SUPPLEMENTARY NOTES TO THE FINANCIAL STATEMENTS (unaudited)

These notes set out on pages 240 to 260 are supplementary to and should be read in conjunction with the consolidated financial statements set out on pages 89 to 238. The consolidated financial statements and these supplementary notes taken together comply with the Banking (Disclosure) Rules ("Rules") made under section 60A of the Banking Ordinance.

1. BASIS OF PREPARATION

(a) Except where indicated otherwise, the financial information contained in these supplementary notes has been prepared on a consolidated basis in accordance with Hong Kong Financial Reporting Standards. Some parts of these supplementary notes, however, are required by the Rules to be prepared on a different basis. In such cases, the Rules require that certain information is prepared on a basis which excluded some of the subsidiaries of the Bank.

Further information regarding subsidiaries that are not included in the consolidation for regulatory purpose is set out in note 2 to the supplementary notes to the financial statements.

(b) 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 2008 as set out in note 4 to the financial statements.

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

2. CAPITAL ADEQUACY

(a) Capital adequacy ratios

The capital adequacy ratios as at 31 December 2008 are computed on the consolidated basis of the Bank and certain of its subsidiaries as specified by the HKMA for its regulatory purposes, and are in accordance with the Banking (Capital) Rules of the Hong Kong Banking Ordinance which became effective on 1 January 2007.

In the year of 2007, the Group has adopted the Standardised approach ("STC") for the calculation of the credit risk capital requirement. With the approval from the HKMA to use the Foundation Internal Ratings-Based ("IRB") approach, the Group has migrated to a more sophisticated IRB approach and adopted this approach to calculate its credit risk for the non-securitisation exposures as at 31 December 2008. During the years of 2007 and 2008, the Group has adopted "Standardised Approach" for the calculation of operational risk capital requirement and the "Internal Models Approach" for the calculation of market risk capital requirement. As there are significant differences between IRB approach and STC approach, the capital adequacy ratios of the two years are not directly comparable.

During the Group's application of adopting IRB approach, the Group has also obtained approval from the HKMA under section 12(2)(a) of the Banking (Capital) Rules to adopt Standardised Approach for certain exposures being exempted from the IRB approach for credit risk calculations. Details of credit risk calculated under Standardised Approach are shown under supplementary note 5.

2. CAPITAL ADEQUACY (continued)

(a) Capital adequacy ratios (continued)

The capital base after deductions used in the calculation of capital adequacy ratios as at 31 December and reported to HKMA is analysed as follows:

	2008	2007
Capital base		
Core capital:		
– share capital	**9,559**	9,559
– retained profits	**24,290**	29,437
– classified as regulatory reserve	**(854)**	(911)
– less: deduction from core capital	**(557)**	(283)
– less: 50 per cent of total unconsolidated investments and other deductions	**(6,330)**	(5,875)
– total core capital	**26,108**	31,927
Supplementary capital:		
– fair value gains on the revaluation of property	**3,465**	3,466
– fair value gains on the revaluation of available-for-sale investment and equity	**649**	823
– collectively assessed impairment allowances	**78**	636
– regulatory reserve	**94**	911
– surplus provision	**101**	–
– term subordinated debt	**10,357**	10,354
– less: 50 per cent of total unconsolidated investments and other deductions	**(6,330)**	(5,875)
– total supplementary capital	**8,414**	10,315
Total capital base after deductions	**34,522**	42,242
Risk-weighted assets		
– credit risk	**235,576**	342,798
– market risk	**1,684**	2,166
– operational risk	**38,104**	33,558
	275,364	378,522
Capital adequacy ratio	**12.5%**	11.2%
Core capital ratio	**9.5%**	8.4%

2. CAPITAL ADEQUACY (continued)

(b) Basis of consolidation

The basis of consolidation for calculation of capital ratios under the Capital Rules follows the basis of consolidation for financial reporting with the exclusion of subsidiaries which are "regulated financial entities" (e.g. insurance and securities companies) as defined by the Capital Rules. Accordingly, the investment costs of these unconsolidated regulated financial entities are deducted from the capital base. The unconsolidated regulated financial entities are:

Hang Seng Bank (Trustee) Limited
Hang Seng Bank Trustee International Limited
Hang Seng Futures Limited
Hang Seng General Insurance (Hong Kong) Company Limited
Hang Seng Insurance Company Limited
Hang Seng Insurance (Bahamas) Limited
Hang Seng Investment Management Limited
Hang Seng Investment Services Limited
Hang Seng Life Limited
Hang Seng (Nominee) Limited
Hang Seng Securities Limited

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

3. CREDIT RISK CAPITAL REQUIREMENTS

With effect from 1 January 2008, the Group uses the foundation internal ratings-based ("IRB") approach approved by the HKMA for calculating the credit risks for the majority of its non-securitisation exposures, with the remainder of its credits risks assessed using the standardised (credit risk) approach. In 2007, the Group used the standardised (credit risk) approach.

