The Hongkong and Shanghai Banking Corporation Limited

Supplementary Notes on the Financial Statements as at 31 December 2009

prepared under the Banking (Disclosure) Rules made pursuant to section 60A of the Banking Ordinance

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Supplementary Notes on the Financial Statements

These notes are supplementary to and should be read in conjunction with the 2009 Annual Report and Accounts. The Annual Report and Accounts and these supplementary notes taken together comply with the Banking (Disclosure) Rules ('Rules') made under section 60A of the Banking Ordinance.

1 Basis of preparation

a Effective 1 January 2008, the group adopted the foundation internal ratings-based approach and internal ratings-based (securitisation) approach to determine the majority of credit risk. It also used the standardised (operational risk) approach and standardised (market risk) approach to calculate its operational risk and market risk respectively. An internal models approach was adopted for calculating the general market risk changes in debt security prices or interest rates and changes in exchange rates, while a separate model is used for calculating the market risk relating to equity options.

From 1 January 2009, the group migrated to the advanced internal ratings-based approach to calculate its credit risk for the majority of its non-securitisation exposures. As a result of the change in approach used to determine credit risk for the non-securitisation exposures the numbers for 2008 are not strictly comparable. From 30 March 2009, the group adopted an internal models approach to calculate its market risk in respect of specific risk for changes in debt security prices or interest rates. Apart from these, there are no changes in the approaches used to calculate credit risk for securitisation exposures, operational risk and market risk for other risk categories.

b Except where indicated otherwise, the financial information contained in these supplementary notes has been prepared on a consolidated basis. The basis of consolidation for regulatory purposes is different from that for accounting purposes. Subsidiaries included in the consolidation for regulatory purposes are specified in a notice from the Hong Kong Monetary Authority ('HKMA') in accordance with section 98(2) of the Banking Ordinance. Further information regarding subsidiaries that are not included in the consolidation for regulatory purposes is set out in Supplementary Note 15.

c The accounting policies applied in preparing these supplementary notes are the same as those applied in preparing the consolidated financial statements for the year ended 31 December 2009, as set out in Note 4 on the financial statements on pages 38 to 52 of the Annual Report and Accounts.

d Certain comparative figures have not been provided where the current year is the first year of disclosure and provision is impracticable.

2 Summary of risk-weighted amounts

The group's total risk-weighted amounts are summarised as follows:

	2009	2008
	HK$m	HK$m
Credit risk		
Basic approach	**7,378**	-
Standardised (credit risk) approach	**148,386**	180,420
Internal ratings-based approach	**967,660**	991,758
Internal ratings-based (securitisation) approach	**1,150**	5,902
	1,124,574	1,178,080
Market risk	**31,848**	57,609
Operational risk	**214,532**	187,543
	1,370,954	1,423,232

Supplementary Notes on the Financial Statements (unaudited) (continued)

3 Credit risk capital requirements

In 2009, the group used the advanced internal ratings-based ('IRBA') approach to calculate its credit risk for the majority of its non-securitisation exposures. The remainder of its credit risk for non-securitisation exposures was assessed using the standardised (credit risk) approach, with the exception of some exposures acquired during the year where the basic approach was used. In 2008, the group used the foundation IRB ('IRBF') and the standardised (credit risk) approaches.

The table below shows the capital requirements for credit risk for each class and subclass of non-securitisation exposures as specified in the Banking (Capital) Rules. Capital requirement means the amount of capital required to be held for that risk based on the risk-weighted amount for that risk multiplied by 8 per cent.

	2009	2008
	HK$m	HK$m
Capital required for exposures under the IRB approach		
Corporate exposures		
Specialised lending under supervisory slotting criteria approach		
- Project finance	**226**	311
- Object finance	**69**	393
- Commodities finance	**92**	66
- Income-producing real estate	**2,370**	1,579
Small-and-medium sized corporates	**12,268**	10,420
Other corporates	**36,849**	29,193
Sovereign exposures		
Sovereigns	**3,394**	8,746
Bank exposures		
Banks	**9,552**	15,726
Securities firms	**521**	321
Retail exposures		
Residential mortgages		
- Individuals	**2,950**	2,565
- Property-holding shell companies	**205**	228
Qualifying revolving retail exposures	**3,463**	3,283
Small business retail exposures	**10**	11
Other retail exposures to individuals	**707**	554
Other exposures		
Cash items	**180**	259
Other items	**4,557**	5,685
Total for the IRB approach	**77,413**	79,340

Supplementary Notes on the Financial Statements (unaudited) (continued)

3 Credit risk capital requirements *(continued)*

	2009	2008
	HK$m	HK$m
Capital required for exposures under the standardised (credit risk) approach		
Sovereign exposures	**4**	-
Public sector entity exposures	**483**	359
Bank exposures	**150**	304
Securities firm exposures	**1**	5
Corporate exposures	**2,324**	5,806
Collective investment scheme exposures	**4**	6
Cash items	**-**	-
Regulatory retail exposures	**3,711**	3,238
Residential mortgage loans	**2,319**	1,992
Other exposures which are not past due exposures	**1,258**	435
Past due exposures	**671**	573
Off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts	**816**	1,043
OTC derivative transactions and credit derivative contracts	**130**	673
Total for the standardised (credit risk) approach	**11,871**	14,434
Capital required for exposures under the basic approach	**590**	-
Total	**89,874**	93,774

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach

a *The internal ratings system and risk components*

Nature of exposures within each internal-ratings based ('IRB') class

The group applies the IRB approach to the following classes of non-securitisation exposures:

- Corporate exposures including exposures to global and local large corporates, middle-market corporates, non-bank financial institutions and specialised lending.
- Sovereign exposures including exposures to central governments, central monetary institutions and relevant international organisations.
- Bank exposures including exposures to banks and regulated securities firms.
- Retail exposures including residential mortgages, qualifying revolving retail exposures and other retail exposures.
- Other exposures including cash items and other assets.

Measurement and monitoring – risk rating systems

Exposure to credit risk arises from a very wide range of customers and product types, and the risk rating systems in place to measure and monitor these risks are correspondingly diverse.

Credit risk exposures are generally measured and managed in portfolios of either distinct customer types or product categories. Risk rating systems for the former are designed to assess the default risk of, and loss severity associated with, customers who are typically managed as individual relationships; these rating systems tend to have a higher subjective content. Risk ratings systems for the latter are generally more analytical, applying techniques such as behavioural analysis across product portfolios comprising large numbers of homogeneous transactions.

A fundamental principle of the group's policy and approach is that analytical risk rating systems and scorecards are all merely tools at the disposal of management, serving ultimately judgemental decisions for which individual approvers are accountable. In the case of automated decision making processes, accountability rests with those responsible for the parameters built into those processes/systems and the controls surrounding their use. For distinct customers, the credit process provides for at least annual review of facility limits granted. Review may be more frequent, as required by circumstances.

Group standards govern the process through which risk rating systems are initially developed, judged fit for purpose, approved and implemented; the conditions under which analytical risk model outcomes can be overridden by decision-takers; and the process of model performance monitoring and reporting. The emphasis here is on an effective dialogue between business line and risk management, suitable independence of decision-takers, and a good understanding and robust challenge on the part of senior management.

Like other facets of risk management, analytical risk rating systems are not static and are subject to review and modification in the light of the changing environment and the greater availability and quality of data. Structured processes and metrics are in place to capture relevant data and feed this into continuous model improvement.

Application of IRB parameters

The group's credit risk rating framework incorporates probability of default ('PD') of an obligor, loss severity expressed in terms of exposure at default ('EAD') and loss given default ('LGD'). These measures are used to calculate expected loss ('EL') and capital requirements. They are also used in conjunction with other inputs to inform rating assessments for the purpose of credit approval and many other risk management decisions.

The narrative explanations that follow relate to the IRB advanced approaches, that is: IRB advanced for distinct customers and Retail IRB for the portfolio-managed retail business.

