3. Risk management

The management of risk lies at the heart of Standard Chartered's business. One of the main risks incurred arises from extending credit to customers through trading and lending operations. Beyond credit risk, the Group is also exposed to a range of other risk types such as country, market, liquidity, operational, regulatory, pension, reputational and other risks which are inherent to Standard Chartered's strategy, product range and geographical coverage.

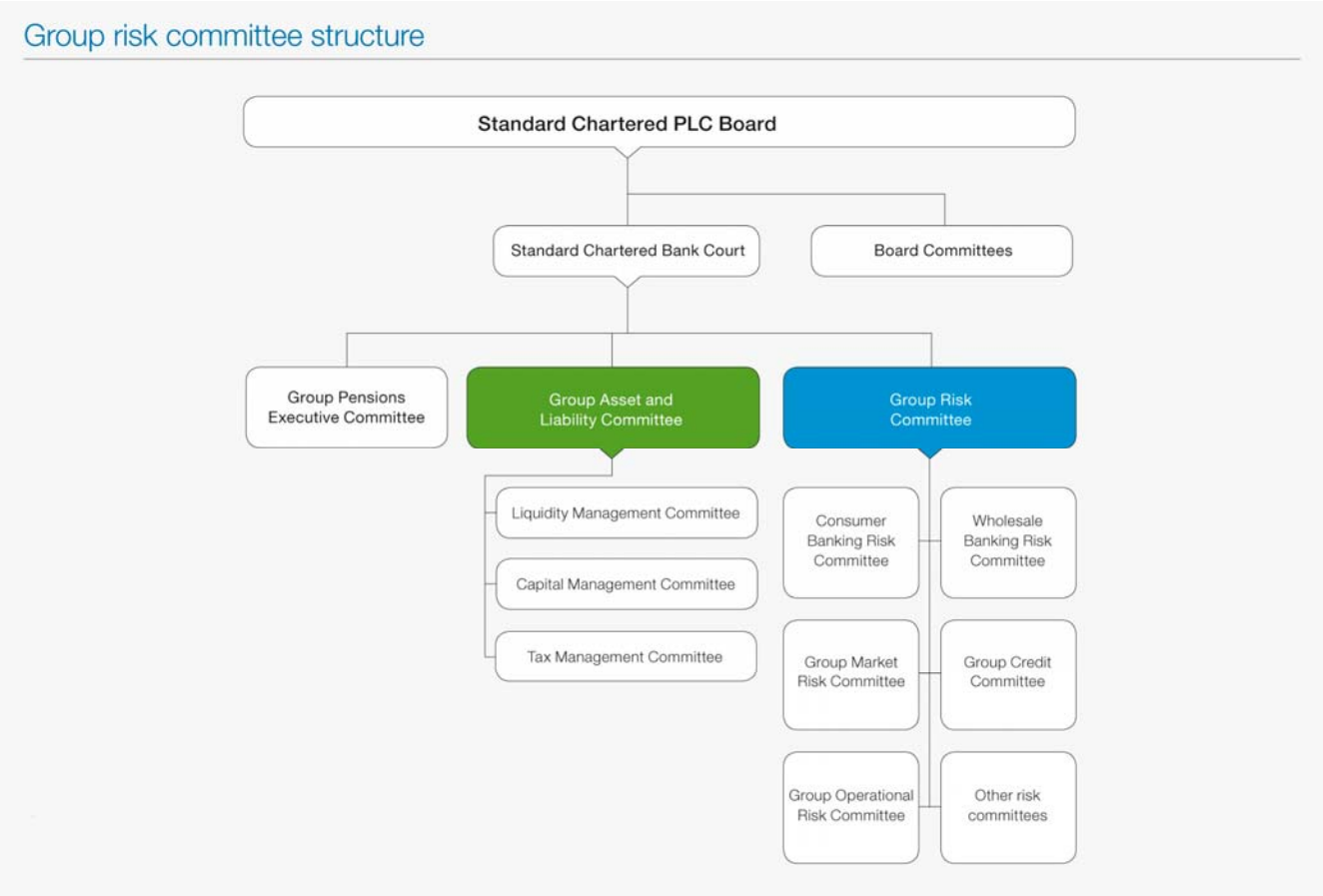
Risk management framework
Effective risk management is fundamental to being able to generate profits consistently and sustainably and is thus a central part of the financial and operational management of the Group.

Through the risk management framework Standard Chartered manages enterprise-wide risks, with the objective of maximising risk-adjusted returns while remaining within the Group's risk appetite.

As part of this framework, the Group uses a set of principles that describe the risk management culture it wishes to sustain:

- Balancing risk and reward: risk is taken in support of the requirements of stakeholders, in line with the Group's strategy and within the Group's risk appetite;
- Responsibility: it is the responsibility of all employees to ensure that risk-taking is disciplined and focused. The Group takes account of its social, environmental and ethical responsibilities in taking risk to produce a return;
- Accountability: risk is taken only within agreed authorities and where there is appropriate infrastructure and resource. All risk-taking must be transparent, controlled and reported;
- Anticipation: seek to anticipate future risks and maximise awareness of all risks; and
- Competitive advantage: seek competitive advantage through efficient and effective risk management and control.

The following diagram illustrates the high level risk committee structure:



Risk governance
Ultimate responsibility for setting the Group's risk appetite and for the effective management of risk rests with the Board of Standard Chartered PLC (the Board). Executive responsibility for risk management is held by the Standard Chartered Bank Court (the Court) which comprises the Group executive directors and other directors of Standard Chartered Bank.

The Court delegates authority for the management of risk to several committees.

The Group Risk Committee (GRC) is responsible for the management of all risks other than those delegated by the Court to the Group Asset and Liability Committee (GALCO) and the Group Pensions Executive Committee. The GRC is responsible for the establishment of, and compliance with, policies relating to credit risk, country cross-border risk, market risk, operational risk, regulatory risk and reputational risk. The GRC also defines the overall risk management framework.

The GALCO is responsible for the management of capital ratios and the establishment of, and compliance with, policies relating to balance sheet management, including management of liquidity, capital adequacy and structural foreign exchange rate risk.

The Group Pensions Executive Committee is responsible for the management of pension risk.

Members of the Court are also members of both the GRC and GALCO. The GRC is chaired by the Group Chief Risk Officer (GCRO). The GALCO is chaired by the Group Finance Director.

Risk limits and risk exposure approval authority frameworks are set by the GRC in respect of credit risk, country cross border risk and market risk. The GALCO sets the approval authority framework in respect of liquidity risk. Risk approval authorities may be exercised by risk committees or authorised individuals.

Acting within an authority delegated by the Board, the Audit and Risk Committee (ARC), whose members are all non-executive directors of the Group, reviews specific risk areas and monitors the activities of the GRC and GALCO. The ARC receives regular reports on risk management, including portfolio trends, policies and standards, adherence with internal controls, regulatory compliance, liquidity and capital adequacy, and is authorised to investigate or seek any information relating to an activity within its terms of reference. As of 4 March 2010, the ARC was split into a Board Risk Committee and a Board Audit Committee .

The committee governance structure ensures that risk-taking authority and risk management policies are cascaded down through the organisation from the Board through to the appropriate functional, divisional and country-level committees. Information regarding material risk issues and compliance with policies and standards is communicated through the country, business and functional committees up to the Group-level committees.

Business governance and functional heads are accountable for risk management in their businesses and functions, and for countries where they have governance responsibilities. This includes:

- implementing across all business activities the policies and standards as agreed by the Group-level risk committees;
- managing risk in line with appetite levels agreed by the Group-level risk committees; and
- developing and maintaining appropriate risk management infrastructure and systems to facilitate compliance with risk policies.

The GCRO directly manages a risk function which is separate from the origination, trading and sales functions of the businesses. The GCRO also chairs the GRC and is a member of the Group Management Committee. Chief Risk Officers for both Wholesale and Consumer Banking have their primary reporting lines into the GCRO. Country Chief Risk Officers take overall responsibility for risk within principal countries.

The Risk function is responsible for upholding the integrity of the Group's risk/return decisions, and in particular for ensuring that risks are properly assessed, that risk/return decisions are made transparently on the basis of this proper assessment, and are controlled in accordance with the Group's standards.

The Risk function is independent of the origination and sales functions to ensure that the necessary balance in risk/return decisions is not compromised by short-term pressures to generate revenues. This is particularly important given that revenues are recognised immediately while losses arising from risk positions only manifest themselves over time.

The Risk function is also responsible for maintaining the Group's Risk Management Framework (RMF), ensuring it remains appropriate to the Group's activities, and is effectively communicated and implemented across the Group. The Risk function also administers Risk-related governance and reporting processes.

The RMF identifies the risk types to which the Group is exposed, each of which is controlled by a designated risk control owner. The major risk types are described individually in the following sections. The risk control owners have responsibility for establishing minimum standards and for implementing governance and assurance processes, under the oversight of the GRC or GALCO and their sub-committees.

Group Internal Audit is a separate Group function that reports to the Chairman of the ARC and to the Group Chief Executive. It provides independent confirmation of compliance with Group and business standards, policies and procedures. Where necessary, it will recommend corrective action to restore or maintain such standards.

Risk appetite
Standard Chartered manages risks to build a sustainable franchise in the interests of all stakeholders. Risk appetite is an expression of the amount of risk the Group is willing to take in pursuit of its strategic objectives, reflecting the Group's capacity to sustain losses and continue to meet its obligations arising from a range of different stress trading conditions.

The Group defines risk appetite in terms of both volatility of earnings and the maintenance of minimum regulatory capital requirements under stress scenarios. Standard Chartered also defines risk appetite with respect to liquidity risks and reputational risk.

The Group's quantitative risk profile is assessed through a 'bottom-up' analytical approach covering all of the major businesses, countries and products. The risk appetite is approved by the Board and forms the basis for establishing the risk parameters within which the businesses must operate, including policies, concentration limits and business mix.

The GRC is responsible for ensuring that the risk profile is managed in compliance with the risk appetite set by the Board.

Stress testing
Stress testing and scenario analysis are used to assess the financial and management capability of Standard Chartered to continue operating effectively under extreme but plausible trading conditions. Such conditions may arise from economic, legal, political, environmental and social factors.

The Group has a stress testing framework designed to:

- contribute to the setting and monitoring of risk appetite;
- identify key risks to strategy, financial position, and reputation;
- examine the nature and dynamics of the risk profile and assess the impact of stresses on profitability and business plans;
- ensure effective governance, processes and systems are in place to co-ordinate and integrate stress testing;
- inform senior management; and
- ensure adherence to regulatory requirements.

A stress-testing forum, led by the Risk function with participation from the businesses, Group Finance, Global Research and Group Treasury, aims to ensure that the earnings and capital implications of specific stress scenarios are fully understood. The stress-testing forum generates and considers pertinent and plausible scenarios that have the potential to adversely affect the Group's business.

In 2009, stress testing activity was intensified at country, business and Group levels, with specific focus on certain asset classes, customer segments and the potential impact of macroeconomic factors. Stress tests have taken into consideration possible future scenarios that could arise as a result of the development of prevailing market conditions.

Stress testing themes such as inflation, US dollar depreciation, declines in asset values, swine flu, or potential border conflicts are co-ordinated by the stress testing forum to ensure consistency of impacts on different risk types or countries. Stress tests for country or risk type are also performed. Examples of market risk stress testing are covered in the section on market risk.

Credit risk mitigation
The Group's credit risk mitigation policy, processes and amounts of collateral held are discussed in section 4.5 Credit risk mitigation.

4. Credit risk

Credit risk is the risk that the counterparty to a financial transaction will fail to discharge an obligation, resulting in financial loss to the Group. Credit exposures may arise from both the banking and trading book. Credit risk is managed through a framework which sets out policies and procedures covering the measurement and management of credit risk. There is a clear segregation of duties between transaction originators in the businesses and the approvers in the Risk function. All credit exposure limits are approved within a defined credit approval authority framework.

Credit policies
Group-wide credit policies and standards are considered and approved by the GRC, which also oversees the delegation of credit approval and loan impairment provisioning authorities. Policies and procedures that are specific to each business are established by authorised risk committees within Wholesale and Consumer Banking. These are consistent with the Group-wide credit policies, but are more detailed and adapted to reflect the different risk environments and portfolio characteristics.

Risk reporting and measurement
Risk measurement plays a central role, along with judgement and experience, in informing risk-taking and portfolio management decisions. It is a primary area for sustained investment and senior management attention.

Various risk measurement systems are available to risk officers to enable them to assess and manage the credit portfolio. These include systems to calculate Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD), RWA and capital requirements on a transaction, counterparty and portfolio basis. The Group has implemented a single risk reporting system to aggregate risk data. This is used to generate regulatory returns and management information to assist business and Risk users with risk monitoring and management.

A number of internal risk management reports are produced on a regular basis, providing information on; individual counterparty, counterparty group, portfolio exposure, credit grade migration, the status of accounts or portfolios showing signs of weakness or financial deterioration, models performance and updates on credit markets. AIRB portfolio metrics are widely used in these reports. Regular portfolio risk reports are made available at senior management committee meetings including ARC, GRC and functional business and country level risk committees.