The table below shows the capital requirements for credit risk for each class and subclass of exposures as specified in the Banking (Capital) Rules.

3. CREDIT RISK CAPITAL REQUIREMENTS (continued)

	2008	2007
Subject to internal ratings-based approach		
Sovereign exposures	413	–
Bank exposures	4,005	–
Corporate exposures	9,477	–
Residential mortgages to individuals and property-holding shell companies	1,099	–
Qualifying revolving retail exposures	750	–
Small business retail exposure	12	–
Other retail exposures to individuals	316	–
Other exposures	915	–
Securitisation exposures	–	–
Equity exposures	–	–
Total capital requirements for credit risk under internal ratings-based approach	16,987	–
Subject to standardised approach		
On-balance sheet		
Sovereign exposures	–	78
Public sector entity exposures	43	394
Multilateral development bank exposures	–	–
Bank exposures	15	7,328
Securities firm exposures	–	126
Corporate exposures	397	11,090
Collective investment scheme exposures	6	188
Cash items	–	2
Regulatory retail exposures	142	1,353
Residential mortgage loans	586	3,705
Other exposures which are not past due exposures	467	1,398
Past due exposures	36	69
Total capital requirements for on-balance sheet exposures	1,692	25,731
Off-balance sheet		
Direct credit substitutes	35	291
Transaction-related contingencies	20	32
Trade-related contingencies	18	164
Forward asset purchases	5	9
Partly paid-up shares and securities	–	–
Forward forward deposits placed	–	–
Unconditionally cancellable commitments	–	–
Other commitments	54	864
Exchange rate contracts	22	191
Interest rate contracts	1	41
Equity contracts	12	101
OTC derivative transactions and credit derivative contracts subject to valid bilateral netting agreements	–	–
Other off-balance exposures which are not elsewhere specified	–	–
Total capital requirements for off-balance sheet exposures	167	1,693
Total capital requirements for credit risk under standardised (credit risk) approach	1,859	27,424
Total capital requirements for credit risk	18,846	27,424

The capital requirement is made by multiplying the Group's risk-weighted amount derived from the relevant calculation approach by 8 per cent. It does not reflect the Group's actual regulatory capital.

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH

(a) The internal system and risk components

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

The Group adopted internal-ratings based approach for the majority of its business with effect from 1 January 2008, with the remainder on standardised approach. The following exposures are subject to internal-ratings based approach:

- Corporate exposure includes exposures to global large corporates, local large corporates, middle market corporates and small and medium-sized enterprises, non-bank financial institutions and specialised lending.
- Sovereign exposure includes exposures to sovereign governments, central monetary institutions and government entities.
- Bank exposure includes exposures to banks and regulated securities firms.
- Retail exposure includes residential mortgages, qualifying revolving retail exposures, small business retail exposures and other retail exposures.
- Other exposure mainly includes notes and coins, premises, plant and equipment and other fixed assets.

Structure of rating systems and control mechanisms

The Group's exposure to credit risk arises from a wide range of asset classes, customers and product types. To measure and manage the risk in these exposures, both to individually assessed customers and to those aggregated into portfolios, the Group employs diverse risk rating systems and methodologies: judgemental, analytical, and hybrids of the two. The main characteristics of the Group's credit risk rating systems are set out below.

(i) Structure of Internal Ratings Systems

The Group-wide credit risk rating framework incorporates probability of default ("PD") of an obligor and loss severity expressed in terms of exposures at default ("EAD") and loss given default ("LGD"). These measures are used to calculate expected loss and capital requirements. They are also used in conjunction with other inputs for risk management decisions.

For wholesale business (includes corporate, bank and sovereign exposures), obligor PD is estimated using a 10-grade scale Customer Risk Rating expanded into 22 buckets, of which 20 are non-default ratings representing varying degrees of strength of financial condition, and two are default ratings. Credit scores generated by models and/or scorecards for individual obligors are reviewed by credit approvers. The final approved Customer Risk Ratings are mapped to a PD value range of which the "mid-point" is used in the regulatory capital calculation. LGD and EAD estimations for wholesale business is subject to parameters set by the Regulator.

The Group uses supervisory slotting criteria approach in rating its regulatory specialised lending exposure. Under this approach, rating will be assigned based on the borrower and transaction characteristics.

For retail business, a wide range of statistical techniques are used to develop credit risk models to provide PD, EAD and LGD estimates, incorporating the characteristics of the products and the borrower's account behaviour. For reporting and management information purposes, retail portfolios are analysed according to analytically-derived criteria into 10 expected loss bands which are grouped under 4 categories, enabling comparability across the Group's retail customer segments, business lines and product types.

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(a) The internal system and risk components (continued)

(ii) Use of internal ratings

While internal estimates derived from applying the internal-ratings based ("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 credit officers in the Group's credit risk function using a risk-based approach, tiered relative to obligor customer risk rating;

– credit monitoring: migration of obligor customer risk rating becomes an important indicator in credit monitoring process;

– pricing: customer relationship managers apply a Risk Adjusted Return on Capital methodology in risk-weighted asset ("RWA") and profitability calculators; and

– portfolio management: regular reports to senior management on analyses of exposures employing internal-ratings based ("IRB") metrics.

