The Hongkong and Shanghai Banking Corporation Limited

Supplementary Notes on the Financial Statements as at 31 December 2011

HSBC

Contents

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

Introduction

The information contained in this document is for The Hongkong and Shanghai Banking Corporation Limited ('the Bank') and its subsidiaries (together 'the group'). It is supplementary to and should be read in conjunction with the 2011 Annual Report and Accounts. The Annual Report and Accounts and these Supplementary Notes, taken together, comply with the Banking (Disclosure) 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 2011.

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 21.

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 2011, as set out in note 3 on the financial statements in the Annual Report and Accounts.

2 Summary of risk-weighted amounts

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

	2011 HK$m	2010 HK$m
Credit risk		
Basic approach	**11,409**	9,470
Standardised (credit risk) approach	**164,644**	173,055
Internal ratings-based approach	**1,244,578**	1,177,134
Internal ratings-based (securitisation) approach	**1,106**	327
	1,421,737	1,359,986
Market risk	**38,585**	35,251
Operational risk	**221,429**	216,866
	1,681,751	1,612,103

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%.

	2011 HK$m	2010 HK$m
Capital required for exposures under the IRB approach		
Corporate exposures		
Specialised lending under the supervisory slotting criteria approach		
- Project finance	**512**	276
- Object finance	**98**	69
- Commodities finance	**90**	10
- Income- producing real estate	**4,030**	3,447
Small-and-medium sized corporates	**15,983**	16,579
Other corporates	**47,287**	44,865
Sovereign exposures		
Sovereigns	**7,675**	4,733
Bank exposures		
Banks	**9,729**	11,077
Securities firms	**459**	463
Retail exposures		
Residential mortgages		
- Individuals	**3,881**	3,550
- Property- holding shell companies	**232**	218
Qualifying revolving retail exposures	**3,303**	3,425
Small business retail exposures	**25**	9
Other retail exposures to individuals	**673**	657
Other exposures		
Cash items	**37**	210
Other items	**8,048**	6,362
Total for the IRB approach	**102,062**	95,950
Capital required for exposures under the standardised (credit risk) approach		
Sovereign exposures	**18**	1
Public sector entity exposures	**817**	683
Bank exposures	**125**	170
Securities firm exposures	**–**	–
Corporate exposures	**2,504**	2,821
Collective investment scheme exposures	**3**	4
Cash items	**–**	–
Regulatory retail exposures	**4,192**	4,116
Residential mortgage loans	**2,678**	2,436
Other exposures which are not past due exposures	**1,203**	1,607
Past due exposures	**409**	430
Off-balance sheet exposures other than OTC derivative transactions and credit derivative contracts	**1,062**	1,312
OTC derivative transactions and credit derivative contracts	**160**	264
Total for the standardised (credit risk) approach	**13,171**	13,844
Capital required for exposures under the basic approach	**913**	758
Total	**116,146**	110,552

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.

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) is estimated using a Customer Risk Rating ('CRR') scale of 23 grades, of which 21 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 experience, 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.

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

Use of internal estimates

Internal risk parameters derived from applying the IRB approach are not only employed in the calculation of risk-weighted assets (‘RWAs’) for the purpose of determining regulatory capital requirements, but also in many other contexts within risk management and business processes and include:

- **credit approval and monitoring**: IRB models, scorecards and other methodologies are valuable tools deployed in the assessment of customer and portfolio risk in lending decisions including the use of CRR grades within watch-list processes and other enhanced monitoring procedures;

- **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, for instance in subsidiaries’ operating plans and the calculation of remuneration through the assessment of performance;

- **portfolio management**: regular reports to the Board and Audit and Risk Committee contain analyses of risk exposures, e.g. by customer segment and quality grade, employing IRB metrics;

- **pricing**: Basel II risk parameters are used in wholesale pricing tools when considering new transactions and annual reviews; and

- **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.

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:

	Advanced IRB approach HK$m	Supervisory slotting criteria approach HK$m	Retail IRB approach HK$m	Total exposures HK$m
2011				
Corporate exposures	**1,465,812**	**83,529**	–	**1,549,341**
Sovereign exposures	**1,024,337**	–	–	**1,024,337**
Bank exposures	**876,569**	–	–	**876,569**
Retail exposures				
- Residential mortgages to individuals and property-holding shell companies	–	–	**603,070**	**603,070**
- Qualifying revolving retail exposures	–	–	**168,158**	**168,158**
- Other retail exposures to individuals and small business retail exposures	–	–	**49,544**	**49,544**
2010				
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

The corporate, sovereign and bank exposures reported under the IRBA approach as at 31 December 2011 include amounts of HK$67,160m, HK$5,398m and HK$157,370m respectively (31 December 2010: HK$51,094m, HK$4,199m and HK$132,998m 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).