Wholesale business

PD for wholesale customer segments, Central Governments and Central Banks (sovereigns), Institutions and Corporates is estimated using a Customer Risk Rating ('CRR') scale of 22-grades, of which 20 are non-default ratings representing varying degrees of strength of financial condition, and two are default ratings. A score generated by a model for the individual obligor type is mapped to the corresponding CRR. The process through which this or a judgementally amended CRR is then recommended to, and reviewed by, a credit approver takes into account all additional information relevant to the risk rating determination, including external ratings where available. The approved CRR is mapped to a PD value range of which the 'mid-point' is used in the regulatory capital calculation. Local PD models are developed where the risk profile of obligors is specific to a country, sector or other non-global factor. This applies to large corporate clients having distinct characteristics in a particular geography, middle market corporates, corporate and retail small and medium-sized enterprises and all other retail segments.

LGD and EAD estimation for the wholesale business is subject to a Group framework of basic principles. EAD is estimated to a 12-month horizon and broadly represents the current exposure plus an estimate for future increases in exposure, taking into account such factors as available but undrawn facilities and the crystallisation of contingent exposures, post-default. LGD focuses on the facility and collateral structure, involving factors like facility priority/seniority, the type and value of collateral, type of client and regional variances in experiences, and is expressed as a percentage of EAD.

The group uses the supervisory slotting criteria approach in rating its specialised lending exposures. Under this approach, ratings are determined by considering both the borrower and the transaction risk characteristics.

Retail business

The wide range of application and behavioural models used in the management of retail portfolios has been supplemented with models used to derive the measures of PD, EAD and LGD required for Basel II. For management information and reporting purposes, retail portfolios are segmented according to local, analytically-derived EL bands, which map to 10 composite EL grades, facilitating comparability across the group's retail customer segments, business lines and product types.

Model governance

Model governance is under the general oversight of the group Credit Risk Analytics Oversight Committee ('CRAOC'), whose responsibilities are to oversee the governance, including development, validation and monitoring of group risk rating models that meet local regulatory requirements, subject to overall Group CRAOC oversight. The group CRAOC meets bi-monthly and reports to the Group Risk Management Committee. The group CRAOC is chaired by the group Credit Risk Officer ('CRO') and its membership is drawn from Asia-Pacific Risk, global businesses and customer groups.

The group publishes standards for the development, independent review, maintenance and performance monitoring of credit risk analytical models, including governance over the successive stages of a model's life-cycle. The standards provide for monetary and/or qualitative thresholds above which decisions must be escalated to a higher authority, and establish minimum intervals at which activities must be carried out, for example, all models must be reviewed at least annually, or more frequently as the need arises. The threshold for approval by the group CRAOC is portfolio coverage of US$5 billion for wholesale models and US$0.5 billion for retail models of risk-weighted assets. The group CRAOC may deem a model material due to the higher-risk nature of the customer sector in question.

Internal Audit or a comparable independent credit quality assurance unit conducts regular reviews of the risk rating model application by the customer groups.

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

Use of internal estimates

While internal estimates derived from applying the IRB approach are employed in the calculation of risk-weighted exposure amounts for the purpose of determining regulatory capital requirements, they are also used in a multitude of contexts within risk management and business processes. Such uses continue to develop and become embedded as experience grows and the repository of quality data improves. They include:

- credit approval: authorities, including those for specific counterparty types and transactions, are delegated to the group's risk function using a risk-based approach, graded according to obligor CRR;
- credit risk analytical tools: IRB models, scorecards and other methodologies are valuable tools deployed in the assessment of customer and portfolio risk;
- risk appetite: IRB measures are an important element of risk appetite definition at customer, sector and portfolio levels, and in the implementation of the Group risk appetite framework;
- portfolio management: regular reports to the Board, Audit Committee and Risk Management Committee contain analyses of risk exposures employing internal-ratings based metrics;
- pricing: customer relationship managers apply an IRB Risk Adjusted Return on Capital methodology in calculating risk-weighted assets and profitability;
- economic capital: IRB measures provide customer risk components for the economic capital model that has been implemented across the group to improve the consistent analysis of economic returns, help determine which customers, business units and products add greatest value, and drive higher returns through effective economic capital allocation; and
- scenario analysis and stress testing: IRB measures are regularly and systematically stressed to understand the sensitivities of the group capital and business plans on forward looking basis to the adverse effects of extreme but plausible events.

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

b *Exposures by IRB calculation approach*

The following shows the group's exposures (including the EAD of on-balance sheet exposures and off-balance sheet exposures) by each IRB calculation approach:

	2009			
	Advanced IRB Approach	**Supervisory Slotting Criteria Approach**	**Retail IRB Approach**	**Total exposures**
	HK$m	**HK$m**	**HK$m**	**HK$m**
Corporate exposures	**1,009,148**	**47,633**	**-**	**1,056,781**
Sovereign exposures	**816,372**	**-**	**-**	**816,372**
Bank exposures	**917,911**	**-**	**-**	**917,911**
Retail exposures				
Residential mortgages to individuals and property-holding shell companies	**-**	**-**	**420,792**	**420,792**
Qualifying revolving retail exposures	**-**	**-**	**131,957**	**131,957**
Other retail exposures to individuals and small business retail exposures	**-**	**-**	**27,699**	**27,699**

	2008			
	Foundation IRB Approach	Supervisory Slotting Criteria Approach	Retail IRB Approach	Total exposures
At 31 December 2008	HK$m	HK$m	HK$m	HK$m
Corporate exposures	886,940	39,204	-	926,144
Sovereign exposures	639,896	-	-	639,896
Bank exposures	940,641	-	-	940,641
Retail exposures				
Residential mortgages to individuals and property-holding shell companies	-	-	350,139	350,139
Qualifying revolving retail exposures	-	-	131,694	131,694
Other retail exposures to individuals and small business retail exposures	-	-	28,318	28,318

The corporate, sovereign and bank exposures reported under the IRBA approach as at 31 December 2009 include amounts (HK$45,437 million, HK$2,597 million and HK$111,019 million respectively) that are subject to supervisory estimates. In 2008, all amounts reported under the IRBF approach were subject to supervisory estimates. By definition, amounts reported under the Supervisory Slotting Criteria approach continue to be subject to supervisory estimates.

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

c *Exposures by credit risk mitigation used*

Exposures covered by recognised guarantees or recognised credit derivative contracts

The following shows the group's exposures (after the effect of any on-balance sheet or off-balance sheet recognised netting) which are covered by recognised guarantees or recognised credit derivative contracts after the application of haircuts required under the Banking (Capital) Rules. These exposures exclude OTC derivative transactions, repo-style transactions and credit derivative contracts (other than recognised credit derivative contracts).

	2009	2008
	HK$m	HK$m
Corporate exposures	**198,460**	158,538
Sovereign exposures	**744**	-
Bank exposures	**186,017**	134,018
Retail exposures	**36,704**	36,980
	421,925	329,536

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

d *Risk assessment for exposures under IRB approach*

Corporate exposures (other than specialised lending) – analysis by obligor grade

	2009			
	Exposure at default	**Exposure-weighted average risk-weight**	**Exposure-weighted average PD**	**Exposure-weighted Average LGD**
	HK$m	**%**	**%**	**%**
Minimal default risk	**53,856**	**14.78**	**0.04**	**45.04**
Low default risk	**302,787**	**25.23**	**0.10**	**44.14**
Satisfactory default risk	**329,719**	**52.85**	**0.37**	**44.96**
Fair default risk	**161,345**	**93.12**	**1.20**	**46.00**
Moderate default risk	**112,984**	**119.59**	**2.87**	**43.27**
Significant default risk	**25,148**	**155.30**	**6.17**	**43.45**
High default risk	**6,036**	**223.05**	**11.91**	**48.48**
Special management	**6,988**	**249.92**	**23.48**	**47.10**
Default	**10,285**	**-**	**100.00**	**54.34**
	1,009,148			

	2008		
	Exposure at default	Exposure-weighted average risk-weight	Exposure-weighted average PD
	HK$m	%	%
Minimal default risk	147,904	16.44	0.04
Low default risk	248,096	30.27	0.10
Satisfactory default risk	285,046	58.98	0.41
Fair default risk	104,266	98.23	1.27
Moderate default risk	63,574	115.81	2.77
Significant default risk	25,647	150.83	5.89
High default risk	1,032	172.68	10.79
Special management	4,638	239.65	25.42
Default	6,737	-	100.00
	886,940		

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

d *Risk assessment for exposures under IRB approach (continued)*

Corporate exposures (specialised lending) – analysis by supervisory rating grade

	2009	
	Exposure at default	**Exposure-weighted average risk-weight**
	HK$m	**%**
Strong	**31,724**	**60.66**
Good	**11,876**	**87.06**
Satisfactory	**3,947**	**121.90**
Weak	**27**	**265.00**
Default	**59**	**-**
	47,633	

	2008	
	Exposure at default	Exposure-weighted average risk-weight
	HK$m	%
Strong	26,651	62.91
Good	10,932	90.65
Satisfactory	1,044	121.90
Weak	533	265.00
Default	44	-
	39,204	

The supervisory rating grades and risk-weights of specialised lending are determined in accordance with section 158 of the Banking (Capital) Rules.

