a) subject to section 6.30(c), if the institution uses the foundation IRB approach, provide its own estimate of the PD for each of its obligor grades and use supervisory estimates for the other credit risk components for inclusion into the risk-weight function to be used in that calculation;

(b) if the institution uses the advanced IRB approach, provide its own estimate of the PD, LGD and EAD for each of its obligor grades and facility grades, as the case may be, and calculate the M of its exposures for inclusion into the risk-weight function to be used in that calculation; and

(c) if it uses the supervisory slotting criteria approach to calculate the risk-weighted amount of its specialized lending, use the relevant supervisory estimate for the risk-weight to be allocated to the specialized lending.

(2) Subject to subsection (5) and section 6.21(2), an authorized institution shall use Formula 6.1 to calculate the risk-weighted amount of the institution's corporate, sovereign and bank exposures which are not in default.

FORMULA 6.1

RISK-WEIGHT FUNCTION TO BE USED FOR CORPORATE, SOVEREIGN AND BANK EXPOSURES

Correlation (R) = 0.12 × (1 – EXP (–50 × PD)) / (1 – EXP (–50)) + 0.24 × [1 – (1 – EXP (–50 × PD)) / (1 – EXP (–50))]

Maturity adjustment (b) = (0.11852 – 0.05478 × 1n (PD))^2

Capital requirement (K) = [LGD × N [(1 – R)^–0.5 × G (PD) + (R / (1 – R))^0.5 x G (0.999)] – PD x LGD] x (1 – 1.5 x b)^– 1 x (1 + (M – 2.5) × b)

Risk-weight (RW) = K x 12.5

Risk-weighted amount (RWA) = RW x EAD

where –

(a) PD and LGD are expressed in decimals, EAD is expressed in Hong Kong dollars and M is expressed in years;

(b) EXP denotes exponential;

(c) 1n denotes the natural logarithm;

(d) N(x) denotes the cumulative distribution function for a standard normal random variable; and

(e) G(z) denotes the inverse cumulative distribution function for a standard normal random variable.

(3) An authorized institution shall apply a zero capital requirement (K) to a sovereign exposure of the institution if the calculation required under this section in respect of the exposure results in a negative capital requirement (K) for the exposure.

(4) Subject to section 6.21(2), an authorized institution shall use the same risk-weight function set out in Formula 6.1 to calculate the risk-weighted amount of its corporate, sovereign and bank exposures which are in default except that the capital requirement (K) for a defaulted corporate, sovereign or bank exposure shall be equal to the greater of –

(a) zero; and

(b) the figure resulting from the subtraction of the institution's best estimate of the EL of the exposure from the LGD of the exposure.

(5) An authorized institution shall use Formula 6.2 to calculate the risk-weighted amount of the institution's corporate and bank exposures –

(a) which are not in default; and

(b) which are treated as hedged exposures under the double default framework pursuant to section 6.81.

FORMULA 6.2

RISK-WEIGHT FUNCTION FOR HEDGED EXPOSURES
UNDER DOUBLE DEFAULT FRAMEWORK

Correlation (ρ_{os}) = 0.12 × (1 − EXP (−50 × PD_o)) / (1 − EXP (−50)) + 0.24 × [1 − (1 − EXP (−50 × PD_o)) / (1 − EXP (−50))]

Maturity adjustment (b_{os}) = (0.11852 − 0.05478 × ln (PD_{os}))^2

Capital requirement (K_{DD})

$$=\left\{LGD_g \cdot \left[N\left(\frac{G(PD_o)+\sqrt{\rho_{os}}\cdot G(0.999)}{\sqrt{1-\rho_{os}}}\right)-PD_o\right]\cdot\frac{1+(M_{os}-2.5)\cdot b_{os}}{1-1.5\cdot b_{os}}\right\}\times(0.15+160\cdot PD_g)$$

Risk weight (RW_{DD}) = K_{DD} x 12.5

Risk-weighted amount (RWA) = RW_{DD} x EAD_g

where –

(a) PD and LGD are expressed in decimals, EAD is expressed in Hong Kong dollars and M is expressed in years;

(b) EXP denotes exponential;

(c) 1n denotes the natural logarithm;

(d) N(x) denotes the cumulative distribution function for a standard normal random variable;

(e) G(z) denotes the inverse cumulative distribution function for a standard normal random variable;

(f) PD_o = PD of exposure to the underlying obligor without taking into account the effect of credit protection;

(g) PD_g = PD of the exposure to the credit protection provider in respect of the hedged exposure;

(h) PD_{os} = the lower of PD_o and PD_g;

(*i*) M_{os} = M as determined in accordance with section 6.32;

(j) LGD_g = LGD as determined in accordance with section 6.25; and

(k) EAD_g = EAD of the hedged exposure.

(6) Where the obligor in respect of a hedged exposure of an authorized institution (referred to in this section as "underlying obligor") defaults, the institution shall –

(a) treat the exposure as a direct exposure to the credit protection provider concerned; and

(b) risk-weight the exposure accordingly.

(7) Where the credit protection provider in respect of a hedged exposure of an authorized institution defaults, the institution shall –

(a) treat the exposure as an exposure to the underlying obligor; and

(b) risk-weight the exposure as an unhedged exposure to the underlying obligor.

(8) Where –

(a) the underlying obligor in respect of a hedged exposure of an authorized institution defaults; and

(b) the credit protection provider in respect of the hedged exposure also defaults,

the institution shall treat the exposure as a defaulted exposure to whichever of the underlying obligor, or the credit protection provider, defaulted last.

6.20 Provisions supplementary to section 6.19(2) and (5) – firm-size adjustments for small-and-medium sized corporates

(1) Where a corporate exposure of an authorized institution falls within the IRB subclass of small-and-medium sized corporates, the institution shall make an adjustment to take into account the size of the corporate concerned (referred to in this section as "firm-size adjustment") to the calculation of the correlation (R or ρ_{os}) in the risk-weight function set out in Formula 6.1 or 6.2 by substituting the following correlation formula for that in Formula 6.1 or 6.2, as the case requires –

(a) if the exposure is not subject to the double default framework, then in Formula 6.1 –

Correlation (R) = $0.12 \times (1 - EXP (-50 \times PD)) / (1 - EXP (-50)) + 0.24 \times [1 - (1 - EXP (-50 \times PD)) / (1 - EXP (-50))] - 0.04 \times (1 - (S - 50) / 450)$;

(b) if the exposure is subject to the double default framework, then in Formula 6.2 –

Correlation (p_{os}) = $0.12 \times (1 - EXP (-50 \times PD_o)) / (1 - EXP (-50)) + 0.24 \times [1 - (1 - EXP (-50 \times PD_o)) / (1 - EXP (-50))] - 0.04 \times (1 - (S - 50) / 450)$.

(2) In the correlation formula set out in subsection (1)(a) or (b), S is expressed as –

(a) subject to paragraphs (b) and (c), the total annual revenue of the corporate;

(b) subject to paragraph (c), in any case where the corporate concerned is a member of a group of companies, the consolidated total annual revenue of the group of companies of which the corporate is a member; or

(c) in any case where the corporate concerned is consolidated with other corporates by the institution for risk-management purposes, the aggregate of the total annual revenue of the corporate and other corporates which are so consolidated,

of not less than $50 million to not more than $500 million.

(3) Where any total annual revenue referred to in subsection (2) is less than $50 million, the authorized institution concerned shall, for the purposes of that subsection, treat the total annual revenue as if it were $50 million.

(4) Where an authorized institution demonstrates to the satisfaction of the Monetary Authority that the total annual revenue of corporate does not accurately reflect the corporate's scale of business, then, for the purposes of this section, the institution may, with the prior consent of the Monetary Authority,

substitute the corporate's total assets for the total annual revenue in calculating the firm-size adjustment.

6.21 Provisions supplementary to section 6.19 – risk-weights for specialized lending

(1) Where an authorized institution is able to comply with –

(a) section 6.22 in relation to the estimation of PD under the foundation IRB approach for any of its specialized lending; or

(b) sections 6.22, 6.24, 6.27 and 6.31 in relation to the estimation of PD, LGD and EAD and the calculation of M under the advanced IRB approach for any of its specialized lending,

the institution shall use the risk-weight function specified in Formula 6.1 or 6.2, as the case requires, (if applicable, adjusted in accordance with section 6.20(1) in respect of exposures to small-and-medium sized corporates) to derive the risk-weighted amount of such specialized lending.

(2) Where an authorized institution does not fall within subsection (1) in respect of any of its specialized lending, the institution shall –

(a) use the supervisory slotting criteria approach to derive the risk-weighted amount of such specialized lending;

(b) assign any internal grade to such specialized lending based on the institution's criteria, systems and processes;

(c) map the internal grades assigned to specialized lending referred to in paragraph (b) to one of the

5 supervisory rating grades of "strong", "good", "satisfactory", "weak" and "default" set out in Table 6.3 by reference to –

(i) the criteria specified in Annex 6 to the document entitled "International Convergence of Capital Measurement and Capital Standards – A Revised Framework (Comprehensive Version)" published by the Basel Committee on Banking Supervision in June 2006; or

(ii) the credit quality grades specified in Schedule 6.1;

(d) subject to subsection (3), apply the risk-weight specified in Table 6.3 for the relevant supervisory rating grade in calculating the risk-weighted amount of such specialized lending.

TABLE 6.3

SUPERVISORY RATING GRADES FOR DETERMINATION OF RISK-WEIGHTS FOR SPECIALIZED LENDING

	Strong	Good	Satisfactory	Weak	Default
Credit quality grade	1	2	3	4	Not applicable
Risk-weight	70%	90%	115%	250%	0%

(3) An authorized institution may assign a risk-weight of 50% to its specialized lending which falls into the supervisory rating grade of "strong" in Table 6.3, and a risk-weight of 70% to its specialized lending which falls into the supervisory rating grade of "good" in Table 6.3, if –

(a) the specialized lending has a remaining maturity of less than 2.5 years; or

(b) the institution has demonstrated to the satisfaction of the Monetary Authority that the institution's credit underwriting criteria and the ability of the obligor in respect of the specialized lending to withstand other risk characteristics are substantially stronger than the corresponding criteria and standards for the equivalent supervisory rating grade as referred to in subsection (2)(c)(i).

6.22 Probability of default

(1) An authorized institution which uses the foundation IRB approach or advanced IRB approach shall estimate of the PD for each of its obligor grades such that –

(a) subject to paragraphs (b) and (c), the estimate of PD is a long run average of one-year default rates for obligors in respect of exposures which fall within the obligor grade to which the estimate relates;

(b) in the case of a corporate or bank exposure of the institution which is not in default, the estimate of the PD is the greater of –

(i) the estimate of the PD for the obligor grade referred to in paragraph (a) into which the exposure falls; or

(ii) 0.03%;

(c) in the case of a corporate, sovereign or bank exposure of the institution which is in default, the estimate of the PD is 100%; and

(d) the estimate of the PD is based on not less than one source of data –

(i) which is relevant to the institution's corporate, sovereign or bank exposures; and

(ii) which, subject to section 2.11, covers a period of not less than 5 years.

(2) For the purposes of subsection (1) –

(a) the institution shall use information, sources of data and techniques which take into account the institution's long run default and long run loss experience as referred to in section 6.11(d)(i); and

(b) if the institution uses a primary technique for the estimation of PD and other techniques as a point of comparison and potential adjustment, the institution shall act prudently in –

(i) comparing the results of the primary technique and other techniques; and

(ii) making adjustments for the respective limitations of the primary technique and other techniques.

6.23 Loss given default under foundation IRB approach

(1) An authorized institution which uses the foundation IRB approach shall –

(a) use a supervisory estimate of 45% for the LGD of its senior exposures which are corporate, sovereign or bank exposures which are –

(i) unsecured; or

(ii) secured by collateral which is not recognized collateral; and

(b) use a supervisory estimate of 75% for the LGD of its subordinated exposures which are corporate, sovereign or bank exposures.

(2) Subject to subsections (3) and (4), an authorized institution which uses the foundation IRB approach may, for the purposes of calculating the risk-weighted amount of a senior exposure of the institution which falls within any of its IRB classes of corporate, sovereign and bank exposures, take into account the credit risk mitigating effect of any –

(a) recognized financial collateral; or

(b) recognized IRB collateral.

(3) For the purposes of subsection (2)(a), an authorized institution shall –

(a) use Formula 6.3 to determine the effective LGD ("LGD*") applicable to an exposure covered by recognized financial collateral for inclusion into

the risk-weight function specified in Formula 6.1 or 6.2, as the case requires;

(b) for the purposes of Formula 6.3, only use the net credit exposure (E*) to calculate the LGD* and continue to calculate the EAD without taking into account the presence of any collateral;

(c) use Formula 6.4 to determine the net credit exposure (E*) in respect of the exposure referred to in paragraph (a);

(d) for the purposes of Formula 6.4 –

(i) use sections 4.41, 4.42 and 4.43 to determine H_e, H_c and H_{fx};

(ii) apply a haircut of zero to repo-style transactions which are treated as collateralized loans to the counterparty if the collateral falls within section 4.33(2); and

(iii) where the recognized financial collateral in respect of an exposure of an authorized institution has a residual maturity which is shorter than the residual maturity of the exposure covered by the collateral, the institution shall adjust, with all necessary modifications, the value of the collateral in accordance with section 4.54.

FORMULA 6.3

DETERMINATION OF EFFECTIVE LGD

$$LGD^* = LGD \times (E^* / E)$$

where –

LGD^*	=	the effective LGD;
LGD	=	the supervisory estimate of 45% for the LGD of a senior exposure before adjusting for the credit risk mitigating effect of recognized financial collateral;
E	=	the EAD of the exposure; and
E^*	=	net credit exposure (being the EAD of the exposure after adjusting for the credit risk mitigating effect of recognized financial collateral).

FORMULA 6.4

DETERMINATION OF NET CREDIT EXPOSURE

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

where –

E^*	=	net credit exposure;
E	=	the EAD of the exposure;

H_e	=	the haircut applicable to the authorized institution's exposure to the obligor pursuant to the standard supervisory haircuts for the comprehensive approach to treatment of recognized collateral subject to adjustment as set out in section 4.43;
C	=	the current market value of recognized financial collateral before adjustment required by the comprehensive approach to treatment of recognized collateral;
H_c	=	the haircut applicable to recognized financial collateral pursuant to the standard supervisory haircuts for the comprehensive approach to treatment of recognized collateral subject to adjustment as set out in section 4.43; and
H_{fx}	=	the haircut applicable in consequence of a currency mismatch, if any, pursuant to the standard supervisory haircuts for the comprehensive approach to treatment of recognized collateral subject to adjustment as set out in section 4.43.

(4) For the purposes of subsection (2)(b), an authorized institution shall determine, for inclusion into the risk-weight function specified in Formula 6.1 or 6.2, as the case requires, the LGD* applicable to an exposure secured by recognized IRB collateral by –

(a) if the ratio of the current market value of the collateral received in respect of the exposure (C) to the EAD of the exposure (E) is below a threshold level of C* as set out in Table 6.4, assigning as the LGD* for that exposure the supervisory estimate of the LGD of 45% specified in subsection (1)(a);

(b) if the ratio of C to E in respect of the exposure exceeds threshold level C** as set out in Table 6.4, assigning as the LGD* for that exposure the supervisory estimate of the LGD applicable pursuant to that Table;

(c) if the ratio of C to E in respect of the exposure exceeds threshold level C* but not the threshold level C** –

(i) dividing the exposure into –

(A) a fully collateralized portion (C/C**); and

(B) the uncollateralized portion (E – C/C**);

(ii) assigning as the LGD* for the fully collateralized portion the supervisory

estimate of the LGD specified in respect of the type of recognized IRB collateral concerned in Table 6.4;

(iii) assigning as the LGD* for the uncollateralized portion the supervisory estimate of the LGD of 45% specified in subsection (1)(a);

(d) if the institution has obtained more than one type of recognized collateral in respect of the exposure –

(i) dividing the exposure into –

(A) the portion fully collateralized by recognized financial collateral (after taking into account the haircuts H_c and H_{fx} and the adjustment for maturity mismatch in determining the value of the recognized financial collateral);

(B) the portion fully collateralized by recognized financial receivables;

(C) the portion fully collateralized by recognized commercial real estate and recognized residential real estate;

(D) the portion fully collateralized by other recognized IRB collateral; and

(E) the portion, if any, which is uncollateralized; and

(ii) calculating the risk-weighted amount of each portion separately;

(e) if the ratio, expressed as a percentage, of the sum of the current market value of recognized commercial real estate, recognized residential real estate and other recognized collateral in respect of an exposure to the EAD of the exposure, after taking into account the credit risk mitigating effect of recognized financial collateral and recognized financial receivables, is below C* (that is 30%), assigning as the LGD* for that exposure the supervisory estimate of the LGD of 45% specified in subsection (1)(a).

TABLE 6.4

DETERMINATION OF EFFECTIVE LGD

Recognized IRB collateral	Supervisory estimate of LGD	Required minimum level of collateralization for collateral to be partially taken into account (C*)	Required level of over-collateralization for collateral to be taken into account (C**)
Recognized financial receivables	35%	0%	125%
Recognized commercial real estate and recognized residential real estate	35%	30%	140%
Other recognized IRB collateral	40%	30%	140%

(5) In this section –

"senior exposure" ( ), in relation to an authorized institution, means an exposure of the institution to an obligor which is not a subordinated exposure;

"subordinated exposure" ( ), in relation to an authorized institution, means an exposure of the institution to an obligor which –

(a) is lower in ranking, or junior, to other claims against the obligor in terms of the priority of repayment; or

(b) will be repaid only after all the senior claims against the obligor have been repaid.

6.24 Loss given default under advanced IRB approach

(1) An authorized institution which uses the advanced IRB approach shall provide an estimate of the LGD for each of its facility types such that –

(a) subject to paragraph (b), the estimate of the LGD reflects the effect on the severity of the loss suffered in respect of an exposure which falls within a facility type of economic downturn conditions where credit losses are expected to be substantially higher than average;

(b) the estimate of the LGD is not less than the long run default-weighted average loss rate given default calculated as the average loss rate of all observed defaults within the data source used by the institution for the estimation of LGD for a facility type;

(c) the estimate of the LGD for a facility type –

(i) is based on historical recovery rates of exposures which fall within the facility type; and

(ii) is not solely based on the estimated market value of collateral in any case where the institution holds collateral in respect of an exposure which falls within the facility type;

(d) the estimate of the LGD for a facility type reflects the possibility that the institution will have to incur unexpected losses during the debt recovery period applicable to an exposure which falls within the facility type;

(e) the estimate of the LGD for a facility type is based on not less than one source of data –

(i) which is relevant to the exposures which fall within the facility type;

(ii) which covers a period of not less than 7 years; and

(iii) which covers at least one economic cycle;

(f) if the process of estimating the LGD for a facility type involves data mapping in respect of the institution's exposures which fall within the facility type to the factors in reference data sets used by ECAIs –

(i) the mapping process is based on a comparison of available common elements in the ECAIs' reference data and the institution's exposures; and

(ii) in any case where the institution combines multiple sets of reference data used by ECAIs, the institution has in place a policy –

(A) setting out the manner in which the combination is effected; and

(B) ensuring that the institution avoids biases or inconsistencies in the mapping process.

(2) For the purposes of subsection (1), an authorized institution shall –

(a) have in place an effective and well-documented process for assessing the effects, if any, of economic downturn conditions on debt recovery rates in respect of different facility types and for producing estimates of LGD which reflect such conditions;

(b) take into account all major factors relevant to measuring loss, including the time value of money, the risk premium, and any direct and indirect costs associated with collection in respect of exposures which fall within the facility type;

(c) take into account the extent of any positive correlation between the credit risk of an obligor to whom the institution has an exposure which falls within a facility type and that of any collateral provided in respect of that exposure or that of the provider of such collateral and address the effect of such correlation, if any, in a prudent manner; and

(d) address any currency mismatch and maturity mismatch in a prudent manner.

6.25 Loss given default under double default framework

For the purposes of Formula 6.2, an authorized institution shall –

(a) only use, as the LGD_g, the LGD of –

(i) the exposure to the credit protection provider; or

(ii) an unhedged exposure to the underlying obligor in respect of the hedged exposure concerned (referred to in this section as "underlying obligor"),

depending upon whether, in the event that both the credit protection provider and the underlying obligor default during the contractual period of the hedged exposure, available evidence and the structure of the guarantee or credit derivative contract indicate that the amount recovered will depend on the financial condition of the credit protection provider or the underlying obligor, as the case may be;

(b) in estimating the LGD_g, only recognize collateral provided in respect of the exposure to the underlying obligor or the credit protection provider concerned if the collateral is provided exclusively in respect of the exposure to the underlying obligor or the credit protection

provider, as the case may be, in a manner consistent with section 6.79(3)(c) or 6.80, as the case requires, such that no account is taken of double recovery.

6.26 Exposure at default under foundation IRB approach – on-balance sheet exposures and off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts

(1) An authorized institution which uses the foundation IRB approach shall, in relation to an on-balance sheet exposure of the institution –

(a) use the current drawn amount of the exposure, after taking into account the credit risk mitigating effect of any recognized netting as specified in section 6.72, as an estimate of the EAD of the exposure such that the EAD of the exposure is not less than the sum of –

(i) the amount by which the institution's core capital would be reduced if the exposure were fully written-off; and

(ii) any specific provisions and partial write-offs in respect of the exposure; and

(b) not take into account any discount in respect of the exposure in calculating the risk-weighted amount of the exposure.

(2) An authorized institution which uses the foundation IRB approach shall, for the purposes of providing an estimate of the EAD of an off-balance sheet exposure of the institution specified in column 2 of Table 6.5, calculate the credit equivalent amount

of the exposure by multiplying the principal amount of the exposure by the CCF specified in column 3 of that Table opposite the type of off-balance sheet exposure.

TABLE 6.5

DETERMINATION OF CCF FOR OFF-BALANCE SHEET EXPOSURES OTHER THAN OTC DERIVATIVE TRANSACTIONS OR CREDIT DERIVATIVE CONTRACTS

Item	Off-balance sheet exposures	CCF
1.	Direct credit substitutes	100%
2.	Transaction-related contingencies	50%
3.	Trade-related contingencies	20%
4.	Asset sales with recourse	100%
5.	Forward asset purchases	100%
6.	Partly paid-up securities (being securities the unpaid portion of which an authorized institution may be called upon by the issuer to pay at a pre-determined or unspecified future date)	100%
7.	Forward forward deposits placed	100%
8.	Note issuance and revolving underwriting facilities	75%
9.	Commitments which do not fall within any of items 1 to 8 and –	
	(a) which may be cancelled at any time unconditionally by an authorized institution or which provide for automatic cancellation due to a deterioration in the creditworthiness of the person to whom the commitment has been made;	0%
	(b) subject to paragraph (c), which do not fall within paragraph (a); and	75%

(c)	the drawdown of which will give rise to an off-balance sheet exposure falling within any of items 1 to 8 or any item specified in section 6.29	the lower of 75% or the CCF applicable to the off-balance sheet exposure arising from the drawdown of the commitment concerned

(3) In subsection (1)(b) –

"discount" ( ), in relation to an on-balance sheet exposure of an authorized institution, means the amount by which the institution's estimate of the EAD of the exposure exceeds the sum referred to in subsection (1)(a).

6.27 Exposure at default under advanced IRB approach – on-balance sheet exposures and off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts

(1) An authorized institution which uses the advanced IRB approach shall, in relation to an on-balance sheet exposure of the institution –

(a) provide an estimate of the EAD of the exposure such that the estimate of the EAD of the exposure is not less than –

(i) the current drawn amount of the exposure, after taking into account the credit risk mitigating effect of any recognized netting as specified in section 6.72;

(ii) the sum of –

(A) the amount by which the institution's core capital would be reduced if the exposure were fully written-off; and

(B) any specific provisions and partial write-offs in respect of the exposure; and

(b) not take into account any discount in respect of the exposure in calculating the risk-weighted amount of the exposure.

(2) Subject to subsection (3), an authorized institution which uses the advanced IRB approach shall provide an estimate of

the EAD of an off-balance sheet exposure of the institution specified in column 2 of Table 6.5.

(3) Subject to subsection (4), an authorized institution shall use its own estimates of CCF to calculate the EAD of those types of off-balance sheet exposures which are not subject to a CCF of 100% in Table 6.5.

(4) An authorized institution shall estimate the EAD of an off-balance sheet exposure of the institution such that –

(a) in the case of a facility, the estimate of the EAD of the facility reflects the possibility of additional drawings by the obligor in respect of that facility up to and after the time a default event is triggered in respect of the facility;

(b) subject to paragraph (c), the estimate of the EAD is a prudent estimate of the long-run default-weighted average EAD for exposures which fall within a facility type with allowance made for the likely margin of error and for any identified positive correlation between the frequency of defaults in respect of exposures which fall within the facility type and any increase in the estimate of the EAD in respect of those exposures;

(c) in the case of a facility type for which the estimate of the EAD is volatile over an economic cycle, the institution uses an estimate of the EAD for the facility type which is appropriate for an

economic downturn if that estimate is more prudent than the long run default-weighted average EAD for exposures which fall within the facility type;

(d) the estimate of the EAD to be used for each facility type is based on procedures established by the institution which provide a clear and unambiguous delineation of each facility type to which the estimate relates;

(e) the estimate of the EAD to be used for each facility type –

(i) is based on all relevant data and information available to the institution in respect of exposures which fall within the facility type; and

(ii) is derived from criteria which are material drivers for the estimation of the EAD in respect of exposures which fall within the facility type;

(f) the estimate of the EAD for a facility type is based on not less than one source of data –

(i) which is relevant to exposures which fall within the facility type;

(ii) which covers a period of not less than 7 years; and

(iii) which covers at least one economic cycle.

(5) In subsection (1)(b) –

"discount" (　　), in relation to an on-balance sheet exposure of an authorized institution, means the amount by which the institution's estimate of the EAD of the exposure exceeds the sum referred to in subsection (1)(a)(ii).

6.28 Exposure at default under foundation IRB approach or advanced IRB approach – OTC derivative transactions and credit derivative contracts

(1) Subject to subsection (2), an authorized institution which uses the foundation IRB approach or advanced IRB approach shall, for the purposes of providing an estimate of the EAD of an off-balance sheet exposure of the institution –

(a) specified in column 2 of Table 4.10; and

(b) booked in the institution's banking book or trading book,

calculate the credit equivalent amount of the exposure in accordance with sections 4.22(2) and 4.23.

(2) For the purposes of subsection (1), the definitions of "credit equivalent amount" and "principal amount" in section 6.2(1) apply to references to those expressions in Table 4.10 and sections 4.22(2) and 4.23.

6.29 Exposure at default under foundation IRB approach or advanced IRB approach – other off-balance sheet exposures not specified in Table 4.10 or 6.5

An authorized institution which uses the foundation IRB approach or advanced IRB approach shall, for the purposes of providing an estimate of the EAD of an off-balance sheet exposure of the institution which is not specified in Table 4.10 or 6.5, calculate the credit equivalent amount of the exposure by applying –

(a) subject to paragraph (b), a CCF of 100%;

(b) the CCF applicable to the exposure pursuant to Part 2 of Schedule 1.1,

in accordance with section 6.26, 6.27 or 6.28, as the case requires, with all necessary modifications.

6.30 Maturity under foundation IRB approach

An authorized institution which uses the foundation IRB approach –

(a) subject to paragraphs (b) and (c), shall use 2.5 years for M of a corporate, sovereign or bank exposure of the institution for inclusion into the risk-weight function specified in Formula 6.1;

(b) subject to paragraph (c), shall use 6 months for the M of a corporate, sovereign or bank exposure of the institution in the case of such an exposure in respect of a repo-style transaction;

(c) may, with the prior consent of the Monetary Authority, calculate the M of a corporate, sovereign or bank exposure of the institution in accordance with section 6.31.

6.31 Maturity under advanced IRB approach

(1) An authorized institution which uses the advanced IRB approach shall calculate the M of a corporate, sovereign or bank exposure of the institution such that –

(a) subject to subsections (2) and (3), the M of the exposure is the greater of –

(i) one year; and

(ii) the remaining effective maturity, in years, of the exposure as calculated in accordance with paragraph (b) or (c), as the case may be;

(b) subject to paragraph (c), if the exposure is subject to a predetermined cash flow schedule, the M of the exposure is calculated by the use of Formula 6.5;

(c) if it is not practicable for the institution to comply with paragraph (b) in respect of the exposure, the institution shall use a more prudent measure of the maturity which is not less than the maximum remaining time, in years, that the obligor is permitted to take to fully discharge the contractual obligations (including principal payments, interest payments and fees) of the obligor under the terms of the agreement governing the exposure;

(d) if the exposure is a net credit exposure resulting from the netting of more than one nettable OTC derivative transaction or credit derivative contract, the weighted average maturity of the transactions or contracts (using the notional amount of each transaction or contract for weighting the maturity of the transactions or contracts) subject to a valid bilateral netting agreement is used as the M.

FORMULA 6.5

CALCULATION OF MATURITY FOR CORPORATE, SOVEREIGN AND BANK EXPOSURE SUBJECT TO PREDETERMINED CASH FLOW SCHEDULE

$$M = \sum_t t * CF_t \; / \; \sum_t CF_t$$

where –

(a) CF_t denotes the cash flows (including principal payments, interest payments and fees) contractually payable by the obligor in period t; and

(b) t is expressed in years (that is, where a payment is due to be received in 18 months, t = 1.5).

(2) An authorized institution shall use 5 years as the M of any exposure referred to in subsection (1) which would, but for this subsection, have an M of greater than 5 years.

(3) Where an authorized institution has a relevant short-term exposure –

(a) subsection (1)(a) shall not apply to the exposure; and

(b) the M of the exposure shall be the greater of –

(i) one day; and

(ii) the remaining effective maturity, in years, of the exposure as calculated in accordance with subsection (1)(b) or (c), as the case requires.

(4) Where an exposure of an authorized institution falls within paragraph (a) of the definition of "relevant short-term exposure" in subsection (5) and is a nettable exposure against other relevant short-term exposures under a valid bilateral netting agreement (referred to in this subsection as "relevant exposures"), then the institution shall –

(a) subject to paragraphs (b) and (c), use the weighted average maturity of the relevant exposures as the M;

(b) subject to paragraph (c), in determining the M, apply a minimum level of M equal to –

(i) 10 days for the relevant exposures which are OTC derivative transactions or securities margin lending transactions;

(ii) 5 days for the relevant exposures which are repo-style transactions; and

(iii) 10 days where the relevant exposures concerned consist of relevant exposures which fall within both subparagraphs (i) and (ii); and

(c) use the notional amount of each of the relevant exposures for weighting the maturity of the exposures.

(5) In this section –

"relevant short-term exposure" ( ), in relation to an authorized institution –

(a) means an exposure in respect of an OTC derivative transaction or securities margin lending transaction which is fully or nearly-fully collateralized, or in respect of a repo-style transaction with an original maturity of less than one year, where the documentation for the transaction contains clauses –

(i) requiring daily revaluation or re-margining; and

(ii) allowing for the prompt realization or setoff of the collateral in the event of default or failure to revalue or re-margin, as the case may be;

(b) means an exposure with an original maturity of less than one year which is not part of the institution's ongoing financing of the obligor in

respect of the exposure (there being no intent or legal obligation to roll over the exposure concerned in the future), and includes –

(i) an import or export letter of credit, or a similar exposure, which can be accounted for at its actual remaining maturity;

(ii) a securities purchase, securities sale, cash settlement by wire transfer, foreign exchange settlement, or any other exposure arising from an unsettled non-delivery-versus-payment transaction, if the exposure does not continue for 5 business days or more after the due settlement date; and

(iii) any other short-term exposure in respect of which the institution has demonstrated to the satisfaction of the Monetary Authority that the institution has no legal obligation to roll over the exposure and will not in practice roll over the exposure.

6.32 Maturity under double default framework

For the purposes of Formula 6.2, an authorized institution shall use as the M_{os} for the exposure the greater of –

(a) one year; and

(b) the M of the credit protection in respect of the hedged exposure as calculated in accordance with section 6.31(1)(b) or (c), as the case requires.

Division 6 – Specific requirements for retail exposures

6.33 Rating dimensions

(1) An authorized institution shall –

(a) ensure that its rating system for retail exposures –

(i) reflects the risk of default of the obligors and transaction-specific factors affecting loss severity in the case of default of obligors in respect of retail exposures; and

(ii) captures the risk characteristics of obligors, the risk characteristics of the transactions and the frequency and duration of the delinquency of retail exposures;

(b) assign each of its retail exposures to not more than one pool of retail exposures in accordance with its rating criteria and based upon all relevant information available regarding the risk characteristics of the obligor in respect of the exposure, the risk characteristics of the transaction to which the exposure relates and the frequency and duration of the delinquency (if any) of the exposure; and

(c) estimate the PD, LGD and EAD for each pool of retail exposures.

(2) For the avoidance of doubt, it is hereby declared that different pools of retail exposures of an authorized institution may have the same estimates of PD, LGD and EAD.

6.34 Rating structure

An authorized institution shall ensure that its process for assigning its retail exposures to various pools of retail exposures results in the grouping of exposures which provides for a consistent, logical and cogent differentiation of credit risk inherent in those retail exposures –

(a) with no excessive concentrations in particular pools of retail exposures; and

(b) allowing for reasonably accurate, consistent and verifiable estimation of credit risk components for each pool of retail exposures.

6.35 Rating criteria

An authorized institution shall ensure that –

(a) its rating definitions in respect of the pools of retail exposures; and

(b) its rating processes and criteria for assigning exposures to such pools,

are specific, logical, sufficiently detailed and consistently applied and result in a clear differentiation of credit risk inherent in the exposures.

6.36 Rating assignment horizon

An authorized institution shall –

(a) use a time horizon of more than one year for the purposes of assigning its retail exposures to its pools of retail exposures;

(b) subject to paragraph (c), ensure that its assignment of a retail exposure to a pool of retail exposures of the institution accurately represents the institution's assessment of the willingness and ability of the obligor in respect of the exposure to perform the contractual obligations of the obligor, after taking into account any potentially adverse economic conditions over a business cycle within the industry or geographic region relevant to the obligor;

(c) act prudently in assessing information relating to the willingness and ability of the obligor in respect of an exposure to perform the contractual obligations of the obligor.

6.37 Rating coverage

An authorized institution shall, in the case of each exposure which falls within the IRB class of retail exposures, assign the exposure to a pool of retail exposures as part of the institution's process for giving credit approvals.

6.38 Integrity of rating process

An authorized institution shall ensure that –

(a) the institution has in place policies and procedures to ensure that the rating process for retail exposures is independent of the institution's staff and management responsible for originating such exposures;

(b) a review is conducted, not less than once in every 12 months, of –

(i) the risk characteristics and delinquency status of each pool of retail exposures; and

(ii) the status of an obligor under an exposure which falls within a pool of retail exposures to ensure that the exposure is assigned to the pool that accurately reflects the credit risk of the exposure; and

(c) the institution has in place an effective process for –

(i) identifying and documenting the circumstances in which officers of the institution may override the inputs to, or the outputs of, the institution's rating system; and

(ii) monitoring the nature and performance of such overrides which have occurred.

6.39 Calculation of risk-weighted amount of retail exposures

(1) An authorized institution shall, for the purposes of calculating the risk-weighted amount of the institution's retail exposures, provide its own estimates of the PD, LGD and EAD for each pool of retail exposures.

(2) An authorized institution shall use Formula 6.6 to calculate the risk-weighted amount of its retail exposures which –

(a) fall within the IRB subclass of residential mortgages to individuals or residential mortgages to property-holding shell companies; and

(b) are not in default.

FORMULA 6.6

RISK-WEIGHT FUNCTION FOR RESIDENTIAL MORTGAGES

Correlation (R)	=	0.15
Capital requirement (K)	=	LGD × N [(1 – R)^-0.5 × G (PD) + (R / (1 – R))^0.5 x G (0.999)] – PD x LGD
Risk-weight (RW)	=	K x 12.5
Risk-weighted amount (RWA)	=	RW x EAD

where –

(a) PD and LGD are expressed in decimals and EAD is expressed in Hong Kong dollars;

(b) N(x) denotes the cumulative distribution function for a standard normal random variable; and

(c) G(z) denotes the inverse cumulative distribution function for a standard normal random variable.

(3) An authorized institution shall use Formula 6.7 to calculate the risk-weighted amount of its retail exposures which –

(a) fall within the IRB subclass of qualifying revolving retail exposures; and

(b) are not in default.

FORMULA 6.7

RISK-WEIGHT FUNCTION FOR QUALIFYING REVOLVING RETAIL EXPOSURES

Correlation (R)	=	0.04
Capital requirement (K)	=	LGD × N [(1 – R)^–0.5 × G (PD) + (R / (1 – R))^0.5 x G (0.999)] – PD x LGD
Risk-weight (RW)	=	K x 12.5
Risk-weighted amount (RWA)	=	RW x EAD

where –

(a) PD and LGD are expressed in decimals and EAD is expressed in Hong Kong dollars;

(b) N(x) denotes the cumulative distribution function for a standard normal random variable; and

(c) G(z) denotes the inverse cumulative distribution function for a standard normal random variable.

(4) An authorized institution shall use Formula 6.8 to calculate the risk-weighted amount of its retail exposures which –

(a) fall within the IRB subclass of small business retail exposures or other retail exposures to individuals; and

(b) are not in default.

FORMULA 6.8

RISK-WEIGHT FUNCTION FOR SMALL BUSINESS RETAIL EXPOSURES OR OTHER RETAIL EXPOSURES TO INDIVIDUALS

Correlation (R)	=	0.03 × (1 – EXP (–35 × PD)) / (1 – EXP (–35)) + 0.16 × [1 – (1 –– EXP (–35 × PD)) / (1 – EXP (–35))]
Capital requirement (K)	=	LGD × N [(1 – R)^–0.5 × G (PD) + (R / (1 – R))^0.5 x G (0.999)] –– PD x LGD
Risk-weight (RW)	=	K x 12.5
Risk-weighted amount (RWA)	=	RW x EAD

where –

(a) PD and LGD are expressed in decimals and EAD is expressed in Hong Kong dollars;

(b) EXP denotes exponential;

(c) N(x) denotes the cumulative distribution function for a standard normal random variable; and

(d) G(z) denotes the inverse cumulative distribution function for a standard normal random variable.

(5) An authorized institution shall use the risk-weight function set out in subsection (2), (3) or (4) as applicable to the IRB subclass within which a retail exposure falls to calculate the risk-weighted amount of any such retail exposure which is in default except that the capital requirement (K) for a defaulted retail exposure shall be equal to the greater of –

(a) zero; and

(b) the figure resulting from the subtraction of the institution's best estimate of the EL of the exposure from the LGD of the exposure.

6.40 Probability of default

(1) An authorized institution which use the retail IRB approach shall estimate the PD for each pool of retail exposures of the institution such that –

(a) subject to paragraphs (b) and (c), the estimate of the PD is a long run average of one-year default rates for obligors in respect of exposures which fall within the pool to which the estimate relates;

(b) the estimate of the PD to be assigned to a pool of retail exposures which are not in default is the greater of –

(i) the estimate of the PD referred to in paragraph (a) associated with the pool; and

(ii) 0.03%;

(c) the estimate of the PD to be assigned to a pool of retail exposures of the institution which are in default is 100%;

(d) the estimate of the PD for a pool of retail exposures takes into account the effect of seasoning in respect of exposures which fall within the pool of retail exposures;

(e) the estimate of the PD for retail exposures of the institution is based on not less than one source of data –

(i) which is relevant to the institution's retail exposures; and

(ii) which, subject to section 2.11, covers a period of not less than 5 years.

(2) For the purposes of subsection (1), an authorized institution shall –

(a) use internal data as the primary source of information for estimating the risk characteristics for each of its pools of retail exposures;

(b) only use external data or models for any estimate of the PD if the institution has demonstrated to the satisfaction of the Monetary Authority that there is a strong correlation –

(i) between the institution's process of assigning exposures to a pool of retail exposures and the classification process used by the external data source; and

(ii) between the institution's credit risk profile and the composition of the external data; and

(c) use all relevant data sources as points of comparison for internal data referred to in paragraph (a), or external data or models referred to in paragraph (b), used by the institution.

(3) For the purposes of subsection (1)(a), an authorized institution may, based on its estimate of the expected long run

loss rate for a pool of retail exposures, use its long run default-weighted average loss rate given default as calculated in section 6.41(1)(b) to infer its estimate of the PD for the pool of retail exposures.

(4) Where an authorized institution does not take into account the effect of seasoning as required in subsection (1)(d) in any estimate of the PD made by it for the purposes of this section, the Monetary Authority may, by notice in writing given to the institution, require the institution to use the higher PD specified in the notice in place of the institution's own estimate of the PD in calculating the institution's credit risk.

(5) An authorized institution shall comply with the requirements of a notice given to it under subsection (4).

6.41 Loss given default

(1) An authorized institution which uses the retail IRB approach shall provide an estimate of the LGD for each pool of retail exposures of the institution such that –

(a) subject to paragraph (b), the estimate of the LGD for the pool reflects the effect on severity of the loss suffered in respect of the retail exposures which fall within the pool of economic downturn conditions where credit losses are expected to be substantially higher than average;

(b) subject to subsection (3), the estimate of the LGD for the pool is not less than the long run default-weighted average loss rate given default calculated as the average loss rate of all observed defaults within the data source used by the institution for the estimation of LGD for that pool;

(c) subject to paragraph (d), the estimate of the LGD of a retail exposure which falls within the IRB subclass of residential mortgages to individuals or residential mortgages to property-holding shell companies is not less than 10% during the transitional period;

(d) paragraph (c) does not apply to any such retail exposures of the institution which are the subject of recognized guarantees issued by sovereigns;

(e) the estimate of the LGD for a pool of retail exposures –

(i) is based on historical recovery rates of exposures which fall within the pool; and

(ii) is not based solely on the estimated market value of the collateral in any case where the institution holds collateral in respect of an exposure which falls within the pool;

(f) the estimate of the LGD for a pool of retail exposure of the institution reflects the possibility that the institution will have to incur unexpected losses during the debt recovery period applicable to an exposure which falls within the pool;

(g) the estimate of the LGD for a pool of retail exposures is based on not less than one source of data –

(i) which is relevant to the exposures which fall within the pool;

(ii) which, subject to section 2.11, covers a period of not less than 5 years; and

(iii) which covers at least one economic cycle; and

(h) if the process of estimating the LGD for a pool of retail exposures involves data mapping in respect

of the institution's exposures which fall within the pool to the factors in reference data sets used by ECAIs –

(i) the mapping process is based on a comparison of available common elements in the ECAIs' reference data and the pool;

(ii) in any case where the institution combines multiple sets of reference data used by ECAIs, the institution has in place a policy –

(A) setting out the manner in which the combination is effected; and

(B) ensuring that the institution avoids biases or inconsistencies in the mapping process.

(2) For the purposes of subsection (1), an authorized institution shall –

(a) have in place an effective and well-documented process for assessing the effect, if any, of economic downturn conditions on debt recovery rates in respect of different pools of retail exposures and for producing estimates of LGD which reflect those conditions;

(b) take into account all major factors relevant to measuring loss, including the time value of money, the risk premium, and any direct and indirect costs

associated with collection in respect of retail exposures which fall within a pool;

(c) take into account the extent of any positive correlation between the credit risk of an obligor to whom the institution has an exposure which falls within a pool of retail exposures and that of any collateral provided in respect of that exposure or that of the provider of the collateral and address the effect of such correlation, if any, in a prudent manner; and

(d) address any currency mismatch and maturity mismatch in a prudent manner.

(3) For the purposes of subsection (1)(b), an authorized institution may, based on its estimate of the expected long run loss rate for a pool of its retail exposures, use its estimate of the PD as referred to in section 6.40 to infer its long run default-weighted average loss rate given default for the pool of retail exposures.

6.42 Exposure at default – on-balance sheet exposures

Section 6.27(1), with all necessary modifications, applies to an authorized institution which uses the retail IRB approach in respect of the estimation by the institution of the EAD for each pool of its on-balance sheet retail exposures as it applies to the institution's estimates of the EAD for its on-balance sheet corporate, sovereign and bank exposures.