	2011 **HK$m**	2010 HK$m
Corporate exposures	**311,870**	293,643
Sovereign exposures	**495**	492
Bank exposures	**45,604**	124,945
Retail exposures	**38,073**	39,553
	396,042	458,633

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 %**
2011				
Minimal default risk	**127,600**	**15**	**0.04**	**41.5**
Low default risk	**452,955**	**27**	**0.10**	**45.3**
Satisfactory default risk	**515,206**	**53**	**0.37**	**45.1**
Fair default risk	**175,216**	**92**	**1.20**	**45.7**
Moderate default risk	**160,770**	**106**	**2.78**	**38.6**
Significant default risk	**17,415**	**159**	**6.50**	**43.6**
High default risk	**3,951**	**194**	**11.83**	**43.4**
Special management	**3,728**	**242**	**24.50**	**47.3**
Default	**8,971**	**–**	**100.00**	**51.0**
	1,465,812			
2010				
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
	1,340,991			

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 %
2011		
Strong	**63,577**	**64**
Good	**15,849**	**84**
Satisfactory	**3,832**	**122**
Weak	**229**	**265**
Default	**42**	**–**
	83,529	
2010		
Strong	45,099	63
Good	13,905	85
Satisfactory	5,281	122
Weak	218	265
Default	42	–
	64,545	

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 %
2011				
Minimal default risk	**651,161**	**2**	**0.02**	**13.4**
Low default risk	**325,891**	**16**	**0.08**	**37.7**
Satisfactory default risk	**33,456**	**54**	**0.49**	**44.7**
Fair default risk	**9,436**	**82**	**1.01**	**44.7**
Moderate default risk	**4,162**	**117**	**3.32**	**43.1**
Significant default risk	**231**	**198**	**5.75**	**45.0**
	1,024,337			
2010				
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
	774,060			

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 %
2011				
Minimal default risk	**340,197**	**7**	**0.04**	**27.5**
Low default risk	**426,640**	**13**	**0.09**	**32.9**
Satisfactory default risk	**89,972**	**31**	**0.29**	**35.4**
Fair default risk	**13,470**	**68**	**1.04**	**38.6**
Moderate default risk	**2,606**	**109**	**3.59**	**41.3**
Significant default risk	**1,873**	**158**	**6.19**	**49.0**
High default risk	**1,685**	**273**	**10.73**	**65.9**
Special management	**16**	**133**	**70.15**	**40.4**
Default	**110**	**–**	**100.00**	**64.6**
	876,569			
2010				
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
	979,447			

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:

	Residential mortgages HK$m	Qualifying revolving retail exposures HK$m	Other retail exposures HK$m	Total exposures HK$m
2011				
Strong	**591,773**	**138,533**	**45,074**	**775,380**
Medium	**10,619**	**28,898**	**3,990**	**43,507**
Sub-standard	**678**	**725**	**479**	**1,882**
Impaired	**–**	**2**	**1**	**3**
	603,070	**168,158**	**49,544**	**820,772**
2010				
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
	549,910	151,771	47,729	749,410

Undrawn commitments

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

	2011		2010	
	Undrawn commitments HK$m	**Exposure-weighted average EAD HK$m**	Undrawn commitments HK$m	Exposure-weighted average EAD HK$m
Corporate exposures	**794,083**	**232,968**	662,092	234,603
Sovereign exposures	**1,831**	**539**	2,631	741
Bank exposures	**21,457**	**5,724**	33,495	9,258
	817,371	**239,231**	698,218	244,602

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

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

e *IRB expected loss and impairment charges*

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

	2011		2010	
	Expected loss at 1 Jan HK$m	**Impairment charge for the year HK$m**	Expected loss at 1 Jan HK$m	Impairment charge for the year HK$m
Sovereign	**238**	**–**	193	–
Bank	**685**	**42**	634	–
Corporate	**11,787**	**2,415**	10,610	3,149
Residential mortgages	**993**	**90**	986	489
Qualifying revolving retail	**1,584**	**335**	1,685	1,113
Other retail	**467**	**149**	490	226
	15,754	**3,031**	14,598	4,977

Impairment charges decreased in 2011 primarily through improvements in the credit quality of the corporate and retail portfolios which drove a decrease in impairment charges and an increase in provision releases.

Sovereign, Bank, and Corporate EL increased slightly, driven by the continuing macro-economic uncertainty in the Eurozone, which has resulted in more conservative EL estimates.