(iii) Credit risk mitigation

Mitigation of credit risk is an important aspect of its effective management and takes in many forms.

In terms of internal-ratings based ("IRB") parameters, risk mitigants are considered in two broad categories: first, those which reduce the intrinsic probability of default of an obligor and therefore operate as adjustments to probability of default ("PD") estimation, and second, those which affect estimated recoverability of obligations and require adjustment of loss given default ("LGD")/exposure at default ("EAD"). The first includes, for example, full parental or third party guarantees; the second, collateral security of various kinds such as cash, equity and mortgages over residential property, etc.

For wholesale exposures, loss given default ("LGD") values are determined by reference to parameters approved by the Regulators based on the nature of the collateral. For retail exposures, credit mitigation data is incorporated into the internal risk parameters for risk exposures and feeds continuously into the calculation of the expected loss band value summarising both customer delinquency and product or facility risk. Credit and risk mitigation data forms part of the inputs submitted to a centralised database, upon which a capital calculation engine then performs calculations by applying the relevant Basel II rules and approach.

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

It is the Group's policy that all facilities of wholesale portfolios should be reviewed (and hence collateral revalued) at least on an annual basis. Where facilities have been overdue for more than 90 days and are tangibly secured, the collateral should be revalued not less than every 3 months.

For residential mortgages under retail business, valuations must be updated at a minimum of once every three years for residential real estate portfolio exceeding USD500m through the consistent use of reputable local house or real estate price indices and/or in-house estimates. Where the market is subject to significant changes in conditions, revaluation should be more frequent. For accounts of more than 90 days past due, an updated valuation on the mortgaged property is required upon downgrading. An updated valuation must be obtained on an annual basis or earlier if there is reason to believe that the value of the property has declined.

The Group's policy provides that netting is only to be applied where it has the legal right to do so. Under the Banking (Capital) Rules, 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 included for capital adequacy credit risk mitigation calculation. While the use of multi-lateral netting arrangement is allowed for internal credit risk management, it is not a valid credit risk mitigation under the Banking (Capital) Rules.

There is immaterial credit and market risks concentrations within the credit risk mitigants (recognised collateral and guarantees) used by the Group.

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(a) The internal system and risk components (continued)

(iv) Control Mechanisms for Rating Systems

In order to ensure that the rating systems are robust, the Group has relevant policy and control mechanism in place to validate the accuracy and consistency of the systems, which are used for the estimation of all relevant risk components for risk management and capital adequacy calculation. The Chief Credit Officer is responsible for the design and management of the Group's credit function, including approval and oversight of the risk rating systems. Regular reportings on model performance are also made to relevant management committees comprising of senior management and business representatives.

Model validation process enables the Group to reaffirm the continuing appropriateness of the models in the light of performance against expectation. The validation process involves a series of quantitative and qualitative activities to assess the rating consistency, discriminatory power, prediction power and stability of a model. The validation process covers two major aspects: pre-implementation examination and post-implementation validation.

Pre-implementation examination is performed for newly built or redeveloped risk rating models before the model is formally deployed into production environment. Pre-implementation examination is carried out by independent party not involved in the model development process. Moreover, post-implementation validation is performed periodically by the model developer with established performance benchmarking standards. There are also periodic model performance reports provided to those responsible for model oversight and model monitoring. Additionally, Internal Audit conducts annual review on model validation and monitoring processes.

(b) Internal Rating Process

For wholesale exposures, the assignment of customer risk rating is an independent exercise, taking into account all aspects of the borrower's risk profile. Lending executive assigns customer risk rating based on a suite of approved risk rating systems. Customer risk ratings are to be re-assessed each time that a credit proposal is formally reviewed, but at a minimum annually. Policy requirements dictate a continuous monitoring of wholesale credits by the assigned executive, formal review and reporting is required upon any material deterioration in risk profile. In the event that credit information external to the risk rating system is deemed to have a material impact on probability of default (“PD”), an override is permissible. Justification of the override is required to document for approval and for model validation purpose.

For retail exposures, exposures are segmented into pools in risk rating assessment. A group of sufficiently homogeneous exposures, which bears the same risk characteristics, is classified as a pool. Each exposure is assigned to a particular pool based on risk drivers of borrower risk, transaction risk and delinquency status.

Probability of Default (“PD”)

Probability of default (“PD”) is the likelihood, expressed as a percentage, of a default event in a one-year time horizon.

For corporate exposures, probability of default (“PD”) is estimated based upon an quantitative assessment of the borrower’s financials combined with a qualitative assessment of the industry environment, management experience and company structure. Based on the Group’s historical default data, the score generated by the PD model is calibrated into a customer risk rating.