6.43 Exposure at default – off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts

(1) Subject to subsection (2), an authorized institution which uses the retail IRB approach shall estimate its own CCFs for each type of off-balance sheet exposures specified in column 1 of Table 6.5 in respect of its retail exposures.

(2) Section 6.27(4)(a) to (e), with all necessary modifications, applies to an authorized institution's estimates of the EAD of its off-balance sheet retail exposures specified in Table 6.5 as it applies to the institution's estimate of the EAD of its off-balance sheet corporate, sovereign and bank exposures specified in Table 6.5.

(3) An authorized institution shall estimate the EAD of its off-balance sheet exposures specified in Table 6.5 for each pool of retail exposures such that –

(a) in the case of the estimate of the EAD for a retail facility with an uncertain future drawdown –

(i) the institution has taken into account –

(A) the institution's overall drawdown and repayment history with regard to its retail exposures which fall within the same facility type as the retail facility concerned; or

(B) the institution's expectation based on the history of additional

drawings by the obligors in respect of facilities which fall within such facility type up to and after the time a default event has been triggered in respect of such a facility;

(ii) if the CCF used by the institution for the calculation of the credit equivalent amount of the retail facility does not reflect the expectation of additional drawings on the retail facility extended up to and after the time a default event has been triggered, the institution has reflected in its estimate of the LGD for the retail exposures the likelihood of such additional drawings; and

(b) the estimate of the EAD for off-balance sheet exposures which fall within a pool of retail exposures is based on not less than one source of data –

(i) which is relevant to such retail exposures; and

(ii) which, subject to section 2.11, covers a period of not less than 5 years.

6.44 Exposure at default – OTC derivative transactions and credit derivative contracts

Section 6.28, with all necessary modifications, applies to an authorized institution which uses the retail IRB approach in respect of the estimation by the institution of the EAD for its retail exposures in respect of OTC derivative transaction or credit derivative contract as it applies to the institution's estimates of the EAD for its corporate, sovereign or bank exposures in respect of OTC derivative transaction or credit derivative contracts.

6.45 Exposure at default – other off-balance sheet exposures not specified in Table 4.10 or 6.5

An authorized institution which uses the retail IRB approach shall, for the purposes of providing an estimate of the EAD of an off-balance sheet exposure of the institution which is not specified in Table 4.10 or 6.5, calculate the credit equivalent amount of the exposure by applying –

(a) subject to paragraph (b), a CCF of 100%;

(b) the CCF applicable to the exposure pursuant to Part 2 of Schedule 1.1,

in accordance with section 6.43 or 6.44, as the case requires, with all necessary modifications.

Division 7 – Specific requirements for equity exposures

6.46 Equity exposures – general

(1) Subject to subsection (2), an authorized institution shall calculate the risk-weighted amount of the institution's equity exposures booked in its banking book by using –

(a) the market-based approach; or

(b) the PD/LGD approach.

(2) An authorized institution shall demonstrate to the satisfaction of the Monetary Authority that the market-based approach or PD/LGD approach used by the institution to calculate the risk-weighted amount of its equity exposures –

(a) is appropriate for the institution's portfolios of equity exposures;

(b) is applied consistently to those portfolios; and

(c) is not used for the purpose of regulatory capital arbitrage.

(3) An authorized institution shall determine the EAD of an equity exposure of the institution as the value of the equity exposure presented in the institution's balance sheet.

(4) Where an authorized institution has holdings in a collective investment scheme which invests in investments which would constitute both equity exposures and non-equity exposures (being those exposures falling within the IRB class of corporate, sovereign, bank, retail or other exposures) –

(a) subject to paragraphs (b) and (c), the institution shall treat the holdings as equity exposures or non-equity exposures, as the case requires, and allocate or apportion them, insofar as is practicable, in a consistent manner by reference to the proportions of the collective investment scheme's investments which would constitute equity exposures and non-equity exposures, as the case may be;

(b) if it is not practicable to comply with paragraph (a) and subject to paragraph (c), the institution shall treat the holdings as equity exposures or non-equity exposures based on whether equity exposures or non-equity exposures constitute the majority of the scheme's investment;

(c) if only the investment mandate of the scheme is known to the institution, the institution shall treat the holdings as an exposure of the institution on the assumptions that –

(i) the scheme first invests, to the maximum extent allowed under the mandate, in investments which would constitute exposures falling within the IRB class attracting the highest capital charge of all the investments permissible under the scheme's investment mandate; and

(ii) the scheme then continues making investments which would constitute exposures falling within other IRB classes in descending order of the level of the capital charge required in respect of such exposures.

6.47 Market-based approach

(1) Subject to subsections (2) and (3), an authorized institution which uses the market-based approach to calculate the risk-weighted amount of the institution's equity exposures booked in its banking book shall use –

(a) the simple risk-weight method;

(b) the internal models method; or

(c) the simple risk-weight method and the internal models method.

(2) Subject to section 6.49(1), an authorized institution shall only use a market-based approach which is –

(a) suitable for the amount and complexity of the institution's equity exposures; and

(b) commensurate with the sophistication of the institution's internal risk management functions.

(3) An authorized institution which uses more than one market-based approach for different portfolios of the institution's equity exposures booked in its banking book shall demonstrate to the satisfaction of the Monetary Authority that –

(a) this course of action is justified having regard to the respective risk profiles of the portfolios; and

(b) the institution uses different risk assessment methods for the portfolios in its internal risk management functions.

6.48 Simple risk-weight method

An authorized institution which uses the simple risk-weight method shall –

(a) calculate the risk-weighted amount of an equity exposure of the institution by multiplying the EAD of the equity exposure by a risk-weight of –

(i) 300% for an equity exposure in a publicly traded company (being an equity security traded on a recognized exchange); and

(ii) 400% for any equity exposure of the institution which does not fall within subparagraph (i);

(b) in relation to a short position in an equity exposure, or an equity contract, which is not permitted to offset a long position in the same equity exposure in accordance with paragraph (c) –

(i) treat the short position as if it were a long position in that equity exposure; and

(ii) risk-weight the short position in accordance with paragraph (a);

(c) subject to paragraphs (d) and (e), set off a short position in an equity exposure, or an equity contract, against a long position in the same equity exposure only if that short position –

(i) has been explicitly designated by the institution as a hedge of the long position in that equity exposure; and

(ii) has a remaining maturity of not less than one year;

(d) where the institution's short position in an equity exposure has a residual maturity which is shorter or longer than the residual maturity of the institution's long positions in the same equity exposure, adjust, with all necessary modifications, the value of the institution's short position in the equity exposure in accordance with section 4.54;

(e) where a net short position remains after the set-off of the institution's short position in an equity exposure against the institution's long position in the same equity exposure –

(i) treat the net short position as if it were a long position in that equity exposure; and

(ii) risk-weight the net short position in accordance with paragraph (a).

6.49 Internal models method

(1) An authorized institution shall not use the internal models method to calculate the risk-weighted amount of the institution's equity exposures booked in its banking book unless the institution demonstrates to the satisfaction of the Monetary Authority that the use by the institution of the internal models method is in compliance with subsection (2).

(2) An authorized institution which uses the internal models method shall –

(a) use its internal models in respect of equity exposures to estimate the potential loss on the portfolio of the institution's equity exposures arising from an assumed instantaneous shock equivalent to a one-tailed 99% confidence interval of the difference between quarterly returns on the portfolio and an appropriate risk-free rate computed over an observation period of not less than 3 years;

(b) ensure that the institution's estimate of potential loss in respect of its equity exposures is –

(i) arrived at using data, information and methods which are relevant to the institution's equity exposures;

(ii) prudent, statistically reliable and resilient; and

(iii) able to reflect the risk profile of the institution's portfolio of equity exposures against adverse market movements;

(c) ensure that the internal models are capable of taking sufficient account of the risk profile (including general market risk and specific risk) and constituent elements of its portfolios of equity exposures;

(d) ensure that the outputs of the internal models can be quantified in the form of the loss percentile specified in paragraph (a);

(e) ensure that if market data are used in an internal model, the institution updates the data used not less than once in every 3 months and, in any case, reassesses the data whenever market prices are subject to material change;

(f) ensure that the institution fully documents and supports by empirical analysis the portfolio correlations (being the correlation of changes in the returns on an equity exposure to changes in the returns on another equity exposure in response to market movements) it has integrated into its measures of potential loss in respect of a portfolio of equity exposures;

(g) ensure that the institution has clear and effective policies, procedures and controls in place to enable it to manage the risk of its portfolios of equity exposures and to ensure the integrity of the internal models and modelling process used to estimate its potential loss in respect of the portfolios; and

(h) ensure that the institution's internal models are fully integrated into the institution's credit approval, risk management and corporate governance functions and, if section 1(b)(vi)(A) of Schedule 2.1 is applicable to the institution, internal capital allocation function.

(3) An authorized institution which uses the internal models method shall –

(a) calculate the risk-weighted amount of each equity exposure by –

(i) multiplying the potential loss of the equity exposure as calculated using its internal models by 12.5; and

(ii) using the simple risk-weight method to multiply the EAD of the equity exposure by a risk-weight of –

(A) 200% for an equity exposure in a publicly traded company (being an

equity security traded on a recognized exchange); and

(B) 300% for any equity exposure of the institution which does not fall within sub-subparagraph (A); and

(b) apply to each of its equity exposures the greater of the risk-weighted amount calculated under paragraph (a)(i) or (ii) for the equity exposure concerned.

(4) Where an authorized institution which uses the internal models method is not able to demonstrate to the satisfaction of the Monetary Authority that the institution complies with subsection (2), the Monetary Authority may, by notice in writing given to the institution, require the institution to use the simple risk-weight method to calculate the risk-weighted amount of the institution's equity exposures booked in its banking book for such period, or until the occurrence of such event, as specified in the notice.

(5) An authorized institution shall comply with the requirements of a notice given to it under subsection (4).

6.50 PD/LGD approach

An authorized institution shall not use the PD/LGD approach to calculate the risk-weighted amount of the institution's equity exposures booked in its banking book unless the institution demonstrates to the satisfaction of the Monetary Authority that the use by the institution of the PD/LGD approach is in compliance with sections 6.51 to 6.57.

6.51 PD/LGD approach – rating dimensions

(1) An authorized institution which uses the PD/LGD approach shall ensure that its rating system for equity exposures comprises –

(a) obligor grades which reflect, exclusively, the risk of default of obligors; and

(b) facility grades which reflect –

(i) factors affecting loss severity in the case of default of obligors; and

(ii) where relevant, the characteristics of obligors to the extent that the characteristics are predictive of LGD.

(2) An authorized institution which uses the PD/LGD approach shall be regarded as complying with subsection (1)(b) if its rating system has a rating scale which reflects the EL of its equity exposures assigned to each grade.

(3) An authorized institution which uses the PD/LGD approach shall, in respect of its equity exposures –

(a) rank and assign its equity exposures to the obligor grades and facility grades in accordance with its rating criteria and based upon all relevant information available regarding the creditworthiness of the obligor or loss severity of the exposure;

(b) in the case of separate equity exposures to the same obligor, assign the exposures to the same

obligor grade unless the institution demonstrates to the satisfaction of the Monetary Authority that the risk of default of the obligors in respect of such exposures is different.

6.52 PD/LGD approach – rating structure

An authorized institution which uses the PD/LGD approach shall ensure that –

(a) its process for assigning equity exposures to its obligor grades or facility grades results in a consistent, logical and cogent differentiation of credit risk inherent in those exposures –

(i) with no excessive concentrations in particular obligor grades or facility grades;

(ii) with the level of perceived and measured credit risk increasing as credit quality declines from one grade to the next; and

(iii) allowing for reasonably accurate, consistent and verifiable estimation of credit risk components for each equity exposure; and

(b) its rating system has –

(i) not less than 7 obligor grades for equity exposures which are not in default; and

(ii) not less than one obligor grade for equity exposures which are in default.

6.53 PD/LGD approach – rating criteria

An authorized institution which uses the PD/LGD approach shall ensure that –

(a) its rating definitions in respect of obligor grades and facility grades; and

(b) its rating processes and criteria for assigning obligors and equity exposures to such grades,

are specific, logical, sufficiently detailed and consistently applied, and result in a clear differentiation of credit risk inherent in the exposures.

6.54 PD/LGD approach – rating assignment horizon

An authorized institution which uses the PD/LGD approach shall –

(a) use a time horizon of more than one year for the purposes of assigning its equity exposures to obligor grades;

(b) subject to paragraph (c), ensure that an obligor grade accurately represents the institution's assessment of the willingness and ability of the obligor in respect of an equity exposure to perform the obligor's obligations, after taking into account any potentially adverse economic conditions over a business cycle within the industry or geographic region relevant to the obligor; and

(c) act prudently in assessing information relating to the willingness and ability of an obligor in respect of an equity exposure to perform the obligations of the obligor.

6.55 PD/LGD approach – rating coverage

An authorized institution which uses the PD/LGD approach shall, in the case of each equity exposure subject to the PD/LGD approach –

(a) assign the equity exposure to an obligor grade or facility grade as part of the institution's process for giving credit approvals; and

(b) assign the equity exposure to the obligor grade which accurately reflects the level of credit risk of the obligor in respect of the exposure.

6.56 PD/LGD approach – integrity of rating process

An authorized institution which uses the PD/LGD approach shall ensure that –

(a) the institution has in place policies and procedures to ensure that the rating assignment process for equity exposures is independent of the institution's staff and management responsible for originating such exposures;

(b) the assignment of equity exposures to obligor grades and facility grades respectively is reviewed and updated not less than once in every 12 months and exposures to obligors which are more likely to default are subject to more frequent review;

(c) whenever the institution becomes aware of any new material information on an equity exposure (including in relation to an obligor in respect of that exposure), a review is conducted, within a reasonable period after the institution becomes so aware, of whether or not the equity exposure should be assigned to a different obligor grade or facility grade, as the case may be;

(d) the institution has in place an effective process to obtain and update relevant information on the financial condition and on other credit risk characteristics of the obligors in respect of the

institution's equity exposures which affect assigned estimates of PD; and

(e) the institution has in place an effective process for –

(i) identifying and documenting the circumstances in which officers of the institution may override the inputs to, or the outputs of, the institution’s rating system; and

(ii) monitoring the nature and performance of such overrides which have occurred.

6.57 PD/LGD approach – calculation of risk-weighted amount of equity exposures

(1) An authorized institution which uses the PD/LGD approach shall calculate the risk-weighted amount of the institution's equity exposures in accordance with sections 6.19 to 6.30, insofar as those sections relate to the use of the foundation IRB approach for corporate exposures, except that –

(a) the EAD in respect of an equity exposure shall be determined in accordance with section 6.46(3);

(b) if the institution has an equity exposure to a corporate but does not have an exposure to that corporate which falls within its IRB class of corporate, sovereign, bank or retail exposures such that the institution does not have sufficient information on the corporate for the application of the prescribed default criteria as set out in section 6.12, then the institution shall calculate the risk-weighted amount of the equity exposure such that –

(i) if the EAD of the institution's equity exposures to the corporate is not more than 15% of the institution's total equity exposures, the institution calculates the risk-weighted amount of the equity exposure by multiplying the EAD of the exposure by the risk-weight as

derived from using the risk-weight function set out in Formula 6.1 (if applicable, adjusted in accordance with section 6.20(1)(a) in respect of exposures to small-and-medium sized corporates) by 1.5;

(ii) if the EAD of the institution's equity exposures to the corporate exceeds 15% of the institution's total equity exposures, the institution applies the simple risk-weight method set out in section 6.48;

(c) an LGD of 90% shall be used in the risk-weight function set out in Formula 6.1 for deriving the risk-weight of an equity exposure;

(d) an M of 5 years shall be used in the risk-weight function set out in Formula 6.1 for deriving the risk-weight of the equity exposure;

(e) a minimum risk-weight of 100% shall be applied in the calculation of the risk-weighted amount of a relevant equity exposure if the risk-weight calculated in accordance with paragraphs (a) to (d) for the relevant equity exposure plus the EL associated with the relevant equity exposure multiplied by 12.5 is less than 100%;

(f) for any equity exposures (including net short positions as referred to in section 6.48(e)) other

than a relevant equity exposures, the institution shall, in the calculation of the risk-weighted amount of any such equity exposure if the risk-weight calculated in accordance with paragraphs (a) to (d) for the equity exposure plus the EL associated with the equity exposure multiplied by 12.5 is less than the minimum risk-weight of –

(i) 200% for an equity exposure in a publicly traded company (being an equity security traded on a recognized exchange); or

(ii) 300% for any equity exposure which does not fall within subparagraph (i),

apply the minimum risk-weight specified in subparagraph (i) or (ii), as the case may be;

(g) if the risk-weight calculated in accordance with paragraphs (a) to (d) for an equity exposure of the institution plus the EL associated with the equity exposure multiplied by 12.5 exceeds 1,250%, the institution shall –

(i) apply a maximum risk-weight of 1,250% in the calculation of the risk-weighted amount of the equity exposure; or

(ii) deduct the EAD of the equity exposure, in accordance with section 6.86(2)(c), from the institution's core capital and supplementary capital; and

(h) if the institution has entered into any hedging arrangements in respect of an equity exposure which is subject to the PD/LGD approach, the institution shall –

(i) assign an LGD of 90% to its exposure to the seller of the hedge; and

(ii) treat its exposure to the seller of the hedge as having an M of 5 years.

(2) In this section, "relevant equity exposure" ( ), in relation to an authorized institution, means an equity exposure of the institution consisting of –

(a) an equity exposure in a publicly traded company where –

(i) the institution's equity exposure is part of a long-term customer relationship;

(ii) any capital gains on the institution's equity exposure are not expected to be realized in the short-term in accordance with the institution's investment policy; and

(iii) the institution has no expectation of above trend capital gains (being capital gains in excess of those which would be anticipated by the institution based upon the historical performance of the equity exposure over a reasonable period) in the

long-term in accordance with the institution's investment policy; or

(b) an equity exposure in a privately owned company where –

(i) the returns on the institution's equity exposure are based on regular and periodic cash flows not derived from capital gains;

(ii) any capital gains on the equity exposure are not expected to be realized in the short-term in accordance with the institution's investment policy; and

(iii) the institution has no expectation of above trend capital gains in the long-term in accordance with the institution's investment policy.

Division 8 – Specific requirements for other exposures

6.58 Cash items

(1) An authorized institution which uses the specific risk-weight approach shall calculate the risk-weighted amount of its cash items by multiplying the EAD of each item by the relevant risk-weight set out in Table 6.6.

TABLE 6.6

RISK-WEIGHTS FOR CASH ITEMS

Item	Cash items	Risk-weight
1.	Cash items which fall within paragraphs (a), (b), (c), (f) and (g) of the definition of "cash items" in section 6.2(1)	0%
2.	Cash items which fall within paragraphs (d) and (*i*) of the definition of "cash items" in section 6.2(1)	100%
3.	Cash items which fall within paragraph (e) of the definition of "cash items" in section 6.2(1)	20%
4.	Cash items falling within paragraph (h) of the definition of "cash items" in section 6.2(1) which are outstanding –	
	(a) up to and including the fourth business day after the due settlement date;	0%
	(b) including the fifth business day and up to and including the fifteenth business day after the due settlement date;	100%
	(c) including the sixteenth business day and up to and including the thirtieth business day after the	625%

due settlement day;

(d)	including the thirty-first business day and up to and including the forty-fifth business day after the due settlement day; and	937.5%
(e)	including and after the forty-sixth business day after the due settlement day.	1,250%

(2) For the purposes of subsection (1), unless the context otherwise requires, the EAD of a cash item is the principal amount of the cash item.

6.59 Other items

(1) Subject to subsection (2), an authorized institution which uses the specific risk-weight approach shall calculate the risk-weighted amount of its exposures which fall within the IRB subclass of other items by multiplying the EAD of each exposure by a risk-weight of 100%.

(2) The Monetary Authority may, by notice in writing given to an authorized institution, require the institution to calculate the risk-weighted amount of an exposure (or a portfolio of exposures) to which this section applies, by multiplying the EAD of the exposure (or the portfolio of exposures) by a risk-weight of more than 100% as specified in the notice.

(3) An authorized institution shall comply with the requirements of a notice given to it under subsection (2).

(4) For the purposes of subsections (1) and (2), unless the context otherwise requires, the EAD of an other item is the principal amount of the other item.

Division 9 – Specific requirements for certain portfolios of exposures

6.60 Purchased receivables

An authorized institution shall –

(a) classify its purchased receivables as retail exposures or corporate exposures in accordance with the nature of the receivables; and

(b) subject to section 6.62(1), calculate the risk-weighted amount for both default risk and dilution risk in respect of its purchased receivables in accordance with sections 6.61 to 6.63.

6.61 Calculation of risk-weighted amount for default risk in respect of purchased receivables

(1) An authorized institution shall calculate the risk-weighted amount for default risk in respect of its purchased receivables –

(a) subject to paragraph (c) and subsection (2), in the case of a portfolio of purchased receivables which fall into one of the IRB subclasses of corporate exposures only, by using in accordance with Division 5 the risk-weight function which is applicable to the IRB subclass within which the portfolio of purchased receivables falls;

(b) subject to paragraph (c) and subsection (3), in the case of a portfolio of purchased receivables which fall into one of the IRB subclasses of retail exposures only, by using in accordance with Division 6 the risk-weight function which is applicable to the IRB subclass within which the portfolio of purchased receivables falls;

(c) subject to subsection (2) or (3), in the case of a portfolio of purchased receivables containing a mixture of exposures in respect of which the institution cannot separate the exposures into different IRB subclasses of corporate exposures or retail exposures, by using in accordance with Division 5 or 6, as the case requires, the risk-

weight function which will result in the highest risk-weighted amount of the exposures in the portfolio of purchased receivables.

(2) For the purposes of subsection (1)(a), an authorized institution which purchases corporate receivables shall make its estimates of the PD and LGD (or, if applicable, EL) for each of the purchased receivables constituting the portfolio of purchased corporate receivables of the institution (referred to in this Division as "bottom-up approach") on the assumption that there is no recourse to, or other support from, the seller of the corporate receivables or any third-party guarantor.

(3) For the purposes of subsection (1)(b), an authorized institution which purchases retail receivables shall –

(a) make its estimates of the PD and LGD (or, if applicable, EL) for the portfolio of purchased retail receivables (referred to in this Division as "top-down approach") on the assumption that there is no recourse to, or other support from, the seller of the retail receivables or any third-party guarantor; and

(b) comply with section 6.63.

6.62 Calculation of risk-weighted amount for dilution risk in respect of purchased receivables

(1) An authorized institution shall calculate the risk-weighted amount for dilution risk in respect of its purchased receivables in accordance with subsection (2) unless the institution demonstrates to the satisfaction of the Monetary Authority that the dilution risk it faces in respect of its purchased receivables is immaterial.

(2) For the purposes of calculating the risk-weighted amount for dilution risk in respect of its purchased receivables, an authorized institution shall –

(a) if the bottom-up approach is used, estimate the EL for dilution risk for each of its purchased receivables (expressed as a percentage of the EAD of the relevant purchased receivable);

(b) if the top-down approach is used –

(i) estimate the EL for dilution risk for a portfolio of its purchased receivables (expressed as a percentage of the total EAD of all receivables in the relevant portfolio of purchased receivables); and

(ii) comply with section 6.63;

(c) make the estimate of EL referred to in paragraph (a) or (b) on the assumption that there is no recourse to, or other support from, the seller of the receivables or any third-party guarantor.

(3) An authorized institution shall, for the purpose of calculating the risk-weighted amount for dilution risk in respect of its purchased receivables, use the corporate risk-weight function set out in Formula 6.1 with –

(a) PD set as equal to the institution's estimate of EL for dilution risk;

(b) LGD set at 100%; and

(c) subject to subsection (4), M determined in accordance with –

(i) in the case of purchased corporate receivables –

(A) section 6.30 if the institution uses the foundation IRB approach;

(B) section 6.31 if the institution uses the advanced IRB approach;

(ii) in the case of purchased retail receivables, section 6.31.

(4) An authorized institution may set M at one year for the purposes of subsection (3)(c) if the institution has demonstrated to the satisfaction of the Monetary Authority that the institution's dilution risk in respect of its purchased receivables is monitored and managed by the institution with a view to the risk being resolved within one year after the purchase.

6.63 Requirements for authorized institutions using top-down approach to estimate probability of default, etc. for purchased receivables for default risk or dilution risk

An authorized institution which uses the top-down approach to estimate the PD and LGD (or, if applicable, the EL) for its purchased receivables for default risk or dilution risk shall –

(a) subject to paragraph (b), group its purchased receivables into portfolios so that accurate and consistent estimates of the PD and LGD (or, if applicable, the EL) for default risk and estimates of the EL for dilution risk can be determined;

(b) make the grouping required under paragraph (a) so as to reflect the seller's credit underwriting practices in respect of the receivables and the heterogeneity of the seller's customers; and

(c) comply with Division 6 in respect of the methods and data used for estimating the PD and LGD (or, if applicable, EL).

6.64 Leasing arrangements

(1) Where an authorized institution has an exposure arising from a leasing arrangement which does not expose the institution to residual value risk, the institution –

(a) shall treat the exposure as an exposure secured by collateral of the same type as the subject matter of the lease; and

(b) if the collateral referred to in paragraph (a) is recognized collateral in accordance with section 6.71, may take into account the credit risk mitigating effect of the collateral in calculating the risk-weighted amount of the exposure.

(2) Where an authorized institution has an exposure arising from a leasing arrangement which exposes the institution to residual value risk, the institution shall –

(a) calculate the risk-weighted amount for default risk by using the risk-weight function applicable to the IRB subclass within which an exposure to the lessee falls, with the EAD set as equal to the discounted lease payment stream, and the PD and LGD as those which the institution assigns to the exposure; and

(b) calculate the risk-weighted amount for residual value risk by multiplying the residual value of the leased asset by 100%.

6.65 Repo-style transactions

An authorized institution shall apply sections 4.26 and 4.27, with all necessary modifications, to repo-style transactions except that –

(a) the institution shall determine the risk-weight to be allocated to its exposure in respect of a repo-style transaction booked in the institution's banking book, which falls within paragraph (a), (b) or (d) of the definition of "repo-style transaction" in section 1.2(1), where the underlying securities are regarded as the institution's assets, in accordance with –

(i) the risk-weight function for corporate, sovereign and bank exposures;

(ii) the risk-weight function for retail exposures; or

(iii) the market-based approach or the PD/LGD approach for equity exposures,

as the case may be, according to the nature of the underlying securities and the IRB class within which the issuer of the securities falls; and

(b) the institution shall determine the risk-weight to be allocated to its exposure under a repo-style transaction booked in the institution's banking book or trading book, which falls within paragraph (c) or (d) of the definition of "repo-style

transaction" in section 1.2(1), where the transaction is regarded as a collateralized loan, in accordance with the risk-weight function for corporate, sovereign and bank exposures or the risk-weight function for retail exposures, as the case may be, according to the IRB class within which an exposure to the counterparty to the repo-style transaction falls and in accordance with the treatment of credit risk mitigation set out in Division 10.

Division 10 – Credit risk mitigation

6.66 Credit risk mitigation – general

(1) An authorized institution may take into account the effect of recognized credit risk mitigation in calculating the risk-weighted amount of exposures, including –

(a) recognized collateral;

(b) recognized netting; and

(c) recognized guarantees and recognized credit derivative contracts.

(2) The risk-weighted amount of an exposure of an authorized institution in respect of which recognized credit risk mitigation has been taken into account by the institution shall not be higher than that of an identical exposure in respect of which recognized credit risk mitigation has not been so taken into account.

6.67 Recognized collateral

For the purposes of section 6.66(1)(a), an authorized institution shall only take into account the credit risk mitigating effect of recognized collateral through its determination of the LGD for a corporate, sovereign, bank or retail exposure of the institution against which recognized collateral is held in accordance with –

(a) section 6.23 if the exposure is a corporate, sovereign or bank exposure for which the institution uses the foundation IRB approach;

(b) section 6.24 if the exposure is a corporate, sovereign or bank exposure for which the institution uses the advanced IRB approach;

(c) section 6.41 if the exposure is a retail exposure for which the institution uses the retail IRB approach.

6.68 Recognized financial receivables

(1) A financial receivable constitutes a recognized financial receivable taken as collateral for a corporate, sovereign or bank exposure of an authorized institution only if it is a claim on the obligor in respect of the receivable (referred to in this section as "receivable obligor") with an original maturity of not more than one year and –

(a) the claim on the receivable obligor is legally enforceable in all relevant countries and the legal requirements for establishing the claim have been fulfilled;

(b) there is in place a framework which allows the institution to have the claim on the receivable obligor as a perfected first priority claim;

(c) the institution has taken all steps to fulfil requirements under the law applicable to the institution's interest in the claim which are necessary to obtain and maintain an enforceable security interest, whether by registration or otherwise, or to exercise a right to set-off in relation to the receivable (referred to in this section as "receivable collateral");

(d) the agreement and the legal process underpinning the claim allow the institution to realize the value of the receivable collateral in a timely manner;

(e) the institution has in place clearly documented procedures to ensure that any legal conditions required for declaring the default of the obligor in respect of the exposure covered by the receivable collateral (referred to in this section as "direct obligor") and for timely collection of the receivable collateral are observed;

(f) in the event of the financial distress or default of the direct obligor, the institution has the legal authority to sell or assign the receivable collateral to other parties without the consent of the receivable obligor;

(g) subject to paragraph (h), the institution has in place an effective process for assessing, monitoring and controlling the credit risk of the receivable collateral;

(h) if the institution relies on the direct obligor to review the credit risk of the receivable obligor, the institution has reviewed the quality of the direct obligor's credit management policies;

(*i*) in the case of receivable collateral which consists of a pool of receivables, the loan-to-value ratio between the amount of the exposure covered by the pool of receivables constituting the receivable collateral and the value of the pool of receivables reflects the anticipated cost of collection of the

receivables and the level of concentration to a particular receivable obligor within the pool of the receivables;

(j) in the case of receivable collateral which consists of a pool of receivables, the institution ensures that –

(i) subject to subparagraph (ii), the pool of receivables constituting the receivable collateral is diversified and the positive correlation between the creditworthiness of the direct obligor and the receivable obligors is not unduly high;

(ii) if the positive correlation between the creditworthiness of the direct obligor and the receivable obligors is unduly high, the attendant risk is taken into account in the setting of loan-to-value ratio in respect of the pool of receivables constituting the receivable collateral; and

(k) the institution has –

(i) a clearly documented process for collecting payments from the receivable obligors in the event of the financial

distress or default of the direct obligor; and

(ii) the resources which are required in the documented process referred to in subparagraph (i) for collecting payments from the receivable obligors.

(2) For the avoidance of doubt, it is hereby declared that financial receivables derived from securitization transactions do not fall within subsection (1).

6.69 Recognized commercial real estate and recognized residential real estate

Commercial real estate or residential real estate constitutes recognized commercial real estate or recognized residential real estate respectively for a corporate, sovereign or bank exposure of an authorized institution only if –

(a) the institution's credit risk to the obligor in respect of the exposure is not materially dependent on the performance of the underlying property or project constituting the collateral (referred to in this section as "property collateral") but on the capacity of the obligor to repay the exposure from other sources;

(b) the value of the property collateral is not materially dependent on the performance of the obligor in respect of the exposure;

(c) the institution has –

(i) a first lien on, or a first charge over, the property collateral; or

(ii) first and subsequent liens on, or first and subsequent charges over, the property collateral if all of such liens or charges over the property collateral are held by the institution;

(d) the institution has in place clearly documented procedures to ensure that there is no prior claim,

or claim of equal ranking, by another party on the property collateral;

(e) the institution's claim on the property collateral is legally enforceable in all relevant countries and the legal requirements for establishing the claim have been fulfilled;

(f) the institution has taken all steps to fulfil requirements under the law applicable to the institution's claim on the property collateral which are necessary to obtain and maintain an enforceable security interest, whether by registration or otherwise, or to exercise a right to set-off in relation to the property collateral;

(g) the agreement and the legal process underpinning the institution interest in the property collateral allow the institution to realize the value of the property collateral in a timely manner;

(h) the institution has in place clearly documented procedures to ensure that any legal conditions required for declaring the default of the obligor in respect of the exposure covered by the property collateral and for timely collection of the property collateral are observed;

(*i*) the property collateral is valued at not more than its fair value;

(j) the value of the property collateral is monitored frequently and reviewed not less than once in every 12 months;

(k) the institution has in place clearly documented policies specifying the types of commercial real estate and residential real estate which the institution accepts as collateral for its corporate, sovereign or bank exposures and the lending criteria associated with such collateral; and

(*l*) the institution ensures that the property collateral is adequately insured against damage or deterioration.

6.70 Other recognized IRB collateral

Physical collateral (other than commercial real estate and residential real estate) constitutes other recognized IRB collateral for a corporate, sovereign or bank exposure of an authorized institution only if –

(a) a liquid market exists for the disposal of the physical collateral in an expeditious and economically efficient manner;

(b) well-established market prices are publicly available for the physical collateral;

(c) the institution has a first lien on, or a first charge over, the physical collateral;

(d) the institution has in place clearly documented procedures to ensure that there is no prior claim, or claim of equal ranking, by another party on the physical collateral;

(e) the institution's claim on the physical collateral is legally enforceable in all relevant countries and the legal requirements for establishing the claim have been fulfilled;

(f) the institution has taken all steps to fulfil requirements under the law applicable to the institution's claim on the physical collateral which are necessary to obtain and maintain an enforceable security interest, whether by

registration or otherwise, or to exercise a right to set-off in relation to the physical collateral;

(g) the agreement and the legal process underpinning the institution's interest in the physical collateral allow the institution to realize the value of the physical collateral in a timely manner;

(h) the institution has in place clearly documented procedures to ensure that any legal conditions required for declaring the default of the obligor in respect of the exposure covered by the physical collateral and for timely collection of the physical collateral are observed;

(*i*) subject to paragraph (j), the loan agreement and all other documentation underpinning the institution's interest in the physical collateral includes detailed descriptions of the collateral and detailed specifications of the manner and frequency of revaluation of the collateral;

(j) the institution performs periodic revaluation and, where practicable, periodic inspection of the physical collateral;

(k) the institution has in place clearly documented policies specifying the types of physical collateral which the institution accepts as collateral for its corporate, sovereign or bank

exposures and the lending criteria associated with such collateral; and

(*l*) the institution ensures that the physical collateral is adequately insured against damage or deterioration.

6.71 Leased assets may be recognized as collateral

A leased asset of an authorized institution constitutes recognized collateral only if –

(a) the lease concerned does not expose the institution to residual value risk;

(b) the leased asset satisfies the requirements set out in –

(i) section 6.69 if it is commercial real estate or residential real estate;

(ii) section 6.70 if it is a physical asset;

(c) the institution has effective clearly documented policies and procedures for managing the risk associated with the leased asset with respect to the location of the asset, the use to which it is put, its age and its planned obsolescence;

(d) there is in place a legal framework which establishes the institution's legal ownership of the leased asset and its ability to exercise its rights as the owner in a timely manner; and

(e) the difference between the rate of depreciation of the leased asset and the rate of amortization of the lease payments is not material to the extent that it will overstate the credit risk mitigating effect of the asset.

6.72 Recognized netting

(1) Where an authorized institution is entitled pursuant to a valid bilateral netting agreement to net amounts owed by the institution to a counterparty against amounts owed by the counterparty to the institution, the institution may take into account the credit risk mitigating effect of the recognized netting in calculating the EAD of its exposure to the counterparty.

(2) Subject to subsection (4), an authorized institution shall apply sections 4.45, 4.46 and 4.54, with all necessary modifications, to take into account the credit risk mitigating effect of recognized netting in calculating the EAD of its exposure to the counterparty in respect of –

(a) the institution's on-balance sheet corporate, sovereign, bank, retail or other exposures; and

(b) OTC derivative transactions and credit derivative contracts booked in the institution's trading book.

(3) Where a repo-style transaction entered into by an authorized institution is subject to a valid bilateral netting agreement, the institution may only take into account the credit risk mitigating effect of the recognized netting by –

(a) in relation to a corporate, sovereign or bank exposure of an authorized institution which uses the foundation IRB approach –

(i) subject to subparagraph (ii), calculating the net credit exposure to the counterparty (that is, $E^{\#}$ as set out in

Formula 4.9) in accordance with section 4.47 as the EAD for inclusion into the risk-weight function specified in Formula 6.1 or 6.2, as the case requires;

(ii) if section 4.48 applies, calculating the net credit exposure to the counterparty (that is, E^{*} as set out in Formula 4.10) in accordance with section 4.48 as the EAD for inclusion into the risk-weight function specified in Formula 6.1 or 6.2, as the case requires;

(b) in relation to a corporate, sovereign or bank exposure of an authorized institution which uses the advanced IRB approach or a retail exposure of an authorized institution uses the retail IRB approach –

(i) subject to subparagraph (ii), calculating the net credit exposure to the counterparty (that is, $E^{\#}$ as set out in Formula 4.9) in accordance with section 4.47 as the EAD for inclusion into the risk-weight function specified in Formula 6.1 or 6.2, as the case requires;

(ii) if section 4.48 applies, calculating the net credit exposure to the counterparty

(that is, E^{*} as set out in Formula 4.10) in accordance with section 4.48 as the EAD for inclusion into the risk-weight function specified in Formula 6.1 or 6.2, as the case requires;

(iii) applying its estimate of LGD to the net credit exposure to the counterparty ($E^{\#}$ or E^{*}, as the case may be).

(4) For the purposes of subsection (2) –

(a) the definition of "principal amount" in section 6.2(1) applies to references to that expression in section 4.46;

(b) the references in sections 4.45 and 4.46 to "net credit exposure" shall be calculated without deduction of any specific provisions or partial write-offs in respect of the exposure.

6.73 Recognized guarantees and recognized credit derivative contracts

(1) Subject to subsection (2), an authorized institution may only take into account the credit risk mitigating effect of a recognized guarantee or a recognized credit derivative contract in accordance with sections 6.74 to 6.82.

(2) An authorized institution shall –

(a) have in place clearly documented criteria, methods and processes, which comply with sections 6.77 to 6.82, for taking into account the credit risk mitigating effect of recognized guarantees and recognized credit derivative contracts; and

(b) subject to section 6.77(2), taking into account such effects consistently –

(i) both for a given type of recognized guarantee or recognized credit derivative contract; and

(ii) over time.

6.74 Recognized guarantees and recognized credit derivative contracts under substitution framework for corporate, sovereign and bank exposures under foundation IRB approach and for equity exposures under PD/LGD approach

(1) Subject to subsection (2), a guarantee which falls within section 4.49 constitutes a recognized guarantee under the substitution framework, and a credit derivative contract which falls within section 4.50 constitutes a recognized credit derivative contract under the substitution framework, in relation to –

(a) a corporate, sovereign or bank exposure of an authorized institution for which the institution uses the foundation IRB approach; and

(b) an equity exposure of an authorized institution for which the institution uses the PD/LGD approach.

(2) For the purposes of subsection (1), sections 4.49(a)(vi) and 4.50(1)(b)(vi) shall be deemed to read as –

"(vi) a corporate which –

(A) has an ECAI issuer rating, which, if mapped to the scale of credit quality grades in Table C in Schedule 4.1, would result in the corporate being assigned a credit quality grade of 1 or 2; or

(B) has an exposure assessed under the institution's rating system with an estimate of PD which is equivalent to the PD of an

exposure with a credit quality grade of 1 or 2 in Table C in Schedule 4.1;".

6.75 Recognized guarantees and recognized credit derivative contracts under substitution framework for corporate, sovereign and bank exposures under advanced IRB approach and for retail exposures under retail IRB approach

A guarantee or credit derivative contract, in relation to –

(a) a corporate, sovereign or bank exposure of an authorized institution for which the institution uses the advanced IRB approach; or

(b) a retail exposures of an authorized institution for which the institution uses the retail IRB approach,

constitutes a recognized guarantee under the substitution framework, or a recognized credit derivative contract under the substitution framework, as the case may be, only if –

(c) the guarantee or credit derivative contract is evidenced in writing, non-cancellable on the part of the credit protection provider, in force until the exposure to which the guarantee or credit derivative contract relates (referred to in this section as "underlying exposure") is satisfied in full and legally enforceable against the credit protection provider in a country where the credit protection provider has assets to attach under the enforcement of a judgment;

(d) the institution has in place clearly documented criteria for the types of credit protection providers which it will recognize for credit risk

mitigation purposes under the substitution framework; and

(e) the criteria used by the institution in recognizing a credit derivative contract under the substitution framework require that the reference obligation under the credit derivative contract on which the credit protection of that contract is based (being the reference obligation) cannot be different from the underlying exposure unless the conditions specified in section 4.50(1)(n) are satisfied.

6.76 Recognized guarantees and recognized credit derivative contracts under double default framework

A guarantee or credit derivative contract, in relation to a corporate exposure (excluding specialized lending under supervisory slotting criteria approach) or public sector entity exposure (excluding exposure to a sovereign foreign public sector entity) of an authorized institution, constitutes a recognized guarantee under the double default framework, or a recognized credit derivative contract under the double default framework, only if –

(a) subject to paragraphs (b) and (c), the guarantee or credit derivative contract covers only one single reference obligation;

(b) the credit derivative contract is a first-to-default credit derivative contract in respect of which the double default framework will be applied to the exposure in the basket of reference obligations specified in the contract which would carry the lowest risk-weighted amount in the absence of the credit protection within the basket;

(c) the credit derivative contract is an nth-to-default credit derivative contract in respect of which the credit protection obtained will only be recognized under the double default framework if –

(i) a $(n-1)^{th}$-to-default credit derivative contract which is a recognized credit

derivative contract has also been entered into; or

(ii) the first to $(n-l)^{th}$ of the reference obligations within the basket have already defaulted;

(d) the guarantee or credit derivative contract satisfies the requirements specified in section 4.49 (except for paragraph (a) of that section) or section 4.50(1) (except for paragraph (b) of that section), as the case may be;

(e) the institution has the right to receive payment from the credit protection provider without having to take legal action in order to pursue the obligor in respect of the hedged exposure for payment;

(f) the institution has, to the extent practicable, taken steps to satisfy itself that the credit protection provider is willing to pay promptly if a credit event specified in the guarantee or credit derivative contract, as the case may be, occurs;

(g) the credit protection will absorb all credit losses incurred on the hedged exposures due to the occurrence of a credit event specified in the guarantee or credit derivative contract;

(h) in any case where the payout structure of a guarantee or credit derivative contract provides for physical settlement, there is a mechanism to

ensure the deliverability of a loan, bond or contingent liability, as the case may be;

(*i*) in any case where the institution intends to deliver under a credit derivative contract which provides for physical settlement an obligation other than the hedged exposure in respect of which the credit protection is held by the institution, the institution has ensured that the deliverable obligation is sufficiently liquid so that the institution would be able to purchase it for delivery in accordance with the relevant contract;

(j) the terms and conditions of the credit protection are confirmed in writing by the credit protection provider and the institution;

(k) in the case of credit protection against dilution risk, the seller of purchased receivables is not a member of the group of companies, of which the credit protection provider is a member;

(*l*) subject to paragraph (m), there is no excessive positive correlation between the creditworthiness of a credit protection provider and the creditworthiness of the obligor in respect of the hedged exposure due to their close financial or legal relationship; and

(m) the institution has in place a process to detect excessive positive correlation referred to in paragraph (*l*).

6.77 Capital treatment of recognized guarantees and recognized credit derivative contracts

(1) Subject to subsection (2) and section 6.82, an authorized institution which takes into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract in calculating the risk-weighted amount for an exposure of the institution shall do so using the substitution framework.

(2) An authorized institution may use the double default framework to take into account the credit risk mitigating effect of a recognized guarantee or a recognized credit derivative contract for each exposure which falls within section 6.81.

6.78 Provisions supplementary to section 6.77(1) – substitution framework (general)

An authorized institution which uses the substitution framework in respect of a corporate, sovereign, bank, retail or equity exposure of the institution (referred to in this section as "underlying exposure") –

(a) shall not reflect the effect of double default when taking into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract in calculating the risk-weighted amount of the underlying exposure; and

(b) shall, to the extent that the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract is taken into account by the institution in calculating the risk-weighted amount of the underlying exposure, ensure that the risk-weight of the underlying exposure concerned, as adjusted after taking into account the credit risk mitigating effect of the recognized guarantee or recognized credit derivative contract, is not less than that of a comparable direct exposure to the credit protection provider.