It should be noted that impairment charges and EL are measured using different methodologies which are not directly comparable. In general, EL is greater than impairment charges for each IRB class. The limitation arises from the fundamental differences in the definition of 'loss' under the accounting standards which determine the impairment charges (write-off and impairment loss allowances) 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 *IRB expected loss and impairment charges (continued)*

The following table compares actual outcomes for the year against the risk elements estimated at the beginning of the year.

	PD		LGD		EAD	
	Actual	Projected	Actual	Projected	Actual	Projected
	%	%	%	%	%	%
At 31 December 2011						
Sovereign	**0.00**	**0.27**	**0.0**	**18.4**	**0**	**100**
Bank	**0.00**	**1.24**	**0.0**	**28.8**	**0**	**95**
Corporate	**0.23**	**1.10**	**35.8**	**45.5**	**46**	**71**
Residential mortgages	**0.76**	**0.97**	**10.7**	**12.0**	**81**	**99**
Qualifying revolving retail	**0.40**	**0.85**	**84.8**	**101.0**	**52**	**60**
Other retail	**1.35**	**1.09**	**33.5**	**19.4**	**73**	**134**
At 31 December 2010						
Sovereign	0.00	0.26	0.0	15.3	0	100
Bank	0.00	1.41	0.0	25.8	0	97
Corporate	0.31	1.21	25.4	44.8	86	68
Residential mortgages	0.88	1.00	12.1	10.9	80	87
Qualifying revolving retail	0.54	0.95	87.0	101.0	63	56
Other retail	1.48	1.25	27.3	32.0	70	77

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 during the year, 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 2011 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 2011 against the limits one year prior to default. The projected EAD is based on a ‘through-the-cycle’ credit experience.

5 Credit risk under the standardised (credit risk) approach

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 or corporate exposures (those without internal CRR); and
- Collective investment scheme exposures.

The group uses external credit ratings from the following ECAIs:

- Fitch Ratings;
- Moody's Investors Service; and
- Standard & Poor's Ratings Services.

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

2011	Total exposures[1]	Exposures after recognised credit risk mitigation[2]		Risk-weighted amounts			Total exposures covered by recognised collateral	Total exposures covered by recognised guarantees or recognised credit derivative contracts
		Rated	Unrated	Rated	Unrated	Total		
	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m	HK$m
Assets								
On-balance sheet								
Sovereign	–	14,380	–	223	–	223	–	–
Public sector entity	75,456	70,191	–	10,210	–	10,210	5,071	7,673
Multilateral development bank	57,448	57,448	–	–	–	–	–	–
Bank	3,898	1,415	3,896	445	1,115	1,560	–	–
Securities firm	9	–	9	–	5	5	–	–
Corporate	47,037	54	31,334	41	31,267	31,308	2,678	13,551
Collective investment scheme	42	–	42	–	42	42	–	–
Regulatory retail	74,018	–	69,877	–	52,408	52,408	1,851	2,289
Residential mortgage loan	58,454	–	58,334	–	33,474	33,474	53	68
Other exposures which are not past due exposures	21,075	–	15,033	–	15,033	15,033	5,772	271
Past due exposures	3,519	193	3,326	159	4,951	5,110	185	33
Total on-balance sheet	340,956	143,681	181,851	11,078	138,295	149,373	15,610	23,885
Off-balance sheet								
Off-balance sheet exposure other than OTC derivative transactions or credit derivative contracts	16,735	1,135	13,742	327	12,945	13,272	1,858	287
OTC derivative transactions	4,538	3,034	1,501	517	1,482	1,999	3	-
Total off-balance sheet	21,273	4,169	15,243	844	14,427	15,271	1,861	287
Total	362,229	147,850	197,094	11,922	152,722	164,644	17,471	24,172
Exposures deducted from Core Capital or Supplementary Capital	–							

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

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

2010	Total exposures[1] HK$m	Exposures after recognised credit risk mitigation[2] Rated HK$m	Unrated HK$m	Risk- weighted amounts Rated HK$m	Unrated HK$m	Total HK$m	Total exposures covered by recognised collateral HK$m	Total exposures covered by recognised guarantees or recognised credit derivative contracts HK$m
Assets								
On-balance sheet								
Sovereign	–	4,892	–	14	–	14	–	–
Public sector entity	51,336	51,398	–	8,537	–	8,537	–	631
Multilateral development bank	68,707	68,707	–	–	–	–	–	–
Bank	5,047	1,343	4,943	354	1,768	2,122	–	–
Securities firm	2	–	2	–	1	1	–	–
Corporate	41,976	364	34,987	164	35,100	35,264	2,763	10,813
Collective investment scheme	53	–	53	–	53	53	–	–
Regulatory retail	73,034	–	68,604	–	51,452	51,452	2,111	2,321
Residential mortgage loan	52,407	–	52,346	–	30,450	30,450	52	56
Other exposures which are not past due exposures	24,746	–	20,087	–	20,087	20,087	4,657	–
Past due exposures	4,438	–	4,438	–	5,370	5,370	975	20
Total on-balance sheet	321,746	126,704	185,460	9,069	144,281	153,350	10,558	13,841
Off-balance sheet								
Off-balance sheet exposure other than OTC derivative transactions or credit derivative contracts	20,917	433	18,705	136	16,264	16,400	1,779	414
OTC derivative transactions	6,023	4,042	1,966	1,428	1,877	3,305	15	–
Total off-balance sheet	26,940	4,475	20,671	1,564	18,141	19,705	1,794	414
Total	348,686	131,179	206,131	10,633	162,422	173,055	12,352	14,255
Exposures deducted from Core Capital or Supplementary Capital	5							

