

The Hongkong and Shanghai Banking  
Corporation Limited

**Supplementary Notes on the Financial  
Statements as at 31 December 2010**

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

These notes are supplementary to and should be read in conjunction with the 2010 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. They also serve to comply with the disclosures on remuneration as required by the Hong Kong Monetary Authority ('HKMA') Supervisory Policy Manual CG-5 'Guideline on a Sound Remuneration System'.

**1 Basis of preparation**

- a** The group uses the advanced internal ratings-based approach to calculate its credit risk for the majority of its non-securitisation exposures and the internal ratings-based (securitisation) approach to determine credit risk for its securitisation exposures. For market risk, the group uses an internal models approach to calculate its general market risk and market risk relating to equity options. The group uses an internal models approach to calculate its market risk in respect of specific risk for the interest rate risk category. The group uses the standardised (market risk) approach for calculating other market risk positions and the standardised (operational risk) approach to calculate its operational risk. There are no changes in the approaches used in 2010.
- 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. Further information regarding subsidiaries that are not included in the consolidation for regulatory purposes is set out in Supplementary Note 17.
- 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 2010, as set out in Note 3 on the financial statements on pages 38 to 54 of the Annual Report and Accounts.

**2 Summary of risk-weighted amounts**

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

	<b>2010</b> <b>HK\$m</b>	2009 HK\$m
Credit risk		
Basic approach .....	9,470	7,378
Standardised (credit risk) approach.....	173,055	148,386
Internal ratings-based approach .....	1,177,134	967,660
Internal ratings-based (securitisation) approach.....	327	1,150
	<b>1,359,986</b>	<b>1,124,574</b>
Market risk .....	35,251	31,848
Operational risk .....	216,866	214,532
	<b>1,612,103</b>	<b>1,370,954</b>

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**3 Credit risk capital requirements**

The group uses 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 in 2009 where the basic approach is used.

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.

	2010 HK\$m	2009 HK\$m
<b>Capital required for exposures under the IRB approach</b>		
Corporate exposures		
Specialised lending under supervisory slotting criteria approach		
- Project finance .....	276	226
- Object finance .....	69	69
- Commodities finance .....	10	92
- Income-producing real estate .....	3,447	2,370
Small-and-medium sized corporates .....	16,579	12,268
Other corporates .....	44,865	36,849
Sovereign exposures		
Sovereigns .....	4,733	3,394
Bank exposures		
Banks .....	11,077	9,552
Securities firms .....	463	521
Retail exposures		
Residential mortgages		
- Individuals .....	3,550	2,950
- Property- holding shell companies .....	218	205
Qualifying revolving retail exposures .....	3,425	3,463
Small business retail exposures .....	9	10
Other retail exposures to individuals .....	657	707
Other exposures		
Cash items .....	210	180
Other items .....	6,362	4,557
<b>Total for the IRB approach .....</b>	<b>95,950</b>	<b>77,413</b>
<b>Capital required for exposures under the standardised (credit risk) approach</b>		
Sovereign exposures .....	1	4
Public sector entity exposures .....	683	483
Bank exposures .....	170	150
Securities firm exposures .....	-	1
Corporate exposures .....	2,821	2,324
Collective investment scheme exposures .....	4	4
Cash items .....	-	-
Regulatory retail exposures .....	4,116	3,711
Residential mortgage loans .....	2,436	2,319
Other exposures which are not past due exposures .....	1,607	1,258
Past due exposures .....	430	671
Off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts ...	1,312	816
OTC derivative transactions and credit derivative contracts .....	264	130
<b>Total for the standardised (credit risk) approach .....</b>	<b>13,844</b>	<b>11,871</b>
<b>Capital required for exposures under the basic approach .....</b>	<b>758</b>	<b>590</b>
<b>Total .....</b>	<b>110,552</b>	<b>89,874</b>

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

### 4 Credit risk under the internal-ratings based approach

#### a *The internal ratings system and its 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 decision tools facilitating 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 requires 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 individual approvers can override analytical risk model outcomes; and the process of model performance monitoring and reporting. There is emphasis on an effective dialogue between business lines and risk management, appropriate independence of decision-takers, and a good understanding and robust reflection 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 it into continuous model improvement.

##### *Application of IRB parameters*

The group's credit risk rating framework incorporates probability of default ('PD') of a borrower, 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.

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**4 Credit risk under the internal-ratings based approach** *(continued)***Wholesale business**

PD for wholesale customer segments (Central Governments and Central Banks (sovereigns), Institutions, Corporates) are estimated using a Customer Risk Rating ('CRR') scale of 23 grades (2009: 22 grades), of which 21 (2009: 20) are non-default grades representing varying degrees of strength of financial condition and two are default grades. A score generated by a model for the individual borrower 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. PD models are developed where the risk profile of corporate borrowers is specific to a country and sector.

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 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, in 10 composite EL grades, facilitating comparability across the group's retail customer segments, business lines and product types.