6.79 Provisions supplementary to section 6.77(1) – substitution framework for corporate, sovereign and bank exposures under foundation IRB approach and for equity exposures under PD/LGD approach

(1) An authorized institution shall, in relation to –

(a) a corporate, sovereign or bank exposure for which the institution uses the foundation IRB approach; or

(b) an equity exposure for which the institution uses the PD/LGD approach,

(in each case referred to in this section as "underlying exposure") take into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract in respect of the exposure in accordance with subsections (2) to (6).

(2) An authorized institution shall divide the EAD of an underlying exposure into the portion covered by the recognized guarantee or recognized credit derivative contract (referred to in this section as "covered portion") and the portion not covered by the recognized guarantee or recognized credit derivative contract (referred to in this section as "uncovered portion") such that –

(a) where the covered and uncovered portions of the underlying exposure are of equal seniority in terms of ranking for payment to the institution, the covered portion of the underlying exposure receives the treatment set out in subsection (3) and the

uncovered portion of the underlying exposure receives the treatment set out in subsection (5);

(b) where –

(i) the institution has entered into a transaction under which a portion of the credit risk of an exposure of the institution is transferred in one or more tranches to one or more credit protection providers, and the remaining portion of the credit risk of the exposure is retained by the institution; and

(ii) the portion of the credit risk transferred and the portion of the credit risk retained are of different seniority,

the institution treats the transaction as a securitization transaction and determines the treatment of its exposure under the transaction in accordance with Part 7.

(3) The institution shall, in the case of a covered portion of an underlying exposure –

(a) subject to paragraph (b), derive a risk-weight by using the risk-weight function applicable to the IRB subclass within which the exposure to the credit protection provider falls, and the PD of the obligor grade to which the exposure to the credit protection provider is assigned;

(b) in any case where the institution considers that it is not appropriate in assessing the credit risk to which the institution is exposed to substitute the obligor grade of the exposure to the credit protection provider for that of the underlying exposure, use the PD of an obligor grade which falls between the obligor grade of the underlying exposure and the obligor grade of the exposure to the credit protection provider;

(c) replace, at the institution's discretion, the estimate of the LGD of the underlying exposure with the estimate of the LGD of the recognized guarantee or recognized credit derivative contract after taking into account the seniority in terms of ranking for payment, and any recognized collateral provided by the credit protection provider to the institution in respect of the recognized guarantee or recognized credit derivative contract.

(4) An authorized institution shall, in the case of an uncovered portion of an underlying exposure, assign a risk-weight calculated in the same manner as for any other direct exposure to the obligor in respect of the underlying exposure.

(5) Where there is a currency mismatch between an underlying exposure of an authorized institution and a recognized guarantee or recognized credit derivative contract covering the underlying exposure, the institution shall adjust the value of the credit

protection, with all necessary modifications, in accordance with section 4.51.

(6) Where there is a maturity mismatch between an underlying exposure of an authorized institution and a recognized guarantee or recognized credit derivative contract covering the underlying exposure and the residual maturity of the recognized guarantee or recognized credit derivative contract is shorter than the residual maturity of the underlying exposure, the institution shall adjust the value of the credit protection, with all necessary modifications, in accordance with section 4.54.

6.80 Provisions supplementary to section 6.77(1) – substitution framework for corporate, sovereign and bank exposures under advanced IRB approach and for retail exposures under retail IRB approach

(1) Subject to subsection (2) and sections 6.73(2) and 6.78, an authorized institution shall, in relation to –

(a) a corporate, sovereign or bank exposure for which the institution uses the advanced IRB approach; or

(b) a retail exposure for which the institution uses the retail IRB approach,

(in each case referred to in this section as "underlying exposure") take into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract in respect of the underlying exposure by adjusting the institution's estimate of the PD or LGD of the underlying exposure.

(2) Subject to subsection (3), an authorized institution shall ensure that its criteria and processes for making adjustments pursuant to subsection (1) to its estimates of the PD or LGD –

(a) subject to paragraphs (b) to (d) and subsection (3), satisfy the requirements set out in this Part applicable to the institution for assigning exposures to obligor grades and facility grades;

(b) reflect the ability and willingness of the credit protection provider to perform its contractual

obligation under the guarantee or credit derivative contract;

(c) address the likely timing of any payments under the guarantee or credit derivative contract and the degree to which the ability of the credit protection provider to perform its contractual obligations under the guarantee or credit derivative contract is positively correlated with the ability of the obligor in respect of the underlying exposure to repay; and

(d) take into account the extent to which residual risk to the obligor in respect of the underlying exposure remains (including any currency mismatch and maturity mismatch between the recognized guarantee or recognized credit derivative contract and the underlying exposure).

(3) An authorized institution may only make an adjustment to the estimate of PD pursuant to subsection (1) in accordance with section 6.79.

6.81 Provisions supplementary to section 6.77(2) – double default framework

(1) Subject to subsection (2), where a corporate exposure or public sector entity exposure of an authorized institution is covered by a recognized guarantee or recognized credit derivative contract (referred to in this section as "underlying exposure"), the institution may take into account the credit risk mitigating effect of the recognized guarantee or recognized credit derivative contract in accordance with subsection (3).

(2) An authorized institution shall only apply the double default framework to an underlying exposure of the institution covered by a recognized guarantee or recognized credit derivative contract if –

(a) the risk-weight which would be allocated to the underlying exposure prior to the application of the double default framework does not already take into account any aspect of credit protection;

(b) the credit protection provider is a financial firm;

(c) the underlying exposure is –

(i) a corporate exposure except for exposure which falls within any of the IRB subclasses of specialized lending under the supervisory slotting criteria approach; or

(ii) a public sector entity exposure which falls within the IRB subclass of public

sector entities (excluding sovereign foreign public sector entities);

(d) the obligor in respect of the underlying exposure is not –

(i) a financial firm; or

(ii) a member of a group of companies, or a member of a group of corporates that the institution consolidates for its risk management purposes, of which the credit protection provider is also a member.

(3) An authorized institution shall take into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract by –

(a) dividing the EAD of the underlying exposure to which the recognized guarantee or recognized credit derivative contract relates into –

(i) a hedged exposure; and

(ii) an unhedged exposure;

(b) calculating the risk-weighted amount of the hedged exposure by using the risk-weight function set out in Formula 6.2; and

(c) calculating the risk-weighted amount of the unhedged exposure in the same way as it calculates the risk-weighted amount of its other exposures to the obligor in respect of the underlying exposure.

6.82 Capital treatment of recognized guarantees and recognized credit derivative contracts in respect of purchased receivables

(1) Subject to subsections (2) to (6), an authorized institution may take into account the credit risk mitigating effect of a recognized guarantee or recognized credit derivative contract for its exposures in respect of purchased receivables –

(a) in accordance with sections 6.73 to 6.81; and

(b) without regard to whether the guarantee or contract, as the case may be, covers default risk or dilution risk, or both.

(2) Where –

(a) an authorized institution is the beneficiary of a recognized guarantee or has entered into a recognized credit derivative contract as protection buyer in respect of its exposure in respect of purchased receivables; and

(b) the guarantee or contract, as the case may be, covers both default risk and dilution risk in respect of a purchased receivable or a portfolio of purchased receivables,

the institution shall, in calculating the risk-weighted amount of its exposures in respect of the purchased receivable or the portfolio of purchased receivables, as the case may be, substitute the risk-weight of the exposure to the credit protection provider for the sum of the risk-weights for default risk and dilution risk

which would otherwise be allocated to the exposure in respect of the purchased receivable or the purchased receivables in the portfolio, as the case may be, in accordance with sections 6.60 to 6.63.

(3) Subject to subsection (6), where a recognized guarantee or recognized credit derivative contract covers only default risk or dilution risk, but not both, in respect of a purchased receivable or a portfolio of purchased receivables of an authorized institution, the institution shall, for the purposes of calculating the risk-weighted amount of its exposure for default risk and dilution risk in respect of the purchased receivable or the portfolio of purchased receivables, as the case may be –

(a) substitute the risk-weight of the exposure to the credit protection provider for the risk-weight which would otherwise be allocated in respect of the default risk or dilution risk covered by the guarantee or contract, as the case may be, for the purpose of calculating the risk-weighted amount of the institution's exposure for default risk or dilution risk, as the case may be, in respect of the purchased receivable or the purchased receivables in the portfolio, as the case may be;

(b) calculate the risk-weighted amount of the institution's exposures to the other risk component (being default risk or dilution risk not covered by the guarantee or contract, as the case may be) in

respect of the purchased receivable or the purchased receivables in the portfolio, as the case may be, in accordance with sections 6.60 to 6.63; and

(c) aggregate the risk-weighted amount calculated under paragraph (a) with the risk-weighted amount calculated under paragraph (b).

(4) Where a recognized guarantee or recognized credit derivative contract covers only a portion of the default risk or dilution risk in respect of a purchased receivable or a portfolio of purchased receivables of an authorized institution, the institution shall, for the purposes of calculating the risk-weighted amount of its exposure for default risk and dilution risk in respect of the purchased receivable or the portfolio of purchased receivables, as the case may be –

(a) divide the exposure into a covered portion and an uncovered portion for the default risk and dilution risk in accordance with section 6.79(2);

(b) calculate the risk-weighted amount of the uncovered portion of the exposure in respect of default risk and dilution risk in accordance with sections 6.60 to 6.63;

(c) calculate the risk-weighted amount the covered portion of the exposure in respect of default risk and dilution risk in accordance with subsection (2); and

(d) aggregate the risk-weighted amount calculated under paragraph (b) with the risk-weighted amount calculated under paragraph (c).

(5) Where a recognized guarantee or recognized credit derivative contract covers only the dilution risk in respect of a purchased receivable or a portfolio of purchased receivables of an authorized institution and constitutes a recognized guarantee or recognized credit derivative contract under the double default framework, the institution may take into account the credit risk mitigating effect of the guarantee or contract, as the case may be, under the double default framework for the hedged exposure.

(6) For the purposes of subsection (5), the risk-weighted amount of an exposure which falls within that subsection shall be calculated –

(a) using the risk-weight function specified in Formula 6.2;

(b) with –

(i) PD_o equal to the estimate of the EL for dilution risk;

(ii) LGD_g equal to 100%; and

(iii) M_{os} set out in accordance with section 6.32.

Division 11 – Treatment of expected losses and eligible provisions

6.83 Calculation of expected loss and eligible provisions for corporate, sovereign, bank and retail exposures

(1) An authorized institution –

(a) shall compare the institution's total EL amount and the total eligible provisions, as calculated in accordance with subsections (2) to (5) and section 6.84;

(b) if the total EL amount exceeds the total eligible provisions, shall deduct the difference from the institution's core capital and supplementary capital in accordance with section 3.14(2)(b); and

(c) if the total EL amount is less than the total eligible provisions, may, in accordance with section 3.11(3), include the difference in its supplementary capital up to a maximum of 0.6% of the institution's total risk-weighted amount determined under the IRB approach.

(2) Subject to subsections (3), (4) and (5), an authorized institution –

(a) shall calculate the EL as the PD multiplied by the LGD for each of its corporate, sovereign, bank and retail exposures which are not in default;

(b) subject to paragraph (c), shall determine and use its best estimate of the EL for each of its corporate, sovereign, bank and retail exposures which are in default based on current economic circumstances and the exposure's default status;

(c) may, if it uses the foundation IRB approach and has the prior consent of the Monetary Authority to do so, use the supervisory estimate for the LGD as the EL for its corporate, sovereign and bank exposures which are in default.

(3) Subject to subsection (4), where an authorized institution uses the supervisory slotting criteria approach for its specialized lending, the institution shall determine the EL of the specialized lending by multiplying the risk-weighted amount of the specialized lending by 8%.

(4) Subject to subsection (5), an authorized institution shall, for the purposes of subsection (3), determine the risk-weight to be used in the calculation of the risk-weighted amount of the specialized lending (being the EAD multiplied by the risk-weight) in accordance with Table 6.7 by reference to the relevant supervisory rating grade to which the exposure has been mapped.

TABLE 6.7

RISK-WEIGHTS FOR SPECIALIZED LENDING
FOR DETERMINATION OF EL

Strong	Good	Satisfactory	Weak	Default
5%	10%	35%	100%	625%

(5) Where an authorized institution assigns preferential risk-weights to its specialized lending which falls within the "strong" and "good" grades in accordance with section 6.21(3), then, in the calculation of the risk-weighted amount of the specialized lending, the institution may assign preferential risk-weights of 0% and 5% to the specialized lending which falls within the "strong" and "good" grades respectively in calculating the EL.

6.84 Determination of eligible provisions for calculation of total eligible provisions

Where an authorized institution which uses the IRB approach also uses the STC approach or BSC approach, or both, to calculate its credit risk for a portion of its corporate, sovereign, bank and retail exposures, the institution shall exclude from the calculation of the total eligible provisions those eligible provisions which are attributable to that portion of its exposures subject to the STC approach or BSC approach, or both, as the case requires, in accordance with section 3.11(2).

6.85 Equity exposures – market-based approach

An authorized institution which uses the market-based approach for its equity exposures shall deem the EL amount of the equity exposures to be zero.

6.86 Equity exposures – PD/LGD approach

(1) Subject to subsection (2), an authorized institution which uses the PD/LGD approach for its equity exposures shall deduct from its core capital and supplementary capital the EL amount of the equity exposures in accordance with section 3.14(2)(*i*).

(2) For the purposes of subsection (1), an authorized institution shall –

(a) in determining the EL amount for each of its equity exposures which are not in default, calculate the EL as the PD multiplied by the LGD if the risk-weighted amount of the equity exposure concerned is not calculated using the risk-weights set out in section 6.57(1)(e), (f) or (g);

(b) if the minimum risk-weight set out in section 6.57(1)(e) or (f), or the maximum risk-weight set out in section 6.57(1)(g)(i), is applied in respect of an equity exposure of the institution which is not in default, deem the EL amount of the equity exposure to be zero;

(c) if section 6.57(1)(g)(ii) applies to an equity exposure of the institution, treat the EAD of the equity exposure as the EL amount of the equity exposure; and

(d) in the case of its equity exposures which are in default, determine and use its best estimate of the

EL for each of the exposures based on current economic circumstances and the exposure's default status.

Division 12 – Scaling factor

6.87 Application of scaling factor

An authorized institution shall multiply the risk-weighted amount of –

(a) the institution's non-securitization exposures as calculated under the IRB approach in accordance with Divisions 1 to 10; and

(b) the institution's securitization exposures as calculated under the IRB(S) approach in accordance with Divisions 4, 5 and 6 of Part 7,

by a scaling factor of 1.06 to arrive at the institution's risk-weighted amount for credit risk calculated under the IRB approach and IRB(S) approach.

Division 13 – Capital floor

6.88 Application of Division 13

(1) Subject to subsection (2), this Division applies to an authorized institution until the third anniversary of the date on which it commenced using the IRB approach to calculate its credit risk.

(2) Where an authorized institution fails to fully comply with the sections of this Part which are applicable to it, the Monetary Authority may, for the purposes of mitigating the effect of that failure, by notice in writing given to the institution –

(a) extend the period for which the institution shall be subject to this Division; or

(b) again apply this Division to the institution,

for such period, or until the occurrence of such event, as specified in the notice, and may, in that notice, specify an adjustment factor which shall be used by the institution for those purposes.

6.89 Calculation of capital floor

(1) An authorized institution shall –

(a) calculate the difference between –

(i) the floor amount of capital calculated under subsections (2) to (6); and

(ii) the actual amount of capital calculated under subsection (7);

(b) if the floor amount of capital referred to in paragraph (a)(i) is larger than the actual amount of capital referred to in paragraph (a)(ii), multiply the difference by 12.5 and add the resulting figure to its total risk-weighted amount for credit risk, operational risk and market risk for the calculation of its capital adequacy ratio.

(2) An authorized institution which starts to use the IRB approach during the transitional period shall, for the purposes of subsection (1), calculate the floor amount of capital by multiplying the amount determined under subsection (3) in respect of the institution by an adjustment factor determined under subsection (6).

(3) An authorized institution shall arrive at the relevant amount for the purposes of subsection (2) by –

(a) determining its risk-weighted amount for credit risk by using –

(i) the BSC approach or, with the prior consent of the Monetary Authority, the STC for non-securitization exposures; and

(ii) the STC(S) approach for securitization exposures;

(b) determining its risk-weighted amount for market risk by using the calculation approach used by the institution for market risk;

(c) aggregating the amounts determined under paragraphs (a) and (b); and

(d) taking 8% of the aggregated amount and –

(i) adding to it all the deductions made from any of the institution's core capital and supplementary capital; and

(ii) subtracting from it the amount of regulatory reserve for general banking risks and collective provisions which is included in the institution's supplementary capital.

(4) An authorized institution which starts to use the IRB approach after the transitional period shall, for the purposes of subsection (1), calculate the floor amount of capital by multiplying the amount determined under subsection (5) in respect of the institution by an adjustment factor determined under subsection (6).

(5) An authorized institution shall arrive at the relevant amount for the purposes of subsection (4) by –

(a) determining its risk-weighted amount for credit risk by using –

(i) the STC approach for non-securitization exposures; and

(ii) the STC(S) approach for securitization exposures;

(b) determining its risk-weighted amount for operational risk by using the calculation approach used by the institution for operational risk;

(c) determining its risk-weighted amount for market risk by using the calculation approach used by the institution for market risk;

(d) aggregating the amounts determined under paragraphs (a), (b) and (c); and

(e) taking 8% of that aggregate amount and –

(i) adding to it all the deductions made from any of the institution's core capital and supplementary capital; and

(ii) subtracting from it the amount of regulatory reserve for general banking risks and collective provisions which is included in the institution's supplementary capital.

(6) Subject to section 6.88(2), an authorized institution which uses the IRB approach (whether during or after the transitional period) shall use the adjustment factors specified in Table 6.8.

TABLE 6.8

ADJUSTMENT FACTORS

Date of implementation of IRB approach	First year of implementation	Second year of implementation	Third year of implementation
Within transitional period	95%	90%	80%
After transitional period	90%	80%	70%

(7) An authorized institution shall, for the purposes of subsection (1), calculate the actual amount of capital by –

(a) determining its total risk-weighted amount for credit risk by using the calculation approach used by the institution for credit risk;

(b) determining its risk-weighted amount for operational risk by using the calculation approach used by the institution for operational risk;

(c) determining its risk-weighted amount for market risk by using the calculation approach used by the institution for market risk;

(d) aggregating the amounts determined under paragraphs (a), (b) and (c); and

(e) taking 8% of that aggregate amount and –

(i) either subtracting from it the excess amount included in the institution's supplementary capital under section 3.11(3) if the institution's total eligible provisions exceeds the total EL amount as calculated under section 6.83(1)(c) or adding to it any shortfall amount deducted from the institution's supplementary capital under section 3.14(2)(b) if the institution's total eligible provisions is below the total EL amount as calculated in section 6.83(1)(b);

(ii) adding to it all other deductions made from any of the institution's core capital and supplementary capital; and

(iii) subtracting from it the amount of regulatory reserve for general banking risks and collective provisions which is included in the institution's supplementary capital if the institution uses the STC approach or BSC approach to calculate its credit risk for any portion

of its non-securitization exposures or the STC(S) approach for any portion of its securitization exposures.

PART 7

CALCULATION OF CREDIT RISK FOR SECURITIZATION EXPOSURES

Division 1 – General

7.1 Interpretation of Part 7

(1) In this Part, unless the context otherwise requires –

"ABCP programme" ( ) means an asset-backed commercial paper programme;

"asset-backed commercial paper programme" ( ) means a programme under which –

(a) a bankruptcy-remote SPE in a securitization transaction issues debt securities with an original maturity of not more than one year; and

(b) the payments in respect of those debt securities are secured by a pool of underlying exposures acquired from third parties and held by, or to the order of, that SPE;

"bankruptcy-remote" ( ), in relation to an SPE in a securitization transaction, means that the assets of the SPE will not be available to the creditors of the originator in the transaction in the event that the originator becomes insolvent;

"clean-up call" ( ) –

(a) in relation to a traditional securitization transaction, means an option which permits the originator in the transaction to repurchase the outstanding securitization issues of the transaction once the amount of the outstanding securitization issues, or of the underlying exposures that have not been paid, has fallen below a level specified in the securitization documentation for the transaction;

(b) in relation to a synthetic securitization transaction, means an option which permits the person providing credit protection under the securitization documentation for the transaction to extinguish the credit protection once the amount of the reference pool of underlying exposures has fallen below a level specified in the securitization documentation for the transaction;

"committed credit line" ( ) means a credit line provided by an authorized institution to a borrower which is not an uncommitted credit line;

"credit enhancement" ( ), in relation to a securitization exposure under a securitization transaction, means a contractual arrangement whereby a person –

(a) retains or assumes credit risk in respect of the exposure; and

(b) provides, in substance, some degree of credit protection to one or more than one other party to the transaction;

"credit-enhancing interest-only strip" ( ), in relation to a securitization transaction, means an on-balance sheet exposure which is –

(a) recorded by the originator in the transaction as representing the expected future excess spread to be derived from the underlying exposures; and

(b) subordinated to claims from other parties to the transaction in terms of the priority of repayment;

"credit equivalent amount" ( ) –

(a) in relation to an off-balance sheet securitisation exposure of an authorized institution which uses the STC(S) approach, subject to paragraph (c), has the meaning assigned to it by section 4.2, with all necessary modifications;

(b) in relation to an off-balance sheet securitization exposure of an authorized institution which uses the IRB(S) approach, subject to paragraph (d), has the meaning assigned to it by section 6.2(1), with all necessary modifications;

(c) in relation to the calculation of investors' interest under the STC(S) approach, means the credit equivalent amount of the undrawn balances to which investors are exposed calculated under section 7.19(1)(b);

(d) in relation to the calculation of investors' interest under the IRB(S) approach, means the credit equivalent amount of the undrawn balances to which investors are exposed calculated under section 7.31(2)(a);

"drawn balance" ( ), in relation to the calculation of investors' interest, means the amount which has been drawn down by a borrower under a revolving credit line, where –

(a) the credit line has been sold, or the credit risk of the credit line has been transferred, to a third party in a securitization transaction; and

(b) the investors in the transaction remain, in whole or in part, exposed to future drawings by the borrower under the credit line;

"early amortization period" ( ), in relation to a securitization transaction in which the underlying exposures are revolving in nature, means the period of time within which the originator in the transaction is obliged to fulfil the originator's obligations under an early amortization provision in the securitization documentation for the transaction once the early amortization provision has been triggered;

"early amortization provision" ( ), in relation to a securitization transaction in which the underlying exposures are revolving in nature, means a mechanism which, once triggered, allows investors in the securitization issues to be paid out prior to the originally stated maturity of the securitization issues held by the investors;

"excess spread" ( ), in relation to a securitization transaction, means future interest and other income derived by the SPE in the transaction from the underlying exposures in the transaction in excess of the transaction costs specified in the securitization documentation for the transaction, expressed as a percentage of the underlying exposures;

"first loss tranche" ( ), in relation to a securitization transaction, means the tranche (including, where the underlying exposures in the transaction are purchased receivables, the tranche in the form of a refundable discount on the purchase price of the receivables provided by the seller of the receivables) which will be exposed first to any credit loss associated with the underlying exposures in the transaction up to a specified or ascertainable level;

"funded credit protection" ( ), in relation to an exposure of an authorized institution, means a technique of credit risk mitigation –

(a) whereby the reduction in credit risk of the exposure is derived from the institution's right to receive the transfer of, to appropriate or to retain certain assets or sums of money in the event of –

(i) the default of an obligor in respect of the exposure; or

(ii) the occurrence of another specified credit event relating to that obligor; and

(b) which may involve, for the purposes of paragraph (a), the institution holding collateral against the exposure or issuing a credit-linked note to transfer the credit risk of the exposure to the purchaser of the note;

"gain-on-sale" ( ), in relation to a securitization transaction, means any increase in the core capital of the originating institution resulting from the sale of underlying exposures in the transaction;

"implicit support" ( ), in relation to a securitization transaction, means any direct or indirect support which the originating institution provides (or has provided) to investors in the transaction in excess of its predetermined contractual obligations, with a view to reducing potential or actual losses that the investors may suffer;

"inferred rating" ( ), in relation to an authorized institution which uses the ratings-based method, means a credit assessment rating attributed by the institution pursuant to section 7.37 to a securitization exposure of the institution which does not have an ECAI issue specific rating;

"investing institution" ( ), in relation to a securitization transaction, means an authorized institution which is an investor in the transaction;

"investment grade" ( ) –

(a) in relation to the use by an authorized institution of the STC(S) approach, means a credit quality grade of 1, 2 or 3 for long-term or short-term ECAI issue specific ratings, as the case requires, assigned to a securitization exposure in accordance with Schedule 7.3;

(b) in relation to the use by an authorized institution of the IRB(S) approach, means a credit quality grade of –

(i) 1, 2, 3, 4, 5, 6, 7 or 8 for long-term ECAI issue specific ratings; or

(ii) 1, 2 or 3 for short-term ECAI issue specific ratings,

as the case requires, assigned to a securitization exposure in accordance with Schedule 7.6;

"investor" ( ), in relation to a securitization transaction, means any person, other than the originator in the transaction, who assumes securitization exposures by –

(a) purchasing securitization issues;

(b) providing credit protection to other parties to the transaction; or

(c) providing liquidity facilities in respect of the transaction;

"investors' interest" ( ), in relation to a securitization transaction in which the underlying exposures are revolving in nature and which is subject to an early amortization provision, means the investors' interest in the underlying exposures in the transaction as determined under section 7.19(1) or 7.31(1), as the case requires;

"liquidity facility" ( ), in relation to an authorized institution, means an off-balance sheet securitization exposure of the institution arising from a contractual agreement pursuant to which the institution provides funding in respect of a securitization transaction to ensure the timeliness of cash flows to investors in the securitization issues in the transaction;

"long-term inferred rating" ( ), in relation to a securitization exposure of an authorized institution, means an inferred rating –

(a) which is attributed to the exposure by the institution; and

(b) which is a long-term credit assessment rating;

"look-through treatment" ( ), in relation to a securitization position held by an authorized institution in a securitization transaction, means a method of determining the risk-weight of the position by reference to –

(a) subject to paragraph (b), the risk-weight applicable to the underlying exposures in the transaction; or

(b) if the underlying exposures consist of different classes of exposure, the weighted average risk-weight applicable to the underlying exposures in the transaction,

based on the STC approach or BSC approach, as the case requires;

"originating institution" ( ), in relation to a securitization transaction, means an authorized institution which is the originator in the transaction;

"originator" ( ), in relation to a securitization transaction, means a person who –

(a) directly or indirectly originates the underlying exposures in the transaction; or

(b) serves as a sponsor of an ABCP programme or a programme with similar features;

"principal amount" ( ) –

(a) in relation to an on-balance sheet securitization exposure of an authorized institution, means the book value of the exposure;

(b) in relation to an off-balance sheet securitization exposure of an authorized institution, means an amount which is –

(i) subject to subparagraph (ii), the contracted amount of the exposure;

(ii) in the case of such an exposure which is a partially drawn facility, the amount of the undrawn commitment;

"rated" ( ), in relation to a securitization exposure, means that the exposure has –

(a) an ECAI issue specific rating; or

(b) if paragraph (a) does not apply, an inferred rating;

"ratings-based method" ( ), in relation to the use of the IRB(S) approach to calculate an authorized institution's credit risk for rated securitization exposures, means the method of calculating that risk set out in Divisions 4 and 5;

"revolving" ( ), in relation to an underlying exposure of an authorized institution in a securitization transaction, means that the borrower's outstanding balance of the exposure is permitted to fluctuate based on the borrower's decision to borrow and repay, up to a limit established by the institution;

"second loss tranche" ( ), in relation to a securitization transaction, means the tranche which will be exposed to any credit loss associated with the underlying exposures in the transaction up to a specified or ascertainable level after the credit enhancement provided by the first loss tranche has been exhausted;

"securitization exposure" ( ), in relation to an authorized institution, means the institution's credit exposure to a securitization transaction booked in its banking book, and includes such an exposure arising from –

(a) the purchase or acquisition of securitization issues for investment purposes;

(b) the provision of credit protection or credit enhancement to any of the parties to the transaction;

(c) the retention of one or more than one securitization position;

(d) the provision of a liquidity facility or servicer cash advance facility for the transaction;

(e) the repurchase of securitization issues; and

(f) the obligation to acquire any investors' interest in the transaction if the transaction is subject to an early amortization provision;

"securitization issues" ( ), in relation to a securitization transaction, means the securities issued by the issuer in the transaction;

"securitization position" ( ), in relation to an authorized institution, means an exposure of the institution to one of the different tranches in a securitization transaction;

"securitization transaction" ( ), means a transaction involving the tranching of credit risk associated with a pool of underlying exposures and in respect of which –

(a) there are not less than 2 different tranches;

(b) payments to investors or other parties to the transaction depend on the performance of the underlying exposures; and

(c) the subordination of tranches determines the distribution of losses during the life of the transaction;

"servicer cash advance facility" ( ), in relation to an authorized institution which provides credit administration services in respect of the underlying exposures in a securitization transaction, means an off-balance sheet securitization exposure of the institution arising from a contractual agreement pursuant to which the institution advances cash in respect of the transaction to ensure an uninterrupted flow of payments to investors in the securitization issues in the transaction;

"short-term inferred rating" ( ), in relation to a securitization exposure of an authorized institution, means an inferred rating –

(a) which is attributed to the exposure by the institution; and

(b) which is a short-term credit assessment rating;

"SPE" ( ) means a special purpose entity;

"special purpose entity" ( ) means a company, trust or other entity –

(a) which is created for the sole purpose of acquiring and holding the underlying exposures in a traditional securitization transaction or assuming credit risk in respect of the underlying exposures in a synthetic securitization transaction, as the case may be, and engaging in activities related or incidental to the issuance of securitization issues in the transaction; and

(b) the creation of which is intended to insulate the underlying exposures transferred to it from the effects of default, insolvency or bankruptcy of the originator in the transaction;

"sponsor" ( ), in relation to an ABCP programme or a programme with similar features, means a person who establishes the programme and manages, or participates in the management of, the programme by performing one or more than one of the following activities –

(a) approving the sellers to participate in the programme;

(b) approving the pool of underlying exposures to be purchased under the programme;

(c) administering the programme, including arranging for the placement into the market of securities issued under the programme; or

(d) providing any credit enhancement or liquidity facility in respect of the programme;

"supervisory formula" ( ) means Formula 7.2 set out in section 7.44;

"supervisory formula method" ( ), in relation to the use of the IRB(S) approach to calculate an authorized institution's credit risk for unrated securitization exposures, means the method of calculating that risk set out in Divisions 4 and 6;

"synthetic securitization transaction" ( ) means a securitization transaction where the credit risk of a pool of underlying exposures included in the transaction is transferred, in whole or in part, through the use of funded or unfunded credit protection afforded to the

underlying exposures which remain on the balance sheet of the originator in the transaction;

"traditional securitization transaction" ( ) means a securitization transaction where –

(a) a pool of underlying exposures is sold by the originator in the transaction to a bankruptcy-remote SPE; and

(b) the cash flows from the pool of underlying exposures are used to service payments to investors or other parties to the transaction;

"tranche" ( ) means a contractually established segment (referred to in this definition as "relevant segment") of the credit risk associated with a pool of underlying exposures in a securitization transaction where –

(a) a position in the relevant segment entails a risk of credit loss greater than, or less than, that of a position of the same amount in each other contractually established segment; and

(b) no account is taken of credit protection provided by third parties directly to the holders of positions in the relevant segment or in other contractually established segments;

"uncommitted credit line" ( ) means a credit line provided by an authorized institution to a borrower which is unconditionally cancellable by the institution without prior notice to the borrower;

"underlying exposures" ( ), in relation to a securitization transaction, means one or more than one on-balance sheet or off-balance sheet exposure in respect of which credit risk is transferred to one or more than one person by the originator in the transaction;

"undrawn balance" ( ), in relation to the calculation of investors' interest, means the amount which has not been drawn down by a borrower under a revolving credit line where –

(a) the credit line has been sold, or the credit risk of the credit line has been transferred, to a third party in a securitization transaction; and

(b) the investors in the transaction remain, in whole or in part, exposed to future drawings by the borrower under the credit line;

"unfunded credit protection" ( ), in relation to an exposure of an authorized institution, means a technique of credit risk mitigation whereby the reduction in credit risk of the exposure is derived from the institution realizing the undertaking of a third party (including that

under a guarantee or a credit default swap) to pay an amount in the event of –

(a) the default of an obligor in respect of the exposure; or

(b) the occurrence of another specified credit event relating to that obligor;

"unrated" ( ), in relation to a securitization exposure, means that the exposure is not a rated exposure;

"weighted average risk-weight" ( ), in relation to a securitization transaction where the underlying exposures consist of different classes of exposures, means the risk-weight of the pool of exposures derived by dividing the total risk-weighted amount of all exposures in the pool (being the sum of individual risk-weighted amounts calculated in respect of each class of exposures) by the total principal amount of the exposures in the pool.

(2) For the avoidance of doubt, it is hereby declared that no reference in this Part to a securitization transaction shall be construed as excluding a reference to a securitization transaction which has more than one originator or more than one SPE.

Division 2 – Requirements applicable to use of STC(S) approach or IRB(S) approach

7.2 Application of Division 2

(1) This Division applies to an authorized institution which uses the STC(S) approach or IRB(S) approach to calculate its credit risk for securitization exposures.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the STC(S) approach or IRB(S) approach to calculate its credit risk for securitization exposures.

7.3 Treatment to be accorded to securitization transaction by originating institution

(1) Subject to subsection (2), an originating institution in a securitization transaction may, with the prior consent of the Monetary Authority –

(a) in the case of a traditional securitization transaction where all the requirements of Schedule 7.1 applicable to or in relation to the institution and the transaction have been satisfied, exclude the underlying exposures in the transaction from the calculation of the risk-weighted mount of its credit exposures under Part 4, 5 or 6, as the case requires;

(b) in the case of a synthetic securitization transaction where all the requirements of Schedule 7.2 applicable to or in relation to the institution and the transaction have been satisfied, calculate the risk-weighted amount of the underlying exposures in the transaction in accordance with section 7.17 or 7.29, as the case requires.

(2) Notwithstanding that a securitization transaction falls within subsection (1), the originating institution shall provide regulatory capital against any securitization exposure which it retains, holds or purchases under the transaction.

(3) Subject to subsection (4), the originating institution in a traditional securitization transaction which does not fall within subsection (1)(a) shall risk-weight the underlying exposures in the transaction in accordance with the approach to the calculation of the institution's credit risk as set out in Part 4, 5 or 6, as the case requires, which the institution uses for the class of exposures into which the underlying exposures fall.

(4) Notwithstanding that a traditional securitization transaction does not fall within subsection (1)(a), the originating institution shall not include in its capital base as determined in accordance with Part 3 any gain-on-sale arising from the transaction.

(5) The originating institution in a synthetic securitization transaction which does not fall within subsection (1)(b) –

(a) shall risk-weight the underlying exposures in the transaction in accordance with the approach to the calculation of the institution's credit risk as set out in Part 4, 5 or 6, as the case requires, which the institution uses for the class of exposures into which the underlying exposures fall; and

(b) shall not take into account the effect of any credit risk mitigation used for transferring credit risk in respect of the underlying exposures to other parties to the transaction in the calculation of the risk-weighted amount of the underlying exposures in the transaction.

7.4 Measures which may be taken by Monetary Authority if originating institution provides implicit support

(1) The originating institution in a securitization transaction which falls within section 7.3(1) shall not provide implicit support to investors in the transaction.

(2) Where the originating institution in a securitization transaction provides implicit support in contravention of subsection (1), the Monetary Authority may, after having had regard to the materiality of the contravention –

(a) by notice in writing given to the institution, require the institution not to use (or, where applicable, withdraw any consent of the Monetary Authority for the institution to use) section 7.3(1)(a) or section 7.3(1)(b), or both –

(i) for that securitization transaction; or

(ii) for other securitization transactions in respect of which the institution is the originating institution for such period, or until the occurrence of such event, as specified by the Monetary Authority in the notice;

(b) by notice in writing given to the institution, require the institution to publicly disclose –

(i) particulars of the implicit support; and

(ii) the impact of the implicit support on the institution's regulatory capital; or

(c) by notice in writing given to the institution, advise the institution that the Monetary Authority is considering exercising the power under section 101 of the Ordinance to vary the capital adequacy ratio of the institution by increasing it.

(3) The originating institution in a securitization transaction shall comply with requirements of a notice given to it under subsection (2)(a) or (b).

(4) Where –

(a) a securitization transaction contains a clean-up call; and

(b) the clean-up call can be exercised by the originating institution in circumstances where the exercise of the clean-up call effectively provides credit enhancement,

the clean-up call shall be treated as implicit support and this section applies to the originating institution in the transaction which contains the clean-up call accordingly.

(5) For the avoidance of doubt, it is hereby declared that subsection (2)(c) does not operate to prejudice the generality of the circumstances in respect of which the Monetary Authority may exercise the power under section 101 of the Ordinance in the case of an authorized institution to which that subsection applies.

7.5 Use of external credit assessments for determination of risk-weights

Subject to section 7.6, section 4.21 relating to ECAI ratings applies, for the purposes of this Part and with all necessary modifications, to and in relation to securitization exposures.

7.6 Provisions applicable to ECAI issue specific ratings in addition to those applicable under Part 4

For the purposes of calculating the risk-weighted amount of an authorized institution's rated securitization exposures –

(a) subject to paragraphs (b) and (c), the institution shall use ECAI issue specific ratings issued by the same ECAIs consistently for a given class of securitization exposures;

(b) the institution shall not, in respect of the same securitization transaction entered into by the institution, use ECAI issue specific ratings issued by an ECAI for one or more than one securitization position held by the institution in the transaction and the ECAI issue specific ratings issued by another ECAI for other securitization positions held by the institution in the transaction which may or may not be rated by the first-mentioned ECAI;

(c) if 2 or more ECAIs have different ECAI issue specific ratings applicable to the same securitization exposure held by the institution, the institution shall apply section 4.20(2)(b) in determining the risk-weight to be applied to that securitization exposure;

(d) if, in a securitization transaction entered into by the institution, credit protection is –

(i) provided directly to the SPE in the transaction by a credit protection provider which falls within section 4.49(a) or 4.50(1)(b); and

(ii) reflected in the ECAI issue specific rating assigned to a securitization exposure held by the institution in the transaction,

the institution –

(iii) shall determine the risk-weight to be applied to the securitization exposure by reference to that rating; and

(iv) shall not otherwise recognize, for the purposes of this Part, that credit protection;

(e) if, in a securitization transaction entered into by the institution, credit protection is provided directly to the SPE in the transaction by a credit protection provider which does not fall within section 4.49(a) or 4.50(1)(b) and a securitization exposure held by the institution in the transaction is covered by the credit protection, the institution shall treat that securitization exposure as unrated;

(f) if a rated securitization exposure held by the institution is covered by credit protection applied to the exposure which has the effect of reducing the risk-weighted amount of the exposure according to Part 4, 5 or 6, but the credit protection is not provided directly to the SPE in the transaction, the institution shall –

(i) treat the exposure as if it were unrated; and

(ii) use the credit risk mitigation treatment specified in Part 4, 5 or 6, as the case requires, to recognize the effect of the credit protection which applies to that exposure.

Division 3 – Risk-weighting requirements under STC(S) approach

7.7 Application of Division 3

(1) This Division applies to an authorized institution which uses the STC(S) approach to calculate its credit risk for securitization exposures.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the STC(S) approach to calculate its credit risk for securitization exposures.

7.8 Calculation of risk-weighted amount of securitization exposures

(1) Subject to subsections (2), (3) and (4), an authorized institution shall calculate the risk-weighted amount of a rated securitization exposure held by it by applying the relevant risk-weight to the exposure by reference to its ECAI issue specific rating or otherwise in accordance with these Rules.

(2) Subject to subsection (4), an authorized institution shall calculate the risk-weighted amount of an on-balance sheet securitization exposure by multiplying the principal amount (after deduction of specific provisions) of the exposure by the applicable risk-weight.

(3) Subject to subsection (4), an authorized institution shall calculate the risk-weighted amount of an off-balance sheet securitization exposure by –

(a) multiplying the credit equivalent amount of the exposure (being the product of the principal amount (after deduction of specific provisions) of the exposure and the applicable CCF) by the applicable risk-weight;

(b) unless otherwise specified in section 7.14 or 7.19, applying a CCF of 100% to the exposure.

(4) Where a securitization exposure held by an authorized institution is subject to funded or unfunded credit protection, the institution shall adjust the risk-weighted amount of the exposure in accordance with sections 7.21 and 7.22.

7.9 Provisions supplementary to section 7.8

(1) Where an authorized institution, other than the originating institution in a securitization transaction, provides credit protection to a securitization issue in the transaction, the institution providing the credit protection shall calculate its regulatory capital in respect of the credit protection as if it were an investor in the securitization issue.

(2) Where an authorized institution, other than the originating institution in a securitization transaction, provides credit protection to an unrated securitization exposure which is in the form of credit enhancement provided to other parties to the transaction, the institution providing the credit protection shall calculate its regulatory capital in respect of the credit protection as if it directly provided the credit enhancement.

7.10 Deductions from core capital and supplementary capital

(1) Subject to subsection (2), an authorized institution shall deduct from any of its core capital and supplementary capital –

(a) any credit-enhancing interest-only strip recorded by the institution as the originating institution in a securitization transaction (after deduction of any gain-on-sale arising from the credit-enhancing interest-only strip);

(b) any gain-on-sale arising from a securitization transaction where the institution is the originating institution;

(c) any rated securitization exposure of the institution with –

(i) a long-term credit quality grade of 4 or 5 in the case of a securitization exposure held by the institution as the originating institution;

(ii) a long-term credit quality grade of 5 in the case of a securitization exposure held by the institution as an investing institution;

(iii) a short-term credit quality grade of 4,

as allocated under Table A or Table B in Schedule 7.3, as the case requires;

(d) any unrated securitization exposure of the institution except where the securitization exposure is –

(i) to the most senior tranche in a securitization transaction which falls within section 7.12(1);

(ii) to a second loss tranche or better in an ABCP programme which falls within section 7.13;

(iii) in respect of a liquidity facility which falls within section 7.14(1); or

(iv) in respect of a servicer cash advance facility which falls within section 7.14(6) and which would satisfy the requirements of section 7.14(1) if the servicer cash advance facility were a liquidity facility; and

(e) any other securitization exposure specified by the Monetary Authority in a notice in writing given to the institution.

(2) An authorized institution required by subsection (1) to make a deduction from any of its core capital and supplementary capital shall –

(a) make the deduction based on –

(i) the principal amount (after deduction of specific provisions) of the deductible item if the item is an on-balance sheet securitization exposure; or

(ii) the credit equivalent amount of the deductible item if the item is an off-balance sheet securitization exposure;

(b) subject to section 3.15(1) and paragraph (c), make the deduction 50% from the institution's core capital and 50% from the institution's supplementary capital;

(c) if the deductible item falls within subsection (1)(b), make the deduction 100% from the institution's core capital.

7.11 Determination of risk-weights

(1) An authorized institution shall, in respect of its rated securitization exposures –

(a) for the purposes of determining the risk-weights to be allocated to the exposures for calculating the risk-weighted amount of the exposures, or determining whether the exposures are to be deducted from the institution's core capital and supplementary capital, map the ECAI issue specific ratings of the exposures to a scale of credit quality grades represented –

(i) by the numerals 1, 2, 3, 4 and 5 for long-term ECAI issue specific ratings as specified in Table A in Schedule 7.3; and

(ii) by the numerals 1, 2, 3 and 4 for short-term ECAI issue specific ratings as specified in Table B in Schedule 7.3;

(b) allocate risk-weights to, or deduct from the institution's core capital and supplementary capital, the exposures in accordance with subsections (2) and (3).