For AIRB portfolios, risk measurement models are approved by the responsible risk committee, on the recommendation of the Group Model Assessment Committee (MAC). The MAC supports risk committees in ensuring risk identification and measurement capabilities are objective and consistent, so that risk control and risk origination decisions are properly informed. Prior to review by the MAC, all AIRB models are validated in detail by a model validation team, which is separate from the teams which develop and maintain the models. Models undergo a detailed annual review. Such reviews are also triggered if the performance of a model deteriorates materially against predetermined thresholds during the ongoing model performance monitoring process.

Credit approval
Major credit exposures to individual counterparties, groups of connected counterparties and portfolios of retail exposures are reviewed and approved by the Group Credit Committee (GCC). The GCC derives its authority from the GRC.

All other credit approval authorities are delegated by the GRC to individuals based on their judgement and experience, and a risk-adjusted scale which takes account of the estimated maximum potential loss from a given customer or portfolio. Credit origination and approval roles are segregated in all but a very few authorised cases. In those very few exceptions where they are not, originators can only approve limited exposures within defined risk parameters.

Concentration risk
Credit concentration risk is managed within concentration caps set by counterparty or groups of connected counterparties, by industry sector and country in Wholesale Banking; and by product and country in Consumer Banking. Additional targets are set and monitored for concentrations by credit rating. Credit concentrations are monitored by the responsible risk committees in each of the businesses and concentration limits that are material to the Group are reviewed and approved at least annually by the GCC.

Credit monitoring
The Group regularly monitors credit exposures, portfolio performance, and external trends which may impact risk management outcomes. Internal risk management reports are presented to risk committees, containing information on key environmental, political and economic trends across major portfolios and countries; portfolio delinquency and loan impairment performance; as well as AIRB portfolio metrics including credit grade migration.

The Wholesale Banking Credit Issues Forum, which is a sub-committee of the Wholesale Banking Risk Committee, meets regularly to assess the impact of external events and trends on the credit risk portfolio and to define and implement the response in terms of appropriate changes to portfolio shape, underwriting standards, risk policy and procedures.

Corporate accounts or portfolios are placed on Early Alert when they display signs of weakness or financial deterioration, for example, where there is a decline in the customer's position within the industry, a breach of covenants, non-performance of an obligation, or there are issues relating to ownership or management. Such accounts and portfolios are subjected to a dedicated process overseen by Group Special Assets Management (GSAM), the specialist recovery unit. Account plans are re-evaluated and remedial actions are agreed and monitored. Remedial actions include, but are not limited to, exposure reduction, security enhancement, exiting the account or immediate movement of the account into the control of GSAM.

In Consumer Banking, portfolio delinquency trends are monitored continuously at a detailed level. Individual customer behaviour is also tracked and informs lending decisions. Accounts which are past due are subject to a collections process, managed independently by the Risk function. Charged-off accounts are managed by a specialist recovery team. In some countries, aspects of collections and recovery functions are outsourced. Medium enterprise and Private Banking past due accounts are managed by GSAM.

The Small and Medium Enterprise (SME) business is managed within Consumer Banking in two distinct segments: small businesses, and medium enterprises, differentiated by the annual turnover of the counterparty. Medium enterprise accounts are monitored in line with Wholesale Banking procedures, while small business accounts are monitored in line with other Consumer Banking accounts. Medium enterprise and private banking past due accounts are managed by GSAM.

4.1. Internal Ratings Based Approach to credit risk

The Group uses the AIRB approach to manage credit risk for the majority of its portfolios. This allows the Group to use its own internal estimates of PD, LGD, EAD and Credit Conversion Factor (CCF) to determine an asset risk weighting.

PD is the likelihood that an obligor will default on an obligation. All banks must produce an internal estimate of PD for all borrowers in each borrower grade. EAD is the expected amount of exposure to a particular obligor at the point of default. CCF is an internally modeled parameter based on historical experience to determine the amount that is expected to be further drawn down from the undrawn portion in a committed facility. LGD is the percentage of EAD that a lender expects to lose in the event of obligor default.

All assets under the AIRB approach have sophisticated PD, LGD and EAD/CCF models developed to support the credit decision making process. RWA under the AIRB approach is determined by regulatory specified formulae dependent on the Group's estimates of PD, LGD, EAD and CCF. The development, use and governance of models under the AIRB approach is covered in more detail in section 4.6 Internal Ratings Based models.

Regulation BIPRU 4.2.30 allows AIRB banks to elect to permanently exclude certain exposures from the IRB approach and use the standardised approach. These are known as permanent exemptions, and are required to be no greater than 15 per cent of the Group's credit RWA.

The permanent exemptions for Consumer Banking include:

- Africa – all retail portfolios;
- Private banking; and
- Portfolios where the size or nature makes application of the advanced approach inefficient; mainly in the Middle East.

For Wholesale Banking, permanent exemptions apply to:

- Alternative investments;
- Private equity;
- Jordan and Lebanon; and
- Purchase receivables.

The Group also applies the standardised approach to portfolios that are currently being transitioned to the AIRB approach in accordance with the Group's 'AIRB Roll Out Plan'. Direct comparability between current and prior year data for certain portfolios may not be possible during this process. Portfolios transitioned from the standardised to the IRB approach through 2009 include:

- SME and secured installment loans in Korea;
- SME mortgage portfolio in Malaysia; and
- Personal loans in Indonesia.

Subject to FSA approval, the following portfolios are due to be incorporated fully into the AIRB coverage within the next 18 months.

- Mortgages and personal loans in Taiwan;
- Credit cards in Indonesia;
- Personal loans in Malaysia;
- A portion of the Permata Bank Wholesale Banking portfolio in Indonesia; and
- A portion of the commercial real estate book in Wholesale Banking.

4.2. Standardised Approach to credit risk

The standardised approach is applied to portfolios that are classified as permanently exempt from the AIRB approach, and those portfolios that are currently under transition to the AIRB approach in accordance with the Group's 'AIRB Roll Out Plan'. Section 4.1 provides details of such portfolios.

The standardised approach to credit risk measures credit risk pursuant to fixed risk weights and is the least sophisticated of the capital calculation methodologies. The risk weight applied under the standardised approach is given by the FSA and is based on the asset class to which the exposure is assigned.

For Sovereigns, Corporates and Institutions, external ratings are used to assign risk weights. These external ratings must come from FSA approved rating agencies, known as External Credit Assessment Institutions (ECAI); namely Moody's, Standard & Poor's and Fitch. The Group uses ratings from these agencies as part of its day to day business. External ratings for the counterparty are determined as soon as a relationship is established and these ratings are tracked and kept updated. Assessments provided by approved ECAI are mapped to credit quality steps as prescribed by the FSA.

The Group currently does not use assessments provided by export credit agencies for the purpose of evaluating RWA in the standardised approach.

4.3. Regulatory capital requirements

The below table presents the minimum regulatory credit risk capital requirements as at 31 December 2009, calculated as 8 per cent of RWA based on the approaches described above in sections 4.1 and 4.2.

	Regulatory Capital Requirement	
Credit Risk Capital	31.12.09 $million	31.12.08 $million
AIRB Exposure Class		
Central governments or central banks	703	404
Institutions	1,394	1,335
Corporates	6,115	5,001
Retail, of which	1,569	1,436
Secured by real estate collateral	519	519
Qualifying revolving retail	422	406
Retail SME	44	68
Other retail	584	443
Securitisation positions	195	198
Non-credit obligation assets	-	17
Total AIRB	9,976	8,391
Standardised Exposure Class		
Central governments or central banks	38	3
Institutions	61	109
Corporates	499	617
Retail	711	840
Secured on real estate property	487	370
Past due items	86	135
Items belonging to regulatory high risk categories	29	35
Other items[2]	955	1,014
Total Standardised	2,866	3,123
Counterparty credit risk capital component (credit risk in the trading book)	1,023	1,388
Concentration Risk capital component[1]	-	-
Total	13,865	12,902

[1] The concentration risk capital component is the additional capital requirement to be held where exposure to an individual counterparty exceeds 25 per cent of capital resources.

[2] Other items' includes cash equity holdings, fixed assets, prepayments and accrued income.

The minimum credit risk capital requirements of the Group's significant subsidiaries are presented below in accordance with the regulatory requirements applicable in the countries in which they are incorporated. For 2008, local regulatory requirements obliged Standard Chartered First Bank Korea to use the standardised approach to credit risk, however under FSA guidelines it was treated under the AIRB approach. For 2009, Standard Chartered First Bank Korea has been granted permission by the Financial Supervisory Service (FSS) to apply the AIRB approach locally to selected Corporate portfolios and the Retail portfolio (excluding SME).

	31.12.09			31.12.08		
Credit Risk Capital	Standard Chartered Bank $million	Standard Chartered Bank (HK) Ltd $million	Standard Chartered First Bank Korea $million	Standard Chartered Bank $million	Standard Chartered Bank (HK) Ltd $million	Standard Chartered First Bank Korea $million
AIRB Exposure Class						
Central governments or central banks	284	15	-	167	6	-
Institutions	1,247	220	-	1,213	230	-
Corporates	3,672	821	778	2,712	887	-
Retail, of which	399	336	548	350	331	-
Secured by real estate collateral	197	109	99	163	101	-
Qualifying revolving retail	125	150	46	110	171	-
Retail SME	-	-	-	-	-	-
Other retail	77	77	403	77	59	-
Securitisation positions	127	2	18	223	2	-
Non-credit obligation assets	-	-	-	-	-	-
Other [1]	-	80	-	-	104	-
Total AIRB	5,729	1,474	1,344	4,665	1,560	-
Standardised Exposure Class						
Central governments or central banks	16	-	8	2	-	1
Institutions	9	11	58	46	1	55
Corporates	195	115	436	294	89	856
Retail	306	32	22	313	35	460
Secured on real estate property	77	36	-	39	32	321
Past due items	15	29	-	19	29	-
Items belonging to regulatory high risk categories	2	-	95	2	-	49
Securitisation positions	-	-	-	-	-	80
Other items	339	20	121	345	27	146
Total Standardised	959	243	740	1,060	213	1,968
Counterparty credit risk capital component (credit risk in the trading book)	902	2	313	981	1	422
Concentration Risk capital component[2]	-	-	-	-	-	-
Total	7,590	1,719	2,397	6,706	1,774	2,390

(1) The AIRB exposure class 'Other' is an asset class under the Hong Kong Monetary Authority regulations.

(2) The concentration risk capital component is the additional capital requirement to be held where exposure to an individual counterparty exceeds 25 per cent of capital resources.

4.4. Exposure values

The following tables detail the Group's Exposure at Default (EAD) before the effect of credit risk mitigation, broken down by the relevant exposure class against the relevant industry, maturity and geography. EAD is based on the current outstandings and accrued interest and fees, plus a proportion of the undrawn component of the facility. The amount of the undrawn facility included is dependant on the product type, and for AIRB exposure classes this amount is modelled internally.

Geographical analysis
The below table provides EAD analysed by the booking location of the exposure. The Group's exposure to credit risk is concentrated in Hong Kong, Korea, Singapore, Other Asia Pacific region and Americas, UK & Europe. Facilities for global corporate and institutional clients are predominantly booked in the Americas, UK and Europe region. The Group sets limits on the exposure to any counterparty and credit risk is spread over a variety of different personal customers and commercial clients. Single borrower concentration risk has been mitigated by active distribution of assets to banks and institutional investors, some of which is achieved through credit-default swaps and synthetic risk transfer structures. The Wholesale Banking portfolio remains well diversified across geography.

	31.12.09									
	Asia Pacific									
	Hong Kong $million	Singapore $million	Korea $million	Other Asia Pacific $million	India $million	Middle East & Other S Asia $million	Africa $million	Americas UK & Europe $million	Period End Total $million	Average Total $million
AIRB Exposure Class										
Central governments or central banks	12,109	5,231	6,658	18,877	4,108	5,990	3,057	18,363	74,393	66,155
Institutions	30,855	13,040	7,822	12,732	2,923	5,999	917	42,095	116,383	117,803
Corporates	12,820	15,330	12,854	18,160	8,750	19,967	4,113	34,563	126,557	122,953
Retail	23,200	11,286	31,585	6,971	2,286	763	-	-	76,091	69,144
Securitisation positions	-	-	-	-	-	-	-	17,389	17,389	17,958
Non-credit obligation assets	-	-	-	-	-	-	-	-	-	-
Total AIRB	78,984	44,887	58,919	56,740	18,067	32,719	8,087	112,410	410,813	394,013
Standardised Exposure Class										
Central governments or central banks	1	-	3	472	-	368	-	-	844	784
Multilateral development banks	300	580	-	34	23	10	-	61	1,008	203
Institutions	147	61	102	72	27	-	-	1,491	1,900	2,466
Corporates	1,478	4,399	453	2,862	562	728	97	1,911	12,490	11,692
Retail	1,263	1,839	72	4,818	999	2,779	850	436	13,056	13,871
Secured on real estate	741	1,155	6	8,912	520	423	36	174	11,967	10,666
Past due items	219	19	101	521	67	154	26	14	1,121	1,227
Items belong to regulatory high risk category	155	18	-	68	19	-	-	14	274	594
Other items	2,539	367	2,231	1,973	1,034	1,561	823	3,601	14,129	13,193
Total Standardised	6,843	8,438	2,968	19,732	3,251	6,023	1,832	7,702	56,789	54,696
Total	85,827	53,325	61,887	76,472	21,318	38,742	9,919	120,112	467,602	448,709