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

d *Risk assessment for exposures under IRB approach (continued)*

Sovereign exposures – analysis by obligor grade

	2009			
	Exposure at default	**Exposure-weighted average risk-weight**	**Exposure-weighted average PD**	**Exposure-weighted average LGD**
	HK$m	**%**	**%**	**%**
Minimal default risk	**618,174**	**1.19**	**0.01**	**11.58**
Low default risk	**174,372**	**8.37**	**0.06**	**24.83**
Satisfactory default risk	**3,292**	**28.50**	**0.21**	**37.24**
Fair default risk	**14,377**	**86.63**	**1.11**	**44.99**
Moderate default risk	**5,457**	**116.65**	**2.88**	**44.47**
Significant default risk	**700**	**102.06**	**5.66**	**30.78**
	816,372			

	2008		
	Exposure at default	Exposure-weighted average risk-weight	Exposure-weighted average PD
	HK$m	%	%
Minimal default risk	409,035	7.89	0.03
Low default risk	180,134	23.13	0.06
Satisfactory default risk	31,972	45.02	0.19
Fair default risk	12,244	101.37	1.12
Moderate default risk	6,129	129.51	2.59
Significant default risk	382	165.73	5.66
	639,896		

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

d *Risk assessment for exposures under IRB approach (continued)*

Bank exposures – analysis by obligor grade

	2009			
	Exposure at default	**Exposure-weighted average risk weighted**	**Exposure-weighted average PD**	**Exposure-weighted average LGD**
	HK$m	**%**	**%**	**%**
Minimal default risk	**275,538**	**5.46**	**0.03**	**23.82**
Low default risk	**451,471**	**11.29**	**0.09**	**25.90**
Satisfactory default risk	**157,402**	**24.21**	**0.25**	**28.11**
Fair default risk	**25,351**	**48.71**	**0.96**	**27.99**
Moderate default risk	**3,592**	**84.49**	**2.79**	**34.06**
Significant default risk	**2,259**	**120.66**	**5.34**	**38.99**
High default risk	**2,003**	**181.42**	**11.57**	**42.72**
Special management	**15**	**228.15**	**19.00**	**45.77**
Default	**280**	**-**	**100.00**	**49.98**
	917,911			

	2008		
	Exposure at default	Exposure-weighted average risk-weight	Exposure-weighted average PD
	HK$m	%	%
Minimal default risk	513,063	8.55	0.03
Low default risk	336,399	26.78	0.08
Satisfactory default risk	66,701	54.55	0.29
Fair default risk	12,387	91.86	0.98
Moderate default risk	6,235	135.23	3.34
Significant default risk	2,331	167.24	5.83
High default risk	3,151	190.80	12.10
Special management	201	249.79	19.00
Default	173	-	100.00
	940,641		

The EAD, PD and LGD disclosed above in respect of corporate, sovereign and bank exposures have taken into account the effect of recognised collateral, recognised netting, recognised guarantees and recognised credit derivative contracts. The exposure-weighted average loss given default disclosed applies only to exposures that are under the IRBA approach.

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

d *Risk assessment for exposures under IRB approach (continued)*

Retail exposures - analysis by credit quality

The following shows a breakdown of exposures (the EAD of on-balance sheet exposures and off-balance sheet exposures) on a pool basis by quality classification:

	2009			
	Residential mortgages	**Qualifying revolving retail exposures**	**Other retail exposures**	**Total exposures**
	HK$m	**HK$m**	**HK$m**	**HK$m**
Strong	**409,827**	**99,286**	**22,930**	**532,043**
Medium	**9,564**	**31,599**	**4,352**	**45,515**
Sub-standard	**1,401**	**1,069**	**413**	**2,883**
Impaired	**-**	**3**	**4**	**7**
	420,792	**131,957**	**27,699**	**580,448**

	2008			
	Residential mortgages	Qualifying revolving retail exposures	Other retail exposures	Total exposures
	HK$m	HK$m	HK$m	HK$m
Strong	340,748	100,222	24,887	465,857
Medium	8,632	30,742	2,892	42,266
Sub-standard	759	724	536	2,019
Impaired	-	6	3	9
	350,139	131,694	28,318	510,151

Undrawn commitments

The following shows the amount of undrawn commitments and exposure-weighted average EAD for corporate, sovereign and bank exposures:

	2009	
	Undrawn commitments	**Exposure-weighted average EAD**
	HK$m	**HK$m**
Corporate exposures	**577,929**	**222,694**
Sovereign exposures	**2,773**	**821**
Bank exposures	**23,458**	**9,014**
	604,160	**232,529**

Supplementary Notes on the Financial Statements (unaudited) (continued)

4 Credit risk under the internal-ratings based approach *(continued)*

e *Analysis of actual loss and estimates*

The following shows the actual losses which represent the net charges (including write-offs and individually assessed impairment loss allowances) made during the year:

	2009	2008
	HK$m	HK$m
Bank	**104**	1,833
Corporate	**3,964**	4,388
Residential mortgages	**(39)**	(7)
Qualifying revolving retail	**957**	1,169
Other retail	**132**	243
	5,118	7,626

Actual loss in 2009 improved due to an overall improvement in economic conditions in 2009 compared with the difficult economic environment in 2008. In addition, the risk containment measures adopted by the Bank led to lower losses during the reporting period.

The following shows the expected loss which is the estimated loss likely to be incurred arising from the potential default of the obligor in respect of the exposure over a one-year period:

	At 31 December 2008	At 31 December 2007
	HK$m	HK$m
Sovereign	173	256
Bank	649	1,234
Corporate	8,448	5,139
Residential mortgages	879	586
Qualifying revolving retail	1,618	1,375
Other retail	410	680
	12,177	9,270

It should be noted that actual loss and EL are measured and calculated using different methodologies which may not be directly comparable. The limitation arises as a result of the fundamental differences in the definition of ‘loss’ under the regulatory EL calculation using Basel II and actual loss (write-off and impairment loss allowance) which is determined based on accounting standards.

4 Credit risk under the internal-ratings based approach *(continued)*

e *Analysis of actual loss and estimates (continued)*

The following table sets out a comparison of the actual outcomes for the year ended 2009 against the risk elements estimated as at 31 December 2008.