For bank exposures, probability of default (“PD”) estimation incorporates an advanced analytical model, which combines financial statistics and trends with qualitative inputs by the relevant relationship manager. The resultant score is blended with internal country and operating environment risk scores to generate a customer risk rating.

For sovereign exposures, the models used to estimate probability of default (“PD”) incorporates inputs comprising both quantitative and qualitative data from a wide range of reference sources and agencies on economic, political, financial and social conditions. Separate local currency and foreign currency risk ratings and associated probability of default (“PD”) are derived and applied to exposures denominated in the respective currencies.

For retail exposures, probability of default (“PD”) estimation takes variables of facility utilisation, payment history, account conduct as well as in-house developed scorecards and credit bureau data.

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(b) Internal Rating Process (continued)

Exposure-at-Default ("EAD")

Exposure at default ("EAD") is a product-specific estimate of the exposure at the time of default. This calculation is based on empirical data predicting the likelihood of drawings, over a one-year time horizon, from an analysis of statistical behaviour of such default events. It is the sum of on-balance sheet balance outstanding and amount of off-balance sheet items multiplied by the credit conversion factor and the drawdown factor. Credit conversion factor is the likelihood that a non-cash/off-balance facility may crystallise and become cash exposure, which include the expected additional drawdown on an available unutilised limit.

For corporate, bank and sovereign exposures, the Group applies the supervisory credit conversion factor estimation provided by the Hong Kong Monetary Authority.

For retail revolving exposures, predictive models are built to estimate additional customer drawdown for the estimation of exposure at default ("EAD"). For retail non-revolving exposures, estimation was based on the sum of current principal outstanding.

Loss Given Default ("LGD")

Loss given default ("LGD") is an estimate of the severity of the loss that the Group is likely to incur in the event that the borrower defaults, expressed as a percentage of exposure at default ("EAD").

For corporate, bank and sovereign exposures, the Group applies the supervisory loss given default factor estimation provided by the Hong Kong Monetary Authority.

For retail exposures, loss given default ("LGD") model is built based on the Group's internal loss and default experience where the estimation of loss given default ("LGD") reflects economic downturn conditions.

(c) Approach for determining provisions

Policies for establishing provisions

The impairment losses of loans and receivables are measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. Receivables with a short duration are not discounted if the effect of discounting is immaterial.

The total allowance for impairment losses consists of two components: individually assessed impairment allowances and collectively assessed impairment allowances. Please refer to note 4(f) to the financial statements for details of the provision policies.

All impaired loans and receivables are reviewed and analysed periodically. Any subsequent changes to the amounts and timing of the expected future cash flows compared to the prior estimates that can be linked objectively to an event occurring after the write-down, will result in a change in the impairment allowances on loans and receivables and will be charged or credited to the profit and loss account. A reversal of impairment losses is limited to the loans and receivables' carrying amount that would have been determined had no impairment loss been recognised in prior years. Where there is no reasonable prospect of recovery, the loan and the related interest receivables are written off.

The Group takes into consideration the provision made in its capital maintenance decisions as in accordance with section 220 of the Banking (Capital) Rules. The Group compares the total expected loss ("EL") amount and the total eligible provisions, and if total EL amount exceeds total eligible provisions, the Group deducts the difference from the core capital and supplementary capital. On the other hand, if total EL amount is less than the eligible provisions, the Group includes the differences in its supplementary capital up to a maximum of 0.6% of the Group's risk weighted amount for credit risk calculated using IRB Approach.

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(d) Exposures subject to supervisory estimates

The Group received approval from HKMA to use the Basel II Foundation Internal Based Approach ("FIRB") for credit risk for its Corporate, Sovereign and Bank portfolios. Approvals for the FIRB approach enables the Group to rely on its own internal estimates for some of the necessary credit risk components in determining the capital requirement for a given credit exposure. Internal estimate is used for PD, while for LGD and Maturity, the HKMA provided estimates are used. PDs and LGDs are the key inputs for EL estimates.

The following table indicates the exposure classes and the respective exposure amounts that are subject to supervisory estimates as at 31 December 2008:

	2008
IRB Exposure Class	
Sovereign exposures	50,696
Bank exposures	179,639
Corporate exposures	188,446
Other exposures	14,629
Total EAD	433,410

(e) Exposures by IRB calculation approach

The following shows the Group's exposures:

	Foundation IRB Approach	Supervisory Slotting Criteria Approach	Retail IRB Approach	Specific Risk-weight Approach	Total exposures
Sovereign exposures	50,696	–	–	–	50,696
Bank exposures	179,639	–	–	–	179,639
Corporate exposures	173,412	15,034	–	–	188,446
Retail exposures:					
– residential mortgages to individuals and property-holding shell companies	–	–	115,053	–	115,053
– qualifying revolving retail exposures	–	–	44,309	–	44,309
– small business retail exposures	–	–	3,119	–	3,119
– other retail exposures to individuals	–	–	8,817	–	8,817
Other exposures	–	–	–	14,629	14,629
	403,747	15,034	171,298	14,629	604,708

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(f) Exposures by credit risk mitigation used

The table below shows the total exposure amount by IRB portfolio other than OTC derivatives which is covered by recognised collaterals or guarantees as at 31 December 2008.