*Model governance*

In order to meet local regulatory requirements, model governance of group risk rating models, including development, validation and monitoring, is under the general oversight of the group Credit Risk Analytics Oversight Committee ('CRAOC') subject to overall Group CRAOC oversight. The group CRAOC meets bi-monthly and reports to the group Risk Management Committee. The group Chief Risk Officer ('CRO') chairs the group CRAOC which draws its members from Asia-Pacific Risk, customer groups, and finance.

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 risk parameters 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 a risk based approach in pricing through the usage of internal models;
- 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 a 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:

	<b>Advanced IRB Approach HK\$m</b>	<b>Supervisory Slotting Criteria Approach HK\$m</b>	<b>Retail IRB Approach HK\$m</b>	<b>Total exposures HK\$m</b>
<b>2010</b>				
Corporate exposures .....	1,340,991	64,545	–	1,405,536
Sovereign exposures .....	774,060	–	–	774,060
Bank exposures .....	979,447	–	–	979,447
Retail exposures				
- Residential mortgages to individuals and property-holding shell companies .....	–	–	549,910	549,910
- Qualifying revolving retail exposures .....	–	–	151,771	151,771
- Other retail exposures to individuals and small business retail exposures .....	–	–	47,729	47,729
<b>2009</b>				
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

The corporate, sovereign and bank exposures reported under the IRBA approach as at 31 December 2010 include amounts of HK\$51,094m, HK\$4,199m and HK\$132,998m respectively (31 December 2009: HK\$45,437m, HK\$2,597m and HK\$111,019m respectively) that are 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 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).

	<b>2010</b>	2009
	<b>HK\$m</b>	HK\$m
Corporate exposures .....	<b>293,643</b>	198,460
Sovereign exposures .....	<b>492</b>	744
Bank exposures .....	<b>124,945</b>	186,017
Retail exposures .....	<b>39,553</b>	36,704
	<b>458,633</b>	421,925

**d Risk assessment for exposures under IRB approach**

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

	Exposure at default HK\$m	Exposure- weighted average risk- weight %	Exposure- weighted average PD %	Exposure- weighted average LGD %
<b>2010</b>				
Minimal default risk .....	98,534	14	0.04	45.4
Low default risk .....	398,350	27	0.10	45.5
Satisfactory default risk .....	481,823	53	0.37	45.4
Fair default risk .....	181,896	98	1.22	48.4
Moderate default risk .....	140,832	115	2.85	41.8
Significant default risk .....	17,247	167	6.48	46.5
High default risk .....	6,527	192	12.09	41.7
Special management .....	3,828	238	24.89	45.9
Default .....	11,954	–	100.00	52.9
	<b>1,340,991</b>			
<b>2009</b>				
Minimal default risk .....	53,856	15	0.04	45.0
Low default risk .....	302,787	25	0.10	44.1
Satisfactory default risk .....	329,719	53	0.37	45.0
Fair default risk .....	161,345	93	1.20	46.0
Moderate default risk .....	112,984	120	2.87	43.3
Significant default risk .....	25,148	155	6.17	43.5
High default risk .....	6,036	223	11.91	48.5
Special management .....	6,988	250	23.48	47.1
Default .....	10,285	–	100.00	54.3
	<b>1,009,148</b>			

**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

	Exposure at default HK\$m	Exposure- weighted average risk- weight %
<b>2010</b>		
Strong .....	45,099	63
Good .....	13,905	85
Satisfactory .....	5,281	122
Weak .....	218	265
Default .....	42	–
	<b>64,545</b>	
<b>2009</b>		
Strong .....	31,724	61
Good .....	11,876	87
Satisfactory .....	3,947	122
Weak .....	27	265
Default .....	59	–
	<b>47,633</b>	

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

Sovereign exposures – analysis by obligor grade

	Exposure at default HK\$m	Exposure- weighted average risk- weight %	Exposure- weighted average PD %	Exposure- Weighted average LGD %
<b>2010</b>				
Minimal default risk .....	585,030	2	0.02	12.8
Low default risk .....	158,923	14	0.09	34.2
Satisfactory default risk .....	633	33	0.27	19.3
Fair default risk .....	24,877	80	1.07	44.9
Moderate default risk .....	3,946	113	2.91	42.7
Significant default risk .....	651	102	5.75	31.1
	<b>774,060</b>			
<b>2009</b>				
Minimal default risk .....	618,174	1	0.01	11.6
Low default risk .....	174,372	8	0.06	24.8
Satisfactory default risk .....	3,292	29	0.21	37.2
Fair default risk .....	14,377	87	1.11	45.0
Moderate default risk .....	5,457	117	2.88	44.5
Significant default risk .....	700	102	5.66	30.8
	<b>816,372</b>			