	31 December 2009					
	PD		**LGD**		**EAD**	
	Actual	**Projected**	**Actual**	**Projected**	**Actual**	**Projected**
	%	**%**	**%**	**%**	**%**	**%**
Sovereign	**0.00**	**0.31**	**0.00**	**13.80**	**0.00**	**99.77**
Bank	**0.02**	**1.50**	**69.69**	**19.26**	**100.00**	**98.17**
Corporate	**0.96**	**1.25**	**43.81**	**46.94**	**76.35**	**70.23**
Residential mortgages	**0.65**	**0.91**	**5.96**	**10.75**	**98.19**	**96.88**
Qualifying revolving retail	**1.02**	**0.94**	**84.36**	**100.54**	**68.67**	**57.94**
Other retail	**2.36**	**1.25**	**37.67**	**27.05**	**67.51**	**54.66**

	31 December 2008	
	PD	
	Actual	Projected
	%	%
Sovereign	0.00	0.80
Bank	0.40	1.88
Corporate	1.01	2.80
Residential mortgages	0.26	1.12
Qualifying revolving retail	0.61	0.79
Other retail	1.56	2.50

The actual PD is measured by using the number of obligors defaulted for 2009 whereas the estimated probability of default rate is the long run average default rate estimated for 2009. The difference can be attributed to the difference in the time horizon used to calculate the actual and estimated default rates. The actual default rate is a 'point-in-time' whereas estimated PD is based on the 'long-run through-the-cycle' estimates.

The actual LGD is calculated using resolved default cases accumulated up to the end of 2009, whereas estimated LGD is the exposure weighted-average LGD as at the beginning of the reporting period, applying downturn factors. The actual LGD for the bank exposures represents the realised loss for the obligors that defaulted in 2008. This relatively high loss rate was connected with exceptional economic conditions in 2008. There was minimal loss recognised on bank exposures in previous years and in 2009.

The actual EAD is calculated by comparing the realised EAD of the defaulted counterparties and resolved cases up to the end of 2009 against the limits one year prior to default whereas estimated EAD incorporates the expected drawdown for revolving products such as overdraft, revolving loan, trade finance, as well as the expected crystallisation for contingent products such as letters of credit estimated as at the beginning of the reporting period.

Supplementary Notes on the Financial Statements (unaudited) (continued)

5 Credit risk under the standardised (credit risk) approach

a *Ratings from External Credit Assessment Institutions*

The following classes of exposure include exposures where IRB exemption has been granted by the HKMA. Such exposures are reported under the standardised (credit risk) approach based on the external credit ratings from External Credit Assessment Institutions ('ECAI')**:**

- Public sector entity exposures;
- Multilateral development bank exposures;
- Bank exposures (those without internal CRR);
- Securities firm exposures (those without CRR);
- Corporate exposures (those without CRR); and
- Collective investment scheme exposures.

The group uses the external credit ratings from the following ECAIs:

- Fitch Ratings;
- Moody's Investors Service;
- Standard & Poor's Ratings Services; and
- Rating and Investment Information, Inc.

The process used to map ECAI issuer ratings or ECAI issue specific ratings in the group's banking book is consistent with those prescribed in Part 4 of the Banking (Capital) Rules.

5 Credit risk under the standardised (credit risk) approach *(continued)*

b *Credit risk exposures under the standardised (credit risk) approach*

2009	Total exposures[1] HK$m	Exposures after recognised credit risk mitigation[2] Rated HK$m	Exposures after recognised credit risk mitigation[2] Unrated HK$m	Risk-weighted amounts Rated HK$m	Risk-weighted amounts Unrated HK$m	Total risk-weighted amounts HK$m	Total exposures covered by recognised collateral HK$m	Total exposures covered by recognised guarantees or recognised credit derivative contracts HK$m
On-balance sheet								
Sovereign	-	4,080	-	50	-	50	-	-
Public sector entity	42,004	41,065	-	6,038	-	6,038	418	1,192
Multilateral development bank	67,150	67,150	-	-	-	-	-	-
Bank	5,044	1,222	4,490	256	1,619	1,875	-	-
Securities firm	24	-	24	-	12	12	-	-
Corporate	40,902	789	28,463	393	28,661	29,054	8,719	2,956
Collective investment scheme	48	-	48	-	48	48	-	-
Regulatory retail	64,475	-	61,855	-	46,391	46,391	1,378	1,242
Residential mortgage loan	48,360	-	48,282	-	28,983	28,983	24	55
Other exposures which are not past due exposures	17,035	-	15,726	-	15,726	15,726	1,310	-
Past due exposures	5,834	11	5,822	6	8,382	8,388	599	24
Total of on-balance sheet	290,876	114,317	164,710	6,743	129,822	136,565	12,448	5,469

Supplementary Notes on the Financial Statements (unaudited) (continued)

THE HONGKONG AND SHANGHAI BANKING CORPORATION LIMITED

Supplementary Notes on the Financial Statements (unaudited) (continued)

5 Credit risk under the standardised (credit risk) approach *(continued)*

b *Credit risk exposures under the standardised (credit risk) approach (continued)*

2009 *(continued)*	**Total exposures[1]**	**Exposures after recognised credit risk mitigation[2]**		**Risk-weighted amounts**		**Total risk-weighted amounts**	**Total exposures covered by recognised collateral**	**Total exposures covered by recognised guarantees or recognised credit derivative contracts**
		Rated	**Unrated**	**Rated**	**Unrated**			
	HK$m	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**	**HK$m**
Off-balance sheet								
Off-balance sheet exposure other than OTC derivatives transactions or credit derivative contracts	**14,501**	**897**	**11,936**	**252**	**9,950**	**10,202**	**1,668**	**424**
OTC derivative transactions	**4,040**	**3,140**	**649**	**846**	**773**	**1,619**	**251**	**-**
Total off-balance sheet	**18,541**	**4,037**	**12,585**	**1,098**	**10,723**	**11,821**	**1,919**	**424**
Total	**309,417**	**118,354**	**177,295**	**7,841**	**140,545**	**148,386**	**14,367**	**5,893**
Exposures deducted from Core Capital or Supplementary Capital	**61**							

Supplementary Notes on the Financial Statements (unaudited) (continued)

5 Credit risk under the standardised (credit risk) approach *(continued)*

b *Credit risk exposures under the standardised (credit risk) approach (continued)*

2008	Total exposures[1] HK$m	Exposures after recognised credit risk mitigation[2] Rated HK$m	Exposures after recognised credit risk mitigation[2] Unrated HK$m	Risk-weighted amounts Rated HK$m	Risk-weighted amounts Unrated HK$m	Total risk-weighted amounts HK$m	Total exposures covered by recognised collateral HK$m	Total exposures covered by recognised guarantees or recognised credit derivative contracts HK$m
On-balance sheet								
Public sector entity	16,001	24,548	-	4,486	-	4,486	-	1,455
Multilateral development bank	16,764	16,764	-	-	-	-	-	-
Bank	10,902	533	9,395	150	3,654	3,804	777	-
Securities firm	113	-	113	-	56	56	-	-
Corporate	95,579	13,516	68,671	3,626	68,946	72,572	7,772	5,620
Collective investment scheme	72	-	72	-	72	72	-	-
Regulatory retail	55,179	-	53,965	-	40,474	40,474	935	279
Residential mortgage loan	41,389	-	41,292	-	24,899	24,899	49	47
Other exposures which are not past due exposures	5,442	-	5,442	-	5,442	5,442	-	-
Past due exposures	5,001	-	5,001	-	7,158	7,158	592	-
Total of on-balance sheet	246,442	55,361	183,951	8,262	150,701	158,963	10,125	7,401

THE HONGKONG AND SHANGHAI BANKING CORPORATION LIMITED

Supplementary Notes on the Financial Statements (unaudited) (continued)

5 Credit risk under the standardised (credit risk) approach *(continued)*

b *Credit risk exposures under the standardised (credit risk) approach (continued)*

2008 *(continued)*	Total exposures[1]	Exposures after recognised credit risk mitigation[2]		Risk-weighted amounts		Total risk-weighted amounts	Total exposures covered by recognised collateral	Total exposures covered by recognised guarantees or recognised credit derivative contracts
		Rated	Unrated	Rated	Unrated			
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Off-Balance Sheet								
Off-balance sheet exposure other than OTC derivatives transactions or credit derivative contracts	18,688	2,850	16,633	928	12,112	13,040	809	171
OTC derivative transactions	12,482	5,393	7,089	1,906	6,424	8,330	-	-
Credit derivatives contracts	87	-	87	-	87	87	-	-
Total of off-balance sheet	31,257	8,243	23,809	2,834	18,623	21,457	809	171
Total	277,699	63,604	207,760	11,096	169,324	180,420	10,934	7,572
Exposures deducted from Core Capital or Supplementary Capital	12							