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.*

6 Counterparty credit risk-related exposures

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
2011			
OTC derivative & credit derivatives:			
Gross total positive fair value	**363,758**	**–**	**5,595**
Credit equivalent amounts	**227,840**	**–**	**4,177**
Repo-style transactions:			
Net credit exposures[1]	**–**	**10,023**	**–**
Value of recognised collateral by type:			
Debt securities	**670**	**96,421**	**–**
Others	**16,234**	**15,985**	**–**
	16,904	**112,406**	**–**
Credit equivalent amounts/ net credit exposures net of recognised collateral[2]	**227,840**	**10,023**	**4,177**
Exposure at default	**227,840**	**10,023**	**4,177**
Risk-weighted amounts	**67,332**	**987**	**896**
Notional amounts of recognised credit derivative contracts which provide credit protection	**–**	**–**	**–**
2010			
OTC derivative & credit derivatives:			
Gross total positive fair value	286,320	–	5,313
Credit equivalent amounts	182,897	–	6,325
Repo-style transactions:			
Net credit exposures[1]	–	10,179	–
Value of recognised collateral by type:			
Debt securities	918	84,528	–
Others	8,596	53,237	–
	9,514	137,765	–
Credit equivalent amounts/ net credit exposures net of recognised collateral[2]	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	–	–	–

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
2011			
OTC derivative & credit derivatives:			
Gross total positive fair value	**2,684**	**–**	**–**
Credit equivalent amounts	**4,538**	**–**	**–**
Repo-style transactions:			
Net credit exposures	**–**	**106**	**–**
Value of recognised collateral by type:			
Debt securities	**–**	**391**	**–**
Others	**3**	**315**	**–**
	3	**706**	**–**
Credit equivalent amounts/ net credit exposures net of recognised collateral	**4,538**	**106**	**–**
Risk-weighted amounts	**1,999**	**52**	**–**
Notional amounts of recognised credit derivative contracts which provide credit protection	**–**	**–**	**–**
2010			
OTC derivative & credit derivatives:			
Gross total positive fair value	4,647	–	–
Credit equivalent amounts	6,023	–	–
Repo-style transactions:			
Net credit exposures	–	233	–
Value of recognised collateral by type:			
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	–	–	–

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
2011			
Notional amounts:			
Sovereigns	**509,971**	**32,614**	**580**
Banks	**22,371,732**	**75,270**	**455,210**
Corporates	**2,644,018**	**9,685**	**22,934**
	25,525,721	**117,569**	**478,724**
Exposure at default[1]:			
Sovereigns	**5,342**	**1,197**	**55**
Banks	**153,514**	**8,000**	**3,856**
Corporates	**68,984**	**826**	**266**
	227,840	**10,023**	**4,177**
Risk-weighted amounts:			
Sovereigns	**627**	**90**	**10**
Banks	**22,349**	**562**	**757**
Corporates	**44,356**	**335**	**129**
	67,332	**987**	**896**
2010			
Notional amounts:			
Sovereigns	229,547	47,616	–
Banks	19,991,145	85,570	509,077
Corporates	2,067,943	3,940	27,050
	22,288,635	137,126	536,127
Exposure at default[1]:			
Sovereigns	4,199	1,049	-
Banks	127,051	8,665	5,947
Corporates	51,647	465	378
	182,897	10,179	6,325
Risk-weighted amounts:			
Sovereigns	662	133	–
Banks	20,458	356	1,054
Corporates	30,110	27	230
	51,230	516	1,284

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
2011			
Notional amounts:			
Sovereigns	**19,887**	**–**	**–**
Public sector entities	**120,830**	**298**	**–**
Banks	**475**	**–**	**–**
Corporates	**48,545**	**446**	**92**
	189,737	**744**	**92**
Credit equivalent amounts/net credit exposures	**4,538**	**106**	**–**
Risk-weighted amounts	**1,999**	**52**	**–**
2010			
Notional amounts:			
Sovereigns	12,388	–	–
Public sector entities	187,668	270	–
Banks	3,035	–	–
Corporates	97,195	289	269
	300,286	559	269
Credit equivalent amounts/net credit exposures	6,023	233	–
Risk-weighted amounts	3,305	139	–