**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

	Exposure at default HK\$m	Exposure- weighted average risk- weight %	Exposure- weighted average PD %	Exposure- weighted average LGD %
<b>2010</b>				
Minimal default risk .....	335,146	6	0.04	25.8
Low default risk .....	531,482	13	0.10	29.3
Satisfactory default risk .....	85,376	31	0.31	33.3
Fair default risk .....	17,441	67	1.19	36.8
Moderate default risk .....	5,129	111	2.88	44.9
Significant default risk .....	2,904	149	6.16	44.9
High default risk .....	1,851	274	12.06	62.8
Special management .....	8	101	19.00	19.7
Default .....	110	–	100.00	38.4
	<b>979,447</b>			
<b>2009</b>				
Minimal default risk .....	275,538	5	0.03	23.8
Low default risk .....	451,471	11	0.09	25.9
Satisfactory default risk .....	157,402	24	0.25	28.1
Fair default risk .....	25,351	49	0.96	28.0
Moderate default risk .....	3,592	84	2.79	34.1
Significant default risk .....	2,259	121	5.34	39.0
High default risk .....	2,003	181	11.57	42.7
Special management .....	15	228	19.00	45.8
Default .....	280	–	100.00	50.0
	<b>917,911</b>			

The EADs, PDs and LGDs 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.

**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 on a pool basis by quality classification:

	<b>Residential mortgages HK\$m</b>	<b>Qualifying revolving retail exposures HK\$m</b>	<b>Other retail exposures HK\$m</b>	<b>Total exposures HK\$m</b>
<b>2010</b>				
Strong .....	539,655	119,669	43,435	702,759
Medium .....	9,361	31,205	3,868	44,434
Sub-standard .....	894	895	423	2,212
Impaired .....	–	2	3	5
	<b>549,910</b>	<b>151,771</b>	<b>47,729</b>	<b>749,410</b>
<b>2009</b>				
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
	<b>420,792</b>	<b>131,957</b>	<b>27,699</b>	<b>580,448</b>

Undrawn commitments

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

	<b>2010</b>		<b>2009</b>	
	<b>Undrawn commitments HK\$m</b>	<b>Exposure- weighted average EAD HK\$m</b>	<b>Undrawn commitments HK\$m</b>	<b>Exposure- weighted average EAD HK\$m</b>
Corporate exposures .....	662,092	234,603	577,929	222,694
Sovereign exposures .....	2,631	741	2,773	821
Bank exposures .....	33,495	9,258	23,458	9,014
	<b>698,218</b>	<b>244,602</b>	<b>604,160</b>	<b>232,529</b>

**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 table shows the expected loss and actual loss by class of exposure. The expected loss (EL) 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. The actual loss is the net charge (including write-offs and individually assessed impairment loss allowances) for each IRB class made during the year:

	2010		2009	
	Expected loss HK\$m	Actual loss HK\$m	Expected loss HK\$m	Actual loss HK\$m
Sovereign .....	193	–	173	–
Bank .....	634	–	649	104
Corporate .....	10,610	3,149	8,448	3,964
Residential mortgages.....	986	489	879	(39)
Qualifying revolving retail .....	1,685	1,113	1,618	957
Other retail .....	490	226	410	132
	<b>14,598</b>	<b>4,977</b>	<b>12,177</b>	<b>5,118</b>

Actual losses decreased in 2010 primarily driven by improvements in the credit performance of the corporate portfolio which drove the decrease in impairment charges and the increase in provision release.

Corporate EL increased, driven by the generally weaker financial conditions of borrowers through the economic downturn in 2008-09.

It should be noted that actual loss and EL are measured with different methodologies which are not directly comparable. In general, EL was greater than the actual loss for each IRB class. The limitation arises from the fundamental differences in the definition of ‘loss’ under the accounting standards which determine the actual loss (write-off and impairment loss allowance) and the Basel II framework which determines the regulatory EL calculation.

**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** (continued)

The following table compares actual outcomes for 2010 year end against the risk elements estimated as at 31 December 2009.

	PD		LGD		EAD	
	Actual %	Projected %	Actual %	Projected %	Actual %	Projected %
<b>At 31 December 2010</b>						
Sovereign .....	<b>0.00</b>	<b>0.26</b>	<b>0.0</b>	<b>15.3</b>	<b>0</b>	<b>100</b>
Bank .....	<b>0.00</b>	<b>1.41</b>	<b>0.0</b>	<b>25.8</b>	<b>0</b>	<b>97</b>
Corporate .....	<b>0.31</b>	<b>1.21</b>	<b>25.4</b>	<b>44.8</b>	<b>86</b>	<b>68</b>
Residential mortgages .....	<b>0.88</b>	<b>1.00</b>	<b>12.1</b>	<b>10.9</b>	<b>80</b>	<b>87</b>
Qualifying revolving retail .....	<b>0.54</b>	<b>0.95</b>	<b>87.0</b>	<b>101.0</b>	<b>63</b>	<b>56</b>
Other retail .....	<b>1.48</b>	<b>1.25</b>	<b>27.3</b>	<b>32.0</b>	<b>70</b>	<b>77</b>
<b>At 31 December 2009</b>						
Sovereign .....	0.00	0.31	0.0	13.8	0	100
Bank .....	0.02	1.50	69.7	19.3	100	98
Corporate .....	0.96	1.25	43.8	46.9	76	70
Residential mortgages .....	0.65	0.91	6.0	10.8	98	97
Qualifying revolving retail .....	1.02	0.94	84.4	100.5	69	58
Other retail .....	2.36	1.25	37.7	27.1	68	55

The difference between actual PD and projected PD is driven by the difference in the time horizon used to calculate the actual and estimated default rates. The actual default rate is a 'point-in-time' measurement referencing the actual number of borrower defaults over a one-year horizon whereas the projected PD is based on a 'through-the-cycle' credit experience.