(2) For the purposes of subsection (1)(b), an authorized institution shall allocate risk-weights to, or deduct from the institution's core capital and supplementary capital, securitization exposures which have long-term ECAI issue specific ratings in accordance with Table 7.1 such that –

(a) for those securitization exposures which map to a credit quality grade of 4, the institution shall –

(i) allocate a risk-weight of 350% to the exposures if the institution is an investing institution; or

(ii) deduct the exposures from the institution's core capital and supplementary capital if the institution is the originating institution;

(b) for those securitization exposures which do not fall within paragraph (a), the institution shall apply the treatment specified in Table 7.1 to the exposures regardless of whether the institution is an originating institution or investing institution.

TABLE 7.1

RISK-WEIGHTS OR DEDUCTIONS APPLICABLE TO LONG-TERM CREDIT QUALITY GRADES UNDER STC(S) APPROACH

Long-term credit quality grade	Risk-weight	Deduction
1	20%	not applicable
2	50%	not applicable
3	100%	not applicable
4	350% (for investing institutions)	deduction from core capital and supplementary capital (for originating institutions)
5	not applicable	deduction from core capital and supplementary capital

(3) For the purposes of subsection (1)(b), an authorized institution shall allocate risk-weights to, or deduct from the institution's core capital and supplementary capital, securitization exposures which have short-term ECAI issue specific ratings in accordance with Table 7.2.

TABLE 7.2

RISK-WEIGHTS OR DEDUCTIONS APPLICABLE TO SHORT-TERM CREDIT QUALITY GRADES UNDER STC(S) APPROACH

Short-term credit quality grade	Risk-weight	Deduction
1	20%	not applicable
2	50%	not applicable
3	100%	not applicable
4	not applicable	deduction from core capital and supplementary capital

7.12 Most senior tranche in securitization transaction

(1) Where an authorized institution –

(a) holds an unrated securitization position in the most senior tranche in a securitization transaction; and

(b) knows the current composition of the pool of underlying exposures,

the institution shall determine the risk-weight to be allocated to the position by applying the look-through treatment.

(2) Where an authorized institution is determining whether a tranche is the most senior tranche in a securitization transaction, the institution shall not take into account –

(a) any interest rate contract or exchange rate contract entered into for the purpose of hedging the respective interest rate risk or foreign exchange risk in the transaction; and

(b) fees or other similar payments due under the transaction.

(3) Where an authorized institution is unable to determine the risk-weights to be allocated in accordance with subsection (1) because it lacks the knowledge referred to in subsection (1)(b), the institution shall deduct the securitization position referred to in subsection (1) from its

core capital and supplementary capital in accordance with section 7.10(2).

7.13 Securitization positions which are in second loss tranche or better in ABCP programmes

Where –

(a) an authorized institution holds an unrated securitization position in an ABCP programme;

(b) the position is protected by credit enhancement provided by the first loss tranche in the programme;

(c) the position is of comparable credit quality to a securitization position having an ECAI issue specific rating which maps to an investment grade according to the scale of credit quality grades under Table A or Table B in Schedule 7.3, as the case requires; and

(d) the institution does not also hold a securitization position in the first loss tranche in the programme,

the institution shall allocate to the securitization position a risk-weight of the greater of –

(e) 100%; or

(f) the highest risk-weight which would be allocated, under the approach used by the institution to calculate its credit risk as set out in Part 4 or 5 for the class of exposures into which the underlying exposures in the securitization transaction would fall, to any of

the underlying exposures in the securitization transaction to which the securitization position relates.

7.14 Treatment of liquidity facilities and servicer cash advance facilities

(1) For the purposes of subsections (2), (3) and (4), a liquidity facility provided by an authorized institution, which forms part of a securitization transaction, is an eligible liquidity facility where –

(a) subject to paragraph (b), the facility documentation clearly identifies and limits the circumstances under which the facility may be drawn;

(b) drawings under the facility are limited to the amount which is likely to be repaid fully from the realization of the underlying exposures in the transaction and any credit enhancement provided by the originator of the underlying exposures;

(c) the facility is not able to be drawn so as to provide credit support to cover losses already incurred in respect of the pool of underlying exposures prior to the drawing;

(d) there are no regular or continuous drawings under the facility to indicate that the facility is either –

(i) used to provide permanent or regular funding to investors in the securitization issues; or

(ii) structured such that drawdown is certain;

(e) the facility is subject to an asset quality test which precludes it from being drawn to cover underlying exposures which would be regarded as in default in section 6.12 under the IRB approach;

(f) if the securitization issues supported by the facility are rated, the facility can only be drawn to make payment in respect of those securitization issues which are rated as investment grade at the time of drawdown;

(g) the facility is not capable of being drawn after all credit enhancements from which the facility would benefit have been exhausted; and

(h) repayment of drawings on the facility is not subordinated to the claims of investors in the securitization issues or subject to deferral or waiver by the institution which provides the facility.

(2) Subject to subsection (3), an authorized institution shall, in relation to the undrawn portion of a liquidity facility provided by it –

(a) in the case of a rated liquidity facility (whether or not the facility is an eligible liquidity facility), determine the risk-weight to be allocated to the undrawn portion of the facility, or whether the undrawn portion of the facility is to be deducted from the institution's core capital and supplementary capital, by applying Table 7.1 or 7.2, as the case requires, and Schedule 7.3 in accordance with section 7.11;

(b) in the case of an unrated eligible liquidity facility –

(i) determine the risk-weight to be allocated to the undrawn portion of the facility by applying to this portion the highest risk-weight which would be applied to any of the underlying exposures covered by the facility as determined pursuant to the approach used by the institution to calculate its credit risk as set out in Part 4 or 5, as the case requires, for the class of exposures into which

the underlying exposures would fall; and

(ii) apply to the undrawn portion of the facility –

(A) a CCF of 20% if the facility has an original maturity of not more than one year;

(B) a CCF of 50% if the facility has an original maturity of more than one year,

for the purposes of calculating the credit equivalent amount of the undrawn portion of the facility.

(3) An authorized institution may apply a CCF of 0% to the undrawn portion of an eligible liquidity facility provided by the institution if the facility –

(a) is only available in the event of a general market disruption such that more than one SPE in different securitization transactions are unable to roll over maturing debt and that inability is not the result of an impairment in the credit quality of the SPE in the securitization transaction to which the facility relates or in the credit quality of the underlying exposures in the transaction; and

(b) is only available to advance funds to pay investors in the securitization issues concerned which, once drawn, are secured by the underlying exposures in the securitization transaction concerned and rank not less than pari passu with the claims of those investors.

(4) Where a liquidity facility provided by an authorized institution is not an eligible liquidity facility and is unrated, the institution shall deduct the undrawn portion of the facility from the institution's core capital and supplementary capital.

(5) An authorized institution shall, in relation to the drawn portion of a liquidity facility provided by it –

(a) determine the risk-weight to be allocated to the drawn portion of the facility, or whether the drawn portion of the facility is to be deducted from the institution's core capital and supplementary capital, in accordance with subsection (2)(a) if the facility is rated; or

(b) deduct the drawn portion of the facility from the institution's core capital and supplementary capital if the facility is unrated.

(6) Subject to subsection (7), where –

(a) a servicer cash advance facility is provided by an authorized institution in respect of a securitization transaction;

(b) the institution is entitled to full reimbursement of cash advanced under the facility; and

(c) the entitlement ranks senior for payment to other claims on cash flows from the pool of underlying exposures in the transaction,

subsections (1), (2), (3), (4) and (5), with all necessary modifications, apply to that servicer cash advance facility as they apply to a liquidity facility.

(7) Where a servicer cash advance facility which falls within subsection (6) is unconditionally cancellable by the authorized institution without prior notice to the person to whom the facility is provided, the institution may apply a CCF of 0% to the undrawn portion of the facility.

7.15 Treatment of overlapping facilities

(1) Where an authorized institution provides 2 or more facilities which may be drawn in respect of the same securitization transaction such that –

(a) duplicate coverage is provided in respect of the same underlying exposure (referred to in this subsection as "overlapping portion"); and

(b) a drawing on one such facility precludes the drawing, whether in whole or in part, on another such facility,

the institution shall –

(c) calculate the risk-weighted amount of the overlapping portion on the basis of –

(i) if the facilities are subject to the same CCF, attributing the overlapping portion to any one of the facilities;

(ii) if the facilities are subject to different CCFs, attributing the overlapping portion to the facility with the highest CCF; and

(d) calculate the risk-weighted amount of that portion of each of the facilities that is not the overlapping portion.

(2) Where overlapping facilities are provided by different authorized institutions, each institution shall calculate the risk-weighted amount for the maximum amount of the facility provided by it.

7.16 Maximum regulatory capital for originating institution

(1) Subject to subsection (2), the originating institution in a securitization transaction shall not provide regulatory capital for the securitization exposures held by the institution in the transaction in excess of the regulatory capital the institution would have been required to provide for the underlying exposures in the transaction if the underlying exposures had not been securitized.

(2) Where the originating institution has entered into a securitization transaction which is subject to an early amortization provision whereby the institution is required to provide regulatory capital for the investors' interest in the transaction, subsection (1) does not apply to the regulatory capital which the institution is required to provide for securitization exposures held by it in the transaction.

7.17 Treatment of underlying exposures of originating institution in synthetic securitization transactions

(1) This section applies to the calculation of the risk-weighted amount of the pool of underlying exposures by an originating institution in a synthetic securitization transaction which falls within Schedule 7.2.

(2) Subject to subsections (3) and (4) , the originating institution in a synthetic securitization transaction shall –

(a) subject to paragraph (b), calculate the risk-weighted amount of the institution's underlying exposures in the transaction based on the approach used by the institution to calculate its credit risk for the class of exposures into which the underlying exposures fall;

(b) take into account the effect of any credit risk mitigation used for transferring credit risk in respect of the underlying exposures to other parties to the transaction in accordance with the credit risk mitigation requirements set out in –

(i) Part 4 if the institution uses the STC approach; or

(ii) Part 5 if the institution uses the BSC approach,

in calculating the risk-weighted amount of the underlying exposures.

(3) For the purposes of calculating the risk-weighted amount of the originating institution's underlying exposures in a synthetic securitization transaction where there is a maturity mismatch between the credit protection pursuant to which credit risk is transferred under the transaction and the underlying exposures, the institution –

(a) subject to paragraphs (b) and (c), shall apply the maturity mismatch treatment set out in section 4.54, with all necessary modifications;

(b) shall –

(i) take the maturity of the underlying exposures as being the lesser of –

(A) the longest maturity of any of those exposures; or

(B) 5 years; and

(ii) determine the maturity of the credit protection in accordance with section 4.54(3) and (4); and

(c) shall not take into account any maturity mismatch in respect of the institution's securitization exposures which are subject to deduction from its core capital and supplementary capital.

(4) Where a synthetic securitization transaction incorporates a call option (other than a clean-up call) which is capable, when exercised, of terminating the transaction and the credit protection on a specified date, the originating institution in the transaction shall treat the transaction in accordance with the treatment of maturity mismatch specified in subsection (3).

7.18 Treatment of investors' interest for securitization exposures of originating institution subject to early amortization provision

(1) Subject to subsections (2) and (3), the originating institution in a securitization transaction shall provide regulatory capital against the investors' interest in the transaction if –

(a) the institution sells the underlying exposures, or transfers the credit risk of the underlying exposures in the transaction, into a structure that contains an early amortization provision; and

(b) the underlying exposures are of a revolving nature.

(2) Where a securitization transaction has a pool of underlying exposures comprising revolving exposures and non-revolving exposures, the originating institution in the transaction shall apply the relevant early amortization treatment specified in section 7.19 to that portion of the pool containing the revolving exposures.

(3) The originating institution in a securitization transaction is not required to provide regulatory capital pursuant to subsection (1) in any case where –

(a) the transaction includes a replenishment structure under which the underlying exposures which are revolving in nature are to be replenished by exposures which are non-revolving in nature and the early amortization ends the ability of the institution to add new underlying exposures;

(b) the transaction is subject to an early amortization provision which results in the structure of the transaction being akin to a structure which is non-revolving in nature in that the credit risk in respect of the underlying exposures does not return to the institution;

(c) investors in the securitization issues remain fully exposed to future drawings by the borrowers in respect of the underlying exposures which are revolving in nature such that the credit risk of those exposures does not return to the institution notwithstanding that an early amortization provision has been triggered; or

(d) the early amortization provision is solely triggered by events not related to the performance of the underlying exposures which are revolving in nature or of the institution.

7.19 Calculation of risk-weighted amount of investors' interest for securitization exposures of originating institution subject to early amortization provision

(1) For the purposes of this section, the investors' interest for the originating institution in a securitization transaction consists of the sum of –

(a) the investors' share of the principal amount of the drawn balances of the underlying exposures in the transaction; and

(b) the investors' share of the credit equivalent amount of the undrawn balances of the underlying exposures in the transaction, which is the principal amount of the undrawn balances multiplied by the applicable CCF of the underlying exposures as specified in sections 4.22 and 4.24, determined by allocating the undrawn balances of the underlying exposures between the institution and the investors according to the proportion of their respective share of the drawn balances of the underlying exposures.

(2) The originating institution in a securitization transaction shall calculate the risk-weighted amount of the investors' interest in the transaction by multiplying together –

(a) the investors' interest as determined under subsection (1);

(b) the appropriate CCF as determined under subsections (3) and (4); and

(c) the risk-weight which would be applicable to the underlying exposures in the transaction (or, if there is more than one class of underlying exposures, the weighted average risk-weight of all of the classes of underlying exposures) based on the approach used by the institution to calculate its credit risk for the class of exposures into which the underlying exposures would fall if they were not securitized.

(3) For the purposes of determining the CCFs to be applied to the investors' interest in a securitization transaction which is subject to a controlled early amortization provision referred to in subsection (5), an authorized institution shall –

(a) divide the underlying exposures into committed and uncommitted credit lines;

(b) apply a CCF of 90% to the investors' interest in respect of the underlying exposures which fall into committed credit lines;

(c) in respect of the underlying exposures which fall into uncommitted credit lines, further divide the exposures into –

(i) non-retail credit lines;

(ii) retail credit lines;

(d) apply a CCF of 90% to the investors' interest in respect of the underlying exposures which fall into uncommitted non-retail credit lines;

(e) subject to paragraphs (f) and (g), apply the appropriate CCF, determined by reference to the ratio of the 3-month average excess spread of the transaction to the trapping point of excess spread as set out in Schedule 7.4, to the investors' interest in respect of the underlying exposures which fall into uncommitted retail credit lines;

(f) treat the trapping point of excess spread, for the purposes of paragraph (e), as that point of the accumulated excess spread at which the SPE in the transaction is required to retain the amount of the excess spread and not pay it out to the originator in the transaction; and

(g) in any case where the transaction does not require excess spread to be trapped, treat the trapping point as that point of the accumulated excess spread where such accumulated excess spread is equal to 4.5% of the principal amount of the underlying exposures in the transaction.

(4) For the purposes of determining the CCFs to be applied to the investors' interest in a securitization transaction which is subject to a non-controlled early amortization provision (being an early amortization provision which does not fall within subsection (5)), an authorized institution shall –

(a) divide the underlying exposures into committed and uncommitted credit lines;

(b) apply a CCF of 100% to the investors' interest in respect of the underlying exposures which fall into committed credit lines;

(c) in respect of the underlying exposures which fall into uncommitted credit lines, further divide the exposures into –

(i) non-retail credit lines;

(ii) retail credit lines;

(d) apply a CCF of 100% to the investors' interest in respect of the underlying exposures which fall into uncommitted non-retail credit lines;

(e) subject to paragraphs (f) and (g), apply the appropriate CCF, determined by reference to the ratio of the 3-month average excess spread of the transaction to the trapping point of excess spread as set out in Schedule 7.5, to the investors' interest in respect of the underlying exposures which fall into uncommitted retail credit lines;

(f) treat the trapping point of excess spread, for the purposes of paragraph (e), as that point of the accumulated excess spread at which the SPE in the transaction is required to retain the amount of the excess spread and not pay it out to the originator in the transaction; and

(g) in any case where the transaction does not require excess spread to be trapped, treat the trapping point as that point of the accumulated excess spread where such accumulated excess spread is equal to 4.5% of the principal amount of the underlying exposures in the transaction.

(5) For the purposes of subsection (3), an early amortization provision is controlled if -

(a) the originating institution in a securitization transaction has a plan which operates to ensure that it has sufficient capital for acquiring the investors' interest and liquidity available in the event of an early amortization in respect of the transaction;

(b) throughout the duration of the transaction, including the early amortization period, the same pro-rata sharing between the originating institution and investors of payments of interest, principal, expenses, losses and recoveries is applied, based on the relative share of the originating institution and the investors in the drawn balances of the underlying exposures outstanding at the beginning of each month;

(c) the early amortization period set by the originating institution is sufficient for at least 90% of the total debt outstanding under the underlying exposures at the beginning of that period to have been repaid, or to have been regarded by the originating institution as in default in section 6.12 under the IRB approach, by the end of that period; and

(d) the speed of repayment of amounts due to the investors by the originating institution is no more rapid than would be the case under a straight-line amortization (being the gradual paying-off of a debt in regular instalments of equal amounts) over the period referred to in paragraph (c).

7.20 Treatment of interest rate contracts and exchange rate contracts

Where an authorized institution has an exposure arising from its entering into an interest rate contract or exchange rate contract in a securitization transaction, the institution shall calculate the risk-weighted amount of that exposure in respect of the contract in accordance with section 4.22 or 5.15, as the case requires.

7.21 Recognized credit risk mitigation

(1) Subject to subsection (2), an authorized institution shall calculate the risk-weighted amount of a securitization exposure in respect of which credit protection has been obtained in accordance with Divisions 5 to 10 of Part 4.

(2) Where an authorized institution which has a securitization exposure in respect of a securitization transaction would use the BSC approach to calculate its credit risk for all or the majority of the underlying exposures of the transaction as determined in section 2.12(4), and credit protection has been obtained in respect of the securitization exposure, the institution shall calculate the risk-weighted amount of the securitization exposure in accordance with Divisions 5 to 8 of Part 5.

7.22 Treatment of maturity mismatches

For the purposes of calculating the risk-weighted amount of an authorized institution's securitization exposures covered by credit protection, where there is a maturity mismatch between the securitization exposures and the credit protection, the institution shall apply section 7.17(3) as if a reference to an underlying exposure in a synthetic securitization transaction in that section were a reference to a securitization exposure covered by credit protection.

Division 4 – Risk-weighting requirements under IRB(S) approach

7.23 Application of Division 4

(1) This Division applies to an authorized institution which uses the IRB(S) approach to calculate its credit risk for securitization exposures.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the IRB(S) approach to calculate its credit risk for securitization exposures.

7.24 Application of scaling factor

An authorized institution shall use the aggregate of –

(a) the risk-weighted amount of its rated securitization exposures calculated under the ratings-based method in accordance with this Division and Division 5; and

(b) the risk-weighted amount of its unrated securitization exposures calculated under the supervisory formula method in accordance with this Division and Division 6,

for the purposes of calculating its capital adequacy ratio only after multiplying that amount by a scaling factor specified in section 6.87.

7.25 Deductions from core capital and supplementary capital

(1) Subject to subsection (2), an authorized institution shall deduct from any of its core capital and supplementary capital –

(a) any credit-enhancing interest-only strip recorded by the institution as the originating institution in a securitization transaction (after deduction of any gain-on-sale arising from the credit-enhancing interest-only strip);

(b) any gain-on-sale arising from a securitization transaction where the institution is the originating institution;

(c) if the institution uses the ratings-based method, any rated securitization exposure of the institution with a long-term credit quality grade of 12 or a short-term credit quality grade of 4 as allocated, respectively, under Table A or Table B in Schedule 7.6, as the case requires;

(d) if the institution uses the supervisory formula method, any unrated securitization exposure of the institution with a risk-weight of not less than 1,250%;

(e) if the institution cannot use the supervisory formula method, or the method specified in section 7.51(3) for liquidity facilities or servicer cash advance facilities, because it lacks the Monetary Authority's consent to do so, any unrated securitization exposure of the institution; and

(f) any other securitization exposure specified by the Monetary Authority in a notice in writing given to the institution.

(2) An authorized institution required by subsection (1) to make a deduction from any of its core capital and supplementary capital shall –

(a) make the deduction based on –

(i) the principal amount (after deduction of any specific provision, partial write-off or non-refundable purchase price discount, as the case may be, made against the deductible item) of the deductible item if the item is an on-balance sheet securitization exposure; or

(ii) the credit equivalent amount of the deductible item if the item is an off-balance sheet securitization exposure;

(b) subject to section 3.15(1) and paragraph (c), make the deduction 50% from the institution's core capital and 50% from the institution's supplementary capital;

(c) if the deductible item falls within subsection (1)(b), make the deduction 100% from the institution's core capital.

7.26 Treatment of liquidity facilities and servicer cash advance facilities

(1) For the purposes of sections 7.38 and 7.51, a liquidity facility provided by an authorized institution, which forms part of a securitization transaction, is an eligible liquidity facility where –

(a) subject to paragraph (b), the facility documentation clearly identifies and limits the circumstances under which the facility may be drawn;

(b) drawings under the facility are limited to the amount which is likely to be repaid fully from the realization of the underlying exposures in the transaction and any credit enhancement provided by the originator of the underlying exposures;

(c) the facility is not able to be drawn so as to provide credit support to cover losses already incurred in respect of the pool of underlying exposures prior to the drawing;

(d) there are no regular or continuous drawings under the facility to indicate that the facility is either –

(i) used to provide permanent or regular funding to investors in the securitization issues; or

(ii) structured such that drawdown is certain;

(e) the facility is subject to an asset quality test which precludes it from being drawn to cover underlying exposures which would be regarded as in default in section 6.12 under the IRB approach;

(f) if the securitization issues supported by the facility are rated, the facility can only be drawn to make payment in respect of those securitization issues which are rated as investment grade at the time of drawdown;

(g) the facility is not capable of being drawn after all credit enhancements from which the facility would benefit have been exhausted; and

(h) repayment of drawings on the facility is not subordinated to the claims of investors in the securitization issues or subject to deferral or waiver by the institution which provides the facility.

(2) Subject to subsection (3), where –

(a) a servicer cash advance facility is provided by an authorized institution in respect of a securitization transaction;

(b) the institution is entitled to full reimbursement of cash advanced under the facility; and

(c) the entitlement ranks senior for payment to other claims on cash flows from the pool of underlying exposures in the transaction,

subsection (1) and section 7.38 or 7.51, as the case requires, with all necessary modifications, apply to that servicer cash advance facility as they apply to a liquidity facility.

(3) Where a servicer cash advance facility which falls within subsection (2) is unconditionally cancellable by an authorized institution without prior notice to the person to whom the facility is provided, the institution may apply a CCF of 0% to the undrawn portion of the facility.

7.27 Treatment of overlapping facilities

(1) Where an authorized institution provides 2 or more facilities which may be drawn in respect of the same securitization transaction such that –

(a) duplicate coverage is provided in respect of the same underlying exposure (referred to in this subsection as "overlapping portion"); and

(b) a drawing on one such facility precludes the drawing, whether in whole or in part, on another such facility,

the institution shall –

(c) calculate the risk-weighted amount of the overlapping portion on the basis of –

(i) if the facilities are subject to the same CCF, attributing the overlapping portion to any one of the facilities;

(ii) if the facilities are subject to different CCFs, attributing the overlapping portion to the facility with the highest CCF; and

(d) calculate the risk-weighted amount of that portion of each of the facilities which is not the overlapping portion.

(2) Where overlapping facilities are provided by different authorized institutions, each institution shall calculate the risk-weighted amount for the maximum amount of the facility provided by it.

7.28 Maximum regulatory capital for originating institution

(1) Subject to subsection (2), the originating institution in a securitization transaction shall not provide regulatory capital for the securitization exposures held by the institution in the transaction in excess of the regulatory capital the institution would have been required to provide for the underlying exposures in the transaction if the underlying exposures had not been securitized.

(2) Where the originating institution has entered into a securitization transaction which is subject to an early amortization provision whereby the institution is required to provide regulatory capital for the investors' interest in the transaction, subsection (1) does not apply to the regulatory capital which the institution is required to provide for the securitization exposures held by it in the transaction.

7.29 Treatment of underlying exposures of originating institution in synthetic securitization transactions

(1) This section applies to the calculation of the risk-weighted amount of the pool of underlying exposures by an originating institution in a synthetic securitization transaction which falls within Schedule 7.2.

(2) Subject to subsections (3) and (4), an originating institution in a synthetic securitization transaction shall –

(a) subject to paragraphs (b) and (c), calculate the risk-weighted amount of the institution's underlying exposures in the transaction based on the approach used by the institution to calculate its credit risk for the class of exposures into which the underlying exposures fall;

(b) take into account the effect of any credit risk mitigation used for transferring credit risk in respect of the underlying exposures to other parties to the transaction in accordance with the credit risk mitigation requirements set out in Part 4 in calculating the risk-weighted amount of the underlying exposures; and

(c) treat the EL amount of the institution's underlying exposures in the transaction as zero.

(3) For the purposes of calculating the risk-weighted amount of the originating institution's underlying exposures in a synthetic securitization transaction where there is a maturity mismatch between the credit protection pursuant to which credit risk is transferred under the transaction and the underlying exposures, the institution –

(a) subject to paragraphs (b) and (c), shall apply the maturity mismatch treatment set out in section 4.54, with all necessary modifications;

(b) shall –

(i) take the maturity of the underlying exposures as being the lesser of –

(A) the longest maturity of any of those exposures; or

(B) 5 years; and

(ii) determine the maturity of the credit protection in accordance with section 4.54(3); and

(c) shall not take into account any maturity mismatch in respect of the institution's securitization exposures which are subject to deduction from its core capital and supplementary capital.

(4) Where a synthetic securitization transaction incorporates a call option (other than a clean-up call) which is capable, when exercised, of terminating the transaction and the credit protection on a specified date, the originating institution in the transaction shall treat the transaction in accordance with the treatment of maturity mismatch specified in subsection (3).

7.30 Treatment of investors' interest for securitization exposures of originating institution subject to early amortization provision

(1) Subject to subsections (2) and (3), the originating institution in a securitization transaction shall provide regulatory capital against the investors' interest in the transaction if –

(a) the institution sells the underlying exposures, or transfers the credit risk or the underlying exposures in the transaction, into a structure that contains an early amortization provision; and

(b) the underlying exposures are of a revolving nature.

(2) Where a securitization transaction has a pool of underlying exposures comprising revolving exposures and non-revolving exposures, the originating institution in the transaction apply the relevant early amortization treatment specified in section 7.31 to that portion of the pool containing the revolving exposures.

(3) The originating institution in a securitization transaction is not required to provide regulatory capital pursuant to subsection (1) in any case where –

(a) the transaction includes a replenishment structure under which the underlying exposures which are revolving in nature are to be replenished by exposures which are non-revolving in nature and the early amortization ends the ability of the institution to add new underlying exposures;

(b) the transaction is subject to an early amortization provision which results in the structure of the transaction being akin to a structure which is non-revolving in nature in that the credit risk in respect of the underlying exposures does not return to the institution;

(c) investors in the securitization issues remain fully exposed to future drawings by the borrowers in respect of the underlying exposures which are revolving in nature such that the credit risk of those exposures does not return to the institution notwithstanding that an early amortization provision has been triggered; or

(d) the early amortization provision is solely triggered by events not related to the performance of the underlying exposures which are revolving in nature or of the institution.

7.31 Calculation of risk-weighted amount of investors' interest for securitization exposures of originating institution subject to early amortization provision

(1) For the purposes of this section, the investors' interest for the originating institution in a securitization transaction consists of the sum of –

(a) the investors' share of the principal amount of the drawn balances of the underlying exposures in the transaction; and

(b) the investors' share of the credit equivalent amount of the undrawn balances of the underlying exposures in the transaction, which is the principal amount of the undrawn balances multiplied by the applicable CCF of the underlying exposures as specified in section 6.26 or 6.27, as the case requires, and section 6.29 for corporate exposures and sections 6.43 and 6.45 for retail exposures, determined by allocating the undrawn balances of the underlying exposures between the institution and the investors according to the proportion of their respective share of the drawn balances of the underlying exposures.

(2) The originating institution in a securitization transaction shall calculate the risk-weighted amount for the investors' interest in the transaction by multiplying together –

(a) the investors' interest as determined under subsection (1);

(b) the appropriate CCF as determined under subsections (3) and (4);

(c) K_{IRB} as determined under section 7.45; and

(d) 12.5.

(3) For the purposes of determining the CCFs to be applied to the investors' interest in a securitization transaction which is subject to a controlled early amortization provision referred to in subsection (5), an authorized institution shall –

(a) divide the underlying exposures into committed and uncommitted credit lines;

(b) apply a CCF of 90% to the investors' interest in respect of the underlying exposures which fall into committed credit lines;

(c) in respect of the underlying exposures which fall into uncommitted credit lines, further divide the exposures into –

(i) non-retail credit lines;

(ii) retail credit lines;

(d) apply a CCF of 90% to the investors' interest in respect of the underlying exposures which fall into uncommitted non-retail credit lines;

(e) subject to paragraphs (f) and (g), apply the appropriate CCF, determined by reference to the ratio of the 3-month average excess spread of the transaction to the trapping point of excess spread as set out in Schedule 7.4, to the investors' interest in respect of the underlying exposures which fall into uncommitted retail credit lines;

(f) treat the trapping point of excess spread, for the purposes of paragraph (e), as that point of the accumulated excess spread at which the SPE in the transaction is required to retain the amount of the excess spread and not pay it out to the originator in the transaction; and

(g) in any case where the transaction does not require excess spread to be trapped, treat the trapping point as that point of the accumulated excess spread where such accumulated excess spread is equal to 4.5% of the principal amount of the underlying exposures in the transaction.

(4) For the purposes of determining the CCFs to be applied to the investors' interest in a securitization transaction which is subject to a non-controlled early amortization provision (being an early amortization provision which does not fall within subsection (5)), an authorized institution shall –

(a) divide the underlying exposures into committed and uncommitted credit lines;

(b) apply a CCF of 100% to the investors' interest in respect of the underlying exposures which fall into committed credit lines;

(c) in respect of the underlying exposures which fall into uncommitted credit lines, further divide the exposures into –

(i) non-retail credit lines;

(ii) retail credit lines;

(d) apply a CCF of 100% to the investors' interest in respect of the underlying exposures which fall into uncommitted non-retail credit lines;

(e) subject to paragraphs (f) and (g), apply the appropriate CCF, determined by reference to the ratio of the 3-month average excess spread of the transaction to the trapping point of excess spread as set out in Schedule 7.5, to the investors' interest in respect of the underlying

exposures which fall into uncommitted retail credit lines;

(f) treat the trapping point of excess spread, for the purposes of paragraph (e), as that point of the accumulated excess spread at which the SPE in the transaction is required to retain the amount of the excess spread and not pay it out to the originator in the transaction; and

(g) in any case where the transaction does not require excess spread to be trapped, treat the trapping point as that point of the accumulated excess spread where such accumulated excess spread is equal to 4.5% of the principal amount of the underlying exposures in the transaction.

(5) For the purposes of subsection (3), an early amortization provision is controlled if –

(a) the originating institution in a securitization transaction has a plan which operates to ensure that it has sufficient capital for acquiring the investors' interest and liquidity available in the event of an early amortization in respect of the transaction;

(b) throughout the duration of the transaction, including the early amortization period, the same pro-rata sharing between the originating institution and investors of payments of interest, principal, expenses, losses and recoveries is applied, based on the relative share of the originating institution and the investors in the drawn balances of the underlying exposures outstanding at the beginning of each month;

(c) the early amortization period set by the originating institution is sufficient for at least 90% of the total debt outstanding under the underlying exposures at the beginning of that period to have been repaid, or to have been regarded by the originating institution as in default in section 6.12 under the IRB approach, by the end of that period; and

(d) the speed of repayment of amounts due to the investors by the originating institution is no more rapid than would be the case under a straight-line amortization (being the gradual paying-off of a debt in regular instalments of equal amounts) over the period referred to in paragraph (c).

7.32 Treatment of interest rate contracts and exchange rate contracts

Where an authorized institution has an exposure arising from its entering into an interest rate contract or exchange rate contract in a securitization transaction, the institution shall calculate the risk-weighted amount of that exposure in respect of the contract in accordance with section 4.22.

Division 5 – Specific risk-weighting requirements under ratings-based method

7.33 Application of Division 5

(1) This Division applies to an authorized institution which uses the ratings-based method under the IRB(S) approach.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the ratings-based method under the IRB(S) approach.

7.34 Calculation of risk-weighted amount of securitization exposures

(1) Subject to subsections (2), (3) and (4), an authorized institution shall calculate the risk-weighted amount of a rated securitization exposure held by it by applying the relevant risk-weight to the exposure by reference to its ECAI issue specific rating or otherwise in accordance with these Rules.

(2) Subject to subsection (4), an authorized institution shall calculate the risk-weighted amount of an on-balance sheet securitization exposure by multiplying the principal amount of the exposure by the applicable risk-weight.

(3) Subject to subsection (4), an authorized institution shall calculate the risk-weighted amount of an off-balance sheet securitization exposure by –

(a) multiplying the credit equivalent amount of the exposure (being the product of the principal amount of the exposure and the applicable CCF) by the applicable risk-weight;

(b) unless otherwise specified in section 7.26 or 7.31, applying a CCF of 100% to the exposure.

(4) Where a securitization exposure held by an authorized institution is subject to funded or unfunded credit protection, the institution shall adjust the risk-weighted amount of the exposure in accordance with section 7.39 and 7.40.

7.35 Provisions supplementary to section 7.34

(1) Where an authorized institution, other than the originating institution in a securitization transaction, provides credit protection to a securitization issue in the transaction, the institution providing the credit protection shall calculate its regulatory capital in respect of the credit protection as if it were an investor in the securitization issue.

(2) Where an authorized institution, other than the originating institution in a securitization transaction, provides credit protection to an unrated securitization exposure which is in the form of credit enhancement to other parties to the transaction, the institution providing the credit protection shall calculate its regulatory capital in respect of the credit protection as if it directly provided the credit enhancement.

7.36 Determination of risk-weights

(1) An authorized institution shall, in respect of its rated securitization exposures –

(a) for the purposes of determining the risk-weights to be allocated to the exposures for calculating the risk-weighted amount of the exposures, or determining whether the exposures are to be deducted from the institution's core capital and supplementary capital, map the ECAI issue specific ratings of the exposures to a scale of credit quality grades represented –

(i) by the numerals 1 to 12 for long-term ECAI issue specific ratings as specified in Table A in Schedule 7.6;

(ii) by the numerals 1, 2, 3 and 4 for short-term ECAI issue specific ratings as specified in Table B in Schedule 7.6;

(b) allocate risk-weights to, or deduct from the institution's core capital and supplementary capital, the exposures in accordance with subsections (2) to (9); and

(c) apply this section to and in relation to an inferred rating as it applies this section to an ECAI issue specific rating.

(2) For the purposes of subsection (1)(b), where –

(a) an authorized institution holds a securitization position in a given tranche of a securitization transaction; and

(b) the tranche is effectively backed or secured by a first legal claim on the entire amount outstanding in respect of the underlying exposures in the transaction,

the institution shall treat the securitization position as a senior position.

(3) For the purposes of determining whether a securitization position held by an authorized institution in a given tranche of a securitization transaction falls within subsection (2), the institution shall not take into account –

(a) any interest rate contract or exchange rate contract entered into for the purposes of hedging the respective interest rate risk or foreign exchange risk in the transaction; or

(b) fees or other similar payments due under the transaction.

(4) Subject to subsections (5), (6) and (7), for the purposes of subsection (1)(b), an authorized institution shall allocate risk-weights to, or deduct from the institution's core capital and supplementary capital, securitization exposures in accordance with Table 7.3 if the exposures have –

(a) a long-term ECAI issue specific rating; or

(b) a long-term inferred rating.

TABLE 7.3

RISK-WEIGHTS OR DEDUCTIONS APPLICABLE TO LONG-TERM CREDIT QUALITY GRADES UNDER RATINGS-BASED METHOD

Long-term credit quality grade	Risk-weight A	Risk-weight B	Risk-weight C	Deduction
1	7%	12%	20%	not applicable
2	8%	15%	25%	
3	10%	18%	35%	
4	12%	20%	35%	
5	20%	35%	35%	
6	35%	50%	50%	
7	60%	75%	75%	
8	100%	100%	100%	
9	250%	250%	250%	
10	425%	425%	425%	
11	650%	650%	650%	
12	not applicable			deduction from core capital and supplementary capital

(5) An authorized institution shall, in the case of a securitization exposure referred to in subsection (4), allocate –

(a) the risk-weights specified in column A of Table 7.3 if –

(i) the effective number of underlying exposures specified in subsection (6) is not less than 6; and

(ii) the exposure is a senior position as referred to in subsection (2);

(b) the risk-weights specified in column B of Table 7.3 if –

(i) the effective number of underlying exposures specified in subsection (6) is not less than 6; and

(ii) the exposure is not a senior position as referred to in subsection (2);

(c) the risk-weights specified in column C of Table 7.3 if the effective number of underlying exposures specified in subsection (6) is less than 6.

(6) For the purposes of subsection (5), an authorized institution shall calculate the effective number of underlying exposures –

(a) by treating multiple exposures to one obligor as one exposure; and

(b) subject to subsection (7), by using Formula 7.1.

FORMULA 7.1

CALCULATION OF EFFECTIVE NUMBER
OF UNDERLYING EXPOSURES

$$N = \frac{\left(\sum_i EAD_i\right)^2}{\sum_i EAD_i^{\,2}}$$

where –

N = effective number of underlying exposures (in the case of a re-securitization as specified in subsection (7), the effective number of securitization exposures which have been securitized); and

EAD_i = the EAD associated with the ith obligor in the pool of underlying exposures.

(7) Where there is a further securitization of securitization exposures (referred to in this section and section 7.49 as "relevant exposures") held by an authorized institution (referred to in this section and sections 7.48 and 7.49 as "re-securitization") –

(a) the institution shall take into account the number of relevant exposures in the pool for the re-securitization instead of the number of underlying exposures in the original pools in the securitization transactions creating the relevant exposures; and

(b) if the portfolio share of the largest exposure (referred to in this subsection as "C_1") (being the amount of the largest exposure in the pool as a percentage of the total amount of the pool of the relevant exposures) is available, the institution may, for the purposes of Formula 7.1, calculate N in that formula as $1/C_1$.

(8) Subject to subsection (9), for the purposes of subsection (1)(b), an authorized institution shall allocate the risk-weights to, or deduct from the institution's core capital and supplementary capital, securitization exposures in accordance with Table 7.4 if the exposures have –

(a) a short-term ECAI issue specific rating; or

(b) a short-term inferred rating.

TABLE 7.4

RISK-WEIGHTS OR DEDUCTIONS APPLICABLE TO SHORT-TERM CREDIT QUALITY GRADES UNDER RATINGS-BASED METHOD

Short-term credit quality grade	Risk-weight A	B	C	Deduction
1	7%	12%	20%	not applicable
2	12%	20%	35%	
3	60%	75%	75%	
4	not applicable			deduction from core capital and supplementary capital

(9) Subsections (5), (6) and (7), with all necessary modifications, apply to and in relation to any risk-weights and credit quality grades referred to in Table 7.4 as they apply to and in relation to any risk-weights and credit quality grades referred to in Table 7.3.

7.37 Use of inferred ratings

An authorized institution shall only attribute an inferred rating to a securitization exposure held by it by making reference to a securitization exposure which has an ECAI issue specific rating (referred to in this section as "reference securitization exposure") if –

(a) the exposure held by the institution has no applicable ECAI issue specific rating;

(b) the reference securitization exposure is subordinate in all respects to the exposure after taking into account credit enhancements, if any, when assessing the relative subordination of the exposure and the reference securitization exposure;

(c) the maturity of the reference securitization exposure is not less than that of the exposure;

(d) the inferred rating is updated from time to time in order to reflect any changes in the ECAI issue specific rating of the reference securitization exposure; and

(e) the ECAI issue specific rating of the reference securitization exposure satisfies the requirements for recognition of ECAI issue specific ratings as specified in sections 7.5 and 7.6.

7.38 Calculation of risk-weighted amount of liquidity facilities

(1) An authorized institution shall, in order to calculate the risk-weighted amount of the undrawn portion of a rated liquidity facility provided by the institution (whether or not the facility is an eligible liquidity facility), determine the risk-weight to be allocated to the undrawn portion of the facility, or whether the undrawn portion of the facility is to be deducted from the institution's core capital and supplementary capital, by applying Table 7.3 or 7.4, as the case requires, and Schedule 7.6 in accordance with section 7.36.

(2) An authorized institution shall calculate the risk-weighted amount of, or deduct from the institution's core capital and supplementary capital, the drawn portion of a rated liquidity facility provided by the institution in accordance with section 7.36.

7.39 Recognized credit risk mitigation

An authorized institution shall calculate the risk-weighted amount of a securitization exposure in respect of which credit protection has been obtained in accordance with Division 10 of Part 6.

7.40 Treatment of maturity mismatches

For the purposes of calculating the risk-weighted amount of an authorized institution's securitization exposures covered by credit protection, where there is a maturity mismatch between the securitization exposures and the credit protection, the institution shall apply section 7.29(3) and (4) as if a reference to an underlying exposure in a synthetic securitization transaction in that section were a reference to a securitization exposure covered by credit protection.

Division 6 – Specific risk-weighting requirements under supervisory formula method

7.41 Application of Division 6

(1) This Division applies to an authorized institution which uses the supervisory formula method under the IRB(S) approach.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the supervisory formula method under the IRB(S) approach.

7.42 Calculation of risk-weighted amount of securitization exposures

(1) Subject to subsection (2), an authorized institution shall calculate the risk-weighted amount of an unrated securitization exposure held by it by multiplying the amount of capital charge calculated in accordance with section 7.44 in respect of the exposure by 12.5.

(2) Where a securitization exposure held by an authorized institution is subject to funded or unfunded credit protection, the institution shall adjust the risk-weighted amount of the exposure in accordance with sections 7.52, 7.53 and 7.54.

7.43 Provisions supplementary to section 7.42

(1) Where an authorized institution, other than the originating institution in a securitization transaction, provides credit protection to a securitization issue in the transaction, the institution providing the credit protection shall calculate its regulatory capital in respect of the credit protection as if it were an investor in the securitization issue.

(2) Where an authorized institution, other than the originating institution in a securitization transaction, provides credit protection to an unrated securitization exposure in the form of credit enhancement to other parties to the transaction, the institution providing the credit protection shall calculate its regulatory capital in respect of the credit protection as if it directly provided the credit enhancement.

7.44 Use of supervisory formula

(1) Subject to subsections (2), (3), (4) and (5), an authorized institution shall, for the purposes of using Formula 7.2 to calculate the capital charge for a securitization position held by it in a given tranche of a securitization transaction, determine –

(a) subject to section 7.45, the capital charge that the underlying exposures would have attracted under the use of the IRB approach if the underlying exposures had not been securitized (referred to in this Division as "K_{IRB}");

(b) subject to section 7.46, the tranche's credit enhancement level (referred to in this Division as "L");

(c) subject to section 7.47, the tranche's thickness (referred to in this Division as "T");

(d) subject to sections 7.48 and 7.50, the pool's effective number of underlying exposures (referred to in this Division as "N"); and

(e) subject to sections 7.49 and 7.50, the pool's exposure-weighted average LGD.

FORMULA 7.2

SUPERVISORY FORMULA

$$S[L]=\begin{cases} L & \text{when } L \le K_{IRB} \\ K_{IRB}+K[L]-K[K_{IRB}]+(d\cdot K_{IRB}/\omega\omega)(-e^{\omega(K_{IRB}-L)/K_{IRB}}) & \text{when } K_{IRB}<L \end{cases}$$

where –

$$h=(1-K_{IRB}/LGD)^{N};$$

$$c=K_{IRB}/(1-h);$$

$$v=\frac{(LGD-K_{IRB})K_{IRB}+0.25(1-LGD)K_{IRB}}{N};$$

$$f=\left(\frac{v+K_{IRB}^{2}}{1-h}-c^{2}\right)+\frac{(1-K_{IRB})K_{IRB}-v}{(1-h)\tau};$$

$$g=\frac{(1-c)c}{f}-1;$$

$$a=g\cdot c;$$

$$b=g\cdot(1-c);$$

$$d=1-(1-h)\cdot(1-Beta[K_{IRB};a,b]);$$

$$K[L]=(1-h)\cdot((1-Beta[L;a,b])L+Beta[L;a+1,b]c);$$

τ = 1000;

ω = 20; and

Beta [L; a, b] = cumulative beta distribution with parameters a and b evaluated at L.