1 *Total exposures are the principal amounts for on-balance sheet exposures, or the credit equivalent amounts for off-balance sheet exposures, as applicable, net of individually assessed impairment allowances.*
2 *Exposures covered by recognised guarantees or recognised credit derivative contracts are reclassified after credit risk mitigation to reflect the exposures to the credit protection providers.*

Supplementary Notes on the Financial Statements (unaudited) (continued)

THE HONGKONG AND SHANGHAI BANKING CORPORATION LIMITED

Supplementary Notes on the Financial Statements (unaudited) (continued)

6 Counterparty credit risk-related exposures

a In respect of the group's counterparty credit risk which arises from over-the-counter ('OTC') derivative transactions, repo-style transactions and credit derivative contracts (other than recognised credit derivative contracts), all credit limits are established in advance of transacting the business. Credit and settlement risk is captured, monitored and reported in accordance with group risk methodologies. Credit exposures are divided into two categories: (1) exposure measures in book or market value terms depending on the product involved; and (2) exposure measures on the basis of 95 percentile potential worst case loss estimates. These methods of calculating credit exposure apply to all counterparties in the transaction and differences in credit quality are reflected in the size of the limits.

The policy for secured collateral on derivatives is guided by the group's internal Best Practice Guidelines ensuring that the due-diligence necessary to fully understand the effectiveness of netting and collateralisation by jurisdiction, counterparty, product and agreement type is fully assessed and that high due-diligence standards are consistently applied.

b *Counterparty credit risk exposures under the internal-ratings based approach*

2009

	OTC derivative transactions	Repo-style transactions	Credit derivative contracts
	HK$m	HK$m	HK$m
OTC derivative & credit derivative:			
Gross total positive fair value	**214,421**	-	**12,625**
Credit equivalent amounts	**149,657**	-	**9,921**
Repo-style transactions:			
Net credit exposures[1]	-	**9,451**	-
Value of recognised collateral by type[2]			
- debt securities	**861**	**91,153**	**-**
- others	**7,711**	**57,889**	**8**
	8,572	**149,042**	**8**
Credit equivalent amounts/net credit exposures net of recognised collateral[3]	**149,657**	**9,451**	**9,921**
Exposure at default	**149,657**	**9,451**	**9,921**
Risk weighted amounts	**44,834**	**514**	**1,731**
Notional amounts of recognised credit derivative contracts which provide credit protection	**-**	-	**-**

1 *In 2009 under IRBA for repo transactions, the recognised collateral is netted against EAD whereas in 2008 under IRBF the recognised collateral was reflected in the LGD. Hence the numbers are not strictly comparable.*
2 *In 2009 under IRBA, Formula 9 as per s96 of the Banking (Capital) Rules was adopted. The value of the recognised collateral is disclosed before the haircut. In 2008 under IRBF, Formula 18 and 19 as per s160 were adopted and the value of the recognised collateral reported was after the haircut. Hence the numbers are not strictly comparable.*
3 *For OTC and credit derivative contracts, the recognised collateral is reflected in the LGD.*

Supplementary Notes on the Financial Statements (unaudited) (continued)

6 Counterparty credit risk-related exposures *(continued)*

b *Counterparty credit risk exposures under the internal-ratings based approach (continued)*

2008

	OTC derivative transactions	Repo-style transactions	Credit derivative contracts
	HK$m	HK$m	HK$m
OTC derivative & credit derivative:			
Gross total positive fair value	396,124	-	34,886
Credit equivalent amounts	214,581	-	10,405
Repo-style transactions:			
Net credit exposures[1]	-	258,148	-
Value of recognised collateral by type[2]			
- debt securities	833	207,926	-
- others	12,232	19,626	-
	13,065	227,552	-
Credit equivalent amounts/net credit exposures net of recognised collateral	201,516	30,596	10,405
Exposure at default	214,581	258,148	10,405
Risk weighted amounts	78,821	2,897	2,782
Notional amounts of recognised credit derivative contracts which provide credit protection	-	-	-

1 *In 2009 under IRBA for repo-style tranasctions, the recognised collateral is netted against EAD whereas in 2008 under IRBF the recognised collateral was reflected in the LGD. Hence the numbers are not strictly comparable.*

2 *In 2009 under IRBA, Formula 9 as per s96 of the Banking (Capital) Rules was adopted. The value of the recognised collateral is disclosed before the haircut. In 2008 under IRBF, Formula 18 and 19 as per s160 were adopted and the value of the recognised collateral reported was after the haircut. Hence the numbers are not strictly comparable.*

Supplementary Notes on the Financial Statements (unaudited) (continued)

6 Counterparty credit risk-related exposures *(continued)*

c *Counterparty credit risk exposures under the standardised (credit risk) approach*

2009

	OTC derivative transactions	**Repo-style transactions**	**Credit derivative contracts**
	HK$m	**HK$m**	**HK$m**
OTC derivative & credit derivative[1]:			
Gross total positive fair value	**3,358**	**-**	**-**
Credit equivalent amount	**4,040**	**-**	**-**
Repo-style transactions[1]:			
Net credit exposures	**-**	**74**	**-**
Value of recognised collateral by type			
- debt securities	**260**	**766**	**-**
- others	**28**	**154**	**-**
	288	**920**	**-**
Credit equivalent amounts/net credit exposures net of recognised collateral	**4,040**	**74**	**-**
Risk weighted amounts	**1,619**	**35**	**-**
Notional amounts of recognised credit derivative contracts which provide credit protection	**-**	**-**	**-**

2008

	OTC derivative transactions	Repo-style transactions	Credit derivative contracts
	HK$m	HK$m	HK$m
OTC derivative & credit derivative[1]:			
Gross total positive fair value	11,392	-	87
Credit equivalent amounts	12,482	-	87
Repo-style transactions[1]:			
Net credit exposures	-	249	-
Value of recognised collateral by type			
- debt securities	-	217	-
- others	-	-	-
	-	217	-
Credit equivalent amounts/net credit exposures net of recognised collateral	12,482	32	87
Risk weighted amounts	8,330	27	87
Notional amounts of recognised credit derivative contracts which provide credit protection	-	-	-

1 *In 2009 for OTC and Repo-style transactions, the value of the recognised collateral is disclosed before the haircut. In 2008, the value of the recognised collateral reported was after the haircut.*

Supplementary Notes on the Financial Statements (unaudited) (continued)

6 Counterparty credit risk-related exposures *(continued)*

d *Major classes of exposures under the internal ratings-based approach by counterparty type*

2009	**OTC derivative transactions**	**Repo-style transactions**	**Credit derivative contracts**
	HK$m	**HK$m**	**HK$m**
Notional amounts			
Sovereigns	**164,592**	**59,939**	**233**
Banks	**13,182,135**	**82,329**	**582,887**
Corporates	**1,219,728**	**4,172**	**38,272**
	14,566,455	**146,440**	**621,392**
Exposure at default[1]			
Sovereigns	**2,568**	**2,114**	**29**
Banks	**102,522**	**7,223**	**8,497**
Corporates	**44,567**	**114**	**1,395**
	149,657	**9,451**	**9,921**
Risk-weighted amounts			
Sovereigns	**434**	**194**	**-**
Banks	**15,345**	**285**	**1,201**
Corporates	**29,055**	**35**	**530**
	44,834	**514**	**1,731**

2008	OTC derivative transactions	Repo-style transactions	Credit derivative contracts
	HK$m	HK$m	HK$m
Notional amounts			
Sovereigns	155,161	17,775	1,442
Banks	13,339,461	237,101	736,273
Corporates	1,503,384	3,272	42,536
	14,998,006	258,148	780,251
Exposure at default[1]			
Sovereigns	2,708	17,775	110
Banks	131,151	237,101	8,475
Corporates	80,722	3,272	1,820
	214,581	258,148	10,405
Risk-weighted amounts			
Sovereigns	462	863	8
Banks	37,240	1,725	2,091
Corporates	41,119	309	683
	78,821	2,897	2,782