The group measures actual LGD by using resolved default cases within the year 2010 whereas projected LGD is based on a downturn recovery experience. Due to the different calculation methodologies and the portfolio mix between the default population and the overall book, the actual and projected results can differ.

The group measures actual EAD by comparing the realised credit exposure of the defaulted counterparties in 2010 against the limits one year prior to default. The projected EAD is based on a 'through-the-cycle' credit experience.

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

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

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**a** *Ratings from External Credit Assessment Institutions*

The following exposure classes include exposures where IRB exemption has been granted by the HKMA. Such exposures are reported under the standardised (credit risk) approach based on 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 ECAs:

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

The group determines ECAI issuer ratings or ECAI issue specific ratings in the banking book in a process consistent with Part 4 of the Banking (Capital) Rules.

## 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

2010 Assets	Total exposures <sup>1</sup> HK\$m	Exposures after recognised credit risk mitigation <sup>2</sup>		Risk-weighted amounts		Total exposures covered by recognised collateral HK\$m	Total exposures covered by guarantees or recognised credit derivative contracts HK\$m
		Rated HK\$m	Unrated HK\$m	Rated HK\$m	Unrated HK\$m		
<b>On-balance sheet</b>							
Sovereign .....	–	4,892	–	14	–	–	–
Public sector entity .....	51,336	51,398	–	8,537	–	–	631
Multilateral development bank .....	68,707	68,707	–	–	–	–	–
Bank .....	5,047	1,343	4,943	354	1,768	–	–
Securities firm .....	2	–	2	–	1	–	–
Corporate .....	41,976	364	34,987	164	35,100	2,763	10,813
Collective investment scheme .....	53	–	53	–	53	–	–
Regulatory retail .....	73,034	–	68,604	–	51,452	2,111	2,321
Residential mortgage loan .....	52,407	–	52,346	–	30,450	52	56
Other exposures which are not past due exposures .....	24,746	–	20,087	–	20,087	4,657	–
Past due exposures .....	4,438	–	4,438	–	5,370	975	20
Total on-balance sheet .....	321,746	126,704	185,460	9,069	144,281	10,558	13,841
<b>Off-balance sheet</b>							
Off-balance sheet exposure other than OTC derivative transactions or credit derivative contracts .....	20,917	433	18,705	136	16,264	1,779	414
OTC derivative transactions .....	6,023	4,042	1,966	1,428	1,877	15	–
Total off-balance sheet .....	26,940	4,475	20,671	1,564	18,141	1,794	414
<b>Total</b> .....	348,686	131,179	206,131	10,633	162,422	12,352	14,255
Exposures deducted from Core Capital or Supplementary Capital	5						





**Supplementary Notes on the Financial Statements** (unaudited) (continued)**6 Counterparty credit risk-related exposures**

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- a** Counterparty credit risk is the risk that a counterparty to a transaction may default before completing the satisfactory settlement of the transaction.

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 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.

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

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

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

	OTC derivative transactions HK\$m	Repo-style transactions HK\$m	Credit derivative Contracts HK\$m
<b>2010</b>			
<b>OTC derivative &amp; credit derivatives:</b>			
Gross total positive fair value .....	286,320	–	5,313
Credit equivalent amounts .....	182,897	–	6,325
<b>Repo-style transactions:</b>			
Net credit exposures <sup>1</sup> .....	–	10,179	–
<b>Value of recognised collateral by type:</b>			
Debt securities .....	918	84,528	–
Others .....	8,596	53,237	–
	9,514	137,765	–
Credit equivalent amounts/ net credit exposures net of recognised collateral <sup>2</sup> .....	182,897	10,179	6,325
Exposure at default .....	182,897	10,179	6,325
Risk-weighted amounts .....	51,230	516	1,284
Notional amounts of recognised credit derivative contracts which provide credit protection .....	–	–	–
<b>2009</b>			
<b>OTC derivative &amp; credit derivatives:</b>			
Gross total positive fair value .....	214,421	–	12,625
Credit equivalent amounts .....	149,657	–	9,921
<b>Repo-style transactions:</b>			
Net credit exposures <sup>1</sup> .....	–	9,451	–
<b>Value of recognised collateral by type:</b>			
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 <sup>2</sup> .....	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 For repo-style transactions, the recognised collateral is netted against the EAD.