(2) Subject to subsection (3), an authorized institution shall calculate the capital charge for any securitization position held by it in a given tranche of a securitization transaction by multiplying –

(a) the EAD of the underlying exposures in the transaction; by

(b) the greater of –

(i) the product of 0.0056 multiplied by T; or

(ii) the excess of S[L + T] over S[L],

where –

function S [.] = the supervisory formula.

(3) Where an authorized institution holds only a proportional interest in a securitization position in a tranche of a securitization transaction, the institution shall calculate the capital charge for its interest in the position as equal to its prorated share of the capital charge calculated for the entire tranche.

(4) An authorized institution shall determine the risk-weight to be allocated to each of its unrated securitization exposures as the greater of –

(a) 7%; or

(b) the effective risk-weight determined in accordance with section 7.52(1).

(5) If the risk-weight determined in accordance with subsection (4)(b) for a securitization exposure is not less than 1,250%, the authorized institution holding the securitization exposure shall deduct that exposure from the institution's core capital and supplementary capital in accordance with section 7.25(1)(d).

7.45 Capital charge for underlying exposures under IRB approach

For the purposes of the supervisory formula –

(a) K_{IRB} is the ratio, expressed in decimal form, of the capital charge calculated under the use of the IRB approach for the pool of underlying exposures in a securitization transaction, as if those exposures were held directly by the authorized institution concerned, subject to the effect of any credit protection covering those exposures (whether individually or as the entire pool), to the EAD of the underlying exposures;

(b) if there is an SPE in a securitization transaction, all the assets of the SPE that are related to the transaction shall be treated as underlying exposures in the pool (including assets in the form of a reserve account, whether a cash collateral account or otherwise);

(c) where an authorized institution has made a specific provision or a partial write-off in respect of, or has a non-refundable purchase price discount on, an underlying exposure in the pool –

(i) the amounts referred to in paragraph (a) shall be calculated using the gross amount of the underlying exposure without deducting the specific provision, partial write-off or non-refundable purchase price discount, as the case may be;

(ii) if the underlying exposure is regarded as in default in section 6.12 under the IRB approach, the amount of the specific provision, partial write-off or non-refundable purchase price discount, as the case may be, may be used to reduce the amount of any deduction from the institution's core capital and supplementary capital required to be made in respect of that exposure under section 7.25(1)(d).

7.46 Credit enhancement level of tranche

(1) For the purposes of the supervisory formula –

(a) L, in relation to a given tranche of a securitization transaction, is the ratio, expressed in decimal form, of the sum of the relevant amounts of all securitization positions subordinate to that tranche of the transaction to the EAD of the underlying exposures in the transaction;

(b) an authorized institution which holds securitization positions in a given tranche shall –

(i) determine L in relation to that tranche before considering the effects of any tranche-specific credit enhancement (including third party guarantees which cover only a single tranche); and

(ii) exclude from the measurement of L any gain-on-sale or credit enhancing interest-only strip realized or held by the institution in respect of the securitization transaction concerned;

(c) subject to paragraph (d), if any interest rate contract or exchange rate contract, entered into by an authorized institution with another person for the purposes of hedging any interest rate risk or foreign exchange risk, as the case may be, arising from the securitization position held by the institution, ranks junior for payment to the tranche concerned, the institution may measure the principal amount of the contract at its current exposure (without taking into account that contract's potential exposure) in calculating L;

(d) if the current exposure of an interest rate contract or exchange rate contract cannot be measured, an authorized institution shall not take into account that contract in the calculation of L;

(e) an authorized institution may include in the calculation of L any reserve accounts, funded by accumulated cash flows from the underlying exposures, that rank junior to the tranche concerned; and

(f) an authorized institution shall not include in the calculation of L any unfunded reserve accounts that are to be funded from future receipts from the underlying exposures.

(2) In subsection (1) –

"relevant amount" ( ), in relation to a securitization position –

(a) if the position is an on-balance sheet securitization position, means the principal amount of the position;

(b) if the position is an off-balance sheet securitization position, means the credit equivalent amount of the position.

7.47 Thickness of tranche

(1) For the purposes of the supervisory formula –

(a) T, in relation to a given tranche of a securitization transaction, is the ratio, expressed in decimal form, of the relevant amount of that tranche of the transaction to the EAD of the underlying exposures in the transaction; and

(b) in determining the principal amount of an authorized institution's securitization exposure arising from an interest rate contract or exchange rate contract entered into by the institution with another person for the purposes of hedging any interest rate risk or foreign exchange risk –

(i) the institution shall take into account the potential exposure of the securitization exposure;

(ii) if the current exposure of the securitization exposure is not negative, the institution shall determine the credit equivalent amount of the securitization exposure by aggregating the current exposure and the potential exposure of the securitization exposure;

(iii) if the current exposure of the securitization exposure is negative, the institution shall determine the credit equivalent amount of the securitization exposure as only the potential exposure.

(2) In subsection (1) –

"relevant amount" ( ), in relation to a securitization position –

(a) if the position is an on-balance sheet securitization position, means the principal amount of the position;

(b) if the position is an off-balance sheet securitization position, means the credit equivalent amount of the position.

7.48 Effective number of underlying exposures

For the purposes of the supervisory formula, an authorized institution which has securitization exposures in respect of a securitization transaction shall –

(a) use Formula 7.1 set out in section 7.36 to calculate the effective number of underlying exposures in the transaction;

(b) treat multiple exposures to one obligor as one exposure; and

(c) if the securitization is a re-securitization, use Formula 7.1 in accordance with section 7.36(7).

7.49 Exposure-weighted average LGD

For the purposes of the supervisory formula –

(a) an authorized institution which has securitization exposures in respect of a securitization transaction shall use Formula 7.3 to calculate the exposure-weighted average LGD of the securitization exposures;

(b) if the securitization is a re-securitization, the authorized institution shall apply an LGD of 100% to the relevant exposures in the pool for the re-securitization;

(c) subject to paragraph (d), if the underlying exposures in the securitization transaction are purchased receivables and the default risk and dilution risk for the purchased receivables are treated by the authorized institution in an aggregate manner (whether by means of the institution holding a single reserve or over-collateralization being available to the institution to cover losses from either default risk or dilution risk or by other means), the institution shall, for the purposes of the LGD to be used in Formula 7.3 for calculating the exposure-weighted average LGD, first determine the LGD as a weighted average of the LGD for default risk and a 100% LGD for dilution risk;

(d) the authorized institution shall determine the respective weights of the LGD for default risk and the LGD for dilution risk referred to in paragraph (c) by reference to the proportion that the capital charge calculated for that default risk and the capital charge calculated for that dilution risk respectively bear to the aggregate capital charge calculated for default risk and dilution risk under the use of the IRB approach to calculate its credit risk in respect of the underlying exposures in the securitization transaction.

FORMULA 7.3

CALCULATION OF EXPOSURE-WEIGHTED AVERAGE LGD

$$\text{Exposure-weighted average LGD} = \frac{\sum_i \text{LGD}_i \cdot \text{EAD}_i}{\sum_i \text{EAD}_i}$$

where –

LGD_i = the average LGD associated with the ith obligor in the pool of underlying exposures; and

EAD_i = the EAD associated with the ith obligor in the pool of underlying exposures.

7.50 Simplified method for calculating N and exposure-weighted average LGD

For the purposes of the supervisory formula –

(a) if the amount outstanding under the largest exposure (referred to in this section as "C_1") in the pool of underlying exposures in a securitization transaction is not more than 0.03 or 3% of the aggregate amount of all the underlying exposures in the pool, an authorized institution which has securitization exposures in respect of the transaction may set the exposure-weighted average LGD at 0.50 and use Formula 7.4 to calculate N;

FORMULA 7.4

SIMPLIFIED METHOD FOR CALCULATING N

$$N = \left(C_1 C_m + \left(\frac{C_m - C_1}{m - 1} \right) \max \{ 1 - m C_1 , 0 \} \right)^{-1}$$

where –

C_m = the share of the pool of underlying exposures corresponding to the sum of the largest "m" exposures (for example, a 15% share corresponds to a value of 0.15) and the level of "m" is set by the authorized institution making the regulatory capital calculation;

(b) if only C_1 is known to the authorized institution and this amount is not more than 0.03, the institution may set the exposure-weighted average LGD at 0.50 and calculate N as $1/C_1$;

(c) if the underlying exposures are retail exposures, the authorized institution may use a value for h of zero and a value for v of zero.

7.51 Calculation of risk-weighted amount of liquidity facilities

(1) An authorized institution shall, in order to calculate the risk-weighted amount of the undrawn portion of an unrated eligible liquidity facility provided by the institution –

(a) multiply the amount of capital charge calculated in accordance with section 7.44 in respect of the undrawn portion of the facility by 12.5;

(b) subject to paragraph (c), apply a CCF of 100% to the undrawn portion of the facility;

(c) apply a CCF of 20% to the undrawn portion of the facility if the facility can satisfy the requirements specified in section 7.14(3)(a) and (b).

(2) Where the risk weight derived from dividing the risk-weighted amount of the undrawn portion of the liquidity facility referred to in subsection (1) by the credit equivalent amount of the undrawn portion of the facility is not less than 1,250%, the authorized institution providing the facility shall deduct that credit equivalent amount from its core capital and supplementary capital.

(3) Where an authorized institution demonstrates to the satisfaction of the Monetary Authority that it is not practicable for the institution to calculate K_{IRB} for the purpose of applying the supervisory formula, the institution

may, with the prior consent of the Monetary Authority, and until the expiration of such period, or the occurrence of such event, as specified in that consent, in order to calculate the risk-weighted amount of the undrawn portion of an unrated eligible liquidity facility provided by the institution –

(a) determine the risk-weight to be allocated to the principal amount of the undrawn portion of the facility by applying to this portion the highest risk-weight which would be applied to any of the underlying exposures covered by the facility as determined pursuant to the approach used by the institution to calculate its credit risk for the class of exposures into which the underlying exposures would fall; and

(b) apply to the undrawn portion of the facility –

(i) subject to subparagraph (iii), a CCF of 50% if the facility has an original maturity of not more than one year;

(ii) subject to subparagraph (iii), a CCF of 100% if the facility has an original maturity of more than one year;

(iii) a CCF of 20% if the facility can satisfy the requirements specified in section 7.14(3)(a) and (b),

for the purposes of calculating the credit equivalent amount of the undrawn portion of the facility.

(4) Where an unrated liquidity facility provided by an authorized institution is not an eligible liquidity facility and the institution uses the supervisory formula method to calculate its credit risk for securitization exposures, the institution shall determine the risk weight to be allocated to the undrawn portion of the facility, or whether the undrawn portion of the facility is to be deducted from the institution's core capital and supplementary capital, in accordance with subsections (1)(a) and (b) and (2).

(5) Where an unrated liquidity facility provided by an authorized institution is not an eligible liquidity facility and the institution does not have the consent of the Monetary Authority to use the supervisory formula method to calculate its credit risk for securitization exposures, the institution shall deduct the credit equivalent amount of the undrawn portion of the facility from the institution's core capital and supplementary capital.

(6) An authorized institution shall calculate the risk-weighted amount of the drawn portion of an unrated liquidity facility provided by the institution in accordance with -

(a) subject to paragraph (b), subsection (1)(a);

(b) subsection (3)(a) if the liquidity facility falls within subsection (3).

(7) Where the risk weight derived from dividing the risk-weighted amount of the drawn portion of the liquidity facility referred to in subsection (6)(a) by the principal amount of the drawn portion of the facility is not less than 1,250%, the authorized institution providing the facility shall deduct that principal amount from its core capital and supplementary capital.

7.52 Treatment of recognized credit risk mitigation – full credit protection

(1) An authorized institution shall determine the effective risk-weight of a securitization exposure by dividing the risk-weighted amount of the exposure calculated in accordance with section 7.42(1) by the relevant amount of the exposure and multiplying the result by 100%.

(2) Where the originating institution in a securitization transaction which uses the supervisory formula method has, pursuant to subsection (1), determined the effective risk-weight of a securitization exposure, the institution shall –

(a) in the case of funded credit protection –

(i) calculate the risk-weighted amount of the securitization exposure by multiplying the relevant amount of the exposure (after taking into account the credit protection held in respect of it) by that effective risk-weight; and

(ii) apply sections 6.66 to 6.71 to the treatment and recognition of any collateral constituting the credit protection;

(b) in the case of unfunded credit protection –

(i) calculate the risk-weighted amount of the securitization exposure by

multiplying the portion which is covered by credit protection (after taking into account any currency mismatch and maturity mismatch) by the risk-weight of the credit protection provider and adding this to the amount arrived at by multiplying the relevant amount of the exposure, less the portion which is covered by credit protection, by that effective risk-weight; and

(ii) apply sections 6.66 and 6.73 to 6.82 to the treatment and recognition of guarantees and credit derivative contracts other than credit-linked notes.

(3) In this section –

"relevant amount" ( ), in relation to a securitization position –

(a) if the position is an on-balance sheet securitization position, means the principal amount of the position;

(b) if the position is an off-balance sheet securitization position, means the credit equivalent amount of the position.

7.53 Treatment of recognized credit risk mitigation – partial credit protection

(1) Where the credit protection for securitization exposures in relation to a securitization transaction covers first losses, or covers losses proportionately in accordance with the seniority of different tranches in the transaction, an authorized institution which has securitization exposures in respect of the transaction shall –

(a) only reduce the capital charge for the securitization exposure in respect of that portion of the securitization exposure which is covered by the credit protection; and

(b) apply section 7.52 to the portion which is covered by the credit protection.

(2) Where the credit protection for securitization exposures in respect of a securitization transaction covers losses partially but not proportionately as specified in subsection (1), an authorized institution which has securitization exposures in respect of the transaction shall –

(a) if the amount of credit protection is not sufficient to cover all the institution's exposures –

(i) apply the credit protection as against the exposures in a descending order of seniority of the exposures;

(ii) treat as the uncovered portion any exposures to which the credit protection does not so apply;

(b) calculate the risk-weighted amount of the portion which is covered by credit protection in accordance with sections 7.44 to 7.50, subject to modifications in respect of the thickness of tranche where the principal amount of the tranche concerned is adjusted for the funded and unfunded credit protection in accordance with section 7.52(2)(a) or (b) respectively.

7.54 Treatment of maturity mismatches

For the purposes of calculating the risk-weighted amount of an authorized institution's securitization exposures covered by credit protection, where there is a maturity mismatch between the securitization exposures and the credit protection, the institution shall apply section 7.29(3) and (4) as if a reference to an underlying exposure in a synthetic securitization transaction in that section were a reference to a securitization exposure covered by credit protection.

PART 8

CALCULATION OF OPERATIONAL RISK

Division 1 – General

8.1 Interpretation of Part 8

In this Part, unless the context otherwise requires –

"first year" ( ), in relation to the last 3 years, means the last calendar quarter of those years and the 3 immediately preceding calendar quarters;

"gross income" ( ) means the sum of an authorized institution's net interest income and non-interest income before the deduction from any such income of –

(a) the operating expenses of the institution; and

(b) any collective provisions and specific provisions made by the institution;

"interest expenses" ( ) means the sum of –

(a) the interest paid by an authorized institution on its interest-bearing liabilities; and

(b) the accrued interest payable by the institution on its interest-bearing liabilities;

"interest income" ( ) means the sum of –

(a) the interest received by an authorized institution on its interest-bearing assets; and

(b) the accrued interest receivable by the institution on its interest-bearing assets;

"last 3 years" ( ) means the last 3 years ending on a calendar quarter end date;

"net interest income" ( ) means the interest income of an authorized institution after deducting the interest expenses of the institution;

"non-interest income" ( ) –

(a) subject to paragraph (b), means income recognized by an authorized institution from –

(i) gains minus losses arising from the institution's trading in –

(A) foreign currencies;

(B) exchange rate contracts;

(C) interest rate contracts;

(D) equity contracts;

(E) precious metal contracts;

(F) other commodity contracts;

(G) credit derivative contracts; and

(H) securities;

(ii) dividends earned from the institution's shareholdings in other companies (except dividends earned from a member of the institution's consolidation group);

(iii) fees and commission income after deducting fees and commission expenses (except fees and commission expenses for outsourcing services); and

(iv) any other income (except interest income) earned in the ordinary course of the business of the institution;

(b) does not include –

(i) reversals of –

(A) write-downs of inventories, property, plant and equipment of the institution; or

(B) provisions for bad and doubtful debts of the institution;

(ii) income recognized by the institution from disposals of items of property, plant and equipment of the institution;

(iii) income recognized by the institution from disposals of non-trading investments of the institution;

(iv) litigation settlements in favour of the institution; and

(v) income recognized by the institution from insurance claims for the benefit of the institution;

"second year" ( ), in relation to the last 3 years, means the year immediately preceding the first year;

"standardized business line" ( ) means a business line specified in section 8.8(a), (b), (c), (d), (e), (f), (g) or (h);

"third year" ( ), in relation to the last 3 years, means the year immediately preceding the second year;

"year" ( ) means a period of 4 consecutive calendar quarters.

8.2 Meaning of "loans and advances in the standardized business line of commercial banking"

(1) In this Part, "loans and advances in the standardized business line of commercial banking" ( ) –

(a) in relation to an authorized institution which uses the STC approach, means the amounts drawn down from the institution and for the time being outstanding in respect of –

(i) any borrowers who fall within any of the descriptions of exposures in subsection (2)(a), (b) and (c); or

(ii) any on-balance sheet exposures (other than equity exposures) of the institution which fall within any of the descriptions of exposures in subsection (2)(a), (b) and (c);

(b) in relation to an authorized institution which uses the BSC approach, means the amounts drawn down from the institution and for the time being outstanding in respect of –

(i) any borrowers who fall within any of the descriptions of exposures in subsection (3)(a) and (b); or

(ii) any on-balance sheet exposures (other than equity exposures) of the institution which fall within any of the descriptions of exposures in subsection (3)(a) and (b);

(c) in relation to an authorized institution which uses the IRB approach, means the amounts drawn down from the institution and for the time being outstanding in respect of –

(i) any borrowers who fall within any of the descriptions of exposures in subsection (4)(a) and (b); or

(ii) any on-balance sheet exposures (other than equity exposures) of the institution which fall within any of the descriptions of exposures in subsection (4)(a) and (b).

(2) The exposures referred to in subsection (1)(a)(i) are –

(a) exposures which are classified into a class of exposures referred to in section 4.5(a), (b), (c), (d), (e) or (f);

(b) any other exposures –

(i) which are classified into a class of exposures referred to in section 4.5(k); and

(ii) which the institution regards as falling within the standardized business line of commercial banking;

(c) exposures which would have been classified into a class of exposures referred to in section 4.5(a), (b), (c), (d), (e) or (f) if they had not been classified into a class of exposures referred to in section 4.5(*l*).

(3) The exposures referred to in subsection (1)(b)(i) are –

(a) exposures which are classified into a class of exposures referred to in section 5.5(a), (b), (c) or (d);

(b) any other exposures –

(i) which are classified into a class of exposures referred to in section 5.5(g); and

(ii) which the institution regards as falling within the standardized business line of commercial banking.

(4) The exposures referred to in subsection (1)(c)(i) are –

(a) exposures which are classified into an IRB class of exposures referred to in item 1, 2 or 3 of Table 6.1;

(b) any other exposures –

(i) which are classified into an IRB class of exposures referred to in item 6 of Table 6.1; and

(ii) which the institution regards as falling within the standardized business line of commercial banking.

8.3 Meaning of "loans and advances in the standardized business line of retail banking"

(1) In this Part, "loans and advances in the standardized business line of retail banking" ( ) –

(a) in relation to an authorized institution which uses the STC approach, means the amounts drawn down from the institution and for the time being outstanding in respect of –

(i) any borrowers who fall within any of the descriptions of exposures in subsection (2)(a), (b) and (c); or

(ii) any on-balance sheet exposures (other than equity exposures) of the institution which fall within any of the descriptions of exposures in subsection (2)(a), (b) and (c);

(b) in relation to an authorized institution which uses the BSC approach, means the amounts drawn down from the institution and for the time being outstanding in respect of –

(i) any borrowers who fall within any of the descriptions of exposures in subsection (3)(a) and (b); or

(ii) any on-balance sheet exposures (other than equity exposures) of the institution which fall within any of the descriptions of exposures in subsection (3)(a) and (b);

(c) in relation to an authorized institution which uses the IRB approach, means the amounts drawn down from the institution and for the time being outstanding in respect of –

(i) any borrowers who fall within any of the descriptions of exposures in subsection (4)(a) and (b); or

(ii) any on-balance sheet exposures (other than equity exposures) of the institution which fall within any of the descriptions of exposures in subsection (4)(a) and (b).

(2) The exposures referred to in subsection (1)(a)(i) are –

(a) exposures which are classified into a class of exposures referred to in section 4.5(*i*) or (j);

(b) any other exposures –

(i) which are classified into a class of exposures referred to in section 4.5(k); and

(ii) which the institution regards as falling within the standardized business line of retail banking;

(c) exposures which would have been classified into a class of exposures referred to in section 4.5(*i*) or (j) if they had not been classified into a class of exposures referred to in section 4.5(*l*).

(3) The exposures referred to in subsection (1)(b)(i) are –

(a) exposures which are classified into a class of exposures referred to in section 5.5(f);

(b) any other exposures –

(i) which are classified into a class of exposures referred to in section 5.5(g); and

(ii) which the institution regards as falling within the standardized business line of retail banking.

(4) The exposures referred to in subsection (1)(c)(i) are –

(a) exposures which are classified into an IRB class of exposures referred to in item 4 of Table 6.1;

(b) any other exposures –

(i) which are classified into an IRB class of exposures referred to in item 6 of Table 6.1; and

(ii) which the institution regards as falling within the standardized business line of retail banking.

Division 2 – Calculation of operational risk : BIA approach

8.4 Application of Division 2

(1) This Division applies to an authorized institution which uses the BIA approach to calculate the capital charge for its operational risk.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the BIA approach to calculate the capital charge for its operational risk.

8.5 Calculation of capital charge for operational risk under BIA approach

(1) An authorized institution shall calculate the capital charge for its operational risk for the last 3 years by –

(a) aggregating the gross income recognized by the institution in the first year;

(b) aggregating the gross income recognized by the institution in the second year;

(c) aggregating the gross income recognized by the institution in the third year;

(d) multiplying the gross income of the institution in each of the first year, second year and third year, where positive, by a capital charge factor of 15%; and

(e) aggregating the capital charges calculated under paragraph (d) for the last 3 years and obtaining the arithmetic mean of the aggregate capital charge for the last 3 years by dividing that aggregate figure by the number of the last 3 years in which the gross income is positive.

(2) The calculation method described in subsection (1) is expressed by Formula 8.1.

FORMULA 8.1

CALCULATION OF CAPITAL CHARGE FOR OPERATIONAL RISK UNDER BIA APPROACH

$$K_{BIA} = [\Sigma(GI_{1\ldots n} \times \alpha)] / n$$

where –

K_{BIA} = the capital charge for operational risk calculated under the BIA approach;

GI = gross income, where positive, of the last 3 years;

n = number of the last 3 years for which gross income is positive; and

α = 15%.

(3) For the avoidance of doubt, an authorized institution shall, in using Formula 8.1 –

(a) exclude from the numerator (GI) any of its gross income for a year which is negative or zero;

(b) exclude from the denominator (n) any year for which its gross income is negative or zero.

8.6 Calculation of risk-weighted amount for operational risk under BIA approach

An authorized institution shall calculate the risk-weighted amount for its operational risk by multiplying the capital charge for its operational risk as calculated under section 8.5 by 12.5.

Division 3 – Calculation of operational risk : STO approach

8.7 Application of Division 3

(1) This Division applies to an authorized institution which uses the STO approach to calculate the capital charge for its operational risk.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the STO approach to calculate the capital charge for its operational risk.

8.8 Classification of authorized institution's business activities into standardized business lines

An authorized institution shall, based on the principles specified in section 2 of Schedule 2.2, classify its business activities, and the gross income in respect of each of those business activities, into the standardized business lines set out in the following paragraphs and more particularly described in Schedule 8.1 –

(a) corporate finance;

(b) trading and sales;

(c) retail banking;

(d) commercial banking;

(e) payment and settlement;

(f) agency services;

(g) asset management; and

(h) retail brokerage.

8.9 Calculation of capital charge for operational risk under STO approach

(1) An authorized institution shall calculate the capital charge for each standardized business line for the last 3 years by –

(a) aggregating the gross income recognized by the institution in respect of each of the standardized business lines in the first year;

(b) aggregating the gross income recognized by the institution in respect of each of the standardized business lines in the second year;

(c) aggregating the gross income recognized by the institution in respect of each of the standardized business lines in the third year; and

(d) multiplying the gross income of the institution for each standardized business line in each of the first year, second year and third year calculated under paragraphs (a), (b) and (c) by the capital charge factor applicable to that business line set out in Table 8.1.

TABLE 8.1

CAPITAL CHARGE FACTOR APPLICABLE TO STANDARDIZED BUSINESS LINES

Standardized business line	Capital charge factor
Corporate finance	18%
Trading and sales	18%
Retail banking	12%
Commercial banking	15%
Payment and settlement	18%
Agency services	15%
Asset management	12%
Retail brokerage	12%

(2) Subject to subsection (4), an authorized institution shall calculate the capital charge for its operational risk by –

(a) adding together the capital charges calculated under subsection (1) in respect of the 8 standardized business lines for each of the last 3 years; and

(b) aggregating the capital charges calculated under paragraph (a) for the last 3 years and obtaining the arithmetic mean of the aggregate capital charge for the last 3 years by dividing that aggregate figure by 3.

(3) The calculation method described in subsections (1) and (2) is expressed by Formula 8.2.

FORMULA 8.2

CALCULATION OF CAPITAL CHARGE FOR OPERATIONAL RISK UNDER STO APPROACH

$$K_{STO} = \{\Sigma_{years\ 1-3} \max [\Sigma(GI_{1-8} \times \beta_{1-8}), 0]\} / 3$$

where –

K_{STO} = the capital charge for operational risk calculated under the STO approach;

GI_{1-8} = gross income for each of the standardized business lines for each of the last 3 years; and

β_{1-8} = the capital charge factor assigned to each of the standardized business lines as specified in Table 8.1.

(4) An authorized institution, when calculating the capital charge for its operational risk –

(a) may, in any given year of the last 3 years, offset a positive capital charge for any standardized business line in the given year with a negative capital charge for any other standardized business line in the given year;

(b) shall not offset positive or negative capital charges for standardized business lines between any of the last 3 years;

(c) if the aggregate capital charge for all the standardized business lines in any given year of the last 3 years is negative, shall assign a zero value to that aggregate capital charge and count the given year in the denominator when calculating the last 3 years arithmetic mean.

8.10 Calculation of risk-weighted amount for operational risk under STO approach

An authorized institution shall calculate the risk-weighted amount for its operational risk by multiplying the capital charge for its operational risk as calculated under section 8.9 by 12.5.

Division 4 – Calculation of operational risk : ASA approach

8.11 Application of Division 4

(1) This Division applies to an authorized institution which uses the ASA approach to calculate the capital charge for its operational risk.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Division is a reference to an authorized institution which uses the ASA approach to calculate the capital charge for its operational risk.

8.12 Application of section 8.8 in classification of authorized institution's business activities into standardized business lines

Section 8.8 applies to an authorized institution which uses the ASA approach to calculate the capital charge for its operational risk as it applies to an authorized institution which uses the STO approach to calculate the capital charge for its operational risk.

8.13 Calculation of capital charge for operational risk in all standardized business lines except retail banking and commercial banking under ASA approach

Section 8.9(1) applies, with all necessary modifications, to an authorized institution which uses the ASA approach to calculate the capital charge for its operational risk in respect of the following 6 standardized business lines –

(a) corporate finance;

(b) trading and sales;

(c) payment and settlement;

(d) agency services;

(e) asset management; and

(f) retail brokerage,

as it applies to an authorized institution which uses the STO approach to calculate the capital charge for its operational risk in respect of all the 8 standardized business lines.

8.14 Calculation of capital charge for operational risk in retail banking under ASA approach

(1) An authorized institution shall calculate the amount of loans and advances in the standardized business line of retail banking for the last 3 years by –

(a) taking the arithmetic mean of the amount of loans and advances in the standardized business line of retail banking as at each of the 4 calendar quarter end dates of the first year;

(b) taking the arithmetic mean of the amount of loans and advances in the standardized business line of retail banking as at each of the 4 calendar quarter end dates of the second year; and

(c) taking the arithmetic mean of the amount of loans and advances in the standardized business line of retail banking as at each of the 4 calendar quarter end dates of the third year.

(2) An authorized institution shall multiply each of the 3 figures calculated under subsection (1)(a), (b) and (c) by a factor of 0.035.

(3) An authorized institution shall calculate the capital charge for its operational risk in respect of the standardized business line of retail banking for each of the last 3 years by multiplying the figures obtained by the application of subsection (2) for the first year, second year and third year by a capital charge factor of 12%.

(4) The calculation method described in subsections (1), (2) and (3) is expressed by Formula 8.3.

FORMULA 8.3

CALCULATION OF CAPITAL CHARGE FOR OPERATIONAL RISK IN RETAIL BANKING UNDER ASA APPROACH

$$K_{RB} = LA_{RB} \times 0.035 \times \beta_{RB}$$

where –

K_{RB} = the capital charge for the standardized business line of retail banking;

LA_{RB} = loans and advances in the standardized business line of retail banking for each year; and

β_{RB} = the capital charge factor for the standardized business line of retail banking.

8.15 Calculation of capital charge for operational risk in commercial banking under ASA approach

An authorized institution shall comply with section 8.14 in respect of the standardized business line of commercial banking as if –

(a) every reference in section 8.14 (including Formula 8.3) to the standardized business line of retail banking were a reference to the standardized business line of commercial banking; and

(b) a capital charge factor of 15% were substituted for the capital charge factor of 12% specified in section 8.14(3).

8.16 Calculation of capital charge for operational risk under ASA approach

(1) Subject to subsections (2), (3) and (4), an authorized institution shall calculate the capital charge for its operational risk by –

(a) adding together for each of the last 3 years –

(i) the capital charges calculated under section 8.13 in respect of the following 6 standardized business lines –

(A) corporate finance;

(B) trading and sales;

(C) payment and settlement;

(D) agency services;

(E) asset management; and

(F) retail brokerage;

(ii) the capital charge calculated under section 8.14 in respect of the standardized business line of retail banking; and

(iii) the capital charge calculated under section 8.15 in respect of the standardized business line of commercial banking; and

(b) aggregating the capital charges calculated under paragraph (a) for the last 3 years and obtaining the arithmetic mean of the aggregate capital charge for the last 3 years by dividing that aggregate figure by 3.

(2) An authorized institution may, in any given year of the last 3 years, offset a positive capital charge for any standardized business line, other than retail banking and commercial banking, in the given year with a negative capital charge for any other standardized business line, other than retail banking or commercial banking, in the given year.

(3) Where the aggregate capital charge for all the standardized business lines, other than retail banking and commercial banking, of an authorized institution in any given year of the last 3 years is negative, the institution –

(a) shall assign a zero value to that aggregate capital charge; and

(b) shall not offset the capital charge for the standardized business line of retail banking or commercial banking with that negative aggregate capital charge.

(4) An authorized institution may –

(a) aggregate the total gross income for all of its standardized business lines except retail banking and commercial banking if the institution applies a capital charge factor of 18% to those standardized business lines;

(b) aggregate the loans and advances in the standardized business line of retail banking and the loans and advances in the standardized business line of commercial banking if the institution applies a capital charge factor of 15% to those standardized business lines.

8.17 Calculation of risk-weighted amount for operational risk under ASA approach

An authorized institution shall calculate the risk-weighted amount for its operational risk by multiplying the capital charge for its operational risk as calculated under section 8.16 by 12.5.

Division 5 – Exceptions

8.18 Provisions applicable where certain authorized institutions have difficulties with BIA approach, STO approach or ASA approach

Where an authorized institution –

(a) has been in operation for less than 18 months on any calendar quarter end date subsequent to the date on which this section comes into operation;

(b) has recorded negative gross income for the last 3 years immediately preceding any calendar quarter end date subsequent to the date on which this section comes into operation; or

(c) is undergoing a merger, acquisition or material restructuring,

the institution –

(d) shall not use the BIA approach, STO approach or ASA approach to calculate the capital charge for its operational risk except with the prior approval of the Monetary Authority;

(e) may, with the prior approval of the Monetary Authority, use an alternative to the BIA approach, STO approach or ASA approach to calculate the capital charge for its operational risk.

8.19 Transitional arrangements

(1) Where, on any calendar quarter end date subsequent to the date on which this section comes into operation, an authorized institution has been in operation for 18 months or more but less than 3 years, the institution shall treat any partial year of operation of 6 months or more as a full year, and any partial year of operation of less than 6 months as zero, for the purposes of calculating all or any of the following under the BIA approach, STO approach or ASA approach –

(a) the gross income for the last 3 years;

(b) the loans and advances in the standardized business line of retail banking for the last 3 years;

(c) the loans and advances in the standardized business line of commercial banking for the last 3 years.

(2) Without prejudice to subsection (1), on any calendar quarter end date subsequent to the date on which this section comes into operation –

(a) where an authorized institution has been in operation for 2 years and 6 months or more but less than 3 years, the institution shall –

(i) annualize the gross income of the partial year and use a denominator of 3;

(ii) if the institution uses the ASA approach, calculate the amount of its loans and advances in the standardized business line of retail banking and its loans and advances in the standardized business line of commercial banking for the partial year by taking the arithmetic mean of the amount outstanding at the end of each full calendar quarter within the partial year;

(b) where an authorized institution has been in operation for more than 2 years but less than 2 years and 6 months, the institution shall treat its gross income for the partial year or its loans and advances in the standardized business line of retail banking and its loans and advances in the standardized business line of commercial banking, for the partial year, as the case requires, as zero and use a denominator of 2;

(c) where an authorized institution has been in operation for 18 months or more but less than 2 years, the institution shall –

(i) annualize the gross income of the partial year and use a denominator of 2;

(ii) if the institution uses the ASA approach, calculate the amount of its loans and advances in the standardized business line of retail banking and its loans and advances in the standardized business line of commercial banking for the partial year by taking the arithmetic mean of the amount outstanding at the end of each full calendar quarter within the partial year.

PART 9

CALCULATION OF MARKET RISK : STM APPROACH

Division 1 – General

9.1 Application of Part 9

(1) This Part applies to an authorized institution which uses the STM approach to calculate its market risk.

(2) Unless the context requires otherwise, a reference to an authorized institution in this Part is a reference to an authorized institution which uses the STM approach to calculate its market risk.

(3) Divisions 2, 3, 4 and 5 do not apply to an authorized institution's option exposures in debt securities, interest rates, equities, foreign exchange (including gold) and commodities except to the extent, if any, specified in Division 6, 7 or 8.

9.2 Interpretation of Part 9

In this Part, unless the context otherwise requires –

"commodity-related derivative contract" ( ) means a futures contract, forward contract, swap contract, option contract or any similar derivative contract the value of which is derived from the value of an underlying commodity or an underlying commodity index (being an index calculated by reference to a basket of commodities);

"conversion factor" ( ) means a number published by a futures exchange for determining the price for each debt security deliverable against a bond futures contract;

"debt-related derivative contract" ( ) means a futures contract, forward contract, swap contract, option contract or any similar derivative contract the value of which is derived from the value of an underlying debt security or an underlying debt security index (being an index calculated by reference to a basket of debt securities);

"debt security" ( ) means –

(a) a fixed or floating rate bond;

(b) a negotiable certificate of deposit;

(c) a non-convertible preference share; or

(d) a convertible bond, preference share, or any other instrument, which trades like a bond, certificate or share falling within paragraph (a), (b) or (c);

"delta" ( ), in relation to an option contract, means a measure of the rate of change in the value of the option contract to changes in the value of the underlying exposure of the option contract;

"delta-plus approach" ( ), in relation to the calculation of an authorized institution's market risk capital charge for its option exposures to debt securities, interest rates, equities, foreign exchange (including gold) and commodities, means the approach set out in Division 8;

"delta-weighted position" ( ), in relation to an option contract, means the value of the underlying exposure of the option contract multiplied by the corresponding delta;

"equity" ( ) means –

(a) an ordinary share (whether voting or non-voting); or

(b) a convertible bond, preference share, or any other instrument, which trades like a share falling within paragraph (a);

"equity-related derivative contract" ( ) means a futures contract, forward contract, swap contract, option contract or any similar derivative contract the value of which is derived from the value of an underlying equity or an underlying equity index (being an index calculated by reference to a basket of equities);

"exchange rate-related derivative contract" ( ) means a futures contract, forward contract, swap contract, option contract or any similar derivative contract the value of which is derived from the value of an underlying currency (including gold) or an underlying currency index (being an index calculated by reference to a basket of currencies);

"gamma" ( ), in relation to an option contract, means a measure of the rate of change in delta of the option contract to changes in the value of the underlying exposure of the option contract;

"general market risk" ( ), in relation to an authorized institution, means the risk of loss, arising from changes in interest rates, exchange rates, equity prices or commodity prices, in the value of –

(a) the institution's trading book positions held in –

(i) debt securities;

(ii) debt-related derivative contracts;

(iii) interest rate derivative contracts;

(iv) equities; and

(v) equity-related derivative contracts; and

(b) the institution's positions held in –

(i) foreign exchange;

(ii) exchange rate-related derivative contracts;

(iii) commodities; and

(iv) commodity-related derivative contracts;

"interest rate derivative contract" ( ) means a futures contract, forward contract, swap contract, option contract or any similar derivative contract –

(a) the value of which changes in response to changes in interest rates; but

(b) the underlying exposure of which is neither a debt security nor an index calculated by reference to a basket of debt securities;

"investment grade" ( ) means credit quality grade 1, 2 or 3 derived from mapping –

(a) the ECAI issuer rating of an issuer, being a sovereign, of any debt security; or

(b) the ECAI issue specific rating of any debt security issued by a bank, securities firm or corporate (within the meaning of section 4.2 or 6.2(1), as the case requires),

to a scale of credit quality grades set out in the Tables in Schedule 4.1;

"market risk capital charge" ( ), in relation to an authorized institution, means the amount of the institution's capital required to cover specific risk or general market risk, or both, for an exposure or a portfolio of exposures;

"market risk capital charge factor" ( ), in relation to an authorized institution, means a percentage specified in this Part for the calculation of the institution's market risk capital charge;

"mark-to-model" ( ) means an approach to valuing an exposure, or a portfolio of exposures, where the value is benchmarked, extrapolated or calculated from an internal model based on a set of market data;

"matched positions" ( ), in relation to an authorized institution, means 2 opposite positions held by the institution where the risk of loss arising from either position can be offset by the other position;

"maturity method" ( ), in relation to the calculation of an authorized institution's market risk capital charge for general market risk for its interest rate exposures, means the approach set out in section 9.8;

"position" ( ), in relation to an authorized institution, means the holding or disposal by the institution of an exposure, or a portfolio of exposures, resulting in risk being taken by the institution on market price movements in respect of the exposure, or portfolio of exposures, as the case may be;

"risk category" ( ), in relation to the calculation of an authorized institution's market risk, means the class of the institution's market risk exposures which are at risk from –

(a) changes in debt security prices or interest rates;

(b) changes in exchange rates;

(c) changes in equity prices; or

(d) changes in commodity prices;

"simplified approach" ( ), in relation to the calculation of an authorized institution's market risk capital charge for its option exposures to debt securities, interest rates, equities, foreign exchange (including gold) and commodities, means the approach set out in Division 7;

"specific risk" ( ), in relation to an authorized institution, means –

(a) the risk of loss, arising from changes in the price of debt securities owing to factors relating to the issuers of the debt securities, in the value of the institution's trading book positions held in the debt securities;

(b) the risk of loss, arising from changes in the price of equities owing to factors relating to the issuers of the equities, in the value of the institution's trading book positions held in the equities;

(c) the risk of loss, arising from changes in the price of debt-related derivative contracts owing to factors relating to the issuers of the underlying debt securities, in the value of the institution's trading book positions held in the debt-related derivative contracts; and

(d) the risk of loss, arising from changes in the price of equity-related derivative contracts owing to factors relating to the issuers of the underlying equities, in the value of the institution's trading book positions held in the equity-related derivative contracts;

"specific risk-free security" ( ) means a hypothetical debt security, free of specific risk, used for the calculation of the market risk capital charge for general market risk relating to derivative contracts;

"vega" ( ), in relation to an option contract, means a measure of the rate of change in the value of the option contract to changes in the volatility of the value of the underlying exposure of the option contract.

9.3 Positions to be used to calculate market risk

(1) Subject to subsection (2), an authorized institution shall calculate its market risk to take into account the risk of losses arising from fluctuations in the value of –

(a) the institution's trading book positions held in –

(i) debt securities;

(ii) debt-related derivative contracts;

(iii) interest rate derivative contracts;

(iv) equities; and

(v) equity-related derivative contracts; and

(b) the institution's positions held in –

(i) foreign exchange;

(ii) exchange rate-related derivative contracts;

(iii) commodities; and

(iv) commodity-related derivative contracts.

(2) An authorized institution shall not include a position in the calculation of its market risk if the position is –

(a) a recognized credit derivative contract (within the meaning of section 4.2, 5.2 or 6.2(1), as the case requires) booked in the institution's trading book as a hedge to a credit exposure booked in the institution's banking book; or

(b) an exposure which under sections 3.14 and 3.15 is required to be deducted from any of the institution's core capital and supplementary capital.

(3) An authorized institution shall value its positions, whether based on a marking-to-market or marking-to-model methodology, in a prudent manner (including by taking into account the liquidity of the positions).

(4) Where the Monetary Authority is satisfied that an authorized institution has contravened subsection (3), the Monetary Authority may, by notice in writing given to the institution, require the institution to reduce all of its positions, or such class of its positions as specified in the notice, to the limit, if any, specified in the notice, beginning on such date, or the occurrence of such event, as specified in the notice.

(5) An authorized institution shall comply with the requirements of a notice given to it under subsection (4).

(6) Where a position of an authorized institution does not fall into subsection (1) by virtue of subsection (2)(a), the institution shall apply Part 4, 5, 6 or 7, as the case requires, to calculate the credit risk for that position.

9.4 Calculation of market risk capital charge for each risk category

(1) An authorized institution shall calculate in accordance with this Part the market risk capital charge for its exposures falling into each risk category.

(2) Subject to subsection (3) and section 9.26(2), an authorized institution shall use the fair value of its positions to calculate the market risk capital charge.

(3) Where the stated notional amount of an exposure held by an authorized institution is leveraged or enhanced by the structure of the exposure, the institution shall use the effective notional amount of the exposure taking into account that the stated amount is so leveraged or enhanced, as the case may be, for the purposes of this Part.

9.5 Calculation of risk-weighted amount for market risk

An authorized institution shall calculate its risk-weighted amount for market risk by multiplying the aggregate of the market risk capital charge as calculated pursuant to section 9.4(1) by 12.5.

Division 2 – Calculation of market risk capital charge for interest rate exposures

9.6 Calculation of market risk capital charge

An authorized institution shall, for the purposes of calculating the market risk capital charge for its interest rate exposures –

(a) calculate in accordance with section 9.7 the market risk capital charge for the specific risk of each of its trading book positions (whether long or short) in debt securities and debt-related derivative contracts; and

(b) calculate in accordance with section 9.8 the market risk capital charge for the general market risk of –

(i) its trading book positions (whether long or short) in debt securities, debt-related derivative contracts and interest rate derivative contracts;

(ii) the interest rate exposures arising from its trading book positions (whether long or short) in equity-related derivative contracts; and

(iii) the interest rate exposures arising from its positions (whether long or short) in commodity-related derivative contracts.