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
2011			
Exchange rate contracts			
Forward	**6,628,177**	**17,442**	**27,708**
Option purchased	**406,331**	**6,453**	**4,678**
Swap	**2,978,224**	**18,983**	**17,072**
	10,012,732	**42,878**	**49,458**
Interest rate contracts			
Forward	**483,586**	**1**	**26**
Option purchased	**315,417**	**1,805**	**2,197**
Swap	**14,544,565**	**21,444**	**29,163**
	15,343,568	**23,250**	**31,386**
Credit derivative contracts	**478,815**	**896**	**1,279**
Other OTC derivative contracts	**359,619**	**3,206**	**9,185**
	26,194,734	**70,230**	**91,308**
2010			
Exchange rate contracts			
Forward	5,051,896	14,038	18,653
Option purchased	247,641	3,694	4,380
Swap	2,634,785	18,171	21,326
	7,934,322	35,903	44,359
Interest rate contracts			
Forward	265,986	–	7
Option purchased	325,480	756	1,133
Swap	13,855,242	16,616	20,319
	14,446,708	17,372	21,459
Credit derivative contracts	536,396	1,284	743
Other OTC derivative contracts	208,054	1,260	4,236
	23,125,480	55,819	70,797

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 2011 Annual Report and Accounts.

The fair values are calculated after taking into account the effect of valid bilateral netting agreements amounting to HK$280,732m (2010: HK$225,484m).

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*

	2011 HK$m	2010 HK$m
Used for credit portfolio		
Credit default swap		
Protection bought	**3,158**	1,768
Protection sold	**–**	–
Total return swap		
Protection bought	**21,735**	11,017
Protection sold	**–**	–
	24,893	12,785
Used for intermediation activities		
Credit default swap		
Protection bought	**230,506**	265,541
Protection sold	**218,812**	253,941
Total return swap		
Protection bought	**402**	575
Protection sold	**4,202**	3,554
	453,922	523,611

7 Credit risk mitigation

The group grants credit facilities 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, 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, for example in the form of collateral security. These policies, together with the determination of suitable valuation parameters, are subject to regular review to ensure that they are supported by empirical evidence and continue to fulfil their intended purpose.

The most common method of mitigating credit risk is to take collateral. 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, a mortgage over property, a 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 the 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.

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: in relation to an asset backed commercial paper ('ABCP') programme, or a programme with similar features, 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 ECAIs for each and all classes of securitisation exposures below.

Securitisation exposures

	2011 HK$m	2010 HK$m
Residential mortgage loans	**1,565**	2,157
Student loans	**496**	988
Commercial mortgage loans	**1,343**	336
Others	**775**	867
	4,179	4,348

Breakdown by risk-weights of the securitisation exposures

	Securitisation exposures HK$m	**Risk-weighted amount HK$m**	**Capital requirements HK$m**
2011			
7%	**1,663**	**123**	**10**
8%	**620**	**53**	**4**
10%	**465**	**49**	**4**
20%	**399**	**85**	**7**
60%	**–**	**–**	**–**
100%	**752**	**796**	**64**
Deducted from capital	**280**	**–**	**–**
	4,179	**1,106**	**89**
2010			
7%	3,240	241	19
8%	685	58	5
10%	–	–	–
20%	–	–	–
60%	44	28	2
100%	–	–	–
Deducted from capital	379	–	–
	4,348	327	26

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

8 Asset securitisation *(continued)*

Exposures deducted from Core Capital or Supplementary Capital

	2011 HK$m	2010 HK$m
Residential mortgage loans	**44**	45
Commercial mortgage loans	**193**	292
Others	**43**	42
	280	379

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%. 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 purpose 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

	2011 HK$m	2010 HK$m
Traditional securitisations:		
Residential mortgage loans	**9,167**	11,338

(ii) There were no securitisation transactions originated during the year where the group did not retain any exposure. (2010: none)

c *Sponsor*

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

	2011 HK$m	2010 HK$m
Others	**–**	218

d *Other disclosures*

(i) There were no material impaired or overdue exposures securitised during the year (2010: none) and there were no losses recognised during the year (2010: none).

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

	2011 HK$m	2010 HK$m
Residential mortgage loans	**–**	8,657

(iii) There were no securitisation transactions entered into during the year that were subject to an early amortisation provision (2010: 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 (2010: none).