2 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)

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

	OTC derivative transactions HK\$m	Repo-style transactions HK\$m	Credit derivative contracts HK\$m
<b>2010</b>			
<b>OTC derivative &amp; credit derivatives:</b>			
Gross total positive fair value .....	4,647	–	–
Credit equivalent amounts .....	6,023	–	–
<b>Repo-style transactions:</b>			
Net credit exposures .....	–	233	–
<b>Value of recognised collateral by type:</b>			
Debt securities .....	–	–	–
Others .....	15	438	–
	15	438	–
Credit equivalent amounts/ net credit exposures net of recognised collateral .....	6,023	233	–
Risk-weighted amounts .....	3,305	139	–
Notional amounts of recognised credit derivative contracts which provide credit protection.....	–	–	–
<b>2009</b>			
<b>OTC derivative &amp; credit derivatives:</b>			
Gross total positive fair value .....	3,358	–	–
Credit equivalent amounts .....	4,040	–	–
<b>Repo-style transactions:</b>			
Net credit exposures .....	–	74	–
<b>Value of recognised collateral by type:</b>			
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.....	–	–	–

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

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

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

	OTC derivative transactions HK\$m	Repo-style transactions HK\$m	Credit derivative contracts HK\$m
<b>2010</b>			
<b>Notional amounts:</b>			
Sovereigns .....	229,547	47,616	–
Banks .....	19,991,145	85,570	509,077
Corporates .....	2,067,943	3,940	27,050
	<b>22,288,635</b>	<b>137,126</b>	<b>536,127</b>
<b>Exposure at default<sup>1</sup>:</b>			
Sovereigns .....	4,199	1,049	–
Banks .....	127,051	8,665	5,947
Corporates .....	51,647	465	378
	<b>182,897</b>	<b>10,179</b>	<b>6,325</b>
<b>Risk-weighted amounts:</b>			
Sovereigns .....	662	133	–
Banks .....	20,458	356	1,054
Corporates .....	30,110	27	230
	<b>51,230</b>	<b>516</b>	<b>1,284</b>
<b>2009</b>			
<b>Notional amounts:</b>			
Sovereigns .....	164,592	59,939	233
Banks .....	13,182,135	82,329	582,887
Corporates .....	1,219,728	4,172	38,272
	<b>14,566,455</b>	<b>146,440</b>	<b>621,392</b>
<b>Exposure at default<sup>1</sup>:</b>			
Sovereigns .....	2,568	2,114	29
Banks .....	102,522	7,223	8,497
Corporates .....	44,567	114	1,395
	<b>149,657</b>	<b>9,451</b>	<b>9,921</b>
<b>Risk-weighted amounts:</b>			
Sovereigns .....	434	194	–
Banks .....	15,345	285	1,201
Corporates .....	29,055	35	530
	<b>44,834</b>	<b>514</b>	<b>1,731</b>

1 For repo-transactions, the recognised collateral is netted against the EAD. 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)

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

	OTC derivative transactions HK\$m	Repo-style transactions HK\$m	Credit derivative contracts HK\$m
<b>2010</b>			
<b>Notional amounts:</b>			
Sovereigns .....	12,388	–	–
Public sector entities .....	187,668	270	–
Banks .....	3,035	–	–
Corporates .....	97,195	289	269
	<b>300,286</b>	<b>559</b>	<b>269</b>
<b>Credit equivalent amounts/net credit exposures .....</b>	<b>6,023</b>	<b>233</b>	<b>–</b>
<b>Risk-weighted amounts .....</b>	<b>3,305</b>	<b>139</b>	<b>–</b>
<b>2009</b>			
<b>Notional amounts:</b>			
Sovereigns .....	6,882	–	–
Public sector entities .....	137,565	467	–
Banks .....	7,140	–	–
Corporates .....	35,828	468	329
	<b>187,415</b>	<b>935</b>	<b>329</b>
<b>Credit equivalent amounts/net credit exposures .....</b>	<b>4,040</b>	<b>74</b>	<b>–</b>
<b>Risk-weighted amounts .....</b>	<b>1,619</b>	<b>35</b>	<b>–</b>

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**6 Counterparty credit risk-related exposures** (continued)**f Risk exposures to derivative transactions**

	Contract amount HK\$m	Risk- weighted amount HK\$m	Fair value HK\$m
<b>2010</b>			
<b>Exchange rate contracts</b>			
Forward .....	5,051,896	14,038	18,653
Option purchased .....	247,641	3,694	4,380
Swap.....	2,634,785	18,171	21,326
	<u>7,934,322</u>	<u>35,903</u>	<u>44,359</u>
<b>Interest rate contracts</b>			
Forward .....	265,986	–	7
Option purchased .....	325,480	756	1,133
Swap.....	13,855,242	16,616	20,319
	<u>14,446,708</u>	<u>17,372</u>	<u>21,459</u>
<b>Credit derivative contracts</b> .....	<b>536,396</b>	<b>1,284</b>	<b>743</b>
<b>Other OTC derivative contracts</b> .....	<b>208,054</b>	<b>1,260</b>	<b>4,236</b>
	<u>23,125,480</u>	<u>55,819</u>	<u>70,797</u>
<b>2009</b>			
<b>Exchange rate contracts</b>			
Forward .....	3,160,234	10,559	16,794
Option purchased .....	188,145	3,787	6,693
Swap.....	1,310,245	14,507	8,888
	<u>4,658,624</u>	<u>28,853</u>	<u>32,375</u>
<b>Interest rate contracts</b>			
Forward .....	196,270	1	14
Option purchased .....	256,227	919	2,417
Swap.....	9,524,864	13,613	18,903
	<u>9,977,361</u>	<u>14,533</u>	<u>21,334</u>
<b>Credit derivative contracts</b> .....	<b>621,721</b>	<b>1,731</b>	<b>1,821</b>
<b>Other OTC derivative contracts</b> .....	<b>118,186</b>	<b>3,067</b>	<b>13,357</b>
	<u>15,375,892</u>	<u>48,184</u>	<u>68,887</u>