Portfolio	Exposures covered by collaterals	Exposures covered by guarantees
Bank exposures	32	31,511
Corporate exposures	30,993	49,161
Retail exposures:		
– residential mortgages to individuals and property-holding shell companies	97,449	17,522
– small business retail exposures	3,119	–
– other retail exposures to individuals	6,416	–
	138,009	98,194

For classes of sovereign exposure, qualifying revolving retail exposure and other exposure, there were no exposures covered by collaterals or guarantees.

(g) Risk assessment for exposures under IRB approach

The tables below details the total exposure at default (“EAD”) of sovereign, bank and corporate exposures by exposure-weighted average risk-weight and exposure-weighted average probability of default (PD) for each obligor grades as at 31 December 2008.

The exposure of default disclosed below in respect of corporate, sovereign and bank exposures have taken into account the effect of recognised collateral and recognised guarantees.

(i) Sovereign exposure

Obligor Grade	Exposure-weighted average PD %	Exposure-weighted average risk-weight %	Exposure at default
Minimal risk	0.01	8.14	43,912
Low risk	0.06	22.96	6,743
Fair default risk	0.74	87.32	41
			50,696

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(g) Risk assessment for exposures under IRB approach (continued)

(ii) Bank exposure

Obligor Grade	Exposure-weighted average PD %	Exposure-weighted average risk-weight %	Exposure at default
Minimal risk	0.03	15.31	73,022
Low risk	0.08	27.03	87,035
Satisfactory risk	0.28	54.64	14,173
Fair default risk	0.82	89.85	2,352
Moderate default risk	3.56	142.93	2,850
Significant default risk	5.25	161.28	11
High default risk	11.24	211.93	36
Default	100.00	–	160
			179,639

(iii) Corporate exposure

Obligor Grade	Exposure-weighted average PD %	Exposure-weighted average risk-weight %	Exposure at default
Minimal risk	0.04	17.45	31,433
Low risk	0.10	29.92	53,737
Satisfactory risk	0.40	59.48	47,971
Fair default risk	1.37	99.67	19,616
Moderate default risk	3.15	117.36	12,907
Significant default risk	6.02	141.23	3,685
High default risk	10.47	153.12	573
Special management	23.59	237.45	1,159
Default	100.00	–	2,331
			173,412

(iv) Specialised lending

The specialised lending portfolio subject to supervisory slotting is classified under corporate and is measured utilising the internal ratings-based approach. Supervisory risk-weights have been specified by HKMA in determining credit exposure for this portfolio.

Obligor Grade	Weighted average risk-weight %	Exposure at default
Strong	65.42	11,225
Good	93.46	2,997
Satisfactory	121.90	527
Weak	265.00	285
		15,034

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(g) Risk assessment for exposures under IRB approach (continued)

(v) Retail exposure

The following shows a breakdown of exposures (the EAD of on-balance sheet exposures and off-balance sheet exposures) on a pool basis into expected loss bands:

	Residential mortgages	Qualifying revolving retail exposures	Small business retail exposures	Other retail exposures	Total exposures
Expected Loss bands					
Strong	113,287	38,329	3,030	7,376	162,022
Medium	879	5,884	80	1,343	8,186
Sub-standard	–	82	–	65	147
Impaired	887	14	9	33	943
	115,053	44,309	3,119	8,817	171,298

(h) Analysis of actual loss and estimates

The following sets out the actual losses (including write-offs and impairment loss allowances) for the year and the expected loss as at 31 December 2007.

	2008	2007
Exposure Class		
Sovereign	–	–
Bank	1,375	–
Corporate	1,109	350
Residential mortgage	(20)	22
Qualifying revolving retail	312	223
Other retail	73	69
	2,849	664

	Expected loss at 31 December 2007
Exposure Class	
Sovereign	3
Bank	551
Corporate	811
Residential mortgage	251
Qualifying revolving retail	282
Other retail	399
	2,297

4. CREDIT RISK UNDER THE INTERNAL-RATINGS BASED APPROACH (continued)

(h) Analysis of actual loss and estimates (continued)

The following sets out the percentage of the actual number of defaults at 31 December 2008 compared against the estimated probability of default at 31 December 2007 of the respective portfolio.

	Actual default rate for 2008 %	Estimated probability of default at 31 December 2007 %
Exposure Class		
Sovereign	–	0.06
Bank	**0.63**	0.28
Corporate	**2.24**	3.09
Residential mortgage	**0.31**	1.05
Qualifying revolving retail	**0.54**	0.62
Other retail	**2.32**	5.38

The actual default rate is measured by using the number of obligor defaulted for the annual reporting period whereas the estimated probability of default is the long run average default rate estimated for 2008.

As the Group only reported on IRB approach commencing from 1 January 2008, the information on actual loss and default rate is for reference only as they may not have covered a period sufficient enough to enable assessment on the performance of internal rating models.