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

	2011 HK$m	2010 HK$m
Under the standardised (market risk) approach		
Interest rate exposures	**9**	10
Other equity exposures	**611**	147
Under the internal models approach		
Equity options	**175**	128
Default risk surcharge	**857**	1,225
General market risk and specific interest rate risk	**1,435**	1,310
Capital charge for market risk	**3,087**	2,820

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% confidence interval and a one day time horizon that is scaled up to a ten day holding period.

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 250 business days 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.

	2011	2010
	HK$m	HK$m
Capital charge for operational risk	**17,714**	17,349

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.

	2011	2010
	HK$m	HK$m
Realised gains from sales for the year	**147**	1,173
Unrealised gains:		
Amount included in reserves but not through the income statement	**30,304**	56,797
Amount included in supplementary capital	**1,085**	1,487

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

12 Interest rate exposures in the banking book

A principal part of our management of market risk in non-trading portfolios is to monitor the sensitivity of projected net interest income under varying interest rate scenarios (simulation modelling). 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.

For simulation modelling, our businesses use a combination of scenarios relevant to them and local markets and standard scenarios which are required throughout the HSBC 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. Assuming no management actions, the sensitivity of projected net interest income is as follows:

	HK$m
Change in 2012 projected net interest income arising from a shift in yield curves of:	
+25 basis points at the beginning of each quarter	**4,785**
-25 basis points at the beginning of each quarter	**(6,848)**
Change in 2011 projected net interest income arising from a shift in yield curves of:	
+25 basis points at the beginning of each quarter	4,445
-25 basis points at the beginning of each quarter	(5,826)

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 (although rates are not assumed to become negative in the falling rates scenario) 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 Balance Sheet Management within Global Markets.

- Core deposit franchises are exposed to changes in the cost of deposits raised. 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 Balance Sheet Management, under our policy of transferring interest rate risk to Balance Sheet Management to be managed within defined limits and with flexibility as to the instruments used.

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

12 Interest rate exposures in the banking book *(continued)*

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 Off-balance sheet exposures other than derivative transactions

	2011 HK$m	2010 HK$m
Contract amounts		
Direct credit substitutes	**57,975**	50,451
Transaction-related contingencies	**105,925**	85,599
Trade-related contingencies	**104,830**	99,711
Forward asset purchases	**2,870**	3,194
Forward deposits placed	**247**	259
Commitments that are unconditionally cancellable without prior notice	**1,173,870**	1,059,747
Commitments which have an original maturity of not more than one year	**91,393**	104,720
Commitments which have an original maturity of more than one year	**133,613**	132,343
	1,670,723	1,536,024
Risk-weighted amounts	**193,043**	217,098

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 accounting purposes, 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.

14 Loans and advances to customers by geographical area

Analysis of loans and advances to customers by geographical areas according to the location of counterparties, after recognised risk transfer:

	Hong Kong HK$m	**Rest of Asia-Pacific/ Other HK$m**	**Total HK$m**
At 31 December 2011			
Gross loans and advances to customers	**1,002,945**	**1,139,227**	**2,142,172**
At 31 December 2010			
Gross loans and advances to customers	889,862	1,014,192	1,904,054

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

15 Loans and advances to customers by industry sectors

The following analysis of the group's loans and advances to customers is based on the categories contained in the 'Quarterly Analysis of Loans and Advances and Provisions' return required to be submitted to the Hong Kong Monetary Authority ('HKMA') by branches of the Bank and by banking subsidiaries in Hong Kong.

	Gross Advances		Collateral and other security	
	2011	2010	**2011**	2010
	HK$m	HK$m	**HK$m**	HK$m
Gross loans and advances to customers for use in Hong Kong		(restated[1])		(restated[1])
Industrial, commercial and financial				
Property development	**71,309**	74,177	**23,200**	21,227
Property investment	**200,721**	187,120	**155,130**	142,417
Financial concerns	**11,852**	12,206	**1,804**	2,362
Stockbrokers	**3,117**	1,993	**331**	178
Wholesale and retail trade	**75,379**	68,303	**19,352**	17,902
Manufacturing	**31,897**	34,924	**6,313**	7,352
Transport and transport equipment	**27,429**	24,372	**18,948**	17,637
Recreational activities	**88**	945	**17**	532
Information technology	**4,888**	5,844	**34**	13
Others	**58,775**	73,039	**18,508**	20,375
	485,455	482,923	**243,637**	229,995
Individuals				
Advances for the purchase of flats under the Hong Kong Government's Home Ownership Scheme, Private Sector Participation Scheme and Tenants Purchase Scheme	**25,640**	27,496	**25,558**	27,458
Advances for the purchase of other residential properties	**298,560**	267,133	**298,277**	267,089
Credit card advances	**41,200**	37,351	**–**	-
Others	**40,036**	36,634	**11,250**	11,757
	405,436	368,614	**335,085**	306,304
Gross loans and advances to customers for use in Hong Kong	**890,891**	851,537	**578,722**	536,299
Trade finance	**142,253**	135,650	**31,113**	27,332
Gross loans and advances to customers for use outside Hong Kong	**1,109,028**	916,867	**393,748**	355,078
Gross loans and advances to customers	**2,142,172**	1,904,054	**1,003,583**	918,709