The above table is compiled in accordance with the ‘Capital Adequacy Ratio’ return submitted to the HKMA. This return is prepared using a consolidated basis as specified by the HKMA under the requirement of section 98(2) of the Banking Ordinance. Such consolidation basis may be different from the group’s accounting policies adopted. Therefore, the contract amounts shown in the above table are different from those disclosed in Note 17 of the 2010 Annual Report and Accounts.

The fair values are calculated after taking into account the effect of valid bilateral netting agreements amounting to HK\$225,484m (2009: HK\$161,517m).

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**6 Counterparty credit risk-related exposures** (continued)**g Contract amounts of credit derivative contracts which create exposure to counterparty credit risk**

	<b>2010</b>	2009
	<b>HK\$m</b>	HK\$m
<b>Used for credit portfolio</b>		
Credit default swap		
Protection bought .....	<b>1,768</b>	1,832
Protection sold .....	–	1,124
Total return swap		
Protection bought .....	<b>11,017</b>	8,530
Protection sold .....	–	–
	<b>12,785</b>	<b>11,486</b>
<b>Used for intermediation activities</b>		
Credit default swap		
Protection bought .....	<b>265,541</b>	309,959
Protection sold .....	<b>253,941</b>	300,276
Total return swap		
Protection bought .....	<b>575</b>	–
Protection sold .....	<b>3,554</b>	–
	<b>523,611</b>	<b>610,235</b>



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

### 7 Credit risk mitigation

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The group grants credit facilities on the basis of capacity to repay, rather than to place primary reliance on credit risk mitigation. Depending on a customer's standing and the type of product, unsecured facilities may be provided. The mitigation of credit risk is nevertheless a key aspect of effective risk management. By consideration of types, jurisdictions and geographical locations of the credit risk mitigation held, there is no material concentration.

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. These policies are subject to regular review.

The main types of recognised collateral taken by the group are those as stated in Section 77 of the Banking (Capital) Rules, including (but not limited to) cash on deposit, mortgage over property, charge over business assets, guarantees, equities listed on a main index and/or a recognised exchange, units or shares in collective investment schemes and various recognised debt securities.

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. Exposures related to sovereign and bank guarantees are managed by central teams in HSBC Group Head Office in London.

Trading facilities are often 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. Techniques such as credit default swaps, structured credit notes and securitisation structures can be deployed to actively manage the credit risk of the portfolios. 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.

The group's policy stipulates that netting should 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 group has in place specific policies with respect to the valuation and re-valuation of credit risk mitigants. The primary objective of these policies is to monitor and ensure that the respective mitigants will provide the secure repayment source as anticipated at the time they were taken. Where collateral is subject to high volatility, valuation is frequent; where stable, less so. Policies in respect of credit mitigants underlying past due accounts are more stringent and call for more frequent monitoring and valuation.

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 a borrower and therefore are accounted for with adjustments to PD estimation; secondly, those which affect the estimated recoverability of obligations and are accounted for with adjustments 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 borrowers in countries of higher risk, and partial parental support.

LGD and EAD values, in case of individually assessed exposures, are determined by reference to 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 continuously fed into the calculation of the EL band value summarising both customer delinquency and product or facility risk.

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**8 Asset securitisation**

The group's strategy is to use securitisations to meet its needs for aggregate funding, to the extent that market, regulatory treatments and other conditions are suitable, and for customer facilitation. The group uses the internal ratings-based (securitisation) approach to calculate the credit risk for its securitisation exposures. The roles played by the group in the securitisation process are as follows:

- Investor: where the group invests in a securitisation transaction directly or provides derivatives or liquidity facilities to a securitisation;
- Originator: where the group originates the assets being securitised, either directly or indirectly; and
- Sponsor: where the group establishes and manages a securitisation programme that purchases exposures from third parties.

**a Investor**

The group is an investor for all securitisation exposures below. In some cases, it also performs other roles, such as swap provider.

The group uses Standard & Poor's Rating Services, Moody's Investors Service, Fitch Ratings and Rating and Investment Information, Inc. as the ECAs for each and all classes of securitisation exposures below.