9.7 Calculation of market risk capital charge for specific risk

(1) Subject to subsections (2) to (10), an authorized institution shall for the purposes of calculating the market risk capital charge for specific risk for its trading book positions (whether long or short) in debt securities and debt-related derivative contracts –

(a) assign those positions into the classes specified in column 1 of Table 9.1, the credit quality grades specified in column 2 of that Table and, if applicable, the residual maturities specified in column 3 of that Table;

(b) multiply those positions by the appropriate market risk capital charge factors for specific risk specified in column 3 of Table 9.1; and

(c) calculate the total market risk capital charge for specific risk as the sum of the market risk capital charge for specific risk for each of those positions.

TABLE 9.1

MARKET RISK CAPITAL CHARGE FACTORS
FOR SPECIFIC RISK

Class	Credit quality grade	Market risk capital charge factor for specific risk
sovereign	1	0%
	2 or 3	0.25% (residual maturity of not more than 6 months)
		1.00% (residual maturity of more than 6 months but not more than 24 months)
		1.60% (residual maturity of more than 24 months)
	4 or 5	8.00%
	6	12.00%
	unrated	8.00%
qualifying		0.25% (residual maturity of not more than 6 months)
		1.00% (residual maturity of more than 6 months but not more than 24 months)
		1.60% (residual maturity of more than 24 months)
non-qualifying	4	8.00%
	5	12.00%
	unrated	8.00%

(2) An authorized institution shall not offset between positions referred to in subsection (1) for the purposes of that subsection except for –

(a) long and short positions in identical issues (including positions in derivative contracts) with the same issuer, coupon, currency and maturity; and

(b) credit derivative contracts set out in section 9.29, 9.30 or 9.31.

(3) For the purposes of subsection (1) –

(a) if –

(i) the issuer of any debt securities referred to in that subsection or, in the case of debt-related derivative contracts referred to in that subsection, the issuer of the underlying debt securities, has an ECAI issuer rating; or

(ii) any debt securities referred to in that subsection or, in the case of debt-related derivative contracts referred to in that subsection, any underlying debt securities, have an ECAI issue specific rating,

an authorized institution shall, subject to paragraphs (b), (c) and (d), map the ECAI issuer rating or the ECAI issue specific rating, as the case may be, to a scale of credit quality grades in accordance with the Tables in Schedule 4.1;

(b) subject to paragraph (c), if the debt securities referred to in that subsection are issued by a sovereign or, in the case of debt-related derivative contracts referred to in that subsection, if the underlying debt securities are issued by a sovereign, an authorized institution shall determine the credit quality grade by reference to the ECAI issuer rating of that sovereign;

(c) an authorized institution shall treat as unrated the issuer of any debt securities or, in the case of debt-related derivative contracts, the issuer of the underlying debt securities, referred to in paragraph (b) which does not have an ECAI issuer rating;

(d) subject to paragraph (e), if the debt securities or debt-related derivative contracts referred to in that subsection do not fall within paragraph (b), an authorized institution shall determine the credit quality grade to be used by reference to, in the case of debt securities, the ECAI issue specific rating of the debt securities or, in the case of debt-related derivative contracts, the ECAI issue specific rating of the underlying debt securities;

(e) an authorized institution shall treat as unrated any debt securities or, in the case of debt-related derivative contracts, the underlying debt securities, referred to in paragraph (d) which do not have an ECAI issue specific rating;

(f) an authorized institution may only assign a market risk capital charge factor of 0% to –

(i) debt securities referred to in that subsection issued by a sovereign with a credit quality grade of 2 or 3 as determined under paragraph (b); or

(ii) debt-related derivative contracts referred to in that subsection in respect of which the underlying debt securities are issued by a sovereign with a credit quality grade of 2 or 3 as determined under paragraph (b),

if, and only if, those debt securities or, in the case of those debt-related derivative contracts, those underlying debt securities, are denominated in the domestic currency of that sovereign and funded by the institution in that currency.

(4) An authorized institution may only include in the qualifying class in Table 9.1 –

(a) debt securities issued by multilateral development banks and debt-related derivative contracts where the underlying debt securities are issued by multilateral development banks;

(b) debt securities, not falling within paragraph (a), which are rated investment grade and debt-related derivative contracts where the underlying debt securities, not falling within paragraph (a), which are rated investment grade; and

(c) if the institution uses the IRB approach to calculate its credit risk, unrated debt securities, and debt-related derivative contracts if the underlying debt securities are unrated, where –

(i) the debt securities, or the underlying debt securities, as the case may be, are assessed as equivalent to investment grade under the institution's rating system on the basis that the debt securities, or the underlying debt securities, as the case may be, have a PD assigned by the institution's rating system of not more than the PD implied by the long-run average PD (being a period which captures a reasonable mix of high-default and low-default years of an

economic cycle) of a debt security rated investment grade; and

(ii) the issuer of the debt securities, or the issuer of the underlying debt securities, as the case may be –

(A) has any debt securities or equities listed on a recognized stock exchange; or

(B) is subject to supervisory arrangements regarding the maintenance of adequate capital to support its business activities comparable to those prescribed for authorized institutions under the Ordinance and these Rules.

(5) An authorized institution shall –

(a) include any debt securities in the non-qualifying class in Table 9.1 if –

(i) the debt securities are not issued by a sovereign; or

(ii) the debt securities are not included in the qualifying class under subsection (4);

(b) include any debt-related derivative contracts in the non-qualifying class in Table 9.1 if –

(i) the underlying debt securities are not issued by a sovereign; or

(ii) the debt-related derivative contracts are not included in the qualifying class under subsection (4).

(6) Where the issuer of any debt securities referred to in this section or, in the case of any debt-related derivative contracts referred to in this section, the issuer of any underlying debt securities, has more than one ECAI issuer rating assigned to the issuer , an authorized institution shall, for the purposes of this section, apply section 4.20(2), with all necessary modifications, to the ECAI issuer ratings concerned (as if the references to ECAI issue specific ratings in that subsection were references to ECAI issuer ratings) to ascertain which one of them shall be used for those purposes.

(7) Where any debt securities referred to in this section or, in the case of any debt-related derivative contracts referred to in this section, any underlying debt securities, have more than one ECAI issue specific rating assigned to them, an authorized institution shall, for the purposes of this section, apply section 4.20(2), with all necessary modifications, to the ECAI issue specific ratings concerned to ascertain which one of them shall be used for those purposes.

(8) Where the Monetary Authority is satisfied that an authorized institution's market risk capital charge for specific risk is underestimated for any non-qualifying debt securities (being debt securities falling within subsection (5)) or non-qualifying debt-related derivative contracts (being debt-related derivative contracts falling within subsection (5)) which have a high yield to redemption relative to debt securities or debt-related derivative contracts falling within subsection (3)(b), the Monetary Authority may, by notice in writing given to the institution –

(a) require the institution to apply a higher market risk capital charge factor for specific risk to such non-qualifying debt securities or debt-related derivative contracts, as the case may be, as specified in the notice;

(b) prohibit offsetting, for the purposes of calculating the institution's market risk capital charge for general market risk, between such debt securities or debt-related derivative contracts and such other debt securities or debt-related derivative contracts as specified in the notice.

(9) An authorized institution shall comply with the requirements of a notice given to it under subsection (7).

(10) For the avoidance of doubt, it is hereby declared that this section does not apply to interest rate derivative contracts.

(11) In this section, "sovereign" ( ) includes a sovereign foreign public sector entity.

9.8 Calculation of market risk capital charge for general market risk

(1) An authorized institution shall, for the purposes of calculating the market risk capital charge for general market risk –

(a) multiply its long and short positions in interest rate exposures in each time band specified in column 1 of Table 9.3 within the maturity ladder constructed in accordance with section 9.9 by the appropriate risk-weight specified in column 4 of that Table;

(b) offset the total risk-weighted long and short positions in each time band to produce a single net risk-weighted long or short position for each time band;

(c) apply a market risk capital charge factor of 10% on the matched position (being the lesser of the absolute values of the total risk-weighted long and short positions) of each time band, whether long or short, to arrive at a market risk capital charge for each matched position (referred to in this section as "vertical disallowance");

(d) subject to subsections (2) and (3) –

(i) first conduct a round of horizontal offsetting between the net risk-weighted positions for the time bands in each of the 3 zones subject to a scale of market risk capital charge factors, expressed as a percentage of the matched positions for each zone, as set out in Table 9.2;

(ii) then conduct a round of horizontal offsetting between the total net risk-weighted positions for the zones across the 3 zones (being between adjacent zones and between zone 1 and zone 3) subject to a scale of market risk capital charge factors, expressed as a percentage of the matched positions between the zones, set out in Table 9.2,

to arrive at a market risk capital charge for each matched position (referred to in this section as "horizontal disallowance"); and

(e) apply a market risk capital charge factor of 100% on the remaining net risk-weighted long or short position in interest rate exposures after carrying out the offsetting referred to in paragraphs (b) and (d).

TABLE 9.2

HORIZONTAL DISALLOWANCE

Zone	Time band		Market risk capital charge factor		
	Coupon of not less than 3% per annum	Coupon of less than 3% per annum	Within the zone	Between adjacent zones	Between zones 1 and 3
zone 1	not more than 1 month	not more than 1 month	40%		
	more than 1 month but not more than 3 months	more than 1 month but not more than 3 months			
	more than 3 months but not more than 6 months	more than 3 months but not more than 6 months			
	more than 6 months but not more than 12 months	more than 12 months but not more than 20 years			
	more than 12 months but not more than 20 years	more than 20 years			
zone 2	more than 1 year but not more than 2 years	more than 1.0 year but not more than 1.9 years	30%		
	more than 2 years but not more than 3 years	more than 1.9 years but not more than 2.8 years			
	more than 3 years but not more than 4 years	more than 2.8 years but not more than 3.6 years			
	more than 4 years but not more than 5 years	more than 3.6 years but not more than 4.5 years			
	more than 5 years but not more than 7 years	more than 4.5 years but not more than 5.7 years			
	more than 7 years but not more than 10 years	more than 5.7 years but not more than 7.3 years			
	more than 10 years but not more than 15 years	more than 7.3 years but not more than 9.3 years			
	more than 15 years but not more than 20 years	more than 9.3 years but not more than 10.6 years			
	more than 20 years	more than 10.6 years but not more than 12 years			
		more than 12 years but not more than 20 years			
		more than 20 years			

zone 3	more than 4 years but not more than 5 years	more than 3.6 years but not more than 4.3 years	40%	100%	
	more than 5 years but not more than 7 years	more than 4.3 years but not more than 5.7 years			
	more than 7 years but not more than 10 years	more than 5.7 years but not more than 7.3 years			
	more than 10 years but not more than 15 years	more than 7.3 years but not more than 9.3 years	30%		
	more than 15 years but not more than 20 years	more than 9.3 years but not more than 10.6 years			
	more than 20 years	more than 10.6 years but not more than 12 years			
		more than 12 years but not more than 20 years			
		more than 20 years			

(2) For the purposes of an authorized institution conducting horizontal offsetting under subsection (1)(d)(i), the institution shall –

(a) calculate the net risk-weighted long or short position of each time band by separately adding –

(i) long positions to long positions; and

(ii) short positions to short positions;

(b) in the case of long and short positions in the same zone, subject the matched position (being the lesser of the absolute values of the total net risk-weighted long and short positions for the zone) to a market risk capital charge factor of 40% for zone 1 and 30% for zone 2 and zone 3; and

(c) offset the positions of time bands within the same zone to create the matched position to which the market risk capital charge factor is applied under paragraph (b) and a total net risk-weighted long or short position for each zone.

(3) For the purposes of an authorized institution conducting horizontal offsetting under subsection (1)(d)(ii), the institution shall –

(a) in the case of opposite positions between adjacent zones (being one zone having a total net risk-weighted long position while another zone has a total net risk-weighted short position), subject the matched position (being the lesser of the

absolute values of the total net risk-weighted long position in one zone and the total net risk-weighted short position in another zone) to a market risk capital charge factor of 40%;

(b) offset the positions between adjacent zones to create the matched position to which the market risk capital charge factor is applied under paragraph (a) and a total net risk-weighted long or short position;

(c) subject to paragraph (d), in the case of opposite positions between zone 1 and zone 3, subject the matched position (being the lesser of the absolute values of the total net risk-weighted long or short position in zone 1 and the total net risk-weighted short or long position respectively in zone 3) to a market risk capital charge factor of 100%; and

(d) in order to calculate the horizontal disallowance between zone 1 and zone 3 for the purposes of paragraph (c) –

(i) if the total net risk-weighted positions of zone 1 and zone 2 are netted, treat the net position as the remaining position of zone 1;

(ii) if the total net risk-weighted positions of zone 2 and zone 3 are netted, treat the net position as the remaining position of zone 3.

(4) An authorized institution shall derive the market risk capital charge for general market risk for its portfolio of interest rate exposures by aggregating –

(a) the market risk capital charge for the remaining net risk-weighted long or short position calculated in accordance with subsection (1)(e);

(b) the total market risk capital charge for vertical disallowance for all time bands calculated in accordance with subsection (1)(c); and

(c) the total market risk capital charge for horizontal disallowance for individual zones and across different zones calculated in accordance with subsection (1)(d).

(5) An authorized institution shall calculate the market risk capital charge for general market risk for each currency separately, convert each amount so calculated into Hong Kong dollars at current market rates and then aggregate the amounts so calculated.

9.9 Construction of maturity ladder

(1) Subject to subsections (2) to (6), for the purposes of making the calculation required by section 9.8(1), an authorized institution shall –

(a) slot all of its long or short positions in debt securities, debt-related derivative contracts, interest rate derivative contracts and interest rate exposures arising from equity-related derivative contracts and commodity-related derivative contracts with a coupon of not less than 3% per annum into a maturity ladder comprising the 13 time bands set out in columns 1 and 2 of Table 9.3; and

(b) slot all of its long or short positions in debt securities, debt-related derivative contracts, interest rate derivative contracts and interest rate exposures arising from equity-related derivative contracts and commodity-related derivative contracts with a coupon of less than 3% per annum into a maturity ladder comprising the 15 time bands set out in columns 1 and 3 of Table 9.3.

TABLE 9.3

TIME BANDS AND RISK-WEIGHTS

Time band	Coupon of not less than 3% per annum	Coupon of less than 3% per annum	Risk-weight
1	not more than 1 month	not more than 1 month	0.00%
2	more than 1 month but not more than 3 months	more than 1 month but not more than 3 months	0.20%
3	more than 3 months but not more than 6 months	more than 3 months but not more than 6 months	0.40%
4	more than 6 months but not more than 12 months	more than 6 months but not more than 12 months	0.70%
5	more than 1 year but not more than 2 years	more than 1.0 year but not more than 1.9 years	1.25%
6	more than 2 years but not more than 3 years	more than 1.9 years but not more than 2.8 years	1.75%
7	more than 3 years but not more than 4 years	more than 2.8 years but not more than 3.6 years	2.25%
8	more than 4 years but not more than 5 years	more than 3.6 years but not more than 4.3 years	2.75%
9	more than 5 years but not more than 7 years	more than 4.3 years but not more than 5.7 years	3.25%

10	more than 7 years but not more than 10 years	more than 5.7 years but not more than 7.3 years	3.75%
11	more than 10 years but not more than 15 years	more than 7.3 years but not more than 9.3 years	4.50%
12	more than 15 years but not more than 20 years	more than 9.3 years but not more than 10.6 years	5.25%
13	more than 20 years	more than 10.6 years but not more than 12 years	6.00%
14		more than 12 years but not more than 20 years	8.00%
15		more than 20 years	12.50%

(2) For the purposes of subsection (1), an authorized institution shall –

(a) slot fixed rate exposures into the time bands set out in Table 9.3 in accordance with their respective residual maturities;

(b) slot floating rate exposures into the time bands set out in Table 9.3 in accordance with their respective residual terms to the next interest fixing date;

(c) regard interest rate exposures arising from derivative contracts as long and short positions and slot such positions into the time bands set out in Table 9.3 such that –

(i) interest rate futures contracts, interest rate forward contracts and forward rate agreements are treated as a combination of the long and short positions in a zero-coupon specific risk-free security whereby –

(A) a long or short position in an interest rate futures contract or interest rate forward contract is to be regarded as –

(I) a short or long position respectively with a maturity being the remaining period up to and including the delivery date of the underlying interest rate contract; and

(II) a long or short position respectively with a maturity being the remaining period up to and

including the delivery date of the underlying interest rate contract plus the contract period of the underlying interest rate contract; or

(B) a sold or purchased forward rate agreement is to be regarded as –

(I) a short or long position respectively with a maturity being the remaining period up to and including the settlement date of the agreement; and

(II) a long or short position respectively with a maturity being the remaining period up to and including the settlement date of the agreement plus the contract period of the agreement;

(ii) bond futures contracts and bond forward contracts are treated as a combination of the long and short positions in a zero-coupon specific risk-free security and

the underlying bond whereby a long or short position in a bond futures contract or bond forward contract is to be regarded as –

(A) a short or long position respectively in a zero-coupon specific risk-free security with a maturity being the remaining period up to and including the delivery date of the underlying bond; and

(B) a long or short position respectively in the underlying bond with a maturity being the remaining period up to and including the delivery date of the underlying bond plus the tenor of the underlying bond;

(iii) interest rate swap contracts under which the institution receives or pays floating rate interest and pays or receives respectively fixed rate interest are regarded as –

(A) a short or long position respectively in a fixed rate instrument with a maturity being the remaining period up to and including

the maturity date of the swap contract concerned; and

(B) a long or short position respectively in a floating rate instrument with a maturity being the remaining period up to and including the next interest fixing date.

(3) For the purposes of subsection (1), an authorized institution –

(a) may exclude from the maturity ladder long and short positions in identical instruments having the same issuer, coupon, currency and maturity;

(b) may fully offset a matched position in a futures contract or forward contract and the underlying exposure of the futures contract or forward contract, as the case may be, except that the position in a zero-coupon specific risk-free security referred to in subsection (2)(c)(ii)(A) shall be included in the calculation of the institution's market risk capital charge for general market risk.

(4) For the purposes of subsection (1), an authorized institution –

(a) in the case of a futures contract or forward contract providing for a range of bonds to be delivered, may only offset positions in the contract and the underlying bond which is readily identifiable as the most profitable for the institution with a short position to deliver;

(b) shall, after offsetting a futures contract or forward contract and the underlying bond pursuant to paragraph (a), record the amount of the remaining long position of the contract, up to and including the delivery date of the contract, as the face value of the contract divided by the conversion factor applicable to the contract and multiplied by the current market price of that bond.

(5) Subject to subsection (6), for the purposes of subsection (1), an authorized institution may treat opposite positions in the same type of derivative contract (including the delta-weighted position of option contracts calculated in accordance with section 9.23) as matched and may fully offset them.

(6) For the purposes of subsection (5), positions in the same type of derivative contract are opposite only if –

(a) the positions relate to derivative contracts with the same underlying exposures, are of the same nominal value and denominated in the same currency;

(b) in the case of futures contracts, the offsetting positions in the underlying interest rate exposures to which the futures contracts relate are for identical exposures and mature within 7 days of each other;

(c) in the case of swap contracts and forward rate agreements, the rates (for floating rate positions) of the contracts or agreements, as the case may be, are identical and the coupons are within 15 basis points; and

(d) in the case of swap contracts, forward rate agreements and forward contracts, the next interest fixing date or, for fixed coupon positions or forward contracts, the residual maturity, corresponds within the following limits –

(i) if either of the contracts to be offset has an interest fixing date or residual maturity of not more than one month, the interest fixing date or residual maturity, as the case may be, is the same for both contracts;

(ii) if either of the contracts to be offset has an interest fixing date or residual maturity of more than one month but not more than one year, the dates or residual

maturities, as the case may be, are within 7 days of each other; and

(iii) if either of the contracts to be offset has an interest fixing date or residual maturity of more than one year, those dates or residual maturities, as the case may be, are within 30 days of each other.

9.10 Use of alternatives requires Monetary Authority's prior consent

An authorized institution –

(a) shall use the methodology prescribed in this Division to calculate its positions to be included in the maturity ladder unless it has the prior consent of the Monetary Authority to use different methodology; and

(b) shall use the maturity method to calculate the market risk capital charge for general market risk for its portfolio of interest rate exposures unless it has the prior consent of the Monetary Authority to use a different method.

Division 3 – Calculation of market risk capital charge for equity exposures

9.11 Calculation of market risk capital charge

An authorized institution shall, for the purposes of calculating the market risk capital charge for its trading book positions (whether long or short) in equities and equity-related derivative contracts –

(a) calculate the market risk capital charge for specific risk for each of those positions; and

(b) calculate the market risk capital charge for general market risk for those positions.

9.12 Preliminary steps to calculating market risk capital charge

(1) For the purposes of section 9.11 –

(a) subject to paragraph (b), an authorized institution shall make a separate calculation for each of its positions in equities and equity-related derivative contracts for each exchange where the equities, or in the case of equity-related derivative contracts, the underlying equities concerned are listed or traded;

(b) if an equity is listed on more than one exchange, an authorized institution shall make the calculation referred to in paragraph (a) only in respect of that exchange which is the primary listing of the equity;

(c) an authorized institution shall convert its equity-related derivative contracts into positions in the underlying equity by –

(i) valuing its futures contracts and forward contracts relating to an individual equity at the fair value of the underlying equity;

(ii) valuing its futures contracts relating to equity indices as –

(A) the current index value multiplied by the monetary value of one index point set by the futures exchange where the futures contract is traded; or

(B) the fair value of the underlying basket of equities used to compile the index;

(d) an authorized institution shall regard each of its equity swap contracts as long and short positions such that –

(i) in the case of an equity swap contract in which the institution –

(A) is receiving an amount based on the change in value of a particular equity or equity index; and

(B) is paying an amount based on the change in value of a different equity or equity index,

the position in sub-subparagraph (A) is the long position, and the position in sub-subparagraph (B) is the short position, of the equity swap contract;

(ii) in the case of an equity swap contract which involves a position requiring the receipt or payment of fixed or floating rate interest, the institution treats the position under the maturity method;

(e) if equities are to be received or delivered under a forward contract, an authorized institution shall treat any interest rate exposure arising out of the contract under the maturity method; and

(f) an authorized institution shall treat any interest rate exposure arising out of an equity futures contract or an equity index futures contract under the maturity method.

(2) For the purposes of section 9.11, an authorized institution may –

(a) fully offset its matched positions in each identical equity or equity index with the same delivery month in each exchange in order to produce a single net short or long position;

(b) offset a futures contract in a given equity against an opposite position in the same equity.

9.13 Calculation of market risk capital charge for specific risk

Subject to section 9.12, an authorized institution shall calculate the market risk capital charge for specific risk for its trading book positions in equities and equity-related derivative contracts as 8% of the total gross (long plus short) position.

9.14 Calculation of market risk capital charge for general market risk

(1) Subject to section 9.12 and subsection (2), an authorized institution shall calculate the market risk capital charge for general market risk for its trading book positions in equities and equity-related derivative contracts as 8% of its total net position in equities and equity-related derivative contracts (being the difference between the sum of the institution's long positions and the sum of the institution's short positions).

(2) An authorized institution shall not, for the purposes of subsection (1), offset net long and short positions on different exchanges.

Division 4 – Calculation of market risk capital charge for foreign exchange exposures (including gold)

9.15 Preliminary steps to calculating market risk capital charge

(1) Subject to subsection (2), an authorized institution shall, for the purposes of calculating the market risk capital charge for its positions in foreign exchange (including gold) and exchange rate-related derivative contracts –

(a) determine the amount of its net open position (being the sum of the net spot position and the net forward position) in each currency and in gold;

(b) convert each amount determined under paragraph (a) into Hong Kong dollars at current market rates; and

(c) subject to Division 6, in relation to those positions arising from foreign currency option contracts, apply paragraphs (a) and (b) to each currency to which the option contracts relate.

(2) An authorized institution shall, for the purposes of calculating the market risk capital charge for its positions in foreign exchange (including gold) and exchange rate-related derivative contracts, not exclude any of its structural positions from such calculation except after consultation with the Monetary Authority.

9.16 Calculation of market risk capital charge

(1) Subject to section 9.15 and subsection (2), an authorized institution shall calculate the market risk capital charge for its positions in foreign exchange (including gold) as 8% of the institution's total net open position derived by aggregating –

(a) the sum of the institution's net long or short positions less its United States dollars position against its Hong Kong dollars position; and

(b) the institution's net position in gold (whether long or short).

(2) For the purposes of subsection (1)(a) –

(a) the sum of an authorized institution's net long or short positions is the sum of –

(i) its total net long or short position in each foreign currency (including gold and, if applicable, the net delta-weighted position of option contracts in each such currency); and

(ii) its Hong Kong dollars position such that the total of all net long positions is the same as the total of all net short positions;

(b) the United States dollars position against the Hong Kong dollars position in respect of an authorized institution is –

(i) zero if the institution's net open positions in United States dollars and Hong Kong dollars are both long or both short;

(ii) the smaller of the 2 positions (expressed as the absolute value) if the institution's net open positions in United States dollars and Hong Kong dollars are opposite positions.

Division 5 – Calculation of market risk capital charge for commodity exposures

9.17 Preliminary steps to calculating market risk capital charge

(1) An authorized institution shall, for the purposes of calculating the market risk capital charge for its positions in commodities and commodity-related derivative contracts –

(a) convert its gross (long plus short) position in each commodity to which those positions relate (measured in barrels, kilograms or grams or such other standard unit of measurement as is applicable to the commodity concerned) into monetary terms at the current market price of the commodity;

(b) subject to Division 6, treat positions arising from commodity option contracts as commodity exposures;

(c) value a futures contract or forward contract relating to a commodity by reference to the notional amount of the standard unit of measurement of the commodity converted into monetary terms at current market price and apply the maturity method to any interest rate exposure arising out of that contract;

(d) in the case of a commodity swap contract under which one leg of the swap contract relates to a position or series of positions referenced to a fixed price and the other leg of the swap contract relates to a position or series of positions referenced to the current market price of a reference commodity or commodities –

(i) for each payment under the swap contract, value each of the positions at the notional amount of the swap contract;

(ii) treat each such position –

(A) as long if the institution is paying at a fixed price and receiving at a floating market price; and

(B) as short if the institution is receiving at a fixed price and paying at a floating market price; and

(iii) treat any such leg which involves receiving or paying at a fixed or floating interest rate as an interest rate exposure to which the maturity method applies.

(2) An authorized institution –

(a) subject to paragraph (b), may, for the purposes referred to in subsection (1), offset long and short positions in the same commodity when calculating its open positions;

(b) shall not so offset for its positions in different types of commodities.

9.18 Calculation of market risk capital charge

An authorized institution shall calculate the market risk capital charge for its commodity exposures as the sum of –

(a) 15% of the institution's net position in each commodity; and

(b) 3% of the institution's gross position (long plus short) in each commodity.

Division 6 – Calculation of market risk capital charge for option exposures : general

9.19 Approaches which authorized institution may use to calculate market risk capital charge for option exposures

An authorized institution shall, for the purposes of calculating the market risk capital charge for its option exposures to debt securities, interest rates, equities, foreign exchange (including gold) and commodities –

(a) subject to paragraph (c) and section 9.20, use the simplified approach;

(b) subject to paragraph (c) and section 9.22, use the delta-plus approach; or

(c) with the prior consent of the Monetary Authority, use another approach.

Division 7 – Calculation of market risk capital charge for option exposures : simplified approach

9.20 Application of Division 7

(1) An authorized institution shall not use the simplified approach to calculate the market risk capital charge for its option exposures unless the institution –

(a) purchases option contracts but does not write option contracts; or

(b) purchases option contracts and only writes option contracts which are fully hedged by matched long positions in the same option contracts.

(2) An authorized institution which uses the simplified approach to calculate the market risk capital charge for its option exposures shall –

(a) exclude from that calculation –

(i) option contracts written by it; and

(ii) the corresponding purchased option contracts which fully hedge the option contracts referred to in subparagraph (i); and

(b) only use its outstanding purchased option contracts for that calculation.

9.21 Calculation of market risk capital charge for outstanding purchased option contracts

(1) Subject to subsection (3), an authorized institution shall, for the purposes of calculating the market risk capital charge for its outstanding purchased option contracts (with or without related positions in the underlying exposures of those option contracts) –

(a) where the institution has –

(i) a long position in a put option contract and a long position in the underlying exposure of the put option contract; or

(ii) a long position in a call option contract and a short position in the underlying exposure of the call option contract,

multiply the fair value of the underlying exposure of the option contract by the sum of the market risk capital charge factors for general market risk and specific risk for the underlying exposure of such option contract as set out in Table 9.4 less the amount by which the option contract is in-the-money (if any);

(b) where the institution has a long position in a call option contract or a long position in a put option contract, use the lesser of –

(i) the fair value of the underlying exposure of the option contract multiplied by the sum of the market risk capital charge factors for general market risk and specific risk for the underlying exposure of such option contract as set out in Table 9.4; and

(ii) the fair value of the option contract; and

(c) calculate in a way such that –

(i) the market risk capital charge is calculated separately for individual option contracts but together with the related position in the underlying exposure of such option contracts;

(ii) the institution uses the sum of the market risk capital charge for individual option contracts to calculate the total market risk capital charge for its portfolio of option exposures.

TABLE 9.4

MARKET RISK CAPITAL CHARGE FACTOR FOR EACH RISK CATEGORY

Risk category	Market risk capital charge factor for specific risk	Market risk capital charge factor for general market risk
interest rate	as per the market risk capital charge factors for specific risk in Table 9.1 according to the class, credit quality grade and residual maturity	as per the risk-weights in Table 9.3 according to the residual maturity for fixed rate exposures or residual term to next interest fixing date for floating rate exposures and coupon rate
equity	8.00%	8.00%
foreign exchange	0.00%	8.00%
commodity	0.00%	15.00%

(2) For the purposes of subsection (1)(a), where the amount derived from the calculation under that subsection is negative, an authorized institution shall treat the market risk capital charge for the relevant outstanding purchased option contract and the underlying exposure of such option contract as zero.

(3) Where it is unclear to an authorized institution which side of an option contract purchased by it constitutes the underlying exposure for the purposes of the simplified approach, the institution shall take the exposure which would be received by

it if the option under the contract were exercised to be the underlying exposure for this purpose.

(4) An authorized institution shall, for the purposes of calculating the market risk capital charge for an option contract purchased by it which has a residual maturity of more than 6 months –

(a) subject to paragraph (b), compare the strike price of the option contract with the forward price of the underlying exposure of the option contract;

(b) if it is not practicable for the institution to comply with paragraph (a), take the amount by which the option contract is considered to be in-the-money as zero.

(5) An authorized institution shall add the market risk capital charge calculated under this Division to the market risk capital charge calculated for the risk category concerned.

Division 8 – Calculation of market risk capital charge for option exposures : delta-plus approach

9.22 Application of Division 8

An authorized institution which writes option contracts (other than such an authorized institution which, by virtue of section 9.20(1)(b), uses the simplified approach) shall –

(a) incorporate the delta-weighted positions of its outstanding option contracts into their respective risk categories; and

(b) calculate and provide the following market risk capital charges against those positions –

(i) the market risk capital charge for general market risk and specific risk for delta risk;

(ii) the market risk capital charge for gamma risk; and

(iii) the market risk capital charge for vega risk.

9.23 Delta risk

An authorized institution shall, for the purposes of calculating its delta risk –

(a) slot its delta-weighted option positions which have debt securities or interest rates as the underlying exposures of the relevant option contracts into the time bands set out in Table 9.3;

(b) treat its interest rate option contracts as having long and short positions such that –

(i) one position is referenced to the time the option contract concerned takes effect; and

(ii) the other position is referenced to the time that the option contract matures;

(c) subject to paragraph (d), calculate the market risk capital charge for its option contracts with equities or equity indices as the underlying exposure by applying the calculation treatment under Division 3 to the delta-weighted positions of those option contracts;

(d) for the purposes of paragraph (c), treat equities or equity indices on each exchange as a separate underlying exposure;

(e) calculate the market risk capital charge for its option contracts with foreign currencies or gold as the underlying exposure by applying the calculation treatment under Division 4 to the net delta-weighted positions (being the difference between the institution's total delta-weighted long positions and its total delta-weighted short positions) of those option contracts; and

(f) calculate the market risk capital charge for its option contracts with commodities as the underlying exposure by applying the calculation treatment under Division 5 to the delta-weighted positions of those option contracts.

9.24 Gamma risk

(1) An authorized institution shall calculate the gamma impact of each of its option contracts by the use of Formula 9.1.

FORMULA 9.1

CALCULATION OF GAMMA IMPACT OF OPTION CONTRACTS

$$\text{Gamma impact} = {}^{1}/_{2} \times \text{Gamma} \times VU^{2}$$

where –

VU = variation of the underlying exposure of the option contract calculated as –

(a) for option contracts relating to debt securities, debt indices and interest rates, the fair value of that underlying exposure multiplied by the risk-weight for the appropriate time band set out in Table 9.3;

(b) for option contracts relating to equities and equity indices, the fair value of that underlying exposure multiplied by 8%;

(c) for option contracts relating to foreign exchange and gold, the fair value of that underlying exposure multiplied by 8%; and

(d) for option contracts relating to commodities, the fair value of that underlying exposure multiplied by 15%.

(2) For the purposes of subsection (1), an authorized institution shall treat the following positions as the same underlying exposure –

(a) for interest rate exposures, positions within each time band set out in Table 9.3;

(b) for equities and equity indices exposures, positions on each exchange;

(c) for foreign exchange and gold exposures, positions in each currency pair and gold; and

(d) for commodities exposures, positions in each individual commodity.

(3) An authorized institution shall –

(a) offset the positive and negative gamma impacts for each option contract on the same underlying exposure to produce a positive or negative net gamma impact for that exposure; and

(b) only use negative net gamma impacts to calculate the market risk capital charge for gamma risk.

(4) An authorized institution shall calculate the total market risk capital charge for gamma risk as the sum of the absolute value of the net negative gamma impacts.

9.25 Vega risk

(1) An authorized institution shall calculate the market risk capital charge for vega risk by multiplying the sum of the vegas for all its option contracts on the same underlying exposure, applying section 9.24(2) by a proportional shift in volatility of ± 25%.

(2) An authorized institution shall calculate the total market risk capital charge for vega risk as the sum of the absolute value of the individual market risk capital charges for vega risk calculated under subsection (1).

Division 9 – Calculation of market risk capital charge for credit derivative contracts booked in authorized institutions' trading book

9.26 Application of Division 9

(1) This Division applies to credit derivative contracts booked in an authorized institution's trading book.

(2) An authorized institution shall use the notional amount of the credit derivative contract to calculate the market risk capital charge for its credit derivative contracts except for section 9.32(6) and (7) where the fair value of the credit-linked note shall be used.

9.27 Specific risk

(1) Where an authorized institution has entered into a total return swap or credit default swap as the protection seller, the institution shall record a long position in the reference obligation specified in the swap contract.

(2) Where an authorized institution has entered into a total return swap or credit default swap as the protection buyer, the institution shall record a short position in the reference obligation specified in the swap contract.

(3) Where an authorized institution has purchased a credit-linked note, the institution shall record a long position in –

(a) the reference obligation of the note; and

(b) the note issuer.

(4) Where an authorized institution has issued a credit-linked note, the institution shall record a short position in the reference obligation of the note.

(5) Where an authorized institution –

(a) is the protection buyer of a first-to-default credit derivative contract or the issuer of a first-to-default credit-linked note; and

(b) does not hold any long position in an underlying exposure which is identical to the reference obligation specified in the contract or under the note, as the case may be,

the institution shall record a short position in only one of the reference obligations in the basket of reference obligations specified in the contract or under the note, as the case may be (being the reference obligation which would yield the highest market risk capital charge for specific risk among the various reference obligations in the basket of reference obligations specified in the contract or under the note).

(6) Where an authorized institution is the protection buyer of a first-to-default credit derivative contract or the issuer of a first-to-default credit-linked note, the institution may offset the market risk capital charge for specific risk for the institution's long position in an underlying exposure which is identical to the reference obligation specified in the contract or under the note, as the case may be, against the market risk capital charge for specific risk for the institution's short position in that one of the reference obligations in the basket of reference obligations specified in the contract or under the note, as the case may be, which would yield the lowest market risk capital charge for specific risk for all of the reference obligations specified in the contract or under the note, as the case may be.

(7) Subject to subsection (8), where an authorized institution is the protection seller of a first-to-default credit derivative contract or the purchaser of a first-to-default credit-linked note, the institution shall record long positions in each of the reference obligations in the basket of reference

obligations specified in the contract or under the note, as the case may be, but in such circumstances the institution's total market risk capital charge for specific risk for the contract or the note, as the case may be, shall not exceed the institution's maximum liability under the contract or the fair value of the note, as the case may be.

(8) An authorized institution is not required to comply with subsection (7) in respect of a first-to-default credit derivative contract or first-to-default credit-linked note if it demonstrates to the satisfaction of the Monetary Authority that there is a material positive correlation among the reference obligations in the basket of reference obligations specified in the contract or under the note, as the case may be, such that the value of each of the reference obligations in the basket of obligations would be likely to fall in the case of a fall in the value of any one of the reference obligations in the basket.

(9) Where an authorized institution enters into a credit default swap, total return swap or credit-linked note which provides for payment to be made proportionately in respect of the reference obligations in the basket of reference obligations as specified in the swap contract or under the note, as the case may be, the institution shall record its positions in the reference obligations according to their respective proportions specified in the swap contract or under the note, as the case may be.

(10) Where an authorized institution has purchased or issued a credit-linked note which is referenced to multiple reference obligations and satisfies the conditions for a qualifying debt security or debt-related derivative contract set out in section 9.7(4), the institution may –

(a) if it has purchased the note, record the specific risk arising from its long positions in the multiple reference obligations under the note as a single long position in the note;

(b) if it has issued the note, record the specific risk arising from its short positions in the multiple reference obligations under the note as a single short position in the note.

9.28 Use of credit derivative contracts to offset specific risk

(1) Subject to subsection (2), an authorized institution may use a credit derivative contract booked in the institution's trading book to offset the market risk capital charge for specific risk calculated for the institution's trading book position in the underlying exposure which is identical to the reference obligation specified in the credit derivative contract, or in another credit derivative contract, in accordance with section 9.29, 9.30 or 9.31.

(2) Where section 9.29, 9.30 or 9.31 does not permit an authorized institution to use a credit derivative contract booked in the institution's trading book to offset the market risk capital charge for specific risk calculated for the institution's trading book position in the underlying exposure which is identical to the reference obligation specified in the credit derivative contract, or in another credit derivative contract, then the institution shall calculate and provide the market risk capital charge against both trading book positions.

9.29 Offsetting in full

(1) An authorized institution may fully offset its position under a credit derivative contract against a position in the underlying exposure which is identical to the reference obligation specified in the credit derivative contract, or against a position in another credit derivative contract, for the purposes of calculating the market risk capital charge for specific risk if the values of the 2 positions, being the long or short position in the credit derivative contract, and the short or long position respectively in the underlying exposure which is identical to the reference obligation specified in the credit derivative contract or the short or long position respectively in the other credit derivative contract, always move in the opposite direction and broadly to the same extent due to –

(a) the 2 positions consisting of identical exposures; or

(b) a long position in the underlying exposure being hedged by a total return swap (or vice versa) and there being a match between the reference obligation specified in the total return swap and the underlying exposure in every respect, and notwithstanding that the maturity of the total return swap may be different from that of the underlying exposure.

(2) Where an authorized institution has fully offset its position under a credit derivative contract against a position in the underlying exposure which is identical to the reference obligation specified in the credit derivative contract, or against a position in another credit derivative contract, pursuant to subsection (1), then no market risk capital charge for specific risk is required to be calculated in respect of those positions.

9.30 Offsetting by 80%

(1) An authorized institution may offset 80% of the market risk capital charge for specific risk for its position in a credit derivative contract against a position in the underlying exposure which is identical to the reference obligation specified in the contract where –

(a) the values of the 2 positions, being a long or short position in the contract and a short or long position respectively in the underlying exposure which is identical to the reference obligation specified in the contract, always move in the opposite direction but not broadly to the same extent; and

(b) the institution has demonstrated to the Monetary Authority's satisfaction that the contract can mitigate the credit risk of the institution's underlying exposure effectively.

(2) For the purposes of the demonstration referred to in subsection (1)(b), an authorized institution falls within that subsection in any case where –

(a) subject to paragraphs (b), (c) and (d), the institution's long position in the underlying exposure referred to in that subsection is effectively hedged by a credit default swap or credit-linked note (or vice versa);

(b) there is a match between –

(i) the reference obligation specified in the credit default swap or under the credit-linked note and the underlying exposure;

(ii) the maturity of the reference obligation and the credit default swap or credit-linked note referred to in paragraph (a) and of the underlying exposure; and

(iii) the currency in which the reference obligation and the underlying exposure are denominated;

(c) the credit event definitions and settlement mechanisms and other key factors of the credit default swap or credit-linked note referred to in paragraph (a) do not cause the price movement of the swap contract or note to materially deviate from the price movements of the underlying exposure; and

(d) the credit default swap or credit-linked note referred to in paragraph (a) transfers risk effectively taking account of any restrictive payout provisions (including fixed payouts and materiality thresholds).

(3) Where an authorized institution offsets its positions in a credit derivative contract pursuant to subsection (1) –

(a) only 20% of the market risk capital charge for specific risk is required to be calculated for the position with the higher market risk capital charge for specific risk; and

(b) the market risk capital charge for specific risk for the other position shall be zero.

9.31 Other offsetting

(1) An authorized institution may offset partially the market risk capital charge for specific risk for its position in a credit derivative contract against a position in the underlying exposure which is identical to the reference obligation specified in the contract where the values of the 2 positions, being the long or short position in the contract and the short or long position respectively in the underlying exposure which is identical to the reference obligation specified in the contract, usually move in the opposite direction in any case where –

(a) the position would fall within section 9.29(1)(b) but for there being an asset mismatch between the reference obligation and the underlying exposure (being that the reference obligation and the underlying exposure are similar but not identical) and –

(i) the reference obligation specified in the contract ranks for payment or repayment pari passu with, or junior to, the underlying exposure; and

(ii) the obligor in respect of the underlying exposure is the same legal entity as the obligor in respect of the reference obligation and legally enforceable cross default or cross acceleration clauses are included in the terms of both the underlying exposure and the reference obligation;

(b) the position would fall within section 9.29(1)(a) or 9.30 but for there being a currency or maturity mismatch between the contract and the underlying exposure; or

(c) the position would fall within section 9.30 but for there being a mismatch between the underlying exposure and the reference obligation specified in the contract (being that the reference obligation and the underlying exposure are similar but not identical) and the underlying exposure is included in one of the deliverable obligations specified in the contract.

(2) Where an authorized institution offsets its positions in a credit derivative contract pursuant to subsection (1) –

(a) the position with the higher market risk capital charge for specific risk shall be subject to a partial allowance to reflect the extent of the offsetting but, in any case, not higher than 80%; and

(b) the market risk capital charge for specific risk for the other position shall be zero.

9.32 General market risk

(1) Where an authorized institution has entered into a total return swap as the protection seller, the institution shall –

(a) record a long position in the reference obligation specified in the swap contract;

(b) if there are periodic interest payments under the swap contract, record a short position in a specific risk-free security with fixed or floating rate interest according to the payment terms of the swap contract.

(2) Where an authorized institution has entered into a total return swap as the protection buyer, the institution shall –

(a) record a short position in the reference obligation specified in the swap contract;

(b) if there are periodic interest payments under the swap contract, record a long position in a specific risk-free security with fixed or floating rate interest according to the payment terms of the swap contract.

(3) Where an authorized institution has entered into a credit default swap with no periodic premiums or interest payments under the swap contract, the institution is not required to calculate and provide the market risk capital charge for general market risk for the swap contract.

(4) Where an authorized institution has entered into a credit default swap as the protection seller with periodic premiums or interest payments under the swap contract, the institution shall record a long position in a specific risk-free security with fixed or floating rate interest according to the payment terms of the swap contract.

(5) Where an authorized institution has entered into a credit default swap as the protection buyer with periodic premiums or interest payments under the swap contract, the institution shall record a short position in a specific risk-free security with fixed or floating rate interest according to the payment terms of the swap contract.

(6) Where an authorized institution has purchased a credit-linked note, the institution shall record a long position in the note.