1 *In 2009 under IRBA for repo-transactions, the recognised collateral is netted against EAD whereas in 2008 under IRBF, the recognised collateral was reflected in the LGD. For OTC and credit derivative contracts, the recognised collateral is reflected in the LGD. Hence the numbers are not strictly comparable.*

Supplementary Notes on the Financial Statements (unaudited) (continued)

6 Counterparty credit risk-related exposures *(continued)*

e *Major classes of exposures under the standardised (credit risk) approach by counterparty type*

2009	**OTC derivative transactions**	**Repo-style transactions**	**Credit derivative contracts**
	HK$m	**HK$m**	**HK$m**
Notional amounts			
Sovereigns	**6,882**	**-**	**-**
Public sector entities	**137,565**	**467**	**-**
Banks	**7,140**	**-**	**-**
Corporates	**35,828**	**468**	**329**
	187,415	**935**	**329**
Credit equivalent amounts/ net credit exposures	**4,040**	**74**	**-**
Risk-weighted amounts	**1,619**	**35**	**-**

2008	OTC derivative transactions	Repo-style transactions	Credit derivative contracts
	HK$m	HK$m	HK$m
Notional amounts			
Sovereigns	14,641	-	-
Public sector entities	104,216	-	-
Banks	21,005	224	-
Corporates	180,910	25	209
	320,772	249	209
Credit equivalent amounts/ net credit exposures	12,482	32	87
Risk-weighted amounts	8,330	27	87

Supplementary Notes on the Financial Statements (unaudited) (continued)

6 Counterparty credit risk-related exposures *(continued)*

f *Risk exposures to derivative transactions*

2009	**Contract amount HK$m**	**Risk-weighted amount HK$m**	**Fair value HK$m**
Exchange rate contracts			
- forward	**3,160,234**	**10,559**	**16,794**
- option purchased	**188,145**	**3,787**	**6,693**
- swap	**1,310,245**	**14,507**	**8,888**
	4,658,624	**28,853**	**32,375**
Interest rate contracts			
- forward	**196,270**	**1**	**14**
- option purchased	**256,227**	**919**	**2,417**
- swap	**9,524,864**	**13,613**	**18,903**
	9,977,361	**14,533**	**21,334**
Credit derivative contracts	**621,721**	**1,731**	**1,821**
Other OTC derivative contracts	**118,186**	**3,067**	**13,357**
	15,375,892	**48,184**	**68,887**

2008	Contract amount HK$m	Risk-weighted amount HK$m	Fair value HK$m
Exchange rate contracts			
- forward	4,174,573	24,530	38,675
- option purchased	254,772	10,394	13,719
- swap	1,196,579	16,872	20,977
	5,625,924	51,796	73,371
Interest rate contracts			
- forward	275,615	919	1,395
- option purchased	181,641	726	1,980
- swap	9,053,697	24,158	33,297
	9,510,953	25,803	36,672
Credit derivative contracts	780,460	2,869	2,288
Other OTC derivative contracts	181,901	9,552	22,024
	16,099,238	90,020	134,355

The table above gives the contract amounts, risk-weighted amounts and the fair value of derivative exposures. The information is consistent with that in the 'Capital Adequacy Ratio' return submitted to the Hong Kong Monetary Authority ('HKMA'). The return is prepared on a consolidated basis as specified by the HKMA under the requirement of section 98(2) of the Banking Ordinance. Therefore, the contract amounts in the above table are different from those disclosed in Note 16 of the 2009 Annual Report and Accounts.

The fair values are calculated after taking into account the effect of valid bilateral netting agreements amounting to HK$161,517 million (2008: HK$308,134 million).

Supplementary Notes on the Financial Statements (unaudited) (continued)

6 Counterparty credit risk-related exposures *(continued)*

g *Contract amounts of credit derivatives contracts which create exposures to counterparty credit risk*

	2009	2008
	HK$m	HK$m
Used for credit portfolio		
Credit default swap		
Protection bought	**1,832**	7,721
Protection sold	**1,124**	1,201
Total return swap		
Protection bought	**8,530**	3,025
Protection sold	**-**	-
	11,486	11,947
Used for intermediation activities		
Credit default swap		
Protection bought	**309,959**	385,974
Protection sold	**300,276**	382,209
Total return swap		
Protection bought	**-**	330
Protection sold	**-**	-
	610,235	768,513

7 Credit risk mitigation

The Group's approach when granting credit facilities is to do so on the basis of capacity to repay, rather than place primary reliance on credit risk mitigation. Depending on a customer's standing and the type of product, facilities may be provided unsecured. Mitigation of credit risk is nevertheless a key aspect of effective risk management. There is no material concentration of credit risk mitigation held.

The Group's general policy is to promote the use of credit risk mitigation, justified by commercial prudence and good practice as well as capital efficiency. Specific, detailed policies cover the acceptability, structuring and terms of various types of business with regard to the availability of credit risk mitigation, are subject to regular review.

The most common method of mitigating credit risk is to take collateral, such as mortgage over the property, physical collateral in vehicle financing in some jurisdictions, charges over business assets and guarantees.

In accordance with sections 98 and 99 of the Banking (Capital) Rules, certain guarantees and credit derivative contracts are recognised for credit risk mitigation purposes. The main types of guarantees are from sovereigns, corporates and banks. The credit mitigating effect of recognised guarantees is grounded on empirical evidence of loss recovery experiences regionally. For sovereign and bank guarantees, these exposures are managed by central teams in HSBC Group Head Office in London.

In the institutional sector, trading facilities are supported by charges over financial instruments such as cash, debt securities and equities. Netting is extensively used and is a prominent feature of market standard documentation. The credit and market risk concentrations within the credit risk mitigants (recognised collateral, netting, guarantees and credit derivative contracts) used by the group are not considered to be material.

Global Banking and Markets business utilises credit risk mitigation to actively manage the credit risk of its portfolios. The techniques used include credit default swaps, structured credit notes and securitisation structures. Buying credit protection creates credit exposure against the protection provider, which is monitored as part of the overall credit exposure against the relevant name.

The group's policy provides that netting only be applied where there is a legal right to do so. Under the Banking (Capital) Rules section 209, recognised netting is defined as any netting done pursuant to a valid bilateral netting arrangement. Consistent with the Banking (Capital) Rules, only bilateral netting arrangements are eligible to net amounts owed by the group for capital adequacy purposes.

The valuation of credit risk mitigants seeks to monitor and ensure that they will continue to provide the secure repayment source anticipated at the time they were taken. Where collateral is subject to high volatility, valuation is frequent; where stable, less so. For residential mortgages, valuations are updated at a minimum of once every three years. For those residential real estate portfolios which are calculated under the retail IRB approach, update of valuations is performed at a minimum once every year. For accounts more than 90 days past due, an updated valuation of the mortgaged property is required and is obtained on an annual basis or earlier if there is reason to believe that the value of the property has declined. For the wholesale portfolio, all facilities should be reviewed (and hence collateral revalued) at least on an annual basis. Where facilities have been overdue for more than 90 days and are secured by tangible assets, the collateral must be revalued not less than every three months.

In terms of their application within an IRB approach risk mitigants are considered in two broad categories: first, those which reduce the intrinsic probability of default of an obligor and therefore operate as adjustments to PD estimation; secondly, those which affect the estimated recoverability of obligations and require adjustment of LGD or, in certain circumstances, EAD.

The adjustment of PD estimation is also subject to supplementary methodologies in respect of a 'sovereign ceiling' constraining the risk ratings assigned to obligors in countries of higher risk, and partial parental support.

LGD and EAD values, in case of individually assessed exposures, are determined by reference to regionally approved internal risk parameters based on the nature of the exposure. For retail portfolios, credit mitigation data is incorporated into the internal risk parameters for risk exposures and feeds continuously into the calculation of the EL band value summarising both customer delinquency and product or facility risk.