1. *Certain comparatives have been restated to reflect changes in classification in the current period disclosure.*

The categories of advances, and the relevant definitions, used by the HKMA differ from those used for internal purposes by the HSBC Group, including The Hongkong and Shanghai Banking Corporation Limited and its subsidiaries, as disclosed in note 18 on the financial statements.

The geographical information shown above has been classified by the location of the principal operations of the subsidiary or, in the case of the Bank, by the location of the branch responsible for advancing the funds.

Collateral includes any tangible security that has a determinable fair market value and is readily marketable. This includes (but is not limited to) cash and deposits, stocks and bonds, mortgages over properties and charges over other fixed assets such as plant and equipment. Where collateral values are greater than gross advances, only the amount of collateral up to the gross advance has been included.

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

16 Non-bank mainland exposures

The analysis of non-bank mainland exposures is based on the categories of non-bank counterparties and the type of direct exposures defined by the HKMA under the Banking (Disclosure) Rules with reference to the HKMA return for non-bank mainland exposures, which includes the mainland exposures extended by the Bank and its banking subsidiary in mainland China.

	On-balance sheet exposure HK$m	Off-balance sheet exposure HK$m	Total exposures HK$m	Specific provisions HK$m
At 31 December 2011				
Mainland entities	**99,498**	**11,161**	**110,659**	**–**
Companies and individuals outside the mainland where the credit is granted for use in the mainland	**52,382**	**7,557**	**59,939**	**44**
Other counterparties the exposures to whom are considered by the Bank to be non-bank mainland exposures	**4,325**	**1,353**	**5,678**	**–**
	156,205	**20,071**	**176,276**	**44**
Mainland exposures of wholly owned mainland subsidiaries:				
Loans and advances	**129,699**	**3,739**	**133,438**	**50**
Debt securities and other	**104,469**	**19,574**	**124,043**	**–**
	234,168	**23,313**	**257,481**	**50**
	390,373	**43,384**	**433,757**	**94**
At 31 December 2010 (restated[1])				
Mainland entities	86,075	7,660	93,735	1
Companies and individuals outside the mainland where the credit is granted for use in the mainland	48,674	11,924	60,598	641
Other counterparties the exposures to whom are considered by the Bank to be non-bank mainland exposures	4,264	1,624	5,888	–
	139,013	21,208	160,221	642
Mainland exposures of wholly owned mainland subsidiaries:				
Loans and advances	111,146	2,995	114,141	36
Debt securities and other	54,473	14,607	69,080	–
	165,619	17,602	183,221	36
	304,632	38,810	343,442	678

1. *Comparatives have been restated to align with the treatment applied in 2011, including strategic investments.*

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

17 Cross-border exposures

The group's country risk exposures in the tables below are prepared in accordance with the HKMA Return of External Positions Part II: Cross-Border Claims (MA(BS)9) guidelines.

Cross-border claims are on-balance sheet exposures to counterparties based on the location of the counterparties after taking into account the transfer of risk.

The tables show claims on individual countries and territories or areas, after recognised risk transfer, amounting to 10% or more of the aggregate cross-border claims.

Cross-border risk is controlled centrally through a well-developed system of country limits and is frequently reviewed to avoid concentration of transfer, economic or political risk.

	Banks HK$m	Public sector entities[1] HK$m	Others HK$m	Total HK$m
As at 31 December 2011				
Asia-Pacific excluding Hong Kong				
China	**281,204**	**59,324**	**125,582**	**466,110**
Others	**138,852**	**206,296**	**245,577**	**590,725**
	420,056	**265,620**	**371,159**	**1,056,835**
Americas				
United States	**52,676**	**120,498**	**41,505**	**214,679**
Others	**38,203**	**18,866**	**88,227**	**145,296**
	90,879	**139,364**	**129,732**	**359,975**
Europe				
United Kingdom	**118,745**	**9,362**	**14,861**	**142,968**
Others	**98,911**	**49,388**	**42,667**	**190,966**
	217,656	**58,750**	**57,528**	**333,934**
As at 31 December 2010 (restated[2])				
Asia-Pacific excluding Hong Kong				
China	223,171	9,839	118,142	351,152
Others	112,588	134,469	222,904	469,961
	335,759	144,308	341,046	821,113
Americas				
United States	107,736	94,888	57,250	259,874
Others	22,435	16,719	68,685	107,839
	130,171	111,607	125,935	367,713
Europe				
United Kingdom	157,840	1,364	13,914	173,118
Others	148,184	63,717	34,529	246,430
	306,024	65,081	48,443	419,548