5. CREDIT RISK UNDER THE STANDARDISED (CREDIT RISK) APPROACH

(a) Ratings from External Credit Assessment Institutions ("ECAIs")

The Group uses the following external credit assessment institutions ("ECAIs") to calculate its capital adequacy requirements under the standardised (credit risk) approach prescribed in the Banking (Capital) Rules:

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

Where exposures have been rated by the above-mentioned ECAIs, they are categorised under the following class of exposures:

- Sovereign exposures
- Public sector entity exposures
- Multilateral development bank exposures
- Bank exposures
- Securities firm exposures
- Corporate exposures
- Collective investment scheme exposures

The process used to map ECAIs issuer ratings or ECAIs issue specific ratings in the Group's banking book is consistent with those prescribed in the Banking (Capital) Rules.

(b) Credit risk mitigation

The Group's policies on credit risk mitigation under standardised approach align with those under the internal ratings-based approach.

5. CREDIT RISK UNDER THE STANDARDISED (CREDIT RISK) APPROACH (continued)

(b) Credit risk mitigation (continued)

As stated in 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, corporate and banks. With corporate guarantees, in order for it to be recognised as a credit risk mitigants, it must have a credit rating of A- or better by Standard & Poor's Ratings Services, Fitch Ratings and Rating and Investment Information, Inc. or a credit rating of A3 or better by Moody's Investors Service. With sovereign and bank guarantees, these exposures are managed by central teams in HSBC Group Head Office in London.

There is immaterial credit and market risks concentrations within the credit risk mitigants (recognised collateral and guarantees) used by the Group.

(c) Credit risk exposures under the standardised (credit risk) approach

	Total exposures*	Exposures after recognised credit risk mitigation		Risk-weighted amounts		Total risk-weighted amounts	Total exposures covered by recognised collateral	Total exposures covered by recognised guarantees or recognised credit derivative contracts
		Rated	Unrated	Rated	Unrated			
2008								
Class of exposures								
On-balance sheet								
Sovereign	–	–	–	–	–	–	–	–
Public sector entity	2,702	2,706	–	541	–	541	–	–
Multilateral development bank	3,976	3,976	–	–	–	–	–	–
Bank	895	81	814	16	169	185	–	–
Securities firm	–	–	–	–	–	–	–	–
Corporate	12,859	2,853	4,027	934	4,028	4,962	5,979	–
Collective investment scheme	72	–	72	–	72	72	–	–
Cash items	–	–	–	–	–	–	–	–
Regulatory retail	2,487	–	2,371	–	1,778	1,778	116	–
Residential mortgage loan	11,889	–	11,873	–	7,331	7,331	12	4
Other exposures which are not past due exposures	6,347	–	5,844	–	5,844	5,844	503	–
Past due exposures	301	–	301	–	446	446	5	–
	41,528	9,616	25,302	1,491	19,668	21,159	6,615	4
Off-balance sheet								
Off-balance sheet exposures other than OTC derivative transactions or credit derivative contracts	2,606	1,231	1,375	302	1,348	1,650	593	–
OTC derivative contracts	482	14	468	3	430	433		
Credit derivative contracts	–	–	–	–	–	–		
Other off-balance sheet exposures not elsewhere specified	–	–	–	–	–	–		
	3,088	1,245	1,843	305	1,778	2,083		
Total	44,616	10,861	27,145	1,796	21,446	23,242		
Exposures deducted from capital base	–							

* Principal amount or credit equivalent amount, as applicable, net of specific provisions.

5. CREDIT RISK UNDER THE STANDARDISED (CREDIT RISK) APPROACH (continued)

(c) Credit risk exposures under the standardised (credit risk) approach (continued)

	Total exposures*	Exposures after recognised credit risk mitigation		Risk-weighted amounts		Total risk-weighted amounts	Total exposures covered by recognised collateral	Total exposures covered by recognised guarantees or recognised credit derivative contracts
		Rated	Unrated	Rated	Unrated			
2007								
Class of exposures								
On-balance sheet								
Sovereign	15,418	17,123	–	969	–	969	–	–
Public sector entity	6,222	24,636	–	4,927	–	4,927	–	552
Multilateral development bank	5,702	5,702	–	–	–	–	–	–
Bank	308,470	309,506	1,051	91,071	526	91,597	–	719
Securities firm	3,215	91	3,064	46	1,532	1,578	60	–
Corporate	158,990	12,027	134,150	4,472	134,150	138,622	9,573	8,698
Collective investment scheme	2,354	–	2,354	–	2,354	2,354	–	–
Cash items	6,804	–	6,804	–	30	30	–	–
Regulatory retail	22,823	–	22,544	–	16,908	16,908	279	–
Residential mortgage loan	128,762	–	109,735	–	46,307	46,307	61	18,966
Other exposures which are not past due exposures	17,964	621	16,856	621	16,856	17,477	486	–
Past due exposures	768	–	768	–	862	862	171	137
	677,492	369,706	297,326	102,106	219,525	321,631	10,630	29,072
Off-balance sheet								
Off-balance sheet exposures other than OTC derivative transactions or credit derivative contracts	19,264	2,622	16,642	1,292	15,707	16,999	636	73
OTC derivative contracts	12,824	11,258	1,566	2,718	1,450	4,168		
Credit derivative contracts	–	–	–	–	–	–		
Other off-balance sheet exposures not elsewhere specified	–	–	–	–	–	–		
	32,088	13,880	18,208	4,010	17,157	21,167		
Total	709,580	383,586	315,534	106,116	236,682	342,798		
Exposures deducted from capital base	–							