The main types of recognised collateral taken by the group are those as stated in Section 80 of the Banking (Capital) Rules, including (but not limited to) cash on deposit, gold bullion, equities listed on a main index and/or a recognised exchange, units or shares in collective investment schemes and various recognised debt securities.

8 Asset securitisation

The group used the internal ratings-based (securitisation) approach to calculate the credit risk for securitisation exposures.

a *Investing institution*

The group is an investing institution for all classes of exposures below. In some cases the group also has other roles (for example, as a swap provider).

Standard & Poor's Rating Services, Moody's Investors Services, Fitch Ratings and Rating and Investment Information, Inc. are the ECAIs that the group has used in relation to each and all classes of securitisation exposures below.

Securitisation exposures

	2009	2008
	HK$m	HK$m
Residential mortgage loans	**2,937**	28,128
Student loans	**1,508**	11,080
Commercial mortgage loans	**1,144**	10,824
Others	**1,000**	29,789
	6,589	79,821

Breakdown by risk-weights of the securitisation exposures

	2009		
Risk-weight	**Securitisation exposures**	**Risk-weighted amount**	**Capital requirements**
	HK$m	**HK$m**	**HK$m**
7%	**4,833**	**359**	**29**
8%	**775**	**66**	**5**
60%	**98**	**62**	**5**
250%	**6**	**15**	**1**
425%	**36**	**161**	**13**
650%	**424**	**488**	**39**
Deducted from capital	**417**	**-**	**-**
	6,589	**1,151**	**92**

	2008		
Risk-weight	Securitisation exposures	Risk-weighted amount	Capital requirements
	HK$m	HK$m	HK$m
7%	78,347	5,813	465
8%	1,049	89	7
Deducted from capital	425	-	-
	79,821	5,902	472

Exposures deducted from Core Capital or Supplementary Capital

	2009	2008
	HK$m	HK$m
Residential mortgage loans	**324**	347
Commercial mortgage loans	**32**	19
Others	**61**	59
	417	425

Capital requirement means the amount of capital required to be held for that risk based on the risk-weighted amount for that risk multiplied by 8 per cent. Securitisation exposures under the internal ratings-based (securitisation) approach means the principal amount gross of specific provisions or partial write-offs.

Supplementary Notes on the Financial Statements (unaudited) (continued)

8 Asset securitisation *(continued)*

b *Originating institution*

The group originates securitisation transactions in the normal course of business by which it transfers recognised financial assets directly to third parties or to special purposes entities (SPEs). These transfers may give rise to the full or partial derecognition of the financial assets concerned.

Full derecognition occurs when the group transfers its contractual right to receive cash flows from the financial assets, or retains the right but assumes an obligation to pass on the cash flows from the asset, and transfers substantially all the risks and rewards of ownership. The risks include credit, interest rate, currency, prepayment and other price risks.

Partial derecognition occurs when the group sells or otherwise transfers financial assets in such a way that some but not substantially all of the risks and rewards of ownership are transferred but control is retained. These financial assets are recognised on the balance sheet to the extent of the group's continuing involvement. The rights and obligations that the group retains from its continuing involvement in securitisations are initially recorded as an allocation of the fair value of the financial asset between the part that is derecognised and the part that continues to be recognised on the date of transfer.

The principal assumption concerns the appropriate value to be attributed to the counterparty credit risk for securitisation. This requires exposure at default, probability of default and recovery in the event of default to be estimated.

For synthetic securitisations, the group uses SPEs to mitigate the capital absorbed by some of the customer loans and advances it has originated. Credit derivatives are used to transfer the credit risk associated with such customer loans and advances to an SPE. These SPEs are consolidated when the group is exposed to the majority of risks and rewards of ownership.

The group is an originating institution for all classes of exposures below. The group does not report any amounts under the internal ratings-based (securitisation) approach as these securitisation exposures do not fall within the scope of s229(1) of the Banking (Capital) Rules and so the related credit risk has been calculated using the same approach as other non-securitisation exposures. The risk-weighted amounts, the capital requirements and the amounts deducted from capital under the internal ratings-based (securitisation) approach are therefore nil.

(i) Securitisations where the group continues to retain exposure

	2009	2008
	HK$m	HK$m
Traditional securitisations:		
Residential mortgage loans	**13,045**	3,275

(ii) Securitisation transactions originated during the annual reporting period

	2009		2008	
	Underlying Exposures	**Recognised gain or loss**	Underlying Exposures	Recognised gain or loss
	HK$m	**HK$m**	HK$m	HK$m
Commercial loans	**2,695**	**25**	–	–

Supplementary Notes on the Financial Statements (unaudited) (continued)

8 Asset securitisation *(continued)*

(iii) Securitisation exposures of the institution resulting from the securitisation transactions in which the institution acted as a sponsor

	2009	2008
	HK$m	HK$m
Residential mortgage loans	**-**	1,719
Commercial loans	**-**	10,148
Others	**298**	3,148
	298	15,015

(iv) There were no material impaired or overdue exposures securitised during the year and there were no losses recognised during the reporting period.

(v) Securitisation transactions repurchased by the group during the year

	2009	2008
	HK$m	HK$m
Residential mortgage loans	**12**	-

(vi) There were no securitisation transactions entered into during the year that were subject to an early amortisation provision.

Supplementary Notes on the Financial Statements (unaudited) (continued)

9 Market risk

The group uses the internal models approach to calculate market risk changes in debt security prices or interest rates and changes in exchange rates. The CAD1 model is used to calculate market risk in respect of options exposures to equities. The group uses the standardised (market risk) approach to calculate market risk for other exposures.

Market risk capital charge

	2009	2008
	HK$m	HK$m
Under the standardised (market risk) approach		
Interest rate exposures	**4**	3,177
Equity options	**114**	174
Other equity exposures	**108**	214
Under the internal models approach		
Default risk surcharge	**945**	–
General market risk and specific interest rate risk	**1,377**	1,043
Capital charge for market risk	**2,548**	4,608

Capital charge means an amount of regulatory capital which the group is required to hold for an exposure to a relevant risk which, if multiplied by 12.5, becomes the risk-weighted amount of that exposure for that risk.

Methodology for valuation of market risk position

General market risk and specific interest rate risk– VAR model

An Historic Simulation approach is used to model foreign currency and interest rate risk, generated by revaluing the portfolio for each of 500 historical scenarios from one-day market movements, and are derived from a clean two-year time series of historic market risk factor data.

A Monte Carlo approach is used to model particular interest rate risk and default risk, generated from a statistical model calibrated using historical time series data and 10,000 Monte Carlo scenarios.

Equity options – Disaster Limit Matrix

For equity options a conservative market risk measurement on Disaster Limit Matrix is taken with the worst case scenario for each underlying aggregated in absolute.

Assessment of market risk model on Regulatory Capital Environment

To enable group entities to aggregate and hold a risk-adjusted amount of capital resources appropriate to the group, all entities with trading book portfolios must adopt the Group’s VAR approach.

Characteristics and coverage of market risk model

General market risk and specific interest rate risk– VAR model

The VAR models cover all material sources of price risk relating to foreign exchange risk and general interest rate risk and specific interest rate risk. Foreign exchange risk factors include, but are not limited to, foreign currency prices and foreign currency option volatility. General interest rate risk factors include, but are not limited to, interest rate curves and interest rate option volatilities. Specific interest rate risk factors are principally bond and credit derivatives spread changes.

Historical simulation and Monte Carlo approaches are used for all outright interest rate, foreign exchange and credit spread positions using a 99% confidence interval and a one day time horizon that is scaled up to a ten day holding period.

Historical, hypothetical and technical scenario stress testing is performed on positions on a weekly basis.

9 Market risk *(continued)*

Back-testing of the interest rate, foreign exchange and credit spread models uses clean and hypothetical profits and losses from trading operations and compares these to overall and individual business level value at risk on a daily basis.

A comparison of the group's trading VAR with the actual profit and loss during the year reveals no loss side back-testing exception. For capital charge calculation purposes, the number of loss exceptions is accumulated on a rolling year basis.