1. Includes balances with central banks
2. Comparatives have been restated to reflect the accounting consolidation followed in 2011

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

18 Non-structural foreign exchange positions

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

	United States dollars HK$m	Singapore dollars HK$m	Brunei dollars HK$m
At 31 December 2011			
Spot assets	**1,254,317**	**325,563**	**10,508**
Spot liabilities	**(1,430,476)**	**(331,008)**	**(27,893)**
Forward purchases	**5,816,926**	**436,756**	**752**
Forward sales	**(5,669,458)**	**(413,455)**	**(1,467)**
Net options positions	**9,826**	**(14)**	**–**
	(18,865)	**17,842**	**(18,100)**
At 31 December 2010 (restated[1])			
Spot assets	1,458,457	190,277	8,530
Spot liabilities	(1,384,662)	(186,404)	(18,931)
Forward purchases	4,681,128	177,679	133
Forward sales	(4,782,471)	(170,835)	(71)
Net options positions	13,842	(127)	–
	(13,706)	10,590	(10,339)

1 Comparatives have been restated to exclude internally generated back to back positions.

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

19 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%. 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:

	2011 %	2010 %
Hong Kong branches of the Bank	**33.6**	39.3

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

20 Senior management compensation and benefits

Remuneration of senior management and key personnel

The following tables show the remuneration paid 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'.

Senior management is defined as those persons responsible for oversight of the group's strategy or activities or material business lines. This includes the Executive Directors, Executive Committee members, Chief Executive, Alternative Chief Executive, and Managers as registered with the HKMA. There were 23 members of senior management in 2011 (2010: 21 members). This includes two members (2010: two) who are Directors of, and are remunerated by, HSBC Holdings Plc and are consequently not included in the disclosures below.

Key personnel is defined as individual employees whose duties or activities involve the assumption of material risk or the taking on of material exposures on behalf of the group.

Analysis of remuneration between fixed, variable, deferred and non-deferred amounts

	2011			2010		
	Senior management (21 people) HK$m	**Key personnel (25 people) HK$m**	**Total HK$m**	Senior management (19 people) HK$m	Key personnel (20 people) HK$m	Total HK$m
Fixed						
Cash based	**91**	**91**	**182**	75	52	127
Variable[1]						
Cash	**66**	**82**	**148**	52	85	137
Non-Deferred Shares	**32**	**76**	**108**	29	84	113
Deferred cash	**49**	**112**	**161**	42	126	168
Deferred shares	**106**	**115**	**221**	56	127	183
Total variable pay	**253**	**385**	**638**	179	422	601

Analysis of deferred remuneration

	2011			2010		
	Senior management (21 people) HK$m	**Key personnel (25 people) HK$m**	**Total HK$m**	Senior management (19 people) HK$m	Key personnel (20 people) HK$m	Total HK$m
Deferred remuneration at 31 December						
Outstanding, unvested[2]	**387**	**759**	**1,146**	330	638	968
Outstanding, cash	**59**	**112**	**171**	–	–	–
Outstanding, share based	**328**	**647**	**975**	330	638	968
Awarded during the year	**152**	**324**	**476**	105	264	369
Paid out	**128**	**126**	**254**	36	87	123
Reduced through performance adjustment	**–**	**–**	**–**	–	–	–

1 *The forms of variable remuneration and the proportion deferred are based on the seniority, role and responsibilities of employees and their level of total variable compensation.*

2 *Outstanding, unvested, deferred remuneration is exposed to ex post explicit adjustments. There is no retained remuneration exposed to ex post explicit adjustments as at 31 December 2011 and 31 December 2010.*

3 *There is no reduction of deferred remuneration and retained remuneration due to ex post explicit adjustments during 2011 and 2010.*

21 Principal subsidiaries and basis of consolidation

The basis of consolidation for accounting purposes is in accordance with Hong Kong Financial Reporting Standards ('HKFRS'). HKFRS is a collective term which includes all applicable individual Hong Kong Financial Reporting Standards, Hong Kong Accounting Standards and Interpretations issued by the Hong Kong Institute of Certified Public Accountants.

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 Futures (Singapore) Pte Ltd
HSBC Securities Japan Limited
Hang Seng General Insurance (Hong Kong) Company Limited
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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