(7) Where an authorized institution has issued a credit-linked note, the institution shall record a short position in the note.

9.33 Counterparty credit risk

(1) Where an authorized institution has entered into a total return swap as the protection buyer or the protection seller, the institution shall calculate and provide the amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(2) Where an authorized institution has entered into a credit default swap as the protection buyer, the institution shall calculate and provide the amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(3) Where an authorized institution has entered into a credit default swap as the protection seller with no periodic premiums or interest payments under the swap contract, the institution is not required to calculate or provide any amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(4) Where an authorized institution has entered into a credit default swap as the protection seller with periodic premiums or interest payments under the swap contract, the institution shall calculate and provide the amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(5) For the avoidance of doubt, it is hereby declared that –

(a) there is no counterparty credit risk for an authorized institution as the purchaser or issuer of a credit-linked note;

(b) the following provisions apply in the case of an authorized institution's counterparty credit risk under credit derivative contracts booked in the institution's trading book –

(i) section 4.22(2);

(ii) section 5.15(2);

(iii) sections 6.28 and 6.44;

(iv) sections 7.8(4) and 7.9;

(v) sections 7.34(4) and 7.35; or

(vi) sections 7.42(2) and 7.43,

as the case requires.

9.34 Foreign exchange risk

Where an authorized institution has entered into a credit derivative contract denominated in a currency other than Hong Kong dollars, the institution shall apply the calculation treatment under Division 4 to its foreign exchange position under the contract.

PART 10

CALCULATION OF MARKET RISK :
IMM APPROACH

Division 1 – General

10.1 Application of Part 10

(1) This Part applies to an authorized institution which uses the IMM approach to calculate its market risk.

(2) Unless the context otherwise requires, a reference to an authorized institution in this Part is a reference to an authorized institution which uses the IMM approach to calculate its market risk.

10.2 Interpretation of Part 10

In this Part, unless the context otherwise requires –

"debt security" ( ) means –

(a) a fixed or floating rate bond;

(b) a negotiable certificate of deposit;

(c) a non-convertible preference share; or

(d) a convertible bond, preference share, or any other instrument, which trades like a bond, certificate or share falling within paragraph (a), (b) or (c);

"equity" ( ) means –

(a) an ordinary share (whether voting or non-voting); or

(b) a convertible bond, preference share, or any other instrument, which trades like a share falling within paragraph (a).

10.3 Positions to be used to calculate market risk

(1) Subject to subsection (2), an authorized institution shall calculate its market risk to take into account the risk of loss arising from fluctuations in the value of –

(a) the institution's trading book positions held in –

(i) debt securities;

(ii) debt-related derivative contracts;

(iii) interest rate derivative contracts;

(iv) equities; and

(v) equity-related derivative contracts; and

(b) the institution's positions held in –

(i) foreign exchange;

(ii) exchange rate-related derivative contracts;

(iii) commodities; and

(iv) commodity-related derivative contracts.

(2) An authorized institution shall not include a position in the calculation of its market risk if the position is –

(a) a recognized credit derivative contract (within the meaning of section 4.2, 5.2 or 6.2(1), as the case requires) booked in the institution's trading book as a hedge to a credit exposure booked in the institution’s banking book; or

(b) an exposure which under sections 3.14 and 3.15 is required to be deducted from any of the institution's core capital and supplementary capital.

(3) An authorized institution shall value its positions, whether based on a marking-to-market or marking-to-model methodology, in a prudent manner (including by taking into account the liquidity of the positions).

(4) Where the Monetary Authority is satisfied that an authorized institution has contravened subsection (3), the Monetary Authority may, by notice in writing given to the institution, require the institution to reduce all of its positions, or such class of its positions as specified in the notice, to the limit, if any, specified in the notice, beginning on such date, or the occurrence of such event, as specified in the notice.

(5) An authorized institution shall comply with the requirements of a notice given to it under subsection (4).

(6) Where a position of an authorized institution does not fall into subsection (1) by virtue of subsection (2)(a), the institution shall apply Part 4, 5, 6 or 7, as the case requires, to calculate the credit risk for that position.

10.4 Calculation of risk-weighted amount for market risk

(1) An authorized institution shall calculate the risk-weighted amount for market risk as the sum of –

(a) the market risk capital charge for general market risk calculated by the institution's internal model; and

(b) where applicable, the market risk capital charge for specific risk calculated by the institution's internal model,

multiplied by 12.5.

(2) Where an authorized institution uses one internal model to calculate both the market risk capital charge for general market risk and the market risk capital charge for specific risk, the institution shall, in that calculation –

(a) use the higher of –

(i) the institution's VaR for all risk categories as at the last trading day; or

(ii) the average VaR for the last 60 trading days multiplied by a multiplication factor determined under section 10.6; and

(b) subject to section 2(e) of Schedule 2.3, apply an additional capital charge (referred to in this Division as "capital surcharge") for default risk calculated in accordance with section 10.5.

(3) Where an authorized institution uses more than one internal model to calculate the market risk capital charge for general market risk and the market risk capital charge for specific risk, the institution shall comply with subsection (2) except that it shall apply subsection (2)(a) separately to the VaR generated from each model.

10.5 Default risk

(1) An authorized institution may, to avoid double counting, when calculating the default risk in its trading book positions, take into account the extent to which default risk has already been incorporated into the institution's internal model (in particular, for positions which would be closed out within 10 trading days in the event of adverse market conditions or other indications of deterioration in the credit environment).

(2) The default risk referred to in section 2(e) of Schedule 2.3 shall not be treated as having been captured through a capital surcharge unless the authorized institution concerned demonstrates to the satisfaction of the Monetary Authority that the capital surcharge provides sufficient capital to cover that default risk in respect of the institution's positions.

(3) Where an authorized institution captures the default risk referred to in section 2(e) of Schedule 2.3 through a capital surcharge, the capital surcharge shall not be subject to a multiplication factor determined under section 10.6.

10.6 Multiplication factor

(1) The multiplication factor to be used by an authorized institution shall be the sum of –

(a) the value of 3;

(b) a plus factor specified in column 2 of Table 10.1 opposite to the number of back-testing exceptions specified in column 1 of that Table for the last 250 trading days; and

(c) any additional plus factor assigned to the institution pursuant to subsection (3).

TABLE 10.1

PLUS FACTORS FOR BACK-TESTING EXCEPTIONS

Number of back-testing exceptions	Plus factor
less than 5	0.00
5	0.40
6	0.50
7	0.65
8	0.75
9	0.85
10 or more	1.00

(2) For the purposes of calculating the number of back-testing exceptions under subsection (1)(b), an authorized institution may exclude any back-testing exceptions if the institution has demonstrated to the satisfaction of the Monetary Authority that those back-testing exceptions are temporary.

(3) Where –

(a) an authorized institution uses the IMM approach to calculate its market risk; and

(b) the Monetary Authority is satisfied that the institution has ceased to satisfy any of the requirements specified in Schedule 2.3 applicable to or in relation to the institution,

the Monetary Authority may, by notice in writing given to the institution, assign an additional plus factor to the institution.

Division 2 – Calculation of market risk capital charge for credit derivative contracts booked in authorized institutions' trading book

10.7 IMM approach to calculation of market risk

(1) An authorized institution shall comply with Division 1 and Schedule 2.3 to use the IMM approach to calculate the market risk capital charge for credit derivative contracts booked in its trading book.

(2) An authorized institution which does not use the IMM approach to calculate the market risk capital charge for credit derivative contracts booked in its trading book shall use the STM approach to calculate those charges as set out in Division 9 of Part 9.

10.8 Counterparty credit risk

(1) Where an authorized institution has entered into a total return swap as the protection buyer or the protection seller, the institution shall calculate and provide the amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(2) Where an authorized institution has entered into a credit default swap as the protection buyer, the institution shall calculate and provide the amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(3) Where an authorized institution has entered into a credit default swap as the protection seller with no periodic premiums or interest payments under the swap contract, the institution is not required to calculate or provide any amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(4) Where an authorized institution has entered into a credit default swap as the protection seller with periodic premiums or interest payments under the swap contract, the institution shall calculate and provide the amount of capital required to cover the counterparty credit risk for its position under the swap contract.

(5) For the avoidance of doubt, it is hereby declared that –

(a) there is no counterparty credit risk for an authorized institution as the purchaser or issuer of a credit-linked note;

(b) the following provisions apply in the case of an authorized institution's counterparty credit risk under credit derivative contracts booked in the institution's trading book –

(i) section 4.22(2);

(ii) section 5.15(2);

(iii) sections 6.28 and 6.44;

(iv) sections 7.8(4) and 7.9;

(v) sections 7.34(4) and 7.35; or

(vi) sections 7.42(2) and 7.43,

as the case requires.

10.9 Foreign exchange risk

Where an authorized institution has entered into a credit derivative contract denominated in a currency other than Hong Kong dollars, the institution shall apply the calculation treatment under Division 1 to its foreign exchange position under the contract.

SCHEDULE 1.1 [ss. 1.2, 4.24, 5.17, 6.29 & 6.45]

SPECIFICATIONS FOR PURPOSES OF CERTAIN DEFINITIONS IN SECTION 1.2(1) OF THESE RULES

PART 1

DOMESTIC PUBLIC SECTOR ENTITIES

1. MTR Corporation Limited.
2. Kowloon-Canton Railway Corporation.
3. Hong Kong Housing Authority.
4. Hospital Authority.
5. Airport Authority.
6. The Hong Kong Mortgage Corporation Limited.
7. Urban Renewal Authority.
8. 香港五隧一橋有限公司Hong Kong Link 2004 Limited.
9. Hong Kong Trade Development Council.
10. Ocean Park Corporation.

PART 2

RELEVANT CCF IN RESPECT OF CERTAIN OFF-BALANCE SHEET EXPOSURES

PART 3

RESTRICTED COLLECTIVE INVESTMENT SCHEMES

PART 4

RESTRICTED DEBT SECURITIES

PART 5

RESTRICTED FOREIGN PUBLIC SECTOR ENTITIES

PART 6

RESTRICTED INSURANCE REGULATORS

PART 7

RESTRICTED JURISDICTIONS

PART 8

RESTRICTED SECURITIES REGULATORS

PART 9

RESTRICTED SOVEREIGNS

PART 10

RELEVANT INTERNATIONAL ORGANIZATIONS

1. Bank for International Settlements.
2. International Monetary Fund.
3. European Central Bank.
4. European Community.

SCHEDULE 2.1 [ss. 2.4, 2.5, 2.6, 2.7 & 6.49]

MINIMUM REQUIREMENTS TO BE SATISFIED FOR APPROVAL UNDER SECTION 2.5 of THESE RULES TO USE IRB APPROACH

1. **General requirements**

An authorized institution which makes an application under section 2.5 of these Rules to use the IRB approach shall demonstrate to the satisfaction of the Monetary Authority that –

(a) the board of directors (or a committee designated by the board for the purpose) and the senior management of the institution –

(i) approve all the key elements of, and any material changes to, the institution's rating system;

(ii) possess an understanding of the design and operation of, and the management reports generated by, the institution's rating system adequate for them to perform their functions specified in this paragraph;

(iii) exercise oversight of the institution's rating system sufficient to ensure that the rating system complies with paragraph (b); and

(iv) ensure that there is a reporting system within the institution to provide information (including, but not limited to, information relating to any material changes to, or deviations from, established policies and procedures or any material findings identified in a review or audit referred to in paragraph (j)) to them regularly and in sufficient detail as will enable them to –

(A) exercise the oversight referred to in subparagraph (iii); and

(B) make informed decisions relating to credit approval, risk management and corporate governance and (where paragraph (b)(vi)(A) is applicable) internal capital allocation based on the information generated by the institution's rating system;

(b) the institution's rating system –

(i) is suitable for the purpose of identifying, measuring and controlling the institution's credit risk taking into account the characteristics and extent of the institution's exposures;

(ii) is capable of generating reasonably accurate, consistent and verifiable credit risk components and of calculating the institution's regulatory capital for credit risk;

(iii) is operated in a prudent and consistently effective manner;

(iv) is operated in compliance with Part 6 of these Rules or in a manner which although not fully in compliance with that Part, will not result in any material non-compliance with other requirements specified in this section;

(v) plays an essential role in the institution's ongoing credit approval, risk management and corporate governance functions;

(vi) either –

(A) plays an essential role in the institution's ongoing internal capital adequacy assessment; or

(B) will eventually play, within a period and in a manner agreed to by the Monetary Authority, an essential role in the institution's ongoing internal capital adequacy assessment once the systems and procedures being developed by the institution as at the date of the institution's application to use the IRB approach under section 2.5 of these Rules for conducting the assessment are implemented in accordance with a plan agreed to by the Monetary Authority;

(vii) is applied by the institution so as to satisfy the minimum IRB coverage ratio set out in section 2.8 of these Rules; and

(viii) enables the institution to comply with the Banking (Disclosure) Rules (L.N. [ ] of 2006) in respect of any disclosures required under those Rules by the institution in respect of –

(A) the institution's credit risk; and

(B) the manner in which the institution manages its credit risk;

(c) the institution has a credit risk control function –

(i) which is functionally independent of the institution's staff and management responsible for credit initiation;

(ii) which reports directly to the institution's senior management; and

(iii) which is responsible for –

(A) the design or selection, testing and implementation of the institution's rating system;

(B) the oversight of the effectiveness of the institution's rating system for the purposes of paragraph (b)(i), (ii) and (iii);

(C) the monitoring and review of any override relating to the inputs to, or the outputs of, the institution's rating system;

(D) the production and analysis of the management reports generated by the institution's rating system; and

(E) the ongoing review of, and changes to, the institution's rating system;

(d) the institution has a sufficient number of staff who are qualified and trained to use the institution's rating system in the institution's business, risk control, audit and back office functions as will enable these functions to work effectively in identifying, measuring and controlling the institution's credit risk;

(e) the institution clearly documents all the key elements of, and the history of major changes in, the institution's rating system and the contents of the documentation are consistent with, and evidence the institution's compliance with, the requirements specified in this section;

(f) the institution has an effective system to collect, store, process, retrieve and utilize data on obligor and facility characteristics and default and loss information in respect of the institution's exposures in a reliable and consistent manner, and the data stored are in sufficient detail as will enable the institution to

comply with the requirements specified in this section;

(g) where the institution uses models which are based on statistical techniques or expert judgment, or both, to assign exposures to obligor grades and facility grades, or pools, and to estimate the credit risk components in respect of those grades or pools, the use of those models will not result in any distortion in the institution's regulatory capital for credit risk;

(h) the institution has a comprehensive stress-testing programme conducted regularly for the assessment of the adequacy of –

(i) the institution's regulatory capital and (where paragraph (b)(vi)(A) is applicable) internal capital for credit risk; and

(ii) the institution's ability to withstand any possible future events or changes in economic conditions which may have adverse effects on credit quality of the institution's exposures;

(*i*) the institution has a reliable system for validating regularly the accuracy and consistency of the institution's rating system (including models used as referred to in paragraph (g)), by persons who are qualified and trained to do so and who are independent of the development of the institution's rating system, through –

(i) vetting data inputs to the institution's rating system;

(ii) reviewing the outputs of the institution's rating system;

(iii) evaluating the logic and conceptual soundness of the institution's rating system;

(iv) implementing an effective control process for making changes to the institution's rating system in response to the results of the validation; and

(v) reviewing any proposed development of the institution's rating system to assess whether the rating system will function effectively as intended if the proposed development is implemented; and

(j) an independent review or audit of the institution's compliance with the requirements specified in this section is conducted regularly by the institution's internal auditors or by independent external parties which are qualified to do so.

2. **Specific requirements**

Without prejudice to the generality of section 1, an authorized institution shall demonstrate to the satisfaction of the Monetary Authority that –

(a) the suitability and capability of the institution's rating system for the purposes of section 1(b)(i) and (ii) are supported by parallel calculations carried out prior to the use of the IRB approach for the calculation of the institution's regulatory capital for credit risk for such period as the Monetary Authority considers reasonable in all the circumstances of the case; and

(b) the institution has been using a rating system, and estimates of credit risk components generated by that rating system, which are broadly consistent with the requirements of Part 6 of these Rules for the estimation of credit risk components and the calculation of credit risk under the IRB approach, in the institution's credit approval, risk management and corporate governance functions and (where section 1(b)(vi)(A) is applicable) internal capital adequacy assessment prior to the use of the IRB approach for the calculation of the institution's regulatory capital for credit risk for such period as the Monetary Authority considers reasonable in all the circumstances of the case.

3. **Meaning of "parallel calculations"**

In section 2(a), "parallel calculations" ( ), in relation to an authorized institution, means calculations –

(a) of which –

(i) one set consists of those calculations derived from the approach the institution actually uses during the period covered by the parallel calculations to calculate its credit risk; and

(ii) the other set consists of those calculations derived from the IRB approach the subject of an application made by the institution under section 2.5 of these Rules;

(b) which is in such form as agreed between the Monetary Authority and the institution; and

(c) which contains such information, and uses such data and methodology, as agreed between the Monetary Authority and the institution.

SCHEDULE 2.2 [ss. 2.15 & 8.8]

MINIMUM REQUIREMENTS TO BE SATISFIED FOR APPROVAL UNDER SECTION 2.15 OF THESE RULES TO USE STO APPROACH OR ASA APPROACH

1. **General requirements**

An authorized institution which makes an application under section 2.15 of these Rules to use the STO approach or ASA approach shall demonstrate to the satisfaction of the Monetary Authority that –

(a) the board of directors (or a committee designated by the board for the purpose) and senior management of the institution are actively involved in –

(i) the oversight of the institution's entire risk management framework; and

(ii) the management of the institution's operational risk;

(b) the institution has a dedicated operational risk management function to which specific duties have been assigned, including –

(i) developing strategies to identify, assess, monitor, control and mitigate the degree of operational risk to which the institution is exposed;

(ii) establishing policies and procedures, in writing, applicable to the matters referred to in subparagraph (i);

(iii) developing and implementing –

(A) an operational risk assessment methodology appropriate for the institution; and

(B) a reporting system for operational risk which is appropriate for the institution; and

(iv) ensuring that the persons involved in the matters referred to in subparagraph (i) have ready access to the policies and procedures referred to in subparagraph (ii);

(c) the institution has all of its policies, and controls and procedures, relating to its system for the management of its operational risk, well documented, including policies to deal with any failure to comply with those policies or those controls and procedures;

(d) the institution has implemented a system to ensure compliance with the policies, and controls and procedures, referred to in paragraph (c);

(e) the institution has implemented a system requiring –

(i) that regular reports be made of information concerning the institution's operational risk, including –

(A) the results of any self-risk assessment of the institution's operational risk;

(B) the key risk indicators;

(C) information concerning the actual or potential losses which have arisen or may arise as a result of the institution's operational risk which are, in the context of the volume of the institution's business, material; and

(D) information concerning major operational events affecting the institution's operational risk; and

(ii) that regular reports be made of information of such a nature and within such time frame as will support the proactive management of the institution's operational risk by the managers of the various business units, and the chief

executives and directors of the institution;

(f) the institution has established procedures for taking appropriate and timely action in response to the information provided pursuant to reports referred to in paragraph (e);

(g) the institution has an established assessment system for its operational risk –

(i) which is capable of systematically keeping track of relevant data concerning the institution's operational risk, in particular any material losses arising due to operational risk in different business lines of the institution; and

(ii) which plays an integral role in the institution's processes for the management of its operational risk;

(h) the institution has resources sufficient to –

(i) properly use the STO approach or ASA approach to calculate its operational risk in relation to the institution's major standardized business lines;

(ii) properly control such use of the STO approach or ASA approach; and

(iii) audit such use, and audit such control of such use, of the STO approach or ASA approach;

(*i*) the institution's process for the management of its operational risk and the system for assessing its operational risk are subject to validation and regular independent reviews by the institution's internal auditors or by external auditors; and

(j) the reviews referred to in paragraph (*i*) include the activities of particular business units of the institution and of the operational risk management function of the institution.

2. **Specific mapping requirements applicable to standardized business lines**

Without prejudice to the generality of section 1, an authorized institution shall demonstrate to the satisfaction of the Monetary Authority that –

(a) the institution has, for the purposes of using the STO approach or ASA approach, policies and criteria in writing applicable to the institution's mapping of the gross income it recognizes from its current business lines into the standardized business lines;

(b) the institution has in place a system for regularly reviewing and revising the policies and criteria referred to in paragraph (a) to ensure that they continue to be appropriate for new or changing activities or products; and

(c) the institution has mapped, or is capable of mapping, all its business activities into the 8 standardized business lines by the application of the following principles –

(i) each business activity of the institution is to be mapped into only one of the standardized business lines;

(ii) any business activity of the institution which cannot be readily mapped into one of the standardized business lines but which is ancillary to one only of the standardized business lines is allocated to the standardized business line to which it is so ancillary;

(iii) any business activity of the institution which cannot be readily mapped into one of the standardized business lines but which is ancillary to 2 or more standardized business lines (referred to in this paragraph as "relevant business lines") is to be allocated to one only, or to 2 or more, of the relevant business lines by the application of objective mapping criteria (which may be, or include, allocation to that relevant business line to which the business activity is principally ancillary, or to 2 or more relevant business lines in proportion to the time spent on the respective relevant business lines);

(iv) where none of the principles set out in subparagraphs (i), (ii) and (iii) enables the institution to map gross income in respect of a particular business activity (referred to in this paragraph as "relevant business activity") into a particular standardized business line, the institution –

(A) attributes the gross income to any standardized business line allocated the highest capital charge factor set out in section 8.9(1)(d) of these Rules; and

(B) also allocates to that standardized business line any business activity which is ancillary to the relevant business activity;

(v) if the institution uses internal pricing methods to allocate gross income between standardized business lines, the total gross income for the institution must still equal the sum of the gross income for the 8 standardized business lines;

(vi) the institution's mapping of its business activities into standardized business lines for the purposes of calculating its operational risk is consistent with the definitions of standardized business lines used for the calculation of the institution's credit risk or market risk or, if there is an inconsistency –

(A) the inconsistency is readily identified as such in writing; and

(B) the reasons for the inconsistency are set out in writing;

(vii) the institution keeps a record in writing of –

(A) the definitions used by it of its standardized business lines for the purposes of calculating its operational risk;

(B) the processes used by it to map its business activities into the standardized business lines; and

(C) any exceptions (including inconsistencies) to the policies or criteria applied by the institution in mapping its business activities into the standardized business lines;

(viii) the institution has established systems, policies and procedures to readily map into its standardized business lines any new business activity carried out or to be carried out by the institution or any new product provided or to be provided by the institution;

(ix) the senior management of the institution is responsible for the development, implementation and oversight of the institution's policy in relation to mapping its business activities into the standardized business lines and the board of directors of the institution is responsible for approving the principal elements of that policy and any major revision to those elements; and

(x) the process by which the institution maps its business activities into the standardized business lines is regularly reviewed by a party independent from that process.

SCHEDULE 2.3 [ss. 2.18, 2.19, 4.48, 10.4, 10.5, 10.6 & 10.7]

MINIMUM REQUIREMENTS TO BE SATISFIED FOR APPROVAL UNDER SECTION 2.18 of THESE RULES TO USE IMM APPROACH

1. **General requirements**

An authorized institution which makes an application under section 2.18 of these Rules to use the IMM approach shall demonstrate to the satisfaction of the Monetary Authority that –

(a) the board of directors (or a committee designated by the board for the purpose) and the senior management of the institution –

(i) approve all the key elements of, and any material changes to, the institution's market risk management system (being the methods, models, processes, controls, and data collection and information technology systems used by the institution which enable the identification, measurement and control of market risk by the institution);

(ii) possess an understanding of the design and operation of, and the management reports generated by, the institution's market risk management system adequate for them to perform their functions specified in this paragraph;

(iii) exercise oversight of the institution's market risk management system sufficient to ensure that the system complies with paragraph (b); and

(iv) ensure that there is a reporting system within the institution to provide information (including, but not limited to, information relating to any material changes to, or deviations from, established policies and procedures or any material findings identified in a review or audit referred to in paragraph (m)) to them regularly and in sufficient detail as will enable them to –

(A) exercise the oversight referred to in subparagraph (iii); and

(B) make informed decisions relating to the institution's market risk exposures;

(b) the institution's market risk management system –

(i) is suitable for the purpose of identifying, measuring and controlling the institution's market risk taking into account the characteristics and extent of the institution's market risk exposures; and

(ii) is operated in a prudent and consistently effective manner;

(c) the institution has a market risk control function –

(i) which is functionally independent of the institution's staff and management responsible for originating and trading market risk exposures;

(ii) which reports directly to the institution's senior management; and

(iii) which is responsible for –

(A) the design or selection of the institution's market risk management system;

(B) the testing and implementation of the institution's market risk management system;

(C) the oversight of the effectiveness of the institution's market risk management system for the purposes of paragraph (b);

(D) the production and analysis of daily management reports based on the output of the institution's internal models to which the application relates (referred to in this Schedule as "relevant models");

(E) the ongoing review of, and changes to, the institution's market risk management system; and

(F) the conduct of a regular back-testing programme to verify the accuracy and reliability of the relevant models;

(d) the institution has a sufficient number of staff who are qualified and trained to use the relevant models in the institution's trading, risk control, audit and back office functions as will enable these functions to perform effectively in identifying, measuring and controlling the institution's market risk;

(e) the institution clearly documents the relevant models and the internal policies, controls and procedures relating to the operation of the models and has a system for monitoring and ensuring compliance with those internal policies, controls and procedures;

(f) the institution has policies and procedures to ensure that the valuation of the institution's market risk exposures is prudently made whenever there are uncertainties affecting the accuracy of valuation estimates;

(g) the use of the relevant models plays an essential role in the institution's daily risk management process, with –

(i) the VaR generated from the relevant models being used in determining the institution's trading and market risk exposure limits; and

(ii) the relationship between the relevant models and those limits being maintained consistently over time and understood by the institution's senior management and staff engaged in trading activity;

(h) the institution has a comprehensive stress-testing programme conducted regularly and the stress-testing results are –

(i) reported routinely to the institution's senior management and periodically to the institution's board of directors (or a committee designated by the board for the purpose); and

(ii) taken into account in –

(A) setting the institution's policies and trading and market risk exposure limits; and

(B) performing the assessment of the adequacy of the institution's regulatory capital and internal capital for market risk and the institution's ability to withstand any possible future events, or changes in market conditions, that could have adverse effects on the institution's market risk exposures;

(*i*) the institution has a reliable system for validating the accuracy and consistency of the relevant models –

(i) by parties –

(A) who are qualified and trained to do so and who are independent of the trading functions and the development of the relevant models; and

(B) whose aim is to ascertain whether the relevant models are conceptually sound and able to capture all material factors affecting market risk;

(ii) when a relevant model is initially developed and when any significant changes are made to the relevant model; and

(iii) regularly or when there have been significant structural changes in the market or changes to the composition of the institution's portfolio of exposures which might lead to the relevant model concerned no longer being adequate to capture all material factors affecting market risk;

(j) the institution has –

(i) model validation procedures appropriate for assessing the relevant models;

(ii) procedures to ensure that both the assumptions and approximations underlying the relevant models are prudent and appropriate for the measurement of the institution's market risk exposures; and

(iii) appropriate methods of assessing the validity and performance of, and the results generated by, the relevant models;

(k) the relevant models capture and accurately reflect, on a continuing basis, all material factors affecting market risk inherent in the institution's market risk exposures;

(*l*) the relevant models have a proven track record of acceptable accuracy in measuring market risk;

(m) an independent review or audit of the institution's compliance with the requirements specified in this Schedule is conducted regularly by the institution's internal auditors or by independent external parties which are qualified to do so; and

(n) in respect of the relevant models –

(i) VaR is computed on a daily basis;

(ii) a one-tailed 99% confidence interval is used in calculating VaR;

(iii) the minimum holding period used by, or assumed by, the relevant models is 10 trading days for the institution's portfolio of exposures;

(iv) subject to subparagraph (vi), the historical observation period for calculating VaR is not less than 250 trading days;

(v) if the institution applies a weighting scheme to the historical observations for the calculation of VaR, a higher weighting is assigned to recent observations;

(vi) the institution is able to use a shorter historical observation period for the calculation of VaR if the Monetary Authority requests the institution to do so on the ground that the Monetary Authority is of the opinion that the request is justified due to a significant increase in volatility in the price of the institution's portfolio of exposures;

(vii) data used are updated at least once every 3 months and are reassessed whenever market prices are subject to material changes;

(viii) the relevant models only recognize empirical correlations of factors affecting market risk within and across risk categories if the institution's system for identifying and measuring correlations is effective and implemented in a prudent manner; and

(ix) the relevant models accurately capture the unique risks associated with options exercisable under option contracts and, in particular –

(A) the relevant models are able to estimate the non-linear relationship between the price movement of the institution's positions under those contracts and that of the underlying exposures of the contracts;

(B) in calculating VaR, an instantaneous 10-day movement in price is applied to the institution's option positions or positions which display option-like characteristics or, if

the institution is unable to apply a full 10-day movement in prices, the institution is able to use periodic simulation or stress-testing to adjust the market risk capital charge for such positions;

(C) the relevant models are able to estimate the vega risk of the institution's option positions; and

(D) if the institution's portfolio of option exposures is relatively large or complex, the institution is able to estimate in detail the volatility of option positions at different maturities.

2. **Additional requirements relating to internal models for calculation of market risk capital charge for specific risk**

Without prejudice to the generality of section 1, an authorized institution shall demonstrate to the satisfaction of the Monetary Authority that, if the institution uses the relevant models to calculate the market risk capital charge for specific risk –

(a) the relevant models capture all material components of market risk and are responsive to changes in market conditions and the composition of the institution's portfolios of exposures and, in particular –

(i) are capable of providing a justification for the historical price variation in the portfolios;

(ii) are sensitive to changes in portfolio construction and result in higher market risk capital charge for portfolios which have increased concentrations in particular issuers, entities or sectors of exposures;

(iii) are able to signal rising market risk in an adverse environment;

(iv) are sensitive to material idiosyncratic differences between similar but not identical positions (including, but not limited to, trading book positions in debt securities (within the meaning of section 9.2 of these Rules) with different levels of subordination and maturity mismatches, and credit derivative contracts with different credit events);

(v) are able to capture market risk which arises from events, other than market-wide shocks resulting in large changes in prices (referred to in this Schedule as "event risk"); and

(vi) are validated through back-testing aimed at assessing whether –

(A) specific risk is being captured adequately;

(B) in the case where the institution uses one internal model to calculate the market risk capital charge for both specific risk and general market risk, both specific risk and general market risk are being captured adequately;

(b) if the institution is subject to event risk which is not reflected in the institution's VaR because it is outside the 10-day holding period used or assumed by the relevant models and 99% confidence interval used in calculating VaR, the institution has ensured that the impact of event risk is factored into the institution's internal assessment process through stress-testing as referred to in section 1(h);

(c) the relevant models prudently assess the market risk arising from less liquid positions and positions with limited price transparency under realistic market scenarios;

(d) for positions referred to in paragraph (c), proxies are only used –

(i) where available data are insufficient or not reflective of the true volatility of an exposure or portfolio of exposures; and

(ii) if they are prudent;

(e) the institution has an approach for calculating the market risk capital charge for specific risk which –

(i) captures separately the default risk of the institution's trading book positions if the institution cannot capture, or adequately capture, such risk in the relevant models; and

(ii) is embedded in the relevant models or takes the form of an additional capital charge separately calculated by the institution; and

(f) the institution satisfies the minimum requirements comparable to those set out in section 1 of Schedule 2.1 for the use of the IRB approach for the calculation of credit risk, with any necessary adjustments to reflect the impact of liquidity, concentrations and hedging on, and the option characteristics of, the institution's market risk exposures.

SCHEDULE 3.1 [s. 3.14]

OTHER AMOUNTS DEDUCTIBLE FROM CORE CAPITAL AND SUPPLEMENTARY CAPITAL

The following amounts are specified for the purposes of section 3.14(2)(j) of these Rules –

(a) in relation to an authorized institution which uses the STC approach, the amount of the first loss portion of a credit protection in respect of the institution's exposures as specified in section 4.52(2) or (8)(c) of these Rules;

(b) in relation to an authorized institution which uses the BSC approach, the amount of the first loss portion of a credit protection in respect of the institution's exposures as specified in section 5.32(2) or (8)(c) of these Rules;

(c) in relation to an authorized institution which uses the STC approach, BSC approach or IRB approach, the amount of the sum of –

(i) the amount of payment made by, or the current market value of the thing delivered by, the institution in respect of any transaction in securities (other than a repo-style transaction), or any transaction in foreign exchange and commodities, which –

(A) was entered into on a basis other than a delivery-versus-payment basis; and

(B) has remained unsettled after the contractual date of payment or delivery to the institution for 5 or more business days; and

(ii) the amount of any positive current exposure associated with the transaction referred to in subparagraph (i);

(d) in relation to an authorized institution which uses the STC(S) approach, the amount of the sum of the items falling within section 7.10 (1)(a), (c), (d) or (e) of these Rules;

(e) in relation to an authorized institution which uses the IRB(S) approach, the amount of the sum of the items falling within section 7.25 (1)(a), (c), (d), (e) or (f) of these Rules.

SCHEDULE 4.1 [ss. 4.6, 4.10, 4.11, 4.12, 4.13, 4.30, 4.49, 4.50, 6.2, 6.74, 9.2 & 9.7]

CREDIT QUALITY GRADES

TABLE A

SOVERIGN EXPOSURES

Credit quality grade (sovereigns)	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	AAA	Aaa	AAA	AAA
	AA+	Aa1	AA+	AA+
	AA	Aa2	AA	AA
	AA-	Aa3	AA-	AA-
2	A+	A1	A+	A+
	A	A2	A	A
	A-	A3	A-	A-
3	BBB+	Baa1	BBB+	BBB+
	BBB	Baa2	BBB	BBB
	BBB-	Baa3	BBB-	BBB-
4	BB+	Ba1	BB+	BB+
	BB	Ba2	BB	BB
	BB-	Ba3	BB-	BB-
5	B+	B1	B+	B+
	B	B2	B	B
	B-	B3	B-	B-
6	CCC+	Caa1	CCC+	CCC+
	CCC	Caa2	CCC	CCC
	CCC-	Caa3	CCC-	CCC-
	CC	Ca	CC	CC
	C	C	C	C
	D		D	

TABLE B

BANK AND SECURITIES FIRM EXPOSURES

Credit quality grade (banks and securities firms)	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	AAA	Aaa	AAA	AAA
	AA+	Aa1	AA+	AA+
	AA	Aa2	AA	AA
	AA-	Aa3	AA-	AA-
2	A+	A1	A+	A+
	A	A2	A	A
	A-	A3	A-	A-
3	BBB+	Baa1	BBB+	BBB+
	BBB	Baa2	BBB	BBB
	BBB-	Baa3	BBB-	BBB-
4	BB+	Ba1	BB+	BB+
	BB	Ba2	BB	BB
	BB-	Ba3	BB-	BB-
	B+	B1	B+	B+
	B	B2	B	B
	B-	B3	B-	B-
5	CCC+	Caa1	CCC+	CCC+
	CCC	Caa2	CCC	CCC
	CCC-	Caa3	CCC-	CCC-
	CC	Ca	CC	CC
	C	C	C	C
	D		D	

TABLE C

CORPORATE EXPOSURES

Credit quality grade (corporates)	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	AAA	Aaa	AAA	AAA
	AA+	Aa1	AA+	AA+
	AA	Aa2	AA	AA
	AA-	Aa3	AA-	AA-
2	A+	A1	A+	A+
	A	A2	A	A
	A-	A3	A-	A-
3	BBB+	Baa1	BBB+	BBB+
	BBB	Baa2	BBB	BBB
	BBB-	Baa3	BBB-	BBB-
4	BB+	Ba1	BB+	BB+
	BB	Ba2	BB	BB
	BB-	Ba3	BB-	BB-
5	B+	B1	B+	B+
	B	B2	B	B
	B-	B3	B-	B-
	CCC+	Caa1	CCC+	CCC+
	CCC	Caa2	CCC	CCC
	CCC-	Caa3	CCC-	CCC-
	CC	Ca	CC	CC
	C	C	C	C
	D		D	

TABLE D

COLLECTIVE INVESTMENT SCHEMES

Credit quality grade (collective investment schemes)	Standard & Poor's Ratings Services Principal stability fund ratings	Standard & Poor's Ratings Services Fund credit quality ratings	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	AAAf	AAAm	Aaa	AAA	AAAfc
	AA+f	AA+m	Aa1	AA+	AA+fc
	AAf	AAm	Aa2	AA	AAfc
	AA-f	AA-m	Aa3	AA-	AA-fc
2	A+f	A+m	A1	A+	A+fc
	Af	Am	A2	A	Afc
	A-f	A-m	A3	A-	A-fc
3	BBB+f	BBB+m	Baa1	BBB+	BBB+fc
	BBBf	BBBm	Baa2	BBB	BBBfc
	BBB-f	BBB-m	Baa3	BBB-	BBB-fc
4	BB+f	BB+m	Ba1	BB+	BB+fc
	BBf	BBm	Ba2	BB	BBfc
	BB-f	BB-m	Ba3	BB-	BB-fc
5	B+f	Dm	B1	B+	B+fc
	Bf		B2	B	Bfc
	B-f		B3	B-	B-fc
	CCC+f		Caa1	CCC+	CCC+fc
	CCCf		Caa2	CCC	CCCfc
	CCC-f		Caa3	CCC-	CCC-fc
			Ca	CC	CCfc
			C	C	Cfc
				D	

TABLE E

SHORT-TERM EXPOSURES (BANKS, SECURITIES FIRMS AND CORPORATES)

Short-term credit quality grade (banks, securities firms and corporates)	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	A-1+ A-1	P-1	F1+ F1	a-1+ a-1
2	A-2	P-2	F2	a-2
3	A-3	P-3	F3	a-3
4	B B-1 B-2 B-3 C D	not prime	B C D	b c

SCHEDULE 4.2 [ss. 4.2, 4.37, 4.45 & 4.47]

STANDARD SUPERVISORY HAIRCUTS FOR COMPREHENSIVE APPROACH TO TREATMENT OF RECOGNIZED COLLATERAL

1. An authorized institution which uses the comprehensive approach to the treatment of recognized collateral shall use the standard supervisory haircuts set out in the Table to take into account the price volatility of both the exposure and the collateral.

TABLE

PART 1

STANDARD SUPERVISORY HAIRCUTS FOR DEBT SECURITIES

Types of exposure or recognized collateral	Credit quality grade / short-term credit quality grade	Residual maturity	Standard supervisory haircuts	
			Sovereign issuers	Other issuers
Debt securities with ECAI issue specific ratings Recognized collateral which falls within any of section 4.30 (e) to (*l*) of these Rules	grade 1	not more than 1 year	0.5%	1%
		more than 1 year but not more than 5 years	2%	4%
		more than 5 years	4%	8%

Debt securities with ECAI issue specific ratings Recognized collateral which falls within any of section 4.30 (e) to (*l*) of these Rules	grades 2 and 3	not more than 1 year	1%	2%
		more than 1 year but not more than 5 years	3%	6%
		more than 5 years	6%	12%
Debt securities with ECAI issue specific ratings Recognized collateral which falls within section 4.30(e), (f) or (h) of these Rules	grade 4	All	15%	not applicable

Debt securities without ECAI issue specific ratings issued by banks or securities firms, which satisfy the criteria set out in section 4.30(m) of these Rules	not applicable	not more than 1 year	not applicable	2%
		more than 1 year but not more than 5 years	not applicable	6%
		more than 5 years	not applicable	12%
Recognized collateral, which falls within section 4.30(m) of these Rules				

PART 2

STANDARD SUPERVISORY HAIRCUTS FOR ASSETS
OTHER THAN DEBT SECURITIES

Types of exposure or recognized collateral	Standard supervisory haircuts
Cash where both the exposure and collateral are in the same currency	0%
Recognized collateral which falls within section 4.30(a), (b) or (c) of these Rules where the exposure is in the same currency as that of the recognized collateral	
Equities in the main index (including convertible bonds) and gold	15%
Recognized collateral which falls within section 4.30(d) or (n) of these Rules	
Other equities (including convertible bonds) listed on a recognized exchange	25%
Recognized collateral which falls within section 4.31(b) of these Rules	
Collective investment schemes	highest haircut applicable to any financial instruments in which the scheme can invest
Recognized collateral which falls within section 4.30(o) or 4.31(c) of these Rules	

PART 3

STANDARD SUPERVISORY HAIRCUTS FOR EXPOSURES AND COLLATERAL WHICH DO NOT FALL WITHIN PARTS 1 AND 2 OF THIS TABLE

Types of exposure or recognized collateral	Standard supervisory haircuts
Exposures and recognized collateral of repo-style transactions which satisfy the criteria set out in section 4.33(2) of these Rules	0%
Exposures arising from currency mismatch	8%
Exposures of transactions under which the instruments lent by an authorized institution do not fall within Parts 1 and 2 of this Table	25%
Recognized collateral which does not fall within section 4.31(a), (b) and (c) of these Rules received by an authorized institution under repo-style transactions	25%
Exposures not specified in this Table	25%

2. In the Table –

(a) the haircuts assume daily marking-to-market, daily remargining and a 10-business day minimum holding period;

(b) the haircuts for sovereigns apply to multilateral development banks and to sovereign foreign public sector entities;

(c) "debt securities" ( ) has the meaning assigned to it by section 4.2 of these Rules;

(d) "recognized collateral" ( ) has the meaning assigned to it by section 4.2 of these Rules;

(e) "other issuers" ( ) includes public sector entities which are not sovereign foreign public sector entities, and for the purpose of applying haircuts to such public sector entities –

(i) an authorized institution shall refer to the credit quality grade applicable to the sovereigns in which the public sector entities are incorporated;

(ii) where the credit quality grade assigned to the sovereign is grade 4, 5 or 6, the securities issued by the public sector entities shall not be recognized for banking book transactions (but may still be recognized in the case of repo-style transactions booked in the trading book, with the application of a 25% haircut according to Part 3 of the Table).