	31.12.08									
	Asia Pacific									
	Hong Kong $million	Singapore $million	Korea $million	Other Asia Pacific $million	India $million	Middle East & Other S Asia $million	Africa $million	Americas UK & Europe $million	Period End Total $million	Average Total $million
AIRB Exposure Class										
Central governments or central banks	8,482	4,959	7,062	19,823	3,858	3,636	1,936	14,875	64,631	54,573
Institutions	27,110	14,904	9,062	11,392	3,025	5,575	1,187	54,212	126,467	118,592
Corporates	12,549	9,138	12,545	18,075	8,138	17,257	3,398	39,014	120,114	111,542
Retail	21,035	8,232	25,179	5,470	2,139	856	-	-	62,911	64,854
Securitisation positions	-	-	-	-	-	-	-	18,533	18,533	14,248
Non-credit obligation assets	-	-	25	-	-	-	-	-	25	13
Total AIRB	69,176	37,233	53,873	54,760	17,160	27,324	6,521	126,634	392,681	363,822
Standardised Exposure Class										
Central governments or central banks	-	-	1	-	45	-	-	134	180	91
Multilateral development banks	-	-	-	-	-	-	-	7	7	4
Institutions	7	129	-	7	167	-	-	3,305	3,615	1,809
Corporates	1,107	3,673	1,413	1,299	410	367	18	3,976	12,263	9,404
Retail	1,090	1,248	2,166	5,070	978	3,257	762	553	15,124	17,291
Secured on real estate	353	612	616	7,104	254	41	34	130	9,144	8,409
Past due items	460	18	130	668	53	111	27	2	1,469	1,305
Items belong to regulatory high risk category	162	-	-	91	21	-	-	22	296	148
Other items	2,174	574	2,334	2,689	1,049	1,109	685	3,692	14,306	13,893
Total Standardised	5,353	6,254	6,660	16,928	2,977	4,885	1,526	11,821	56,404	52,354
Total	74,529	43,487	60,533	71,688	20,137	32,209	8,047	138,455	449,085	416,176

Industry analysis

The Wholesale Banking portfolio is well diversified across industry, with no significant concentration within the industry classifications of Manufacturing; Financing, insurance and business services; Commerce; or Transport, storage and communication.

	31.12.09										
	Loans to Individuals - Mortgage $million	Loans to Individuals - Other $million	SME $million	Commerce $million	Manufacturing $million	Commercial Real Estate $million	Government $million	Financing Insurance & Business Services $million	Transport & Storage & Communication $million	Other $million	Total $million
AIRB Exposure Class											
Central governments or central banks	-	-	-	1,174	-	321	70,702	714	27	1,455	74,393
Institutions	2	27	-	322	-	375	369	114,429	4	855	116,383
Corporates	10	174	4,585	28,779	33,788	6,630	529	13,695	11,700	26,667	126,557
Retail	53,177	21,896	1,018	-	-	-	-	-	-	-	76,091
Securitisation positions	-	-	-	38	-	-	-	2,641	-	14,710	17,389
Non-credit obligation assets	-	-	-	-	-	-	-	-	-	-	-
Total AIRB	53,189	22,097	5,603	30,313	33,788	7,326	71,600	131,479	11,731	43,687	410,813
Standardised Exposure Class											
Central governments or central banks	-	-	-	-	-	-	1	3	-	840	844
Multilateral development banks	-	-	-	-	-	-	15	130	-	863	1,008
Institutions	-	-	-	-	-	-	-	818	-	1,082	1,900
Corporates	-	-	8,185	1,228	1,160	-	80	186	159	1,492	12,490
Retail	-	7,896	5,160	-	-	-	-	-	-		13,056
Secured on real estate	10,065	-	1,887	-	-	-	-	-	-	15	11,967
Past due items	189	347	443	13	41	4	-	38	-	46	1,121
Items belonging to regulatory high risk category	-	-	39	3	38	102	-	3	-	89	274
Other items	2	474	-	180	195	2	-	321	62	12,893	14,129
Total Standardised	10,256	8,717	15,714	1,424	1,434	108	96	1,499	221	17,320	56,789
Total	63,445	30,814	21,317	31,737	35,222	7,434	71,696	132,978	11,952	61,007	467,602

	31.12.08										
	Loans to Individuals - Mortgage $million	Loans to Individuals - Other $million	SME $million	Commerce $million	Manufacturing $million	Commercial Real Estate $million	Government $million	Financing Insurance & Business Services $million	Transport & Storage & Communication $million	Other $million	Total $million
AIRB Exposure Class											
Central governments or central banks	-	-	-	-	-	-	63,766	157	-	708	64,631
Institutions	-	4	-	9	5	328	118	116,505	7	9,491	126,467
Corporates	32	17	1,568	26,309	34,765	5,954	594	14,684	8,953	27,238	120,114
Retail	42,787	19,490	634	-	-	-	-	-	-	-	62,911
Securitisation positions	-	-	-	-	-	-	-	448	-	18,085	18,533
Non-credit obligation assets	-	-	-	-	-	-	-	-	-	25	25
Total AIRB	42,819	19,511	2,202	26,318	34,770	6,282	64,478	131,794	8,960	55,547	392,681
Standardised Exposure Class											
Central governments or central banks	-	-	-	-	-	-	-	-	-	180	180
Multilateral development banks	-	-	-	-	-	-	-	-	-	7	7
Institutions	-	-	-	-	-	-	-	572	-	3,043	3,615
Corporates	-	-	7,498	1,312	1,084	-	-	18	101	2,250	12,263
Retail	-	8,609	6,515	-	-	-	-	-	-	-	15,124
Secured on real estate	7,618	-	1,523	-	-	-	-	-	-	3	9,144
Past due items	4	577	800	8	30	3	-	1	-	46	1,469
Items belonging to regulatory high risk category	-	-	-	-	41	129	-	-	-	126	296
Other items	-	-	-	279	198	-	-	835	50	12,944	14,306
Total Standardised	7,622	9,186	16,336	1,599	1,353	132	-	1,426	151	18,599	56,404
Total	50,441	28,697	18,538	27,917	36,123	6,414	64,478	133,220	9,111	74,146	449,085

Maturity analysis

Approximately 64 per cent (2008: 64 per cent) of the Group's exposure to customers is short term, having contractual maturity of one year or less. The Wholesale Banking portfolio is predominantly short term with 73 per cent (2008: 75 per cent) of EAD having a remaining contractual maturity of one year or less. In Consumer Banking the longer maturity profile of the AIRB portfolio is driven by the mortgage book which makes up 70 per cent (2008: 68 per cent) of the portfolio and is traditionally longer term in nature and well secured. Whilst the Other and SME loans in Consumer Banking have short contractual maturities, typically they may be renewed and repaid over longer terms in the normal course of business.

The following tables show the maturity of EAD by each principal category of exposure class.

	31.12.09			
	One year or less $million	One to five years $million	Over five years $million	Total $million
AIRB Exposure Class				
Central governments or central banks	59,117	13,030	2,246	74,393
Institutions	94,748	19,067	2,568	116,383
Corporates	88,054	30,632	7,871	126,557
Retail	9,885	15,684	50,522	76,091
Securitisation positions	5,413	10,082	1,894	17,389
Non-credit obligation assets	-	-	-	-
Total AIRB	257,217	88,495	65,101	410,813
Standardised Exposure Class				
Central governments or central banks	843	1	-	844
Multilateral development banks	131	843	34	1,008
Institutions	1,704	196	-	1,900
Corporates	10,190	546	1,754	12,490
Retail	5,953	3,257	3,846	13,056
Secured on real estate	6,702	310	4,955	11,967
Past due items	694	161	266	1,121
Items belonging to regulatory high risk category	230	34	10	274
Other items	10,859	25	3,245	14,129
Total Standardised	37,306	5,373	14,110	56,789
Total	294,523	93,868	79,211	467,602

	31.12.08			
	One year or less $million	One to five years $million	Over five years $million	Total $million
AIRB Exposure Class				
Central governments or central banks	56,572	7,556	503	64,631
Institutions	106,072	17,122	3,273	126,467
Corporates	83,927	27,640	8,547	120,114
Retail	6,898	15,803	40,210	62,911
Securitisation positions	701	15,760	2,072	18,533
Non-credit obligation assets	25	–	–	25
Total AIRB	254,195	83,881	54,605	392,681
Standardised Exposure Class				
Central governments or central banks	180	-	-	180
Multilateral development banks	7	-	-	7
Institutions	3,070	524	21	3,615
Corporates	10,139	275	1,849	12,263
Retail	7,244	3,874	4,006	15,124
Secured on real estate	784	290	8,070	9,144
Past due items	433	173	863	1,469
Items belonging to regulatory high risk category	154	142	-	296
Other items	10,720	-	3,586	14,306
Total Standardised	32,731	5,278	18,395	56,404
Total	286,926	89,159	73,000	449,085

4.5. Credit risk mitigation

Potential credit losses from any given account, customer or portfolio are mitigated using a range of tools such as collateral, netting agreements, credit insurance, credit derivatives and other guarantees. The reliance that can be placed on these mitigants is carefully assessed in light of issues such as legal certainty and enforceability, market valuation correlation and counterparty risk of the guarantor.

Risk mitigation policies determine the eligibility of collateral types. Collateral types which are eligible for risk mitigation include: cash; residential, commercial and industrial property; fixed assets such as motor vehicles, aircraft, plant and machinery; marketable securities; commodities; bank guarantees and letters of credit. The Group also enters into collateralised reverse repurchase agreements.

Where guarantees or credit derivatives are used as Credit Risk Mitigation (CRM) the creditworthiness of the guarantor is assessed and established using the credit approval process in addition to that of the obligor or main counterparty. The main types of guarantors include bank guarantees, insurance companies, parent companies, shareholders and export credit agencies. Credit derivatives, due to their potential impact on income volatility are used in a controlled manner with reference to their expected volatility.

Collateral is valued in accordance with the risk mitigation policy, which prescribes the frequency of valuation for different collateral types, based on the level of price volatility of each type of collateral and the nature of the underlying product or risk exposure. Collateral held against impaired loans is maintained at fair value.

The Group uses bilateral and multilateral netting to reduce pre-settlement and settlement counterparty risk. Pre-settlement risk exposures are normally netted using the bilateral netting documentation in legally approved jurisdictions. Settlement exposures are generally netted using Delivery vs Payments or Payment vs Payments systems.

For further information regarding credit risk mitigation in the trading book see section 4.9 Counterparty credit risk in the trading book.

The following table discloses the amount of exposure after the effect of CRM (excluding the impact of guarantees and credit derivatives) in the AIRB portfolio. For the AIRB portfolios, there is no requirement to disclose the value of collateral as this is typically captured within the LGD models. The amount of the exposure that is covered by guarantees/credit derivatives is also shown by asset class.

	31.12.09		31.12.08	
	EAD after the effect of CRM $million	Of which: EAD covered by guarantees/credit derivatives $million	EAD after the effect of CRM $million	Of which: EAD covered by guarantees/credit derivatives $million
AIRB Exposure Class				
Central governments or central banks	73,605	90	63,753	26
Institutions	109,698	1,076	116,105	1,913
Corporates	97,453	7,109	105,764	3,820
Retail	25,297	-	23,368	-
Securitisation positions	16,915	1,670	18,152	2,863
Non-credit obligation assets	-	-	25	-
Total AIRB	322,968	9,945	327,167	8,622

Wholesale Banking
The process of managing and recognising credit risk mitigation is governed by policies which set out the eligibility criteria that must be met. The credit risk mitigation policy sets out clear criteria that must be satisfied if the mitigation is to be considered effective:

- Excessive exposure to any particular risk mitigants or counterparties should be avoided. Collateral concentration mitigation standards are maintained at both the portfolio and counterparty level;
- Risk mitigants should not be correlated with the underlying assets such that default would coincide with a lowering of the Forced Sale Value (FSV) of the collateral;
- Where there is a currency mismatch, haircuts should be applied to protect against currency fluctuations;
- Legal opinions and documentation must be in place; and
- Ongoing review and controls exist where there is a maturity mismatch between the collateral and exposure.

For all credit risk mitigants that meet the policy criteria, a clear set of procedures are applied to ensure that the value of the underlying collateral is appropriately recorded and updated regularly.

Consumer Banking
The effective use of collateral is a key tool by which credit risk is mitigated in Consumer Banking. All eligible collateral accepted by Consumer Banking is covered by a product proposal approved by senior credit officers delegated with the relevant authority. New collateral types have to be vetted through a stringent 'New Business Approval' process and approved by the Consumer Banking Risk Committee.

In order to be recognised as security and for the loan to be classified as secured, all items pledged must be valued and there must exist an active secondary resale market for the collateral. Documentation must be held to enable Consumer Banking to realise the asset without the cooperation of the asset owner in the event that this is necessary.

Regular valuation of collateral is required in accordance with the Group's risk mitigation policy, which prescribes both the process of valuation and the frequency of valuation for different collateral types. The valuation frequency is driven by the level of price volatility of each type of collateral and the nature of the underlying product or risk exposure. Stress tests are performed on changes in collateral values for key portfolios to assist senior management in managing the risks in those portfolios. Physical collateral is required to be insured at all times and against all risks, with Standard Chartered as the loss payee under the insurance policy.

Detailed procedures over collateral management must be in place for each business at the country level.

The table below identifies the effect of credit risk mitigation on EAD for the standardised portfolio. Eligible financial collateral consists primarily of cash, debt securities, equities and gold. All collateral shown below meets FSA Handbook BIPRU Chapter 5 eligibility rules.

The main type of collateral for the Group's standardised portfolio is real estate property which accounts for 63 per cent (2008: 65 per cent) of all credit risk mitigants.

	31.12.09				
	EAD before the effect of CRM $million	EAD covered by eligible financial collateral $million	EAD covered by other eligible collateral $million	EAD after the effect of CRM $million	EAD covered by guarantees/credit derivatives $million
Standardised Exposure Class					
Central governments or central banks	843	-	-	843	4
Multilateral development banks	1,009	-	-	1,009	-
Institutions	1,899	-	-	1,899	467
Corporates	12,490	4,478	-	8,012	1
Retail	13,058	1,164	-	11,894	-
Secured on real estate property	11,967	64	10,620	1,283	-
Past due items	1,122	31	192	899	-
Items belonging to regulatory high risk categories	274	32	-	242	-
Other items	14,129	290	-	13,839	-
Total Standardised	56,791	6,059	10,812	39,920	472

	31.12.08				
	EAD before the effect of CRM $million	EAD covered by eligible financial collateral $million	EAD covered by other eligible collateral $million	EAD after the effect of CRM $million	EAD covered by guarantees/credit derivatives $million
Standardised Exposure Class					
Central governments or central banks	180	-	-	180	1
Multilateral development banks	7	-	-	7	-
Institutions	3,615	26	-	3,589	48
Corporates	12,263	3,212	-	9,051	-
Retail	15,124	1,013	-	14,111	1
Secured on real estate property	9,144	48	8,920	176	-
Past due items	1,469	47	525	897	-
Items belonging to regulatory high risk categories	296	1	-	295	-
Other items	14,306	-	-	14,306	-
Total Standardised	56,404	4,347	9,445	42,612	50

4.6. Internal Ratings Based models

Model governance

The AIRB models used by the Group calculate a conservative Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD), as borne out by the model performance data contained in this section. The product of this is a conservative view of Regulatory Expected Loss, which is considered necessary for the prudent calculation of regulatory capital.

Models are developed by analytics teams within the Consumer Banking and Wholesale Banking risk functions and Group Risk. The model development process is conducted and documented in line with specific criteria setting out the minimum standards for model development. All AIRB models are validated annually by a model validation team reporting to the Group Chief Credit Officer, thereby maintaining independence from the model build processes. Model validation findings are presented to the Group Model Assessment Committee (MAC) which in turn makes approval recommendations to the Consumer Banking and Wholesale Banking Risk Committees. These decision making bodies are comprised of divisional senior management whose role is to challenge model assumptions and performance and agree on appropriate model use for business decision making. The GRC and ARC periodically review overall model performance.

The model validation process involves a qualitative and quantitative assessment of the model, data, systems and governance. This would typically include an assessment of the:

- Model assumptions;
- Validity of the technical approach used;
- Statistical and empirical measures of performance;
- Appropriateness of intended model use;
- Model application and infrastructure;
- Data integrity and history;
- Model response to changes in internal and external environment - the extent to which the model provides point in time or through the cycle measures of risk;
- Model monitoring standards and triggers; and
- Levels of conservatism applied.

Statistical testing is used to determine a model's discriminatory power, predicted versus actual performance and stability over time with pre-defined thresholds for passing such tests. The model development teams also conduct annual model reviews, which are informed by regular monitoring, to ascertain whether the model is fit for purpose and performing within acceptable boundaries or whether there are potential improvements in performance.

PD model development

The Group employs a variety of techniques to develop its PD models. In each case the appropriate approach is dictated by the availability and appropriateness of both internal and external data.

If there is a perceived weakness in the data, for example shorter histories or fewer instances of default, an appropriate amount of conservatism is applied to predicted default rates.

The general approaches fall into three categories:

Default History Based ('Good-Bad') – where a sufficient number of defaults is available, the Group deploys a variety of statistical methods to determine the likelihood of default on existing exposures. These methods afford very high discriminatory power by identifying exposure characteristics that have a significant predictive ability. The majority of the Group's consumer and corporate exposures are rated under such an approach.

Shadow Rating Approach – if it is determined that the Group's internal data does not provide a sufficient default history (for example, so called 'low default portfolios'), then the Group develops models which are designed to reflect ratings made by established external credit assessment institutions, those agencies having access to large databases of defaults on a variety of credit obligations. These external ratings are customised to develop the Group's own customer rating systems.

Constrained Expert Judgement – for certain types of exposure there is little or no internal or external default history, and therefore no reliable external ratings. In such rare cases, the Group develops quantitative frameworks which include the expert opinions of the Group's credit risk management personnel. These frameworks are called 'knowledge based systems' and are regularly reviewed with respect to historical outcomes.

LGD model development

The Group develops LGD models by assessing unsecured recoveries and the forced sale value of collateral together with the economic costs in securing these recoveries, and the timing with which such cash flows occur. All such cash values are then measured at net present value using a suitable discount rate to derive a recovery rate. LGD is therefore the EAD less these estimated recoveries.

Unsecured recoveries are estimated based upon empirical evidence which has shown that factors such as customer segment, product and geography have predictive content.

All LGD models are conservatively calibrated to a 'downturn' – with lower assumed collateral values and lower recoveries on unsecured exposures.

EAD model development

An EAD model is developed for uncertain exposure products such as lines of credit, credit cards, overdrafts and other commitments. Based on the Group's experience (and supplemented by external data), EAD models assess changes to limits and the likely draw-down of committed and uncommitted limits as an exposure approaches default. The factor generated by the model and applied to the undrawn limit is referred to as the credit conversion factor (CCF).

The Group has used conservative assumptions in assessing EAD, in keeping with the expected experience in an economic downturn.

Model use

In addition to supporting credit decisions, AIRB models also support risk-based pricing methodologies and measures used to assess business performance such as Economic Capital, Economic Revenue and Economic Profit.

The use of models is governed by a suite of policies:

- Each model is governed by a separate policy and procedure which defines the applicability of that model and details the procedure for use;
- The model review policy governs the regular review of models and specifies statistical thresholds and other triggers which determine when models need to be redeveloped;

- The model override policy sets the conditions and approval authority required to override model output; and
- The parental support policy, for Wholesale Banking, determines the extent to which parental support may be utilised to adjust the credit grade of corporates' and financial institutions' subsidiaries.

Wholesale Banking model results

Wholesale Banking models have been developed from a dataset which runs to over a decade, including default and recovery experience from the 1997 Asian financial crisis. This data has been used to calibrate estimates of PD to the Group's long run experience. Actual ('point in time') default rates will typically differ from this 'through the cycle' experience as economies move above or below cyclical norms.

AIRB PD estimates are computed as of 1 January 2009 and are compared with default observations through 31 December 2009. The historical loss experience for institutions is minimal, so the predicted PD for institutions reflects a particularly low number of defaults. Given the exceptional stress in the banking sector over the past two years, the observed default rate for institutions is therefore, as would be expected, higher than the estimated PD. This recent default data will be reflected in PDs going forward. For central governments or central banks, there were no defaults during 2009. The actual default rate among corporate exposures was maintained below AIRB model predictions.

The calculation of actual versus predicted LGD is affected by the fact that it takes a number of years for the workout process to complete. The recovery process on defaults in 2009 is too immature to compute meaningful actual versus realised outcomes.

The predicted LGD is therefore based on the model outputs as of 1 January 2009 compared with long run actual realisations of LGD including downturn periods, since 1995. The predicted LGD estimate takes into account the impact of enhanced risk mitigation techniques (e.g. netting) and proactive Early Alert risk management actions. These have been more prevalent in recent years and are therefore not reflected in the long run average LGD to the same extent as predicted LGD. The effect of increased netting is particularly material in the predicted LGD for institutions. Furthermore, due to the low number of defaults historically in institutions the long run average LGD is not considered to be statistically significant.

EAD takes into consideration potential drawdown of commitment as a counterparty defaults by estimating the credit conversion factor (CCF, also known as k-factor) of undrawn commitments. The comparison of actual versus predicted CCF is summarised in the ratio of the EAD of defaulted assets, 1 year before default, to the outstanding at the point of default. The ratio for both corporates and institutions are larger than one, indicating that the predicted EAD is higher than actual outstanding at default. This is due to the regulatory requirement to assign conservatism to the CCF of certain exposure types, as well as the impact of management action to reduce actual EAD prior to default.

	Predicted PD %	Actual PD %	Predicted LGD %	Actual LGD %	Predicted EAD/ actual EAD
AIRB Exposure Class					
Central governments or central banks	0.13	0.00	26.3	0.0	0.0
Institutions	0.22	0.27	18.9	35.9	1.1
Corporates	1.33	1.22	45.4	48.6	1.4

Consumer Banking model results

Consumer Banking models have been developed from datasets which capture eight years of performance data for the majority of portfolios. This history includes 'credit bubbles' in various markets such as Taiwan, Hong Kong and Korea, as well as stresses that arose during the avian flu outbreak. This experience is therefore reflected in the calibration of the AIRB models.

Predicted PD was computed as at 1 January 2009 and compared to the actual default observations through 31 December 2009. The observed default rate for asset classes other than QRRE is either in line with, or lower than, the predicted PD. For QRRE, the actual default rate is 52 basis points higher than the predicted PD. At this point in the credit cycle it is in line with expectations that the actual default rate is higher given that the predicted PD is a long run average.

The process to recover losses on a defaulted asset typically spans more than one financial year. The actual LGD shown below is calculated based on recoveries that were realised in 2009. This is compared to the predicted LGD of these assets in the year of default. Actual LGDs are lower than the predicted values for all asset classes, primarily due to the models using 'downturn' parameter settings to predict LGD. This is most evident in the mortgage portfolios, where the predicted LGDs include a significant assumed reduction in property values along with an in-built conservatism such as stressing the declining property price index. The economic environment in Consumer Banking's main markets was less severe in 2009 than the 'downturn' conditions modelled. For QRRE the quality of the portfolio is better than it has been historically in times of equivalent stress.

The Predicted EAD is shown below as a ratio of the Actual EAD. For asset classes other than QRRE the ratio demonstrates that the prediction was close to the Actual EAD experienced during 2009. The Predicted EAD for QRRE includes regulatory 'downturn' requirements which coupled with management action to reduce limits prior to default result in a higher ratio, showing that Actual EAD was lower than Predicted EAD.

	Predicted PD %	Actual PD %	Predicted LGD %	Actual LGD %	Predicted EAD/ actual EAD
AIRB Exposure Class					
Secured by real estate collateral	0.90	0.56	20.9	8.8	1.0
Qualifying revolving retail (QRRE)	1.97	2.49	78.3	63.7	1.2
Other retail	3.85	3.87	80.9	62.5	1.1
Retail SME	6.91	6.95	100.0	93.6	1.1

Regulatory Expected Loss versus Individual Impairment charges

The table below shows regulatory expected loss as at 31 December 2008 and net individual impairment charges raised during the 2009 financial year for the AIRB exposure classes. Regulatory expected loss is based on a through-the-cycle methodology using risk parameters and observations over a period of time. It is a conservative and appropriately prudent calculation underpinning regulatory capital requirements, and:

- does not take account of any benefit from management actions to reduce exposures to riskier customers, clients or segments as conditions deteriorate;
- does not take account of any diversification benefit; and
- is calculated in accordance with rules which enforce a certain level of conservatism.

The net individual impairment charge is a point in time actual charge raised in accordance with accounting standards that require the Group to either provide for or write-off debts when certain conditions are met as described in section 4.8 Problem credit management and provisioning. The gap between the two measures narrowed through 2009 as market conditions in certain areas deteriorated.

	31.12.08	31.12.09	31.12.07	31.12.08
	Regulatory expected loss $million	Net individual impairment charge $million	Regulatory expected loss $million	Net individual impairment charge $million
AIRB Exposure Class				
Central governments or central banks	27	-	26	-
Institutions	200	114	83	19
Corporates	1,056	691	915	286
Retail, of which	788	537	721	381
Secured by real estate collateral	111	13	110	8
Qualifying revolving retail	379	252	317	204
Retail SME	50	77	-	-
Other retail	248	195	294	169
Securitisation positions	-	-	-	-
Non-credit obligation assets	-	-	-	-
Total AIRB	2,071	1,342	1,745	686

4.7. Risk grade profile

Exposures by internal credit grading

For IRB portfolios a standard alphanumeric credit risk-grading system is used in both Wholesale and Consumer Banking. The grading is based on the Group's internal estimate of probability of default over a one-year horizon, with customers or portfolios assessed against a range of quantitative and qualitative factors. The numeric grades run from 1 to 14 and some of the grades are sub-classified A, B or C. Lower credit grades are indicative of a lower likelihood of default. Credit grades 1A to 12C are assigned to performing customers or accounts, while credit grades 13 and 14 are assigned to non-performing or defaulted customers.

The Group's credit grades in Wholesale Banking are not intended to replicate external credit grades, and ratings assigned by external ratings agencies (ECAIs) are not used in determining internal credit grades. Nonetheless, as the factors used to grade a borrower may be similar, a borrower rated poorly by an ECAI is typically assigned a worse internal credit grade.

As a guide the table below presents the Group's credit grades in relation to that of Standard and Poor's credit ratings.

	Standard and Poor's Mapping	
Credit Grade	Corp/NBFIs	Banks
1A	AAA	AAA, AA+
1B	AA+	AA, AA–
2A	AA	A+
2B	AA–	A
3A	A+	A–
3B	A	BBB+
4A	A–	BBB+, BBB
4B	BBB+	BBB
5A	BBB	BBB–
5B	BBB–	BB+
6A	BB+	BB+, BB
6B		BB
7A	BB	BB,BB–
7B		BB–
8A	BB–	B+
8B		B+, B
9A	B+	B
9B		B, B–
10A	B	B–
10B		B–, CCC
11A - C	B–	CCC
12A - C	N/A	N/A

Credit grades for Consumer Banking accounts covered by AIRB models are based on a probability of default. These models are based on application and behavioural scorecards which make use of credit bureau information as well as the Group's own data. For Consumer Banking portfolios where AIRB models have not yet been developed, the probability of default is calculated using historical portfolio delinquency flow rates and expert judgement, where applicable.

AIRB models cover a substantial majority of the Group's loans and are used extensively in assessing risks at customer and portfolio level, setting strategy and optimising the Group's risk-return decisions.

Standard Chartered makes use of internal risk estimates of PD, LGD and EAD in the areas of:

- Credit Approval and Decision – The level of authority required for the sanctioning of credit requests and the decision made is based on a combination of PD, LGD and EAD of the obligor with reference to the nominal exposure;
- Pricing – In Wholesale Banking a pre-deal pricing calculator is used which takes into consideration PD, LGD and EAD in the calculation of expected loss and economic capital for the proposed transactions to ensure appropriate return. In Consumer Banking a scorecard approach is taken to assess the level of risk using PD, LGD and EAD;
- Limit Setting – In Wholesale Banking concentration limits for some portfolios, as counterparty limits are determined by PD, LGD and EAD. The limits operate on a sliding scale to ensure that the Group does not have over concentration of low credit quality assets. This process operates similarly in Consumer Banking;
- Provisioning – Portfolio Impairment Provisions (PIP) are raised at the portfolio level and are set with reference to expected loss which is based on PD, LGD and EAD amongst other quantitative and qualitative factors;
- Risk Appetite – PD, LGD and EAD models provide some of the key inputs into the risk-based methodologies used in the assessment of business and market variables which in turn are key components in the approach taken in setting Risk Appetite; and
- Economic Capital –PD, LGD and EAD are key components of the model used to calculate Economic Capital which is used in the strategic planning, budgeting, pricing and performance measurement processes at business unit, portfolio and client relationship level.

The following table sets out analysis of EAD within the AIRB portfolios by internal credit grading and Basel II exposure classes. EAD has been calculated after taking into account the impact of credit risk mitigation. 72 per cent (2008: 75 per cent) of exposures are classified as credit grades 1 to 5.

	31.12.09					
	Grades 1-5 $million	Grades 6-8 $million	Grades 9-11 $million	Grade 12 $million	Grades 13-14 $million	Total $million
Total exposure						
Central government and central banks	68,475	3,077	2,053	-	-	73,605
Institutions	97,397	9,875	1,481	178	767	109,698
Corporates	47,320	35,417	11,362	1,454	1,900	97, 453
Retail, of which	11,479	8,148	4,736	463	471	25,297
Retail exposures secured by real estate collateral	1,396	758	178	10	41	2,383
Qualifying revolving retail	7,489	2,920	2,211	318	248	13,186
Retail SME	280	611	74	21	32	1,018
Other retail	2,314	3,859	2,273	114	150	8,710
Securitisation positions	7,871	919	8,125	-	-	16,915
Non-credit obligation assets	-	-	-	-	-	-
Total AIRB	232,542	57,436	27,757	2,095	3,138	322,968

	31.12.08					
	Grades 1-5 $million	Grades 6-8 $million	Grades 9-11 $million	Grade 12 $million	Grades 13-14 $million	Total $million
Total exposure						
Central government and central banks	61,213	1,924	616	-	-	63,753
Institutions	103,047	9,967	2,609	65	417	116,105
Corporates	59,404	36,206	8,812	647	695	105,764
Retail, of which	11,391	6,439	4,526	597	415	23,368
Retail exposures secured by real estate collateral	1,852	1,099	237	12	44	3,244
Qualifying revolving retail	6,871	2,970	2,037	326	224	12,428
Retail SME	–	464	103	29	38	634
Other retail	2,668	1,906	2,149	230	109	7,062
Securitisation positions	11,690	15	6,437	-	10	18,152
Non-credit obligation assets	-	-	-	-	25	25
Total AIRB	246,745	54,551	23,000	1,309	1,562	327,167

The following table sets out analysis of undrawn commitments by internal credit grading and Basel II exposure classes.

	31.12.09					
	Grades 1-5 $million	Grades 6-8 $million	Grades 9-11 $million	Grade 12 $million	Grades 13-14 $million	Total $million
Undrawn commitments						
Central government and central banks	858	14	-	-	-	872
Institutions	4,009	1,196	85	-	-	5,290
Corporates	22,790	14,336	3,553	30	199	40,908
Retail, of which	3,445	2,160	617	13	10	6,245
Retail exposures secured by real estate collateral	2,465	982	461	2	4	3,914
Qualifying revolving retail	-	-	-	-	-	-
Retail SME	9	142	-	-	-	151
Other retail	971	1,036	156	11	6	2,180
Securitisation positions	-	-	-	-	-	-
Non-credit obligation assets	-	-	-	-	-	-
Total AIRB	31,102	17,706	4,255	43	209	53,315

	31.12.08					
	Grades 1-5 $million	Grades 6-8 $million	Grades 9-11 $million	Grade 12 $million	Grades 13-14 $million	Total $million
Undrawn commitments						
Central government and central banks	47	15	-	-	-	62
Institutions	4,977	900	146	-	-	6,023
Corporates	23,365	11,915	2,937	23	160	38,400
Retail, of which	2,435	1,216	597	15	4	4,267
Retail exposures secured by real estate collateral	1,478	708	455	2	2	2,645
Qualifying revolving retail	-	-	-	-	-	-
Retail SME	-	-	-	-	-	-
Other retail	957	508	142	13	2	1,622
Securitisation positions	-	-	-	-	-	-
Non-credit obligation assets	-	-	-	-	-	-
Total AIRB	30,824	14,046	3,680	38	164	48,752

The following tables set out exposure weighted average LGD and exposure weighted average risk weight of the credit risk trading and non-trading books. These weighted averages have been calculated using EAD before taking into account the impact of credit risk mitigation. The average exposure weighted LGD across the AIRB portfolio is 35.1 per cent (2008: 31.6 per cent).

	31.12.09					
	Grades 1-5 %	Grades 6-8 %	Grades 9-11 %	Grade 12 %	Grades 13-14 %	Total %
Exposure weighted average LGD						
Central government and central banks	27.2	38.5	41.5	-	-	28.1
Institutions	28.3	36.3	36.9	39.9	39.3	29.3
Corporates	44.8	40.6	27.7	51.5	56.3	40.5
Retail, of which	28.6	42.8	60.0	68.7	52.5	35.3
Retail exposures secured by real estate collateral	15.9	19.1	17.3	19.2	21.1	16.7
Qualifying revolving retail	83.8	81.7	81.1	81.6	77.5	82.7
Retail SME	21.2	49.3	75.6	73.5	77.8	44.8
Other retail	68.4	77.2	80.8	85.6	81.9	76.0
Securitisation positions	100.0	93.1	100.0	-	-	91.0
Non-credit obligation assets	-	-	-	-	-	-
Total AIRB	31.4	41.2	44.3	54.5	51.8	35.1

	31.12.08					
	Grades 1-5 %	Grades 6-8 %	Grades 9-11 %	Grade 12 %	Grades 13-14 %	Total %
Exposure weighted average LGD						
Central government and central banks	25.8	39.5	40.0	-	-	26.3
Institutions	25.8	39.3	28.1	34.7	26.6	26.8
Corporates	48.2	44.8	35.2	49.0	50.1	46.0
Retail, of which	34.7	38.5	60.8	71.9	54.4	38.8
Retail exposures secured by real estate collateral	18.4	17.5	19.9	21.6	23.0	17.8
Qualifying revolving retail	86.5	82.9	84.2	87.2	83.4	85.3
Retail SME	-	100.0	100.0	100.0	100.0	100.0
Other retail	78.2	79.5	79.3	78.6	79.5	78.9
Securitisation positions	97.2	95.5	99.0	-	95.5	95.3
Non-credit obligation assets	-	-	-	-	70.0	70.0
Total AIRB	36.5	50.6	58.2	63.8	47.4	31.6

	31.12.09					
	Grades 1-5 %	Grades 6-8 %	Grades 9-11 %	Grade 12 %	Grades 13-14 %	Total %
Exposure weighted average risk weight						
Central government and central banks	6.0	74.2	110.9	-	-	11.9
Institutions	11.1	58.3	116.2	218.4	147.0	18.5
Corporates	34.1	75.4	85.9	295.6	320.6	66.9
Retail, of which	6.4	40.8	101.1	205.7	134.9	25.8
Retail exposures secured by real estate collateral	4.8	25.3	59.6	114.2	116.9	12.2
Qualifying revolving retail	7.0	35.6	116.6	239.0	149.7	40.0
Retail SME	7.9	56.6	123.0	185.7	181.6	54.6
Other retail	30.5	84.6	126.2	215.4	144.0	83.8
Securitisation positions	8.5	28.9	12.8	-	-	13.7
Non-credit obligation assets	-	-	-	-	-	-
Total AIRB	13.6	64.8	81.7	270.8	242.8	34.6

	31.12.08					
	Grades 1-5 %	Grades 6-8 %	Grades 9-11 %	Grade 12 %	Grades 13-14 %	Total %
Exposure weighted average risk weight						
Central government and central banks	4.7	80.6	120.2	-	-	8.1
Institutions	10.1	60.9	83.4	207.9	185.9	17.1
Corporates	35.7	80.8	104.6	269.7	201.1	59.4
Retail, of which	7.9	36.0	106.0	213.9	110.5	28.5
Retail exposures secured by real estate collateral	6.9	23.6	69.5	129.4	110.6	15.2
Qualifying revolving retail	7.1	35.7	120.0	256.6	108.1	40.8
Retail SME	-	120.0	160.5	251.6	155.8	134.7
Other retail	22.2	86.7	127.0	202.6	90.4	78.4
Securitisation positions	11.6	315.8	19.3	-	597.4	18.9
Non-credit obligation assets	-	-	-	-	849.5	849.5
Total AIRB	13.4	67.4	81.9	240.4	178.0	31.3

4.8. Problem credit management and provisioning

Consumer Banking
In Consumer Banking, where there are large numbers of small value loans, a primary indicator of potential impairment is delinquency. However, not all delinquent loans (particularly those in the early stage of delinquency) will be impaired. Within Consumer Banking an account is considered to be delinquent when payment is not received on the due date. For delinquency reporting purposes the Group follows industry standards, measuring delinquency as of 1, 30, 60, 90, 120 and 150 days past due. Accounts that are overdue by more than 30 days are more closely monitored and subject to specific collections processes.

Provisioning within Consumer Banking reflects the fact that the product portfolios (excluding medium enterprises among SME customers and Private Banking customers) consist of a large number of comparatively small exposures. As a result, much of the provisioning is initially done at an account level for each product and a portfolio impairment provision (PIP) is raised on a portfolio basis. PIP is set using expected loss rates, based on past experience supplemented by an assessment of specific factors affecting the relevant portfolio. These include an assessment of the impact of economic conditions, regulatory changes and portfolio characteristics such as delinquency trends and early alert trends. The PIP methodology provides for accounts for which an individual impairment provision has not been raised.

For the main unsecured products and loans secured by automobiles, the entire outstanding amount is generally written off at 150 days past due. Unsecured consumer finance loans are similarly written off at 90 days past due. For secured loans (other than those secured by automobiles) individual impairment provisions (IIP) are generally raised at either 150 days (mortgages) or 90 days (other) past due.

The provisions are based on the estimated present values of future cashflows, in particular those resulting from the realisation of security. Following such realisation any remaining loan will be written off. The days past due used to trigger write offs and IIP are broadly driven by past experience, which shows that once an account reaches the relevant number of days past due, the probability or recovery (other than by realising security where appropriate) is low. For all products there are certain situations where the individual impairment provisioning or write off process is accelerated, such as in cases involving bankruptcy, fraud and death. Write off and IIP is accelerated for all restructured accounts to 90 days past due (unsecured and automobile finance) and 120 days past due (secured) respectively.

The procedures for managing problem credits for Private Banking and the medium enterprises in the SME segment of Consumer Banking are similar to those adopted in Wholesale Banking.

The following table shows impaired loans and advances, and the movement in impairment provisions by each principal category of borrowers' business or industry for Consumer Banking. This section follows International Financial Reporting Standards (IFRS) definitions used in the Annual Report and Accounts.

	Impaired loans and advances as at 31.12.09 $million	Individual impairment provision held as at 01.01.09 $million	Net individual impairment charge 2009 $million	Amounts written off/other movements 2009 $million	Individual impairment provision held as at 31.12.09 $million
Loans to individuals					
Mortgages	334	88	51	(32)	107
Other	198	192	744	(735)	201
Small and medium enterprises	498	263	203	(236)	230
Consumer Banking	1,030	543	998	(1,003)	538

	Impaired loans and advances as at 31.12.08 $million	Individual impairment provision held as at 01.01.08 $million	Net individual impairment charge 2008 $million	Amounts written off/other movements 2008 $million	Individual impairment provision held as at 31.12.08 $million
Loans to individuals					
Mortgages	302	99	23	(34)	88
Other	175	200	705	(713)	192
Small and medium enterprises	585	356	170	(263)	263
Consumer Banking	1,062	655	898	(1,010)	543

Wholesale Banking
Loans are classified as impaired and considered non-performing where analysis and review indicates that full payment of either interest or principal is questionable, or as soon as payment of interest or principal is 90 days overdue. Impaired accounts are managed by the Group's specialist recovery unit, Group Special Assets Management (GSAM), which is separate from the main businesses. Where any amount is considered irrecoverable, an individual impairment provision is raised. This provision is the difference between the loan carrying amount and the present value of estimated future cash flows.

The individual circumstances of each customer are taken into account when GSAM estimates future cash flow. All available sources, such as cash flow arising from operations, selling assets or subsidiaries, realising collateral or payments under guarantees, are considered. In any decision relating to the raising of provisions, Standard Chartered attempts to balance economic conditions, local knowledge and experience, and the results of independent asset reviews.

Where it is considered that there is no realistic prospect of recovering a portion of an exposure against which an impairment provision has been raised, that amount will be written off.

As with Consumer Banking, a portfolio impairment provision (PIP) to cover the inherent risk of losses which although not identified, are known to be present in any portfolio. In Wholesale Banking, this is set with reference to historic loss rates and subjective factors such as the economic environment and the trends in key portfolio indicators. The PIP methodology provides for accounts for which an individual impairment provision has not been raised. The following table shows impaired loans and advances, and the movement in impairment provisions during the reporting period by each principal category of borrowers' business or industry for Wholesale Banking.

	Impaired loans and advances 31 December 2009 $million	Individual impairment provision 1 January 2009 $million	Net individual impairment charge/(release) $million	Amounts written off/other movements $million	Individual impairment provision 31 December 2009 $million
Agriculture, forestry and fishing	105	39	5	15	59
Banks	286	17	114	1	132
Construction	94	18	-	18	36
Commerce	686	134	238	53	425
Electricity, gas and water	11	28	-	(21)	7
Financing, insurance and business services	464	31	254	(155)	130
Mining and quarrying	-	-	-	6	6
Manufacturing	974	458	181	(49)	590
Commercial real estate	58	21	2	(10)	13
Transport, storage and communication	55	24	1	(1)	24
Other	27	11	11	3	25
Wholesale Banking	2,760	781	806	(140)	1,447

	Impaired loans and advances 31 December 2008 $million	Individual impairment provision 1 January 2008 $million	Net individual impairment charge/(release) $million	Amounts written off/other movements $million	Individual impairment provision 31 December 2008 $million
Agriculture, forestry and fishing	158	33	20	(14)	39
Banks	35	2	15	-	17
Construction	47	10	3	5	18
Commerce	229	152	15	(33)	134
Electricity, gas and water	6	25	(5)	8	28
Financing, insurance and business services	286	27	2	2	31
Mining and quarrying	-	12	-	(12)	-
Manufacturing	756	290	231	(63)	458
Commercial real estate	40	23	2	(4)	21
Transport, storage and communication	22	22	15	(13)	24
Other	32	22	7	(18)	11
Wholesale Banking	1,611	618	305	(142)	781

Impaired loans and advances by geography

The following table shows a geographical breakdown of the impaired loans and advances net of individual impairment provisions for the Group along with loans and advances that are past due but not individually impaired. Past due but not individually impaired loans total $3,929 million (2008: $5,235 million), of which over 70 per cent (2008: 70 per cent) are 30 days or less past due.

	31.12.09								
	Asia Pacific								
	Hong Kong $million	Singapore $million	Korea $million	Other Asia Pacific $million	India $million	Middle East & Other S Asia $million	Africa $million	Americas UK & Europe $million	Total $million
Gross Impaired Loans	276	49	492	1,200	246	1,060	184	283	3,790
Individual impairment provision	(181)	(27)	(267)	(620)	(91)	(560)	(63)	(176)	(1,985)
Net Impaired Loans	95	22	225	580	155	500	121	107	1,805
Total past due but not individually impaired	314	324	684	1,110	310	857	294	36	3,929
Total past due & impaired loans net of individual impairment provisions	409	346	909	1,690	465	1,357	415	143	5,734

	31.12.08								
	Asia Pacific								
	Hong Kong $million	Singapore $million	Korea $million	Other Asia Pacific $million	India $million	Middle East & Other S Asia $million	Africa $million	Americas UK & Europe $million	Total $million
Gross Impaired Loans	272	54	357	1,055	85	368	102	380	2,673
Individual impairment provision	(164)	(20)	(154)	(605)	(44)	(170)	(54)	(113)	(1,324)
Net Impaired Loans	108	34	203	450	41	198	48	267	1,349
Total past due but not individually impaired	386	476	1,075	1,399	392	1,257	193	57	5,235
Total past due &impaired loans net of individual impairment provisions	494	510	1,278	1,849	433	1,455	241	324	6,584

Movement in Group Impairment provisions

The following table sets out the movements in the Group's total individual and portfolio impairment provisions against loans and advances.

	2009 $million	2008 $million
At 1 January	1,981	1,809
Exchange translation differences	70	(179)
Acquisitions	-	109
Amounts written off	(1,332)	(1,119)
Recoveries of acquisition fair values	(39)	(78)
Recoveries of amounts previously written off	191	180
Discount unwind	(58)	(40)
Other	53	13
New provisions	2,613	1,796
Recoveries/provisions no longer required	(618)	(510)
Net charge against profit	1,995	1,286
Provisions held at 31 December	2,861	1,981
Of which:		
Individual Impairment Provision	1,985	1,324
Portfolio Impairment Provision	876	657

Loans and advances past due

The following table sets out the industry analysis of loans and advances which are past due including those assets on which an individual impairment provision has been raised. A loan is considered to be past due when the counterparty has failed to make a principal or interest payment when contractually due. Past due does not necessarily mean that the counterparty is impaired. Past due but not individually impaired loans total $3,929 million (2008: $5,235 million), of which over 70 per cent are 30 days or less past due.

	31.12.09 $million	31.12.08 $million
Loans to individuals		
Mortgages	1,976	2,301
Other	1,463	1,945
Small and medium enterprises	982	1,207
Consumer Banking	4,421	5,453
Agriculture, forestry and fishing	111	195
Banks	286	88
Construction	133	80
Commerce	803	315
Electricity, gas and water	97	6
Financing, insurance and business services	482	542
Mining and quarrying	1	11
Manufacturing	1,206	1,048
Commercial real estate	77	43
Transport, storage and communication	59	95
Other	43	32
Wholesale Banking	3,298	2,455
Total	7,719	7,908

4.9. Counterparty credit risk in the trading book

Counterparty credit risk (CCR) is the risk that the Group's counterparty in a foreign exchange, interest rate, commodity, equity or credit derivative contract defaults prior to maturity date of the contract and that the Group at the time has a claim on the counterparty. CCR arises predominantly in the trading book, but also arises in the non-trading book due to hedging of external funding.

The credit risk arising from all financial derivatives is managed as part of the overall lending limits to banks and customers.

The Group will seek to negotiate Credit Support Annexes (CSA) with counterparties on a case by case basis, where collateral is deemed a necessary or desirable mitigant to the exposure. The credit terms of the CSA are specific to each legal document and determined by the credit risk approval unit responsible for the counterparty. The nature of the collateral will be specified in the legal document and will typically be cash or highly liquid securities.

The Group further reduces its credit exposures to counterparties by entering into contractual netting agreements which result in a single amount owed by or to the counterparty through netting the sum of the positive (amounts owed by the counterparty) and negative (amounts owed by the Group) mark-to-market (MTM) values of these transactions. Following International Accounting Standard (IAS) 32 requirements, exposures are however presented on a gross basis in the financial statements as such transactions are not intended to be settled net in the ordinary course of business.

A daily operational process takes place to calculate the MTM on all trades captured under the CSA. Additional collateral will be called from the counterparty if total uncollateralised MTM exposure exceeds the threshold and minimum transfer amount specified in the CSA. Additional collateral may be required from the counterparty to provide an extra buffer to the daily variation margin process.

Credit reserves
Using risk factors such as PD and LGD a Regulatory Expected Loss is calculated for each counterparty across the CCR portfolio, and based on this calculation credit reserves are set aside for traded products. The reserve is a dynamic calculation based on the EAD risk profile for each counterparty, alongside PD and LGD factors.

In line with market convention, the Group negotiates CSA terms for certain counterparties where the thresholds related to each party are dependent on their Export Credit Assessment Institutions (ECAI) long term rating. Such clauses are typically mutual in nature. It is therefore recognised that a downgrade in the Group's rating could result in counterparties seeking additional collateral calls to cover negative MTM portfolios where thresholds are lowered.

Wrong way risk
Wrong way risk occurs when either the EAD or LGD increases as the credit quality of an obligor decreases. For example, as the MTM on a derivative contract increases in favour of the Group, this can correspond to a higher replacement cost (EAD), and the counterparty may increasingly be unable to meet its obligations. Furthermore the EAD may become larger as the counterparty finds it harder to meet its payment, margin call or collateral posting requirements. The Group employs various policies and procedures to ensure that deterioration in credit grading is alerted to management.

Exposure value calculation
Exposure values for regulatory capital purposes on over the counter traded products are calculated according to the CCR MTM method. This is calculated as a sum of the current replacement cost and the potential future credit exposure. The current replacement cost is the USD equivalent amount owed by the counterparty to the Group for various financial derivative transactions. The potential future credit exposure is an add-on based on a percentage of the notional principal of each transaction. Such percentages are prescribed by the FSA in the BIPRU guidelines and vary according to the underlying asset class and tenor of each trade. The benefit from master netting agreements is applied to the portfolio of counterparty trades in the CCR calculation according to the Net to Gross Ratio rules provided in the FSA Handbook BIPRU 13 guidelines.

The following tables cover the credit exposure on derivative transactions after taking into account the benefits from legally enforceable netting agreements and collateral arrangements.

	31.12.09				
	Gross positive fair value of contracts $million	Netting benefits $million	Netted current credit exposure $million	Collateral held $million	Net derivatives credit exposure $million
Derivative contracts	61,859	33,706	28,153	1,846	26,307
Repo style transactions	2,737	-	2,737	2,056	681
Credit derivatives[1]	2,336	296	2,040	26	2,014
Total	66,932	34,002	32,930	3,928	29,002

[1] Of the $2,040 million netted current credit exposure, $1,633 million of protection has been purchased, and $407 million of protection has been sold.

	31.12.08				
	Gross positive fair value of contracts $million	Netting benefits $million	Netted current credit exposure $million	Collateral held $million	Net derivatives credit exposure $million
Derivative contracts	89,463	50,998	38,465	1,545	36,920
Repo style transactions	9,429	-	9,429	7,199	2,230
Credit derivatives[2]	1,820	1,020	800	-	800
Total	100,712	52,018	48,694	8,744	39,950

[2] Of the $800 million netted current credit exposure, $791 million of protection has been purchased and $9 million of protection has been sold.

The following tables cover the notional value, the credit exposure on derivative transactions after taking into account the benefits from legally enforceable netting agreements and collateral arrangements and the capital requirement by derivative type.

	31.12.09		
	Notional value $million	Netted current credit exposures $million	Regulatory capital requirement $million
Derivative contracts:			
Interest rate contracts	1,696,826	6,215	241
Foreign exchange contracts	1,150,891	19,185	628
Equity and stock index options	3,208	697	9
Commodity contracts	19,066	2,056	107
Credit derivatives:			
Credit default swaps	34,928	2,017	32
Total return swaps	205	23	-
Total derivatives	2,905,124	30,193	1,017
Repo style transactions:			
Repo		1,259	4
Reverse repo		1,478	2
Total		32,930	1,023

	31.12.08		
	Notional value $million	Netted current credit exposures $million	Regulatory capital requirement $million
Derivative contracts:			
Interest rate contracts	1,502,801	8,602	372
Foreign exchange contracts	1,361,872	28,118	861
Equity and stock index options	1,075	-	-
Commodity contracts	16,200	1,745	108
Credit derivatives:			
Credit default swaps	28,944	787	17
Total return swaps	89	13	-
Total derivatives	2,910,981	39,265	1,358
Repo style transactions:			
Repo		5,086	12
Reverse repo		4,343	18
Total		48,694	1,388

4.10. Securitisation

Securitisation is defined as a structure where the cash flow from a pool of assets is used to service obligations to at least two different tranches or classes of creditors.

Securitisations may be categorised as either:

- Traditional securitisation: assets are sold to a Special Purpose Entity (SPE), which finances the purchase by issuing notes in different tranches with different risk and return profiles. Cash flow arising from those assets is used by the SPE to service its debt obligations, or;
- Synthetic transaction: a securitisation whereby only the credit risk, or part of the credit risk of a pool of assets is transferred to a third party via credit derivatives. The pool of assets remains on the Group's balance sheet.

Securitisation activities undertaken by the Group are for a variety of purposes, by various businesses acting in a different capacity;

- Risk Mitigation, Funding and Capital Management (as Originator)
- Fee Generation (as Arranger/ Lead Manager)
- Risk Taking (as Investor)

The Group has $17.4 billion (2008: $18.5 billion) of EAD classified as securitisation positions, as detailed in Section 4.4 Exposure Values. These transactions meet the criteria to qualify as securitisation positions under the FSA's securitisation framework and the particulars of these transactions are discussed below. In addition to these positions, the Group has originated Residential Mortgage Backed Securities (RMBS) with a face value of $3.6 billion (2008: $4.2 billion), which do not qualify as securitisation positions under the FSA framework and are not detailed within this section. The Group's securitisation positions are rated by Moody's, Standard & Poor's and Fitch.

Asset Backed Securities

Wholesale Banking through the Capital Markets unit has purchased as investments or arranged for clients and held Asset Backed Securities (ABS) of $3.4 billion (2008: $4.5 billion), the carrying value of which represents 0.9 per cent of the Group's total assets.

The credit quality of the ABS exposures remains strong. With the exception of those securities which have been subject to an impairment charge, 80 per cent of the overall portfolio is rated A, or better, and 39 per cent of the overall portfolio is rated as AAA. The portfolio is broadly diversified across asset classes and geographies, and there is no direct exposure to the US sub-prime market. The portfolio has an average credit grade of AA-, unchanged from 31 December 2008.

26 per cent of the overall portfolio is invested in Residential Mortgage Backed Securities (RMBS), with a weighted average credit rating of AA (AA+ in 2008). 45 per cent of the RMBS exposures were originated in 2005 or earlier.

23 per cent of the overall portfolio is in Commercial Mortgage Backed Securities (CMBS), of which $139 million is in respect of US CMBS with a weighted average credit grade of AAA. The weighted average credit rating of the remaining CMBS exposure is A-.

12 per cent of the overall portfolio is in Collateralised Debt Obligations (CDOs). This includes $77 million of exposures to CDOs of ABS (Mezzanine and High Grade), of which $56 million have been impaired. The remainder of the other CDOs amounting to $353 million has a weighted average credit rating of BBB (AA+ in 2008).

39 per cent of the overall portfolio is in Other ABS, which includes securities backed by credit card receivables, loans to corporates or corporate SMEs, student loans, auto loans, and diversified payment types, with a weighted credit rating of AA.

The notional and carrying value of the asset backed securities purchased or retained by the Group are shown in the table below analysed by underlying asset type, alongside any recognised net gain or loss on sale in the period.

	31.12.09			
		Notional amount		
	Carrying value of asset backed securities $million	Traditional securitisation programmes $million	Synthetic securitisation programmes $million	Recognised net gain/(loss) on sale $million
Residential mortgages (RMBS)	809	894	-	-
Commercial mortgages (CMBS)	602	769	34	-
CDOs of ABS – RMBS	13	77	-	(2)
CDOs Other: Leveraged loans/Trust preferred/Real Estate	285	342	11	-
Other ABS:				
Credit card receivables	114	116	-	-
Loans to corporates or Corporate SMEs	252	52	219	-
Student loans	212	230	-	-
Auto loans	391	400	-	-
Diversified payment types	107	120	-	-
Other assets	151	178	-	-
Total	2,936	3,178	264	(2)

	31.12.08			
		Notional amount		
	Carrying value of asset backed securities $million	Traditional securitisation programmes $million	Synthetic securitisation programmes $million	Recognised net gain/(loss) on sale $million
Residential mortgages (RMBS)	1,027	1,110	-	(1)
Commercial mortgages (CMBS)	654	786	32	(5)
CDOs of ABS – RMBS	32	209	-	(28)
CDOs Other: Leveraged loans/Trust preferred/Real Estate	306	367	11	-
Other ABS:				
Credit card receivables	343	356	-	(1)
Loans to corporates or Corporate SMEs	169	52	139	(1)
Student loans	237	263	-	(1)
Auto loans	391	400	-	-
Diversified payment types	442	515	-	(2)
Other assets	158	210	-	-
Total	3,759	4,268	182	(39)

ABS are accounted for as financial assets. For further details regarding recognition and impairment refer to Note 1 of the Group's Annual Report and Accounts. The ABS portfolio is assessed frequently for objective evidence of impairment. In 2009, $73 million of mezzanine CMBS, US RMBS and CDOs (of RMBS/CMBS and Trust Preferred) were impaired.

Valuation of retained interest is initially and subsequently determined using market price quotations where available or internal pricing models that utilise variables such as yield curves, prepayment speeds, default rates, loss severity, interest rate volatilities and spreads. The assumptions used for valuation are based on observable transactions in similar securities and are verified by external pricing sources, where available.

The ABS portfolio is closely managed by a centralised dedicated team. This team has all the capabilities (Legal, Risk, GSAM, Credit Analysis, Asset Surveillance, Trading and Distribution) and authority to manage this portfolio effectively. The team has developed a detailed analysis and reporting framework of the underlying portfolio to allow senior management to make an informed holding decision with regards to specific assets, asset classes or parts of an asset class.

Portfolio management

Wholesale Banking via its Portfolio Management unit buys synthetic protection for its banking book credit portfolio. Securitisation provides capacity for client-focused growth and improves efficiency of economic and regulatory capital. The Group as the originator performs multiple roles, including Protection Buyer, Calculation Agent and Credit Event Monitor Agent. The Protection Buyer executes and maintains securitisation transactions. The Calculation Agent computes periodic coupon payments and loss payouts. The Credit Event Monitor Agent validates and provides notifications of credit events.

The Asset & Liability Management unit (ALM), performs a different role, and acts as deposit taker for funds collected from the credit protection provider for certain funded securitisation transactions. Deposits collected enhance the liquidity position of the Group and eliminates counterparty risk for deals where the Group is the protection buyer.

Wholesale Banking has eight securitisation transactions listed in the following table, with an aggregate hedge capacity of $15.3 billion (2008: $15.6 billion). Of the eight transactions, three are private deals with bilateral investors and five are public deals distributed to a broad spectrum of investors and rated by Moody's, Standard & Poor's and Fitch. The Group did not originate any synthetic securitisation programmes in 2009.

At December 2009 $65 million (2008: $44 million) of securitised exposures were classified as impaired and past due.

All eight transactions are structured as synthetic protection to facilitate the hedging of commercial loans and trade finance facilities extended to clients by the Group's branches and subsidiaries. All transactions are also structured as non-disclosed pools for reason of client confidentiality.

The table below provides detail of securitisation programmes that have been originated by the Group.

					31.12.09		
	Underlying facilities hedged	Public/private	Start date	Scheduled maturity	Max notional $million	Outstanding exposures[1] $million	Retained exposures[2] $million
START III	Commercial Loan	Public	Dec 2006	June 2010	1,230	629	949
START IV	Commercial Loan	Public	June 2007	Dec 2010	1,500	1,307	1,219
TF5	Trade Finance	Private	May 2008	Dec 2010	2,999	2,673	2,851
SEALANE	Trade Finance	Public	Nov 2007	May 2011	2,993	2,757	2,701
START II	Commercial Loan	Public	June 2006	June 2011	1,600	1,273	1,370
START V	Commercial Loan	Public	July 2008	Jan 2012	1,000	943	928
SHANGREN	Trade Finance	Private	Aug 2008	Feb 2012	2,495	2,271	2,230
ASIAMEA	Commercial Loan	Private	Dec 2007	Dec 2012	1,500	1,441	1,399
Total					15,317	13,294	13,647

					31.12.08		
	Underlying facilities hedged	Public/private	Start date	Scheduled maturity	Max notional $million	Outstanding exposures[1] $million	Retained exposures[2] $million
START III	Commercial Loan	Public	Dec 2006	June 2010	1,500	1,401	18
START IV	Commercial Loan	Public	June 2007	Dec 2010	1,500	1,366	1,219
TF5	Trade Finance	Private	May 2008	Dec 2010	3,000	2,563	2,864
SEALANE	Trade Finance	Public	Nov 2007	May 2011	3,000	2,651	2,708
START II	Commercial Loan	Public	June 2006	June 2011	1,600	1,469	1,370
START V	Commercial Loan	Public	July 2008	Jan 2012	1,000	924	928
SHANGREN	Trade Finance	Private	Aug 2008	Feb 2012	2,500	2,247	2,231
ASIAMEA	Commercial Loan	Private	Dec 2007	Dec 2012	1,500	1,438	1,399
Total					15,600	14,059	12,737

(1) Underlying exposures that have been securitised in the programmes.

(2) Exposures that have not been sold to investors but have been retained by the Group.

The maximum notional amount for certain transactions has reduced between December 2008 and December 2009. This is due to the START III transaction being in a no replenishment period and impairment provisions totalling $13 million reducing capacity in TF5, SEALANE and SHANGREN transactions.

Accounting policy

Financial assets included in a traditional securitisation transaction will be fully or partially derecognised in the consolidated balance sheet when rights to receive cash flows from the financial assets have expired or where the Group has transferred substantially all risks and rewards of ownership. The Group engages in structures that achieve the transfer of risks, but through the issuance of notes by a non-consolidated Special Purpose Entity (SPE). The Group deems these to be securitisation transactions as securities are issued on the assets held by the Group. These securitisation transactions are outlined in the table above. For all transactions except TF5, notes were issued by non-consolidated SPEs. For TF5 transactions, notes were issued directly by Standard Chartered Bank.

The Group transfers credit risk associated with specific financial assets to an SPE via the use of synthetic credit derivative structures. The SPE issues various tranches of notes or credit linked notes which offer exposure to the referenced assets held by the Group, but without holding those assets. The investors claim is to the proceeds of the sale of the notes, the yield on the proceeds and the fee received from the Group for the credit protection sold by the SPE via a waterfall structure.

Through the use of synthetic securitisation, the Group buys protection without actual transference of any assets to an SPE. These exposures are transferred to the note holders by the SPE through the issue of credit linked notes. As a result, the Group remains the owner of the assets but has transferred a substantial part of the credit risk to the SPE. Third party investors in securities issued by the SPE have recourse only to the assets of the SPE and not to the Group.

Retained notes are initially valued at cost and subsequently determined using market price quotations where available, or in their absence, dealer quotes. The assumptions used for valuation are based on observable transactions in similar securities and are verified by external pricing sources, where available.

Governance of securitisation activities

Securitisation transactions proposed for funding and capital management must first obtain support from the respective Capital Management Committee (CMC), that manages the capital requirements of the business, before going to Group Capital Management Committee (GCMC) for final approval and Liquidity Management Committee (LMC) for noting.

Execution of each securitisation transaction must either be under an individual Transaction Programme Authorisation or Product Program Framework; such that all relevant support, control and risk functions are involved in the transaction. Specifically, Compliance covers issues like confidentiality of clients' information and insider information, Finance advises on the accounting treatment, Credit advises on the regulatory treatment, Group Tax provides an opinion on taxation and Group Regulatory Reporting facilitates communication with the regulator.

Basel II for securitisation positions

The calculation of risk-weighted exposure amounts for securitisation positions is based on the following two calculation methods advised by the FSA:

- IRB method for certain senior securitisation positions; and
- Standardised Approach for all other securitisation positions.

All existing securitisation transactions originated by Wholesale Banking, in the table above, meet the credit risk transfer requirement to be accounted for as securitisation under the Basel II regulatory capital regime.

The table below presents a summary of the securitisation positions retained and the notional value of ABS purchased or arranged by the Group, analysed by risk weight band. The majority of the exposures are rated AAA.

	31.12.09		
Risk weight bands	Securitisation programmes[1] $million	ABS[2] $million	Total $million
0% – 20%	13,334	2,510	15,844
20% – 40%	-	383	383
40% – 60%	-	111	111
60% – 80%	75	74	149
80% – 100%	1	69	70
100% and above	75	104	179
1250% or Deducted	162	191	353
Total	13,647	3,442	17,089

	31.12.08		
Risk weight bands	Securitisation programmes[1] $million	ABS[2] $million	Total $million
0% – 20%	12,268	3,233	15,501
20% – 40%	135	440	575
40% – 60%	-	419	419
60% – 80%	75	58	133
80% – 100%	14	107	121
100% and above	75	72	147
1250% or Deducted	170	121	291
Total	12,737	4,450	17,187

(1) Retained exposures that are included in the securitisation programmes originated by the Group and have not been sold to investors.

(2) ABS exposures purchased from a third party by the Group.

5. Market risk

Standard Chartered recognises market risk as the risk of loss resulting from changes in market prices and rates. The Group is exposed to market risk arising principally from customer-driven transactions. The objective of the Group's market risk policies and processes is to obtain the best balance of risk and return while meeting customers' requirements.

The primary categories of market risk for Standard Chartered are:

- Interest rate risk: arising from changes in yield curves, credit spreads and implied volatilities on interest rate options;
- Currency exchange rate risk: arising from changes in exchange rates and implied volatilities on foreign exchange options;
- Commodity price risk: arising from changes in commodity prices and commodity option implied volatilities; covering energy, precious metals, base metals and agriculture; and
- Equity price risk: arising from changes in the prices of equities, equity indices, equity baskets and implied volatilities on related options.

Market risk governance

The Group Risk Committee (GRC) approves the Group's market risk appetite taking account of market volatility, the range of traded products and asset classes, the business volumes and transaction sizes. Market risk appetite has remained broadly stable in 2009.

The Group Market Risk Committee (GMRC) is responsible, under authority delegated by the GRC, for setting Value at Risk (VaR) limits at a business level and recommends Group level VaR and stress loss limits for market risk. The GMRC is also responsible for policies and other standards for the control of market risk and overseeing their effective implementation. These policies cover both trading and non-trading books of the Group. The trading book is defined as per the FSA Handbook's Prudential Sourcebook for Banks, Building Societies and Investment Firms (BIPRU). This is more restrictive than the broader definition within IAS 39 'Financial Instruments: Recognition and Measurement', as the FSA only permits certain types of financial instruments or arrangements to be included within the trading book. Limits by location and portfolio are proposed by the businesses within the terms of agreed policy.

Group Market Risk (GMR) approves the limits within delegated authorities and monitors exposures against these limits. Additional limits are placed on specific instruments and position concentrations where appropriate. Sensitivity measures are used in addition to VaR as risk management tools. For example, interest rate sensitivity is measured in terms of exposure to a one basis point increase in yields, whereas foreign exchange, commodity and equity sensitivities are measured in terms of the underlying values or amounts involved. Option risks are controlled through revaluation limits on underlying price and volatility shifts, limits on volatility risk and other variables that determine the options' value.

Value at Risk

The Group measures the risk of losses arising from future potential adverse movements in market rates, prices and volatilities using a VaR methodology. VaR, in general, is a quantitative measure of market risk which applies recent historic market conditions to estimate the potential future loss in market value that will not be exceeded in a set time period at a set statistical confidence level. VaR provides a consistent measure that can be applied across trading businesses and products over time and can be set against actual daily trading profit and loss outcome.

VaR is calculated for expected movements over a minimum of one business day and to a confidence level of 97.5 per cent. This confidence level suggests that potential daily losses, in excess of the VaR measure, are likely to be experienced six times per year.

The Group applies two VaR methodologies:

- Historic simulation: involves the revaluation of all unmatured contracts to reflect the effect of historically observed changes in market risk factors on the valuation of the current portfolio. This approach is applied for general market risk factors.
- Monte Carlo simulation: this methodology is similar to historic simulation but with considerably more input risk factor observations. These are generated by random sampling techniques, but the results retain the essential variability and correlations of historically observed risk factor changes. This approach is applied for credit spread VaR.

In both methods an historical observation period of one year is chosen and applied.

VaR is calculated as the Group's exposure as at the close of business, generally London time. Intra-day risk levels may vary from those reported at the end of the day.

Back testing

To assess their predictive power, VaR models are back tested against actual results. In 2009 there has been only one exception in the regulatory back testing, compared with three in 2008. This is well within the 'green zone' applied internationally to internal models by bank supervisors, and implies that model reliability is statistically greater than 95 per cent.

Back testing is conducted daily against clean profit and loss, which is the actual profit and loss for a given business day adjusted to remove the effect of certain items unrelated to market risk. Back testing is also conducted against clean hypothetical profit and loss which is the clean profit and loss that would have occurred for a given business day if the portfolio on which the VaR number for that business day is based remained unchanged.

Stress testing

Losses beyond the confidence interval are not captured by a VaR calculation, which therefore gives no indication of the size of unexpected losses in these situations.

GMR complements the VaR measurement by weekly stress testing market risk exposures to highlight potential risk that may arise from extreme market events that are rare but plausible.

Stress testing is an integral part of the market risk management framework and considers both historical market events and forward looking scenarios. A consistent stress testing methodology is applied to trading and non-trading books.

Stress scenarios are regularly updated to reflect changes in risk profile and economic events. The GMRC has responsibility for reviewing stress exposures and, where necessary, enforcing reductions in overall market risk exposure. The GRC considers stress testing results as part of its supervision of risk appetite. The stress testing methodology assumes that scope for management action would be limited during a stress event, reflecting the decrease in liquidity that often occurs.

Regular stress test scenarios are applied to interest rates, credit spreads, exchange rates, commodity prices and equity prices. This covers all asset classes in the Financial Markets non-trading and trading books.

Ad hoc scenarios are also prepared reflecting specific market conditions and for particular concentrations of risk that arise within the businesses.

Market risk changes

Total average VaR rose in 2009 against 2008. This stemmed mainly from the non-trading book VaR, and reflected sharp increases in the volatility of credit spreads that followed the collapse of Lehman Brothers in September 2008. The one year historic data window applied as an input to the VaR model continued to reflect this period of particularly high credit spread volatility throughout most of 2009. Average trading book VaR rose slightly in 2009, with Commodities and Equities VaR increasing as these businesses continue to expand their activities.

Securities classed as loans and receivables or held to maturity were removed from VaR in June 2009. These non-traded securities are accounted for on an amortised cost basis, so market price movements have no effect on either profit and loss or reserves. This alignment of VaR with accounting treatment resulted in an $8.6million reduction in total VaR at the time of implementation. The inclusion of the listed part of the Private Equity portfolio in non-trading VaR from October 2009 resulted in a $3 million increase in total VaR.

Market risk regulatory capital

At Group and Solo Consolidated levels, the FSA specifies minimum capital requirements against market risk in the trading book. Interest rate risk in the non-trading book is covered separately under the Pillar 2 framework. The FSA has granted the Group CAD2 internal model approval covering the majority of interest rate and foreign exchange risk in the trading book. In 2008 the scope was extended to include precious and base metals market risk. Positions outside the CAD2 scope are assessed according to standard FSA rules.

At 31 December 2009 the Group's market risk regulatory capital requirement was $1,590 million (31 December 2008: $735 million). The increase occurred despite a reduction in trading book market risk as reflected below in internal VaR. It arises primarily due to energy derivative positions that are subject to FSA standard rules and for which application has been made to the FSA for CAD2 approval.

Valuation framework

Products may only be traded subject to a formally approved Product Programme which identifies the risks, controls and regulatory treatment. The control framework is assessed by the relevant Group functions as well as Group Internal Audit on an ongoing basis. It is Group policy that all assets and liabilities held are to be recorded in the financial accounts on a fair-value basis that is consistent with IFRS.

The Product Control function is responsible for valuation controls in accordance with policy. Where possible, positions held are marked to market on a consistent and daily basis using quoted prices within active markets. Where this is not possible, positions are marked to model using models which have been independently and periodically validated by GMR. Product Control ensure adherence to the Group Policy for valuation adjustments to incorporate counterparty risk, bid/ask spreads, market liquidity and where appropriate model risk reserves to mark all positions on a prudent basis. The GMRC provides oversight and governance of all policy and performs a monthly review of the valuation adjustments.

The minimum regulatory market risk capital requirements for the trading book are presented below for the Group.

	31.12.09		31.12.08	
Market Risk Capital Requirements for Trading Book	Regulatory capital requirement $million	Risk Weighted Assets $million	Regulatory capital requirement $million	Risk Weighted Assets $million
Interest rate[1]	516	6,448	257	3,217
Equity	32	400	28	350
Options	416	5,200	143	1,792
Collective investment schemes	-	-	1	13
Commodity[2]	252	3,151	45	563
Foreign exchange[1],[2]	137	1,713	59	739
Internal Models Approach	240	3,000	202	2,531
Total	1,593	19,912	735	9,205

(1) Interest rate and foreign currency capital requirements for positions which are not within the scope of permission to use a VaR model granted by the FSA.

(2) Commodity and foreign currency covers all business activities across trading and non-trading books.

The minimum regulatory market risk capital requirement for the trading book is presented below for the Group's significant subsidiaries in accordance with local regulatory requirements applicable in the countries in which they are incorporated.

	31.12.09		
Market Risk Capital Requirements for Trading Book	Standard Chartered Bank $million	Standard Chartered Bank (HK) Ltd $million	Standard Chartered First Bank Korea Ltd $million
Interest rate[1]	428	53	-
Equity	31	-	-
Options	413	-	-
Collective investment schemes	-	-	-
Commodity[2]	252	-	-
Foreign exchange[1],[2]	135	5	-
Internal Models Approach	237	8	60
Total	1,496	66	60
Market Risk – RWA	18,759	845	750

(1) Interest rate and foreign currency capital requirements for positions which are not within the scope of permission to use a VaR model granted by the FSA.

(2) Commodity and foreign currency covers all business activities across trading and non-trading books.

The tables below show the average, high and low trading and non-trading VAR over the year 2009, and the actual position on 31 December 2009. The highest and lowest VaR are independent and could have occurred on different days.

Daily value at risk (VaR at 97.5%, 1 day)

	2009				2008			
Trading and Non-trading	Average $million	High[3] $million	Low[3] $million	Actual [4] $million	Average $million	High[3] $million	Low[3] $million	Actual [4] $million
Interest rate risk[1]	37.3	46.7	24.7	25.5	25.1	37.6	14.2	36.7
Foreign exchange risk	7.8	16.1	3.5	5.0	6.0	8.7	3.3	4.8
Commodity risk	3.0	5.5	1.3	3.7	1.3	2.4	0.6	2.1
Equity risk	4.3	11.1	1.1	10.8	1.4	2.4	0.5	0.8
Total[2]	38.9	47.9	27.6	31.8	31.5	42.5	17.8	41.7
Trading								
Interest rate risk[1]	11.7	17.8	8.7	10.5	12.0	16.0	8.5	9.3
Foreign exchange risk	7.8	16.1	3.5	5.0	6.0	8.7	3.3	4.8
Commodity risk	3.0	5.5	1.3	3.7	1.3	2.4	0.6	2.1
Equity risk	2.7	3.6	1.0	2.5	1.4	2.4	0.5	0.8
Total[2]	14.5	19.3	9.9	13.2	14.2	20.6	9.2	9.8
Non-trading								
Interest rate risk[1]	32.4	41.0	20.8	22.2	19.8	39.6	10.6	38.8
Equity risk[5]	1.8	9.9	-	9.1	-	-	-	-
Total[2]	32.7	41.0	22.6	23.5	19.8	39.6	10.6	38.8

(1) Interest rate risk VaR includes credit spread risk arising from securities held for trading or available for sale.

(2) The total VaR shown in the tables above is not a sum of the component risks due to offsets between them.

(3) Highest and lowest VaR for each risk factor are independent and usually occur on different days.

(4) Actual one day VaR as at period end date.

(5) Non-trading equity risk VaR was included only from October 2009. For the period October to December 2009, non-trading VaR average as $9.1 million, with a low of $8.7 million.

Interest rate risk in the non-trading book

Interest rate risk from the non-trading book portfolios is transferred to Financial Markets where it is managed by local Asset and Liability Management (ALM) desks under the supervision of local Asset and Liability Committees (ALCO). The ALM desks deal in the market in approved financial instruments in order to manage the net interest rate risk, subject to approved VaR and risk limits.

VaR and stress tests are therefore applied to non-trading book exposures in the same way as for the trading book including listed 'available for sale' securities. Securities classed as 'loans and receivables' or 'held to maturity' are not reflected in VaR or stress tests since they are accounted on an amortised cost basis, so market price movements have no effect on either the profit and loss account or reserves.

Basis risk, or the risk arising from hedging exposure to one interest rate with exposure to a rate which reprices under slightly different conditions, is also analysed.

6. Operational risk

Operational risk is the 'risk of direct or indirect loss due to an event or action resulting from inadequate or failed internal processes, people and systems, or from external events'.

Objective
Operational risk exposures arise as a result of business activities. It is the Group's objective to minimise exposure to such exposures, subject to cost tradeoffs. This objective is met through a framework of policies and procedures that drive risk identification, assessment, control and monitoring.

Governance Structure
Governance over operational risk management is achieved through a defined structure of committees at the group, business, function and country level. At each level operational risk governance committees integrate into the Group's overall risk governance structure. The Group Operational Risk Committee (GORC), a subcommittee of the GRC, supervises the management of operational risks across all businesses and functions. Escalation rules, linked to risk tolerance limits, are in place to ensure that operational risk decisions are taken at the right level within the governance structure

Roles and Responsibilities
Responsibility for the management of operational risk rests with business and function management as an integral component of the management task. An independent Operational Risk function within the Risk function works alongside them to ensure that exposure to operational risk remains within acceptable levels.

Risk Management Approach
The Group's operational risk management procedures and processes are integral components of the broader Risk Management Framework. Operational risks are managed through an end to end process of identification, assessment, control and monitoring. This four step management process is performed at all levels across the Group and is the foundation of the management approach. Once identified, risks are assessed against standard criteria to determine their significance and the degree of risk mitigation effort required to reduce the exposure to acceptable levels. Risk mitigation plans are overseen by the appropriate governance committee.

Assurance
Independent assurance reviews provide management and governance bodies with confirmation that the Group's risk management standards and controls are being adhered to. These reviews are conducted by specialist control functions with the support of an independent assurance function. The Group's audit function conducts regular audits of assurance activities.

Measurement
Standard Chartered uses The Standardised Approach to assess its regulatory and internal capital requirements for Operational Risk. The Standardised Approach for operational risk capital calculation applies a beta to the average income that was achieved in the previous three years by the Group. Following BIPRU 6, the average income is categorised into FSA business lines in accordance with the Group policy.

The table below details the operational risk capital requirement for the Group.

	31.12.09 Operational risk capital requirement $million	31.12.08 Operational risk capital requirement $million
Consumer Banking	667	670
Wholesale Banking	989	