Securitisation exposures

	2010 HK\$m	2009 HK\$m
Residential mortgage loans.....	2,157	2,937
Student loans.....	988	1,508
Commercial mortgage loans.....	336	1,144
Others.....	867	1,000
	<b>4,348</b>	<b>6,589</b>

Breakdown by risk-weights of the securitisation exposures

	Securitisation exposures HK\$m	Risk-weighted amount HK\$m	Capital requirements HK\$m
<b>2010</b>			
7% .....	3,240	241	19
8% .....	685	58	5
60% .....	44	28	2
250% .....	–	–	–
425% .....	–	–	–
650% .....	–	–	–
Deducted from capital.....	379	–	–
	<b>4,348</b>	<b>327</b>	<b>26</b>
<b>2009</b>			
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	–	–
	<b>6,589</b>	<b>1,151</b>	<b>92</b>

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**8 Asset securitisation** (continued)

Exposures deducted from Core Capital or Supplementary Capital

	<b>2010</b>	2009
	<b>HK\$m</b>	HK\$m
Residential mortgage loans.....	45	324
Commercial mortgage loans.....	292	32
Others.....	42	61
	<b>379</b>	<b>417</b>

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. In 2009, securitisation exposures represent the principal amount gross of specific provisions or partial write-offs. From mid-June, 2010, securitisation exposures are presented as the principal amount net of specific provisions or partial write-offs.

**b Originator**

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 assumptions to determine fair value are based on benchmark information about prepayment speeds, default rates, loss severities and the historical performance of the underlying assets.

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 the classes of exposure 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.

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**8 Asset securitisation** (continued)

(i) Securitisations where the group continues to retain exposure

	2010 HK\$m	2009 HK\$m
<b>Traditional securitisations:</b>		
Residential mortgage loans .....	<u>11,338</u>	<u>13,045</u>

(ii) Securitisations originated during the year where the group did not retain any exposure.

	Underlying exposures HK\$m	Recognised gain or loss HK\$m
<b>2010</b>		
Commercial loans .....	<u>–</u>	<u>–</u>
<b>2009</b>		
Commercial loans .....	<u>2,695</u>	<u>25</u>

**c Sponsor**

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

	2010 HK\$m	2009 HK\$m
Others .....	<u>218</u>	<u>298</u>

**d Other disclosures**

(i) There were no material impaired or overdue exposures securitised during the year (2009: none) and there were no losses recognised during the year (2009: none).

(ii) Securitisation transactions repurchased by the group during the year.

	2010 HK\$m	2009 HK\$m
Residential mortgage loans .....	<u>8,657</u>	<u>12</u>

(iii) There were no securitisation transactions entered into during the year that were subject to an early amortisation provision (2009: none).

(iv) There were no securitisation transactions under the internal ratings-based (securitisation) approach which were covered by recognised guarantees or recognised credit derivative contracts during the year (2009: none).

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**9 Market risk**

Market risk is the risk that movements in foreign exchange rates, interest rates, credit spreads, or equity and commodity prices will result in profits or losses to the group. 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

	2010 HK\$m	2009 HK\$m
<b>Under the standardised (market risk) approach</b>		
Interest rate exposures .....	10	4
Equity options .....	128	114
Other equity exposures .....	147	108
<b>Under the internal models approach</b>		
Default risk surcharge .....	1,225	945
General market risk and specific interest rate risk .....	1,310	1,377
<b>Capital charge for market risk</b>	<b>2,820</b>	<b>2,548</b>

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

VAR is a technique that estimates the potential losses that could occur on risk positions as a result of movements in market rates and prices over a specified time horizon and to a given level of confidence. A 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 is derived from a clean two-year time series of historic market risk factor data.

A Monte Carlo approach is used to model idiosyncratic 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, the CAD1 model, captures the worst case scenario for each underlying position in absolute aggregate.

*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 derivative spread changes.

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

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**9 Market risk** (continued)

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

*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.

**10 Operational risk**

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

	2010 HK\$m	2009 HK\$m
Capital charge for operational risk.....	<b>17,349</b>	<b>17,163</b>

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 the 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 3(g) and (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.

	2010 HK\$m	2009 HK\$m
Realised gains from sales for the year .....	<b>1,173</b>	<b>1,190</b>
Unrealised gains:		
Amount included in reserves but not through the income statement .....	<b>56,797</b>	<b>41,617</b>
Amount included in supplementary capital .....	<b>1,487</b>	<b>1,146</b>

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**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, our businesses use a combination of scenarios relevant to them 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 incremental 25 basis points parallel falls or rises in all yield curves at the beginning of each quarter during the 12 months from 1 January 2011. Assuming no management actions, the sensitivity of projected net interest income is as follows:

	HK\$m
<b>Change in 2011 projected net interest income arising from a shift in yield curves of:</b>	
+25 basis points at the beginning of each quarter.....	4,445
-25 basis points at the beginning of each quarter.....	(5,826)
 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)

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 pro forma 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 above also assume that interest rates of all maturities move by the same amount and, therefore, do not reflect the potential effect on net interest income of some rates changing while others remain unchanged. In addition, 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.