SCHEDULE 6.1 [s. 6.21]

CREDIT QUALITY GRADES FOR SPECIALIZED LENDING

Credit quality grade	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	AAA	Aaa	AAA	AAA
	AA+	Aa1	AA+	AA+
	AA	Aa2	AA	AA
	AA–	Aa3	AA–	AA–
	A+	A1	A+	A+
	A	A2	A	A
	A–	A3	A–	A–
	BBB+	Baa1	BBB+	BBB+
	BBB	Baa2	BBB	BBB
	BBB–	Baa3	BBB–	BBB–
2	BB+	Ba1	BB+	BB+
	BB	Ba2	BB	BB
3	BB–	Ba3	BB–	BB–
	B+	B1	B+	B+
4	B	B2	B	B
	B–	B3	B–	B–
	CCC+	Caa1	CCC+	CCC+
	CCC	Caa2	CCC	CCC
	CCC–	Caa3	CCC–	CCC–
	CC	Ca	CC	CC
	C	C	C	C
	D		D	

SCHEDULE 7.1 [s. 7.3]

REQUIREMENTS APPLICABLE TO OR IN RELATION TO ORIGINATING INSTITUTION IN TRADITIONAL SECURITIZATION TRANSACTION BEFORE SECTION 7.3(1)(a) OF THESE RULES MAY BE USED

An originating institution in a traditional securitization transaction shall demonstrate to the satisfaction of the Monetary Authority that –

(a) significant credit risk associated with the underlying exposures in the transaction has been transferred from the institution to third parties;

(b) the institution does not maintain effective control, directly or indirectly, over the underlying exposures in the transaction;

(c) the underlying exposures in the transaction have been validly transferred and none of the institution or the institution's creditors, or any liquidator or receiver or like officer appointed in respect of the institution, is able, or will be able, to avoid, set aside or successfully contest the transfer;

(d) the institution has obtained an opinion in writing from qualified legal counsel confirming that, in all relevant jurisdictions, the transaction falls within paragraph (c);

(e) the institution has obtained an adjudication from relevant tax authorities, or a tax opinion has been obtained from an accountant or tax advisor, or a person who holds such qualification as the Monetary Authority may accept as being of a standard comparable to that of an accountant or tax adviser, on whether any direct or indirect tax obligations arise as a result of any transfer of interests in underlying exposures and related collateral under the transaction;

(f) the securitization documentation for the transaction accurately reflects the economic substance of the transaction;

(g) the securitization documentation for the transaction does not contain any clause that –

(i) directly or indirectly makes any representation or provides any warranty as to the future credit performance of the underlying exposures;

(ii) obliges the institution to repurchase any of the underlying exposures, at any time, except where that obligation arises from a claim arising from a representation or warranty given by the institution to another person in the securitization documentation solely in respect of the

status of any underlying exposure at the time of the transfer and that is capable of being verified at that time;

(iii) requires the institution to alter the pool of underlying exposures such that the pool's credit quality is improved unless this is achieved through the purchase of underlying exposures by independent and unaffiliated third parties at market prices;

(iv) allows for increases in a first loss tranche retained, or credit enhancement provided, by the institution after the commencement of the transaction; or

(v) increases the return to parties other than the institution, such as investors in securitization issues and third party providers of credit enhancements to the transaction, in response to a deterioration in the credit quality of the pool of underlying exposures;

(h) the securitization issues under the transaction do not represent payment obligations of the institution such that investors who purchase the securitization issues only have recourse for payment to the pool of underlying exposures;

(*i*) the securitization issues under the transaction are issued by an SPE and the holders of the securitization issues have the right to pledge or transfer them without restriction;

(j) where the transaction includes a clean-up call –

(i) the exercise of the clean-up call is entirely at the discretion of the institution except where the clean-up call is exercised under circumstances beyond the control of any party to the transaction;

(ii) the clean-up call is not structured –

(A) to reduce potential or actual losses to investors or other parties to the transaction; or

(B) to provide credit enhancement to those investors and parties; and

(iii) the clean-up call is exercisable only when 10% or less of the principal amount of the securitization issues or underlying exposures at the commencement of the transaction remains outstanding;

(k) subject to paragraph (*l*), the institution has not committed itself to purchasing any of the securitization issues prior to their initial issue by the SPE;

(l) where the institution or a member of its group of companies has underwritten any securitization issues in the transaction –

(i) this has been done at an arm's length basis; and

(ii) this has been done after consultation with the Monetary Authority, in accordance with a timetable for the disposal of any positions held or to be held under the underwriting commitment;

(m) where under the transaction there is an interest rate contract or exchange rate contract between the institution and the SPE which issued the securitization issues for the purpose of enabling the SPE to hedge interest rate risk or foreign exchange risk, the contract was entered into at market rates and, notwithstanding the contract, the transaction still satisfies the requirements set out in this Schedule.

SCHEDULE 7.2 [ss. 7.3, 7.17 & 7.29]

REQUIREMENTS APPLICABLE TO OR IN RELATION TO ORIGINATING INSTITUTION IN SYNTHETIC SECURITIZATION TRANSACTION BEFORE SECTION 7.3(1)(b) OF THESE RULES MAY BE USED

1. **Requirements**

An originating institution in a synthetic securitization transaction shall demonstrate to the satisfaction of the Monetary Authority that –

(a) significant credit risk associated with the underlying exposures in the transaction has been transferred from the institution to third parties through relevant credit protection which falls within Divisions 5 to 10 of Part 4;

(b) any collateral obtained by the institution for hedging the credit risk of the underlying exposures falls within section 4.30 or 4.31 of these Rule, as the case requires, and, in the case of recognized collateral (within the meaning of section 4.2, 5.2 or 6.2(1) of these Rules, as the case requires) provided by the SPE in the transaction, the institution has obtained the prior consent of the Monetary Authority to allow the institution to use such collateral as recognized collateral for the purposes of this paragraph;

(c) subject to section 2, any guarantee or credit derivative contract provided by any credit protection provider falls within sections 4.49 and 4.50 of these Rules;

(d) the institution has obtained an opinion in writing from qualified legal counsel confirming that, in all relevant jurisdictions, the securitization documentation for the transaction –

(i) enables the institution to have valid, legally binding and enforceable rights over any collateral taken in respect of the transaction;

(ii) constitutes valid, legally binding and enforceable obligations of any credit protection provider in respect of the transaction;

(e) the securitization documentation for the transaction accurately reflects the economic substance of the transaction;

(f) the securitization documentation for the transaction does not contain any clause that –

(i) materially limits the credit protection if a credit event occurs or the credit quality of the pool of underlying exposures deteriorates;

(ii) requires the institution to alter the pool of underlying exposures such that the pool's credit quality is improved unless this is achieved through the purchase of underlying exposures by independent and unaffiliated third parties at market prices;

(iii) allows for increases in a first loss tranche retained, or credit enhancement provided, by the institution after the commencement of the transaction;

(iv) allows for increases in the cost of credit protection to the institution in response to deterioration in the credit quality of the pool of underlying exposures; or

(v) increases the return to parties other than the institution, such as investors in securitization issues and third party providers of credit enhancements to the transaction, in response to a deterioration in the credit quality of the pool of underlying exposures;

(g) where the transaction includes a clean-up call -

(i) the exercise of the clean-up call is entirely at the discretion of the institution except where the clean-up call is exercised under circumstances beyond the control of any party to the transaction;

(ii) the clean-up call is not structured –

(A) to reduce potential or actual losses to investors or other parties to the transaction; or

(B) to provide credit enhancement to those investors and parties; and

(iii) the clean-up call is exercisable only when 10% or less of the principal amount of the securitization issues or underlying exposures at the commencement of the transaction remains outstanding;

(h) subject to paragraph (*i*), the institution has not committed itself to purchasing any of the securitization issues prior to their initial issue by the SPE;

(i) where the institution or a member of its group of companies has underwritten any securitization issues in the transaction –

(i) this has been done at an arm's length basis; and

(ii) this has been done after consultation with the Monetary Authority, in accordance with a timetable for the disposal of any positions held or to be held under the underwriting commitment;

(j) where under the transaction there is an interest rate contract or exchange rate contract between the institution and the SPE which issued the securitization issues for the purpose of enabling the SPE to hedge interest rate risk or foreign exchange risk, the contract was entered into at market rates and, notwithstanding the contract, the transaction still satisfies the requirements set out in this Schedule.

2. **Provisions supplementary to section 1(c)**

For the purposes of section 1(c), the SPE in the securitization transaction concerned shall not be recognized as a credit protection provider.

SCHEDULE 7.3 [ss. 7.1, 7.10, 7.11, 7.13 & 7.14]

MAPPING OF ECAI ISSUE SPECIFIC RATINGS INTO CREDIT QUALITY GRADES UNDER STC(S) APPROACH

TABLE A

LONG-TERM CREDIT QUALITY GRADE

Long-term credit quality grade	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	AAA	Aaa	AAA	AAA
	AA+	Aa1	AA+	AA+
	AA	Aa2	AA	AA
	AA-	Aa3	AA-	AA-
2	A+	A1	A+	A+
	A	A2	A	A
	A-	A3	A-	A-
3	BBB+	Baa1	BBB+	BBB+
	BBB	Baa2	BBB	BBB
	BBB-	Baa3	BBB-	BBB-
4	BB+	Ba1	BB+	BB+
	BB	Ba2	BB	BB
	BB-	Ba3	BB-	BB-
5	B+	B1	B+	B+
	B	B2	B	B
	B-	B3	B-	B-
	CCC+	Caa1	CCC+	CCC+
	CCC	Caa2	CCC	CCC
	CCC-	Caa3	CCC-	CCC-
	CC	Ca	CC	CC
	C	C	C	C
	D		D	

TABLE B

SHORT-TERM CREDIT QUALITY GRADE

Short-term credit quality grade	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	A-1+ A-1	P-1	F1+ F1	a-1+ a-1
2	A-2	P-2	F2	a-2
3	A-3	P-3	F3	a-3
4	B B-1 B-2 B-3 C D	not prime	B C D	b c

SCHEDULE 7.4 [ss. 7.19 & 7.31]

CCF FOR SECURITIZATION EXPOSURES SUBJECT TO CONTROLLED EARLY AMORTIZATION PROVISION

Credit line	Uncommitted		Committed
	3-month average excess spread level	CCF	CCF
Retail	133.33% or more of trapping point	0%	90%
	less than 133.33% to 100% of trapping point	1%	
	less than 100% to 75% of trapping point	2%	
	less than 75% to 50% of trapping point	10%	
	less than 50% to 25% of trapping point	20%	
	less than 25% of trapping point	40%	
Non-retail	not applicable	90%	90%

SCHEDULE 7.5 [ss. 7.19 & 7.31]

CCF FOR SECURITIZATION EXPOSURES SUBJECT TO NON-CONTROLLED EARLY AMORTIZATION PROVISION

Credit line	Uncommitted		Committed
	3-month average excess spread level	CCF	CCF
Retail	133.33% or more of trapping point	0%	100%
	less than 133.33% to 100% of trapping point	5%	
	less than 100% to 75% of trapping point	15%	
	less than 75% to 50% of trapping point	50%	
	less than 50% of trapping point	100%	
Non-retail	not applicable	100%	100%

SCHEDULE 7.6 [ss. 7.1, 7.25, 7.36 & 7.38]

MAPPING OF ECAI ISSUE SPECIFIC RATINGS INTO CREDIT QUALITY GRADES UNDER RATINGS-BASED METHOD

TABLE A

LONG-TERM CREDIT QUALITY GRADES

Long-term credit quality grade	Standard & Poor's Ratings Services	Moody's Investors Service	Fitch Ratings	Rating and Investment Information, Inc.
1	AAA AA+	Aaa Aa1	AAA AA+	AAA AA+
2	AA AA-	Aa2 Aa3	AA AA-	AA AA-
3	A+	A1	A+	A+
4	A	A2	A	A
5	A-	A3	A-	A-
6	BBB+	Baa1	BBB+	BBB+
7	BBB	Baa2	BBB	BBB
8	BBB-	Baa3	BBB-	BBB-
9	BB+	Ba1	BB+	BB+
10	BB	Ba2	BB	BB
11	BB-	Ba3	BB-	BB-
12	B+ B B- CCC+ CCC CCC- CC C D	B1 B2 B3 Caa1 Caa2 Caa3 Ca C	B+ B B- CCC+ CCC CCC- CC C D	B+ B B- CCC+ CCC CCC- CC C

TABLE B

SHORT-TERM CREDIT QUALITY GRADES

Short-term credit quality grade	Standard & Poor's Ratings Services	Moody's Investor Service	Fitch Ratings	Rating and Investment Information, Inc.
1	A-1+ A-1	P-1	F1+ F1	a-1+ a-1
2	A-2	P-2	F2	a-2
3	A-3	P-3	F3	a-3
4	B B-1 B-2 B-3 C D	not prime	B C D	b c

SCHEDULE 8.1 [s. 8.8]

STANDARDIZED BUSINESS LINES

1. Each standardized business line set out in the column 1 of the Table can be –

(a) divided into the major business segments set out in column 2 opposite to the standardized business line; and

(b) further divided into the activity groups set out in column 3 opposite to the standardized business line.

TABLE

Standardized business line	Major business segments	Activity groups
1. corporate finance	corporate finance	mergers and acquisitions; underwriting; privatizations; securitizations;
	municipal or government finance	research; debt (sovereign, high yield); equity;
	merchant banking	syndications; initial public offerings; secondary private placements
	advisory services	
2. trading and sales	sales	fixed income; debt; equity;
	market making	foreign exchange; commodities; credit;
	proprietary positions	funding; own position securities; lending and repo-style
	treasury	transactions; brokerage; prime brokerage
3. retail banking	retail banking	retail lending and deposits; banking services; trust and estates
	private banking	private lending and deposits; banking services; trust and estates; investment advice
	card services	merchant, commercial or corporate cards; private labels cards and retail cards

4.	commercial banking	commercial banking	project finance; real estate finance; export finance; trade finance; factoring; leasing; lending; guarantees; bills of exchange
5.	payment and settlement	external clients	payments and collections; funds transfer; clearing and settlement
6.	agency services	custody	escrow; depository receipts; securities lending (customers); corporate actions
		corporate agency	issuer and paying agents
		corporate trust	
7.	asset management	discretionary fund management	pooled, segregated, retail, institutional, closed, open or private equity fund
		non-discretionary fund management	pooled, segregated, retail, institutional, closed or open fund
8.	retail brokerage	retail brokerage	execution only and full service

2. For the purpose of item 5 in the Table, payment and settlement losses related to an authorized institution's own activities shall be allocated to the standardized business line to which the transaction occasioning the payment and settlement loss is most closely related.

Monetary Authority

2006

Explanatory Note

These Rules are made by the Monetary Authority under section 98A of the Banking Ordinance (Cap. 155) ("the Ordinance") as amended by the Banking (Amendment) Ordinance 2005 (19 of 2005) to prescribe the manner in which the capital adequacy ratio of an authorized institution incorporated in Hong Kong ("local institution") shall be calculated.

2. In June 2004, the Basel Committee on Banking Supervision ("the BCBS") issued revised capital adequacy standards for banks under its document entitled "International Convergence of Capital Measurement and Capital Standards: A Revised Framework". The framework contained in the document is commonly referred to as "Basel II". Basel II represents a far more comprehensive approach to bank capital regulation than its predecessor Basel I, the 1988 Capital Accord introduced by the BCBS. Basel I requires banks to hold a minimum level of capital for their exposures to credit risk, expressed as a minimum ratio of a bank's capital base to its risk-weighted assets. This ratio is known as the capital adequacy ratio. Basel I was subsequently amended in 1996 to incorporate banks' exposures to market risk.

3. The present statutory provisions governing the calculation of the capital adequacy ratio of a local institution, which are based on the requirements of Basel I, are contained in section 98 of the Ordinance as read with the Third Schedule to the Ordinance. However, the BCBS requires its member jurisdictions to introduce

the framework in Basel II from January 2007. Hong Kong is not a member of the BCBS, but has always subscribed to the supervisory standards recommended by it. Therefore, the Government has decided to introduce Basel II in accordance with the timetable set by the BCBS for its members. This has necessitated the enactment of the Banking (Amendment) Ordinance 2005. The principal statutory provisions which will govern the calculation of the capital adequacy ratio of a local institution are the definitions of "capital adequacy ratio" and "capital base" in section 2(1) of the Ordinance as amended by the Banking (Amendment) Ordinance 2005, sections 98 and 98A of the Ordinance as amended by the Banking (Amendment) Ordinance 2005, and these Rules. The Third Schedule to the Ordinance will be repealed by the Banking (Amendment) Ordinance 2005 when the new statutory provisions come into operation.

4. The new definition of "capital adequacy ratio" in section 2(1) of the Ordinance names, and assigns a meaning to, 3 kinds of risk faced by local institutions, that is, credit risk, operational risk and market risk.

5. The Rules are divided into 10 Parts.

6. Part 1 contains the meaning of the expressions generally used in the Rules, and specifies that the capital adequacy ratio of a local institution is to be calculated as a ratio, expressed as a percentage, of the institution's capital base to the aggregate of the institution's risk-weighted amounts for credit risk, operational risk and market risk. (See the definitions of "risk-

weighted amount", "risk-weighted amount for credit risk", "risk-weighted amount for operational risk" and "risk-weighted amount for market risk" in section 1.2(1).)

7. Part 2 specifies the various approaches which a local institution shall, or with the approval of the Monetary Authority may, use to calculate its credit risk, operational risk and market risk.

8. Section 2.2 provides that a local institution shall use the standardized (credit risk) approach to calculate its credit risk for non-securitization exposures unless it has the approval of the Monetary Authority to use the basic approach or internal ratings-based approach to calculate its credit risk for such exposures. (See the definition of "non-securitization exposure" in section 1.2(1).) Part 4 and Schedules 4.1 and 4.2 set out the technical details which a local institution shall comply with in using the standardized (credit risk) approach to calculate its credit risk for non-securitization exposures.

9. The Monetary Authority may only grant approval to a local institution to use the basic approach to calculate its credit risk for non-securitization exposures if the institution satisfies the requirements of section 2.4. Part 5 sets out the technical details which a local institution shall comply with in using the basic approach to calculate its credit risk for non-securitization exposures.

10. The Monetary Authority may only grant approval to a local institution to use the internal ratings-based approach to calculate its credit risk for non-securitization exposures if the institution satisfies the requirements of Schedule 2.1. Part 6 and Schedule 6.1 set out the technical details which a local institution shall comply with in using the internal ratings-based approach to calculate its credit risk for non-securitization exposures.

11. Subject to certain specified exceptions, a local institution shall use the standardized (securitization) approach to calculate its credit risk for securitization exposures if it would use the standardized (credit risk) approach or basic approach to calculate its credit risk for the underlying exposures in the securitization transaction concerned. (See the definitions of "securitization exposure", "securitization transaction" and "underlying exposures" in section 7.1(1).) Divisions 2 and 3 of Part 7 and Schedules 7.1, 7.2, 7.3, 7.4 and 7.5 set out the technical details which a local institution shall comply with in using the standardized (securitization) approach to calculate its credit risk for securitization exposures.

12. Similarly, and subject to certain specified exceptions, a local institution shall use the internal ratings-based (securitization) approach to calculate its credit risk for securitization exposures if it would use the internal ratings-based approach to calculate its credit risk for the underlying exposures in the securitization transaction concerned. Divisions

2, 4, 5 and 6 of Part 7 and Schedules 7.1, 7.2, 7.4, 7.5 and 7.6 set out the technical details which a local institution shall comply with in using the internal ratings-based (securitization) approach to calculate its credit risk for securitization exposures.

13. Section 2.14 provides that a local institution shall use the basic indicator approach to calculate its operational risk unless it has the approval of the Monetary Authority to use the standardized (operational risk) approach or alternative standardized approach to calculate its operational risk. Division 2 of Part 8 sets out the technical details which a local institution shall comply with in using the basic indicator approach to calculate its operational risk.

14. The Monetary Authority may only grant approval to a local institution to use the standardized (operational risk) approach or alternative standardized approach to calculate its operational risk if the institution satisfies the requirements of Schedule 2.2. Division 3 of Part 8 and Schedule 8.1 set out the technical details which a local institution shall comply with in using the standardized (operational risk) approach to calculate its operational risk. Division 4 of Part 8 sets out the technical details which a local institution shall comply with in using the alternative standardized approach to calculate its operational risk.

15. Section 2.17 provides that a local institution (except a local institution exempted under section 2.22(1)) shall use the standardized (market risk) approach to calculate its market risk unless it has the approval of the Monetary Authority to use the internal models approach to calculate its market risk or the approach used by its parent bank to calculate its market risk. (See the definition of "parent bank" in section 1.2(1).) Part 9 sets out the technical details which a local institution shall comply with in using the standardized (market risk) approach to calculate its market risk.

16. The Monetary Authority may only grant approval to a local institution to use the internal models approach to calculate its market risk if it satisfies the requirements of Schedule 2.3. Part 10 sets out the technical details which a local institution shall comply with in using the internal models approach to calculate its market risk.

17. Part 3 and Schedule 3.1 specify how a local institution shall determine its capital base for the purposes of the Rules.

18. The following is a list of abbreviations used in the Rules.

Abbreviation	Expression
ABCP programme	asset-backed commercial paper programme
ASA approach	alternative standardized approach
BIA approach	basic indicator approach
BSC approach	basic approach

CCF	credit conversion factor
EAD	exposure at default
ECAI	external credit assessment institution
EL	expected loss
EL amount	expected loss amount
IMM approach	internal models approach
IRB approach	internal ratings-based approach
IRB(S) approach	internal ratings-based (securitization) approach
LGD	loss given default
M	maturity
OTC derivative transaction	over-the-counter derivative transaction
PD	probability of default
SPE	special purpose entity
STC approach	standardized (credit risk) approach
STC(S) approach	standardized (securitization) approach
STM approach	standardized (market risk) approach
STO approach	standardized (operational risk) approach
VaR	value-at-risk

19. The following is a list of tables contained in the Rules.

Section No.	Table No.	Description
2.11	2.1	Transitional data requirements
4.6	4.1	Risk-weights for sovereign exposures
4.10	4.2	Risk-weights for bank exposures
4.10	4.3	Risk-weights for bank exposures with a short-term ECAI issue specific rating
4.11	4.4	Risk-weights for securities firm exposures
4.11	4.5	Risk-weights for securities firm exposures with a short-term ECAI issue specific rating
4.12	4.6	Risk-weights for corporate exposures
4.12	4.7	Risk-weights for corporate exposures with a short-term ECAI issue specific rating
4.13	4.8	Risk-weights for collective investment scheme exposures
4.22	4.9	Determination of CCF for off-balance sheet exposures other than OTC derivative transactions or credit derivative contracts

4.22	4.10	Determination of CCF for OTC derivative transactions or credit derivative contracts
4.42	4.11	Assumed minimum holding periods
4.48	4.12	Multiplier for exceptions
5.15	5.1	Determination of CCF for off-balance sheet exposures other than OTC derivative transactions or credit derivative contracts
5.15	5.2	Determination of CCF for OTC derivative transactions or credit derivative contracts
6.5	6.1	Classes and subclasses of exposures under IRB approach
6.10	6.2	IRB calculation approaches
6.21	6.3	Supervisory rating grades for determination of risk-weights for specialized lending
6.23	6.4	Determination of effective LGD
6.26	6.5	Determination of CCF for off-balance sheet exposures other than OTC derivative transactions or credit derivative contracts

6.58	6.6	Risk-weights for cash items
6.83	6.7	Risk-weights for specialized lending for determination of EL
6.89	6.8	Adjustment factors
7.11	7.1	Risk-weights or deductions applicable to long-term credit quality grades under STC(S) approach
7.11	7.2	Risk-weights or deductions applicable to short-term credit quality grades under STC(S) approach
7.36	7.3	Risk-weights or deductions applicable to long-term credit quality grades under ratings-based method
7.36	7.4	Risk-weights or deductions applicable to short-term credit quality grades under ratings-based method
8.9	8.1	Capital charge factor applicable to standardized business lines
9.7	9.1	Market risk capital charge factors for specific risk
9.8	9.2	Horizontal disallowance
9.9	9.3	Time bands and risk-weights

9.21	9.4	Market risk capital charge factor for each risk category
10.6	10.1	Plus factors for back-testing exceptions
Schedule 4.1		Credit quality grades
Schedule 4.2		Standard supervisory haircuts for comprehensive approach to treatment of recognized collateral
Schedule 6.1		Credit quality grades for specialized lending
Schedule 7.3		Mapping of ECAI issue specific ratings into credit quality grades under STC(S) approach
Schedule 7.4		CCF for securitization exposures subject to controlled early amortization provision
Schedule 7.5		CCF for securitization exposures subject to non-controlled early amortization provision
Schedule 7.6		Mapping of ECAI issue specific ratings into credit quality grades under ratings-based method
Schedule 8.1		Standardized business lines

20. The following is a list of formulas contained in the Rules.

Section No.	Formula No.	Description
4.25	4.1	Calculation of risk-weight of credit derivative contract which falls within section 4.25(6)
4.38	4.2	Calculation of net credit exposure to obligor under on-balance sheet exposure
4.39	4.3	Calculation of net credit exposure to obligor under off-balance sheet exposure other than credit derivative contract booked in the trading book and OTC derivative transaction
4.40	4.4	Calculation of net credit exposure to counterparty under credit derivative contract booked in trading book and OTC derivative transaction
4.41	4.5	Calculation of haircut where more than one type of recognized collateral is provided in respect of the same exposure

4.43	4.6	Adjustment of standard supervisory haircuts for circumstances set out in section 4.43
4.45	4.7	Calculation of net credit exposure under recognized netting
4.46	4.8	Calculation of net potential exposure under nettable derivative transactions
4.47	4.9	Calculation of net credit exposure to counterparty where aggregate value referred to in section 4.47(2)(a) is greater than aggregate value referred to in section 4.47(2)(b)
4.48	4.10	Calculation of net credit exposure to counterparty under nettable repo-style transaction using VaR model
4.51	4.11	Calculation of amount of credit protection of recognized guarantee or recognized credit derivative contract where there is currency mismatch

4.54	4.12	Adjustment of calculation of value of credit protection where there is maturity mismatch
5.18	5.1	Calculation of risk-weight of credit derivative contract which falls within section 5.18(6)
5.27	5.2	Calculation of net credit exposure under recognized netting
5.28	5.3	Calculation of net potential exposure under nettable derivative transactions
6.19	6.1	Risk-weight function to be used for corporate, sovereign and bank exposures
6.19	6.2	Risk-weight function for hedged exposures under double default framework
6.23	6.3	Determination of effective LGD
6.23	6.4	Determination of net credit exposure
6.31	6.5	Calculation of maturity for corporate, sovereign and bank exposure subject to predetermined cash flow schedule
6.39	6.6	Risk-weight function for residential mortgages

6.39	6.7	Risk-weight function for qualifying revolving retail exposures
6.39	6.8	Risk-weight function for small business retail exposures or other retail exposures to individuals
7.36	7.1	Calculation of effective number of underlying exposures
7.44	7.2	Supervisory formula
7.49	7.3	Calculation of exposure-weighted average LGD
7.50	7.4	Simplified method for calculating N
8.5	8.1	Calculation of capital charge for operational risk under BIA approach
8.9	8.2	Calculation of capital charge for operational risk under STO approach
8.14	8.3	Calculation of capital charge for operational risk in retail banking under ASA approach
9.24	9.1	Calculation of gamma impact of option contracts

Banking (Capital) Rules

Explanatory Paper

Background

1. The capital held by a bank helps to absorb losses and thus protect its creditors including depositors. Consequently, banking supervisory authorities have an interest in maintaining adequate capital in the banking system and have used their authority to impose minimum capital requirements. Capital levels of banks are usually considered in the form of a capital adequacy ratio ("CAR"), expressed as a percentage, of a bank's capital base to its exposures to risks.

2. The international standards in the field of banking supervision are set by the Basel Committee on Banking Supervision[1] ("BCBS"). A key element of the Basel supervisory approach is the capital adequacy ratio requirement set out in the Basel Capital Accord adopted in 1988 (now widely referred to as Basel I). Basel I introduced a capital adequacy measure for credit risk and (as subsequently amended in 1996) market risk. It requires that banks hold as capital at least 8% of their credit and market risks. Basel I has been adopted by Hong Kong through legislation under the Third Schedule to the Banking Ordinance ("Ordinance"). Its subsequent amendments relating to market risk were backed by the introduction of paragraph 6(e) of the Seventh Schedule to the Ordinance.

3. In order to provide a more comprehensive and risk-sensitive approach to align capital requirements with actual banking risk, the BCBS issued revised capital adequacy standards for banks under its document entitled "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" to replace Basel I. The framework contained in this document is commonly referred to as

[1] The Basel Committee on Banking Supervision was established by the central bank Governors of the Group of Ten (G10) countries in 1975. It formulates broad supervisory standards, provides guidance and recommends best practice in the area of banking supervision. In close collaboration with many non-G10 supervisory authorities, the Committee also aims to promote sound supervisory standards world-wide.

"Basel II". The BCBS requires its member jurisdictions to introduce the framework in Basel II from January 2007. The Government, in line with its established practice of subscribing to the supervisory standards recommended by the BCBS, has decided to introduce Basel II in accordance with the timetable set by the BCBS for its members.

4. The Banking (Amendment) Ordinance 2005, enacted in July 2005, provides the legal basis for the Hong Kong Monetary Authority ("HKMA") to implement Basel II in Hong Kong. In particular, it provides that the CAR of locally incorporated authorized institutions ("local institutions") shall be calculated, and information on the state of affairs and profit and loss including CAR shall be disclosed, in a manner prescribed in Rules to be made by the Monetary Authority ("MA") under the Ordinance, and such Rules are referred to as "Banking (Capital) Rules" and "Banking (Disclosure) Rules" respectively. These Rules will have the status of subsidiary legislation and will be subject to negative vetting by the Legislative Council ("LegCo"). The Third Schedule to the Ordinance, which prescribes the calculation methodology for the capital adequacy ratio under Basel I, will be replaced by the Banking (Capital) Rules.

5. The MA is subject to the statutory duty to consult the Banking Advisory Committee, the Deposit-taking Companies Advisory Committee, The Hong Kong Association of Banks, the DTC Association and the Financial Secretary when making the Rules. In addition to these parties, the MA is consulting a broad spectrum of society to ensure broad support and identify issues of relevance to industry players, other professionals and the general public that should be properly considered before the Rules are gazetted.

6. This explanatory paper is to assist parties interested in the subject to understand the objectives of each part of the Rules.

Pillar 1 of Basel II

7. Basel II is structured around three "pillars". Pillar 1 sets out the

minimum capital requirements for a bank's operational risk, in addition to credit risk and market risk which are captured under Basel I. Pillar 2 requires that banks should have in place sound internal processes to assess the adequacy of their capital, based on a thorough evaluation of their risks including those risks not covered under Pillar 1, and that supervisors should carry out "supervisory review" of this process. Pillar 3 is to complement Pillars 1 and 2 through enhanced market transparency and market discipline by requiring banks to make public disclosure of information on their risk profiles, capital adequacy and risk management.

8. The definitions of "capital adequacy ratio" and "capital base" under the Ordinance as amended by the Banking (Amendment) Ordinance and the Banking (Capital) Rules to be made by the MA under the Ordinance will govern the calculation of the CAR of a local institution as set out under Pillar 1 of Basel II. Under section 2(1) of the Ordinance, CAR in relation to a local institution means the ratio of the institution's capital base to a value representing the degree of credit risk, market risk and operational risk to which the institution is exposed. The definition of the three types of risk is embodied in the definition of CAR[2]. These definitions are essential to ensure that the supervisory standards on capital adequacy in Hong Kong to be set out in the Banking (Capital) Rules are in line with the requirements of Basel II and that the MA's power to make rules under the Ordinance is limited to the power to make rules for the implementation of Basel II.

9. The value representing the degree of the three types of risk is to be calculated in a variety of ways depending upon the type of risk and the calculation approach to be adopted. Pillar 1 offers a menu of approaches to calculating the value of each type of risk, in order of increasing sophistication, for banks to choose. These

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[2] **Credit risk** means the risk of loss from (i) default by counterparties in on-balance sheet and off-balance sheet transactions of the institution; or (ii) diminution in the value of such on-balance sheet items of the institution as may be prescribed by the MA in rules made under section 98A(1) of the Ordinance;

Market risk means the potential losses arising from fluctuations in the value of positions held by the institution (i) for trading purposes in debt securities, interest rate-related contracts, equities and equities-related contracts; and (ii) in foreign exchange, exchange rate-related contracts, commodities and commodities-related contracts;

. **Operational risk** means the risk of direct or indirect losses resulting from (i) inadequacies or failings in the processes or systems, or of personnel of the institution; or (ii) external events.

are the standardized approach, the foundation internal ratings-based ("IRB") approach and the advanced IRB approach for credit risk; the basic indicator approach, the standardized approach (including the alternative standardized approach) and the advanced measurement approaches ("AMA") for operational risk; and the standardized approach and the internal models approach for market risk. In view of the widely differing business focus, size and complexity of local institutions and the nature and combination of risks which they face, the HKMA is allowing institutions the freedom of selecting the calculation approaches available under Basel II, except that the AMA approach for operational risk will not be offered initially given that the techniques for quantitative capital measurement are still evolving. In addition, the HKMA will make available the basic approach for measuring credit risk to local institutions with small, simple and straightforward operations or as an interim approach for those institutions implementing the IRB approach during the transitional period from 2007 to 2009. This approach is essentially a modification of the existing framework with slight definitional changes, and the adoption of it is subject to the MA's prior approval. Institutions that intend to adopt the more advanced approaches of calculation for credit risk, market risk or operational risk will be required to meet stringent qualifying criteria and standards, and must obtain MA's prior approval for doing so.

Contents of the Banking (Capital) Rules

10. The consultation draft of the Banking (Capital) Rules sets out in detail the different calculation approaches that can be adopted for credit, market and operational risks, which are similar to the consultative proposals already issued by the HKMA. The Banking (Capital) Rules are structured into 10 parts, with their major objectives and provisions as follows:

Part 1 – Preliminary

11. This part defines the terms used generally throughout the Banking (Capital) Rules and specifies how the CAR shall be calculated. Specifically, section 1.3 specifies that the CAR of a local institution shall be calculated as the ratio,

expressed as a percentage, of the institution's capital base to the aggregate of its risk-weighted amounts for credit risk, market risk and operational risk. "Risk-weighted amount" in relation to the calculation of the three types of risk of a local institution is to be calculated in accordance with Part 4, 5 or 6 (under the standardized (credit risk) approach, the basic approach or the IRB approach for the institution's non-securitization exposures to credit risk); Part 7 (under the standardized (securitization) approach or the IRB (securitization) approach for the institution's securitization exposures to credit risk); Part 8 (under the basic indicator approach, the standardized (operational risk) approach or the alternative standardized approach for the institution's exposures to operational risk); and Part 9 (under the standardized (market risk) approach or the internal models approach for the institution's exposures to market risk).

Part 2 – Prescribed approaches in relation to calculation of CAR

12. This part specifies the various approaches a local institution must, or with the approval of the MA, may use to calculate its credit, market and operational risks and the qualifying criteria for using some of these approaches.

Credit risk

13. A local institution must use the standardized (credit risk) approach to calculate its credit risk for non-securitization exposures unless it has the approval of the MA to use the basic approach or the IRB approach to calculate its credit risk for non-securitization exposures. The MA may only grant approval for a local institution to use the basic approach or the IRB approach if it satisfies the requirements of section 2.4 or 2.5 (including Schedule 2.1) respectively.

14. Subject to certain specified exceptions, a local institution must use the standardized (securitization) approach to calculate its credit risk for the securitization exposures in a securitization transaction if it would use the standardized (credit risk) approach or the basic approach to calculate its credit risk for the underlying exposures in the transaction. Similarly, a local institution must use the internal ratings-based (securitization) approach to calculate its credit risk for the securitization exposures in

a securitization transaction if it would use the IRB approach to calculate its credit risk for the underlying exposures in the transaction.

Market risk

15. A local institution (except an institution exempted under section 2.22) must use the standardized (market risk) approach to calculate its market risk unless it has the approval of the MA to use the internal models approach to calculate its market risk. The MA may only grant approval for an institution to use the internal models approach if it satisfies the requirements of Schedule 2.3. Section 2.20 also provides that an institution may use the approach adopted by its parent bank to calculate market risk if it has the MA's approval to do so. In addition, an institution with a small market risk position may be exempted by the MA under section 2.22 from the calculation of market risk.

Operational risk

16. A local institution must use the basic indicator approach to calculate its operational risk unless it has the approval to use the standardized approach or the alternative standardized approach to calculate its operational risk. The MA may only grant approval for an institution to use the standardized approach or the alternative standardized approach if it satisfies the requirement of Schedule 2.2.

Calculation basis

17. This Part also specifies the requirement of a local institution to calculate its CAR on a solo basis, solo-consolidated basis or consolidated basis. Section 2.24(2) provides that the MA may require the CAR of the institution to be calculated on a consolidated basis in respect of a subsidiary of the institution (other than a subsidiary which is an insurance firm or securities firm), if more than 50% of the subsidiary's total assets or total income arise from the carrying out of relevant financial activities set out in Section 2.24(3).

Part 3 - Determination of Capital Base

18. This Part specifies how a local institution should determine its capital base for calculating its CAR, that is, to add together the institution's core capital (as defined under section 3.4) and supplementary capital (as defined under section 3.8) and to make such deductions as are specified in section 3.14. Section 3.3 specifies the essential characteristics that an institution's core capital or supplementary capital must possess in order for such capital to be included in the institution's capital base.

Part 4 – Standardized approach to calculation of credit risk for non-securitization exposures

19. This Part and Schedules 4.1 and 4.2 set out the technical details that a local institution must comply with in using the standardized (credit risk) approach to calculate its credit risk for non-securitization exposures. In particular, section 4.5 provides that an institution shall classify each of its exposures, according to the obligor or the nature of the exposure, into 12 specified classes and Division 3 provides that the risk-weight for exposures under the classes of sovereign exposures, public sector entity exposures, bank exposures, securities firm exposures, corporate exposures, and collective investment scheme exposures shall be determined according to the ratings assigned by recognized external credit assessment institutions to those exposures. Divisions 5 to 10 provide that an institution can use credit risk mitigation in the form of specified types of collateral, guarantees, credit derivative contracts and netting in reducing the risk-weighted amount of the institution's exposures subject to the specified conditions being met.

Part 5 – Basic approach to calculation of credit risk for non-securitization exposures

20. This Part sets out the technical details that a local institution must comply with in using the basic approach to calculate its credit risk for non-securitization exposures. In particular, section 5.5 provides that an institution shall classify each of its exposures, according to the obligor or the nature of the exposure, into 7 specified classes, being sovereign exposures; public sector exposures; multilateral development bank exposures; bank exposures; cash items; residential

mortgage loans; and other exposures. Division 3 specifies the risk-weights for each of these classes of exposures. Divisions 5 to 8 provide that an institution can use credit risk mitigation in the form of specified types of collateral, guarantees, credit derivative contracts and netting in reducing the risk-weighted amount of the institution's exposures subject to the specified conditions being met.

Part 6 - IRB approach to calculation of credit risk for non-securitization exposures

21. This Part and Schedule 2.1 set out the technical details that a local institution must comply with in using the IRB approach to calculate its credit risk for non-securitization exposures. In particular, Division 2 provides that an institution shall classify each of its exposures into one of the six IRB classes, being corporate exposures, sovereign exposures, bank exposures, retail exposures, equity exposures and other exposures. Division 3 requires an institution to select one of the IRB calculation approaches applicable to the six IRB classes. Divisions 5 to 9 set out the technical details for the calculation of credit risk for an institution's exposures which fall under each of the IRB classes. Division 10 provides that an institution can take into account the effect of credit risk mitigation in calculating the risk-weighted amount of its exposures. Division 11 specifies the capital treatment an institution shall accord the difference between the total expected loss amount and the total eligible provision of its exposures under the IRB approach. Division 12 requires an institution to multiply the risk-weighted amount of its exposures by a scaling factor to arrive at the institution's total risk-weighted amount for credit risk. Division 13 requires an institution to be subject to a capital floor during the first three years of adoption of the IRB approach.

Part 7 – Calculation of credit risk for securitization exposures

22. This Part prescribes the calculation framework for securitization exposures. Divisions 2 and 3 of Part 7 and Schedules 7.1 to 7.5 set out the technical details that a local institution must comply with in using the standardized (securitization) approach to calculate its credit risk for securitization exposures. Divisions 2, 4, 5 and 6 of Part 7, and Schedules 7.1 to 7.5 set out the technical details that an institution must comply with in using the internal ratings-based (securitization)

approach to calculate its credit risk for securitization exposures. Schedules 7.1 and 7.2 set out the criteria that an originating institution in a securitization transaction is required to satisfy before the underlying exposures (in the case of a traditional securitization) or the credit risk of the underlying exposures (in the case of a synthetic securitization) can be considered as removed from the book of the institution.

Part 8 – Calculation of operational risk

23. Division 1 of this Part sets out the technical details that a local institution must comply with in using the basic indicator approach to calculate its operational risk, which basically require the institution to calculate the capital charge for its operational risk based on its average gross income of the last 3 years. Division 2 of this Part and Schedule 8.1 set out the technical details that an institution must comply with in using the standardized approach to calculate its operational risk. Under this approach, an institution is required to calculate the capital charge for its operational risk based on its average gross income of 8 standardized business lines of the last 3 years. Division 3 of this Part sets out the technical details that an institution must comply with in using the alternative standardized approach to calculate its operational risk. An institution using this approach shall calculate its capital charge for operational risk based on the methodology under the standardized approach, except that it shall calculate its capital charge for the standardized business lines of retail banking and commercial banking by reference to the loans and advances in, instead of gross income of, those business lines.

Parts 9 & 10 – Calculation of market risk

24. Part 9 sets out the technical details that a local institution must comply with in using the standardized (market risk) approach to calculate its market risk. In particular, Divisions 2 to 5 set out the technical details that an institution must comply with for the calculation of the capital charge for its market risk positions in debt securities, interest rates, equities, foreign exchange and commodities. Calculation of the market risk capital charge for an institution's option exposures and credit derivative contracts is set out in Divisions 6 to 9.

25. Part 10 and Schedule 2.3 set out the technical details that a local institution must comply with in using the internal models approach to calculate its market risk. An institution using this approach is allowed to use its own internal models (mainly using the value-at-risk techniques) to calculate its market risk.

26. Upon completion of the development of the Banking (Capital) Rules and Banking (Disclosure) Rules, the HKMA will issue further guidance on the manner in which the MA interprets and proposes to operate the Rules.

Impact of the Banking (Capital) Rules

27. As will be evident from the contents of the draft Rules, capital requirements for risks run by local institutions will be more comprehensive and risk-sensitive, which is important for banking stability reasons. Further, by allowing institutions to use their own risk management systems as the basis for the calculation of regulatory capital requirements under the more advanced calculation approaches, the revised capital requirements provide an incentive for institutions to upgrade their own systems, which will enable them to better distinguish the credit quality of borrowers and form better pricing policies. This greater efficiency should be beneficial to the economy. The implementation of the revised capital adequacy standards under Basel II will increase institutions' attention to the risks run by them. If this increased attention leads to better management of risks by them, the risks to banking stability will be reduced.

28. A possible concern may be whether the larger institutions adopting the more advanced approaches, such as the IRB approaches, and the smaller institutions using the less advanced approaches like the standardized or basic approach will favour the larger institutions' competitiveness. While there could be reductions in regulatory capital requirements for institutions adopting the more advanced approaches, and thus giving them a possible advantage on pricing, quantifying these effects with confidence is not possible at this stage. In any case, capital charges are not the only factor that drives the pricing of bank services; competition is at least as important. There are also already wide differences in the costs of funds of

institutions, so an additional difference in capital charge may not make too great a difference.

29. As the objectives underlying Basel II and its planned implementation in Hong Kong are primarily prudential in nature, it will affect consumers only indirectly. The introduction of a more risk-sensitive approach for bank capital requirements will tend to enhance banking stability and therefore depositor protection. In the cases of small and midsized businesses and corporate customers, a lower capital charge will be required for the standardized approach (which the majority of local institutions will adopt initially), as the new risk-weight for regulatory retail exposures will be reduced to 75% from 100% under the current regime and the risk weight for corporate exposures will be reduced to 20% or 50% from 100% if the corporate or the issue of the corporate has a good external rating.

30. The HKMA has consulted the industry and other interested parties extensively throughout the long process of development of Basel II, the implementation proposals for Hong Kong and the subsequent development of the Rules. There is strong support from the parties consulted, and their comments (which have mainly been of a technical nature) have been taken into account where appropriate in preparing the Rules. Feedback documents detailing major comments received in the consultation process and the HKMA's responses to them have been issued to the industry associations and posted on the HKMA's website.

Legislative timetable

31. The Rules are subsidiary legislation and hence are subject to negative vetting by the LegCo. Assuming that the consultation does not reveal any unanticipated problems, the Banking (Capital) Rules are intended to be published in the Gazette in late October and tabled in the LegCo in early November.

32. The drafting of the Banking (Disclosure) Rules is in progress. It is expected that these Rules will be released for consultation in early September and published in the Gazette at the same time as the Banking (Capital) Rules.

Implementation

33. The Banking (Capital) Rules and the Banking (Disclosure) Rules are intended to come into operation as from 1 January 2007.

Hong Kong Monetary Authority
3 August 2006

Consultation on Draft Banking (Capital) Rules

Feedback Questionnaire

1. ***Basel II represents a more sophisticated and risk-sensitive approach to capital requirements than its predecessor, Basel I, and is proposed as a means of enhancing financial stability and promoting good risk management and financial disclosure. Do you support implementation of Basel II in Hong Kong?***

☐ Yes
☐ Yes, but I have the following comments*:_____
_____
_____
_____
☐ No

2. ***The intention is to implement Basel II in Hong Kong in January 2007, in line with most other major international financial centres. Do you support implementation in January 2007?***

☐ Yes
☐ No, I think it should be delayed because* _____
_____
_____
_____

3. ***It is intended to table the Banking (Capital) Rules (suitably amended to reflect comments from this consultation) before the Legislative Council in November. Do you support passage of these Rules?***

☐ Yes
☐ Yes, but I have the following comments*: _____
_____
_____
_____
☐ No

[optional]
Name: _____

Organisation: _____

Contact tel. number: _____

* If more space is required please attach a separate page.