* Principal amount or credit equivalent amount, as applicable, net of specific provisions.

6. COUNTERPARTY CREDIT RISK-RELATED EXPOSURES

(a) In respect of counterparty credit risk exposures which arises from over-the-counter ("OTC") derivative transactions and repo-style transactions (referred as "relevant transaction") hereunder, credit limit to counterparty credit risk arising from the relevant transaction is assigned, monitored and reported in accordance with the Group risk methodology. The credit limit established takes into account the gross contract amount and the future potential exposure measured on the basis of 95 percentile potential worst case loss estimates for the product involved. This method of calculating credit limit applies to all counterparties.

Credit equivalent amount and risk weighted amount of relevant transaction is determined following the regulatory capital requirements. Risk-weighted amount is calculated in accordance with the counterparty risk weighting as per standardised/internal ratings-based approach under the Capital Rules.

The policy for secured collateral on derivatives is guided by the Group's internal Best Practice Guidelines ensuring 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 the due-diligence standards are high and consistently applied. The Group's policies for establishing provisions are discussed in note 4(f)–Loan impairment.

(b) Counterparty credit risk exposures

	OTC derivative transactions
2008	
OTC derivative transactions:	
– gross total positive fair value which are not repo-style transactions	**6,578**
– credit equivalent amount	**14,486**
Value of recognised collateral by type:	
– debt securities	**–**
– others	**–**
	–
Credit equivalent amount or net credit exposures net of recognised collateral held	**14,486**
Risk-weighted amount	**4,110**
Notional amount of recognised credit derivative contracts which provide credit protection	**–**
2007	
OTC derivative transactions:	
– gross total positive fair value which are not repo-style transactions	4,168
– credit equivalent amount	12,824
Value of recognised collateral by type:	
– debt securities	–
– others	–
	–
Credit equivalent amount or net credit exposures net of recognised collateral held	12,824
Risk-weighted amount	4,168
Notional amount of recognised credit derivative contracts which provide credit protection	–

There was no outstanding repo-style transactions and credit derivative contracts at 31 December 2008 (2007: Nil).

6. COUNTERPARTY CREDIT RISK-RELATED EXPOSURES (continued)

(c) Major classes of exposures by counterparty type

	2008			2007		
	Contract amounts	**Credit equivalent amounts**	**Risk-weighted amounts**	Contract amounts	Credit equivalent amounts	Risk-weighted amounts
Sovereign	1,766	18	4	–	–	–
Public sector entities	1,436	15	3	987	8	2
Banks	763,517	12,753	3,082	791,396	11,251	2,718
Corporates	49,278	1,700	1,021	31,187	1,565	1,448
	815,997	14,486	4,110	823,570	12,824	4,168

7. ASSET SECURITISATION

There was no asset securitisation for which the Group is an originating institution or an investing institution at 31 December 2008.

8. MARKET RISK

The Hong Kong Monetary Authority has granted approval under section 18(2)(a) and 18(5) of the Banking (Capital) Rules for the Group to use the Internal Models Approach ("IMM") to calculate its market risk for foreign exchange risk and general interest rate risk. Standardised Approach is used for the calculation of specific interest rate risk, equity risk and commodity risk.

	2008	2007
Market risk calculated by:		
– Internal Models Approach:		
– Foreign exchange exposures and general interest rate exposures	114	141
– Standardised Approach:		
– Specific interest rate exposures	20	32
– Equity exposures	1	–
– Commodity exposures	–	–
Total capital charge for market risk	135	173

9. OPERATIONAL RISK CAPITAL CHARGE

The Hong Kong Monetary Authority has granted approval under section 25(2) of the Banking (Capital) Rules for the Group to use the Standardised Approach to calculate its operational risk.

	2008	2007
Capital charge for operational risk	3,048	2,685

10. EQUITY EXPOSURES IN BANKING BOOK

Investments in equity shares which are intended to be held on a continuing basis, but which do not comprise investments in associates, jointly controlled entities or subsidiaries, are classified as available-for-sale securities and are reported in the balance sheet as "Financial investments". Available-for-sale securities are measured at fair value as described in notes 4(g)(iii) and 4(n) on the financial statements. Included within this category are 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 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.