Equity options – Disaster Limit Matrix

Specific equity option risks are computed on gross utilisation bases on the underlying equity in the worst case scenario.

10 Operational risk

The group uses the standardised (operational risk) approach to calculate its operational risk.

	2009	2008
	HK\$m	HK\$m
Capital charge for operational risk	**17,163**	15,003

Capital charge means an amount of regulatory capital which the group is required to hold for an exposure to a relevant risk which, if multiplied by 12.5, becomes the risk-weighted amount of that exposure for that risk.

11 Equity exposures in banking book

Investments in equity shares which are intended to be held on a continuing basis, but which do not comprise investments in associates, jointly controlled entities or subsidiaries, are classified as available-for-sale securities and are reported in the balance sheet as financial investments. Available-for-sale securities are measured at fair value as described in Notes 4(g) & (h) on the financial statements. Included within this category are primarily investments made by the group for strategic purposes, which are subject to additional internal procedures and approvals to ensure that the investment is in accordance with the group's and HSBC Group's strategy and to ensure compliance with all relevant regulatory and legal restrictions. In some cases, additional investments may be made later such that the investee becomes an associate, jointly controlled entity or subsidiary, at which point the investment is reclassified in accordance with the group's accounting policies.

	2009	2008
	HK\$m	HK\$m
Realised gains from sales for the year	**1,190**	1,853
Unrealised gains:		
Amount included in reserves but not through income statement	**41,617**	19,456
Amount included in supplementary capital	**1,146**	582

12 Interest rate exposures in the banking book

The group aims, through its management of market risk in non-trading portfolios, to mitigate the effect of prospective interest rate movements which could reduce future net interest income, while balancing the cost of such hedging activities on the current net revenue stream. The group monitors the sensitivity of projected net interest income under varying interest rate scenarios (simulation modelling) on a monthly basis.

For simulation modelling, businesses use a combination of scenarios relevant to local businesses and local markets and standard scenarios which are required throughout the group. The standard scenarios are consolidated to illustrate the combined proforma effect on the group's consolidated portfolio valuations and net interest income.

The table below sets out the effect on future net interest income of an incremental 25 basis points parallel fall or rise in all yield curves at the beginning of each quarter during the 12 months from 1 January 2010. Assuming no management actions, the sensitivity of projected net interest income is as follows:

	HK$m
Change in 2010 projected net interest income arising from a shift in yield curves of:	
+25 basis points at the beginning of each quarter	**4,113**
-25 basis points at the beginning of each quarter	**(6,810)**
Change in 2009 projected net interest income arising from a shift in yield curves of:	
+25 basis points at the beginning of each quarter	(86)
-25 basis points at the beginning of each quarter	(3,170)

The interest rate sensitivities set out in the table above are illustrative only and are based on simplified scenarios. The figures represent the effect of the proforma movements in net interest income based on the projected yield curve scenarios and the group's current interest rate risk profile. This effect, however, does not incorporate actions that would be taken by Global Markets or in the business units to mitigate the impact of this interest rate risk. In reality, Global Markets seeks proactively to change the interest rate risk profile to minimise losses and optimise net revenues. The projections take account of the anticipated net interest income impact of rate change differences between interbank interest rates and interest rates linked to other bases (such as Central Bank rates or product rates over which the entity has discretion in terms of the timing and extent of rate changes). The projections make other simplifying assumptions too, including that positions will run to maturity and incorporating any material effect from the extent to which movements in interest rates will alter the demand for the group's products and how customers' behaviour may change with movements in interest rates, such as loan repayments.

The group's exposure to the effect of movements in interest rates on its net interest income arises in two main areas: core deposit franchises and Global Markets.

- Core deposit franchises: these are exposed to changes in the cost of deposits raised and spreads on wholesale funds. In a low interest rate environment, the net interest income benefit of core deposits increases as interest rates rise and decreases as interest rates fall. This risk is asymmetrical in a very low interest rate environment, however, as there is limited room to lower deposit pricing in the event of interest rate reductions.
- Residual interest rate risk is managed within Global Markets, under the group's policy of transferring interest rate risk to Global Markets to be managed within defined limits and with flexibility as to the instruments used.

The year on year movements in the sensitivity of the group's net interest income to the changes in interest rates tabulated above were driven by the following:

- Changes in the market environment which may have an impact on the group's ability to pass on rate changes to customers; and
- Changes in Global Markets' net trading asset positions. The funding of net trading assets is generally sourced from floating rate retail deposits and recorded in 'Net interest income' whereas the income from such assets is recorded in 'Net trading income'.

13 Liquidity ratio

The Banking Ordinance requires banks operating in Hong Kong to maintain a minimum liquidity ratio, calculated in accordance with the provisions of the Fourth Schedule of the Banking Ordinance, of 25 per cent. This requirement applies separately to the Hong Kong branches of the Bank and to those subsidiary companies which are Authorised Institutions under the Banking Ordinance in Hong Kong.

The average liquidity ratios for the year are as follows:

	2009	2008
Hong Kong branches of the Bank	**50.4%**	51.2%

14 Off-balance sheet exposures other than derivative transactions

Contract amounts	**2009** **HK$m**	2008 HK$m
Direct credit substitutes	**44,774**	60,136
Transaction-related contingencies	**78,582**	73,847
Trade-related contingencies	**73,754**	72,541
Forward asset purchases	**3,103**	4,441
Forward forward deposits placed	**816**	696
Commitments that are unconditionally cancellable without prior notice	**916,875**	983,881
Commitments which have an original maturity of not more than one year	**77,111**	42,874
Commitments which have an original maturity of more than one year	**86,938**	72,723
	1,281,953	1,311,139
Risk-weighted amounts	**195,566**	118,991

The table above gives the nominal contract amounts and risk-weighted amounts of contingent liabilities and commitments. The information is consistent with that in the ‘Capital Adequacy Ratio’ return submitted to the Hong Kong Monetary Authority (‘HKMA’) by the group. The return is prepared on a consolidated basis as specified by the HKMA under the requirement of section 98(2) of the Banking Ordinance.

For the purposes of these financial statements, acceptances and endorsements are recognised on the balance sheet in ‘Other assets’ in accordance with HKAS 39 ‘Financial Instruments: Recognition and Measurement’. For the purpose of the Banking (Capital) Rules, acceptances and endorsements are included in the capital adequacy calculation as if they were contingencies.

15 Principal subsidiaries and basis of consolidation

The basis of consolidation for accounting purposes is in accordance with HKFRS.

The major subsidiaries of the Bank for accounting purposes are:

Hang Seng Bank Limited
HSBC Bank (China) Company Limited
HSBC Bank Malaysia Berhad
HSBC Bank Australia Limited*
HSBC Insurance (Asia) Limited*
HSBC Life (International) Limited*

* Held indirectly

The basis of consolidation for regulatory purposes is different from the basis of consolidation for accounting purposes. Subsidiaries included in consolidation for regulatory purposes are specified in a notice from the Hong Kong Monetary Authority in accordance with section 98(2) of the Banking Ordinance. Subsidiaries not included in consolidation for regulatory purposes are securities and insurance companies that are authorised and supervised by a regulator and are subject to supervisory arrangements regarding the maintenance of adequate capital to support business activities comparable to those prescribed for authorised institutions under the Banking (Capital) Rules and the Banking Ordinance. The Bank's shareholdings in these subsidiaries are deducted from its core capital and supplementary capital as determined in accordance with Part 3 of the Banking (Capital) Rules.

With respect to Notes 2 to 14 the principal subsidiaries that are not included in consolidation for regulatory purposes are:

HSBC Insurance (Asia Pacific) Holdings Limited and subsidiaries
HSBC Securities Japan Limited
Hang Seng General Insurance (Hong Kong) Company Limited
Hang Seng Insurance Company Limited

The group operates subsidiaries in a number of countries and territories where capital is governed by local rules and there may be restrictions on the transfer of regulatory capital and funds between members of the banking group.

The world's local bank

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