Projecting the movements in net interest income from prospective changes in interest rates is a complex interaction of structural and managed exposures. 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'.

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**13 Off-balance sheet exposures other than derivative transactions**

	2010 HK\$m	2009 HK\$m
<b>Contract amounts</b>		
Direct credit substitutes .....	50,451	44,774
Transaction-related contingencies .....	85,599	78,582
Trade-related contingencies .....	99,711	73,754
Forward asset purchases .....	3,194	3,103
Forward deposits placed .....	259	816
Commitments that are unconditionally cancellable without prior notice .....	1,059,747	916,875
Commitments which have an original maturity of not more than one year .....	104,720	77,111
Commitments which have an original maturity of more than one year .....	132,343	86,938
	<b>1,536,024</b>	<b>1,281,953</b>
<b>Risk-weighted amounts</b>	<b>217,098</b>	<b>195,566</b>

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 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.



**Supplementary Notes on the Financial Statements** (unaudited) (continued)**14 Non-structural foreign exchange positions**

The group had the following non-structural foreign currency positions that were not less than 10 per cent of the net non-structural positions in all foreign currencies:

*Group*

	<b>United States dollars HK\$m</b>	<b>Singapore dollars HK\$m</b>	<b>Brunei dollars HK\$m</b>	<b>Chinese renminbi HK\$m</b>
<b>At 31 December 2010</b>				
Spot assets .....	3,600,303	664,036	103,968	347,444
Spot liabilities .....	(3,536,433)	(741,911)	(29,881)	(326,844)
Forward purchases .....	4,690,542	259,447	148	649,086
Forward sales .....	(4,781,960)	(170,855)	(84,574)	(671,025)
Net options positions .....	13,842	(127)	–	(100)
	<b>(13,706)</b>	<b>10,590</b>	<b>(10,339)</b>	<b>(1,439)</b>
<b>At 31 December 2009</b>				
Spot assets .....	3,053,837	247,020	84,729	109,807
Spot liabilities .....	(3,010,444)	(311,720)	(27,308)	(92,862)
Forward purchases .....	2,560,540	189,887	170	342,940
Forward sales .....	(2,632,313)	(120,564)	(62,207)	(361,662)
Net options positions .....	13,870	–	–	–
	<b>(14,510)</b>	<b>4,623</b>	<b>(4,616)</b>	<b>(1,777)</b>

The net options positions reported above are calculated using the delta-weighted position of the options contracts.

**15 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:

	<b>2010 %</b>	<b>2009 %</b>
Hong Kong branches of the Bank .....	<b>39.3</b>	<b>50.4</b>

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**16 Senior management compensation and benefits***Remuneration of senior management and key personnel*

The following tables show the remuneration paid by the group to senior management and key personnel. These disclosures are made pursuant to the HKMA Supervisory Policy Manual CG-5 'Guideline on a Sound Remuneration System'. Comparative data have not been provided as this is the first year of disclosure. Senior management is defined as those persons responsible for oversight of the group's strategy or material business lines and includes executive members of the Board of Directors and Executive Committee of the Bank. Key personnel is defined as individual employees whose duties involve the assumption of material risk or the taking on of material exposures on behalf of the group.

*Analysis of remuneration between fixed and variable amounts*

	2010		
	Senior management (19 people) HK\$m	Key personnel (20 people) HK\$m	Total HK\$m
<b>Fixed</b>			
Cash based .....	75	52	127
Share based .....	–	–	–
Other .....	–	–	–
	<b>75</b>	<b>52</b>	<b>127</b>
<b>Variable</b>			
Cash based .....	94	211	305
Share based .....	85	211	296
Other .....	–	–	–
	<b>179</b>	<b>422</b>	<b>601</b>

Deferred remuneration consists of cash and shares, both of which vest over a period of 3 years. Further details on share schemes can be found in note 50 of the Annual Report and Accounts.

*Analysis of deferred remuneration*

	2010		
	Senior management (19 people) HK\$m	Key personnel (20 people) HK\$m	Total HK\$m
<b>Deferred remuneration</b>			
Outstanding, vested .....	–	–	–
Outstanding, unvested .....	330	638	968
Awarded during the year .....	105	264	369
Paid out .....	36	87	123
Reduced through performance adjustments .....	–	–	–

**Supplementary Notes on the Financial Statements** (unaudited) (continued)**17 Principal subsidiaries and basis of consolidation**

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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 Bank (Taiwan) 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 HKMA 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 11 and 13, the principal subsidiaries that are not included in consolidation for regulatory purposes are:

Hang Seng Insurance Company Limited  
HSBC Insurance (Asia Pacific) Holdings Limited and subsidiaries  
HSBC Securities Japan Limited  
Hang Seng General Insurance (Hong Kong) Company Limited  
HSBC Futures (Singapore) Pte Ltd  
HSBC Securities Brokers (Asia) 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.

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