	2008	2007
Cumulative realised gains on disposal	**255**	442
Unrealised gains:		
– recognised in reserve but not through the income statement	**254**	1,552
– deducted from the supplementary capital	**–**	–

11. DISCLOSURE FOR SELECTED EXPOSURE

(a) Holding of debt securities issued by Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation

The table below shows the Group's exposures to the senior debt securities (AAA rated) issued by the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation.

	Gross principal	**Fair value**
At 31 December 2008	63	66
At 31 December 2007	1,001	998

The Group did not hold any asset-backed securities, mortgage-backed securities and collateralised debt obligations.

(b) Involvement with Special Purpose Entities ("SPEs")

From time to time, the Group enters into certain transactions with customers in the ordinary course of business which involve the establishment of SPEs. The use of SPEs is not a significant part of the Group's activities and the Group is not reliant on SPEs for any material part of its business operations or profitability.

12. ANALYSIS OF GROSS ADVANCES TO CUSTOMERS BY CATEGORIES BASED ON INTERNAL CLASSIFICATION USED BY THE GROUP

Impaired advances, overdue advances, individually assessed and collectively assessed loan impairment allowances, the amount of new impairment allowances charged to income statement, and the amount of impaired loans and advances written off during the year in respect of industry sectors which constitute not less than 10 per cent of gross advances to customers are analysed as follows:

	Group					
	Gross advances	Impaired advances	Individually assessed loan impairment allowances	Collectively assessed loan impairment allowances	New impairment allowances	Advances written off during the year
2008						
Residential mortgages	107,187	403	(33)	(104)	22	3
Commercial, industrial and international trade	62,464	2,030	(1,048)	(483)	996	101
Commercial real estate	34,354	2	–	(5)	1	–
Other property-related lending	57,979	265	(75)	(55)	85	3
2007						
Residential mortgages	100,725	474	(31)	(95)	19	15
Commercial, industrial and international trade	58,967	594	(361)	(316)	367	196
Commercial real estate	32,861	22	–	(5)	–	–
Other property-related lending	45,058	21	(8)	(43)	5	23

13. 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 overseas branches and overseas subsidiaries only.

	On-balance sheet exposure	Off-balance sheet exposure	Total exposures	Individually assessed allowances
2008				
Mainland entities	10,129	2,072	12,201	–
Companies and individuals outside Mainland where the credit is granted for use in Mainland	7,292	3,956	11,248	170
Other counterparties where the exposure is considered by the Bank to be non-bank Mainland exposure	15	–	15	–
	17,436	6,028	23,464	170
Mainland exposures of HACN	26,537	7,900	34,437	290
	43,973	13,928	57,901	460
2007				
Mainland entities	7,246	6,111	13,357	1
Companies and individuals outside Mainland where the credit is granted for use in Mainland	6,397	5,376	11,773	88
Other counterparties where the exposure is considered by the Bank to be non-bank Mainland exposure	50	278	328	–
	13,693	11,765	25,458	89
Mainland exposures of HACN	25,582	9,966	35,548	125
	39,275	21,731	61,006	214

14. CROSS-BORDER CLAIMS

Cross-border claims include receivables and loans and advances, and balances due from banks and holdings of certificates of deposit, bills, promissory notes, commercial paper and other negotiable debt instruments, as well as accrued interest and overdue interest on these assets. Claims are classified according to the location of the counterparties after taking into account the transfer of risk. For a claim guaranteed by a party situated in a country different from the counterparty, the risk will be transferred to the country of the guarantor. For a claim on the branch of a bank or other financial institutions, the risk will be transferred to the country where its head office is situated. Claims on individual countries or areas, after risk transfer, amounting to 10 per cent or more of the aggregate cross-border claims are shown as follows:

	Banks & other financial institutions	Public sector entities	Sovereign & other	Total
2008				
Asia-Pacific excluding Hong Kong:				
– Australia	21,088	–	431	21,519
– China	13,539	–	11,202	24,741
– Japan	8,933	–	74,127	83,060
– Other	16,212	–	6,054	22,266
	59,772	–	91,814	151,586
The Americas:				
– United States	34,673	25	34,206	68,904
– Canada	10,784	–	6,963	17,747
– Other	16	–	3,842	3,858
	45,473	25	45,011	90,509
Europe:				
– United Kingdom	36,069	–	5,825	41,894
– Other	46,939	–	6,407	53,346
	83,008	–	12,232	95,240
2007				
Asia-Pacific excluding Hong Kong:				
– Australia	33,865	–	397	34,262
– China	20,668	–	12,615	33,283
– Japan	11,802	–	149	11,951
– Other	32,308	–	6,091	38,399
	98,643	–	19,252	117,895
The Americas:				
– United States	29,111	1,187	6,866	37,164
– Canada	14,428	240	3,893	18,561
– Other	45	–	4,051	4,096
	43,584	1,427	14,810	59,821
Europe:				
– United Kingdom	33,031	–	8,511	41,542
– Other	123,002	–	4,627	127,629
	156,033	–	13,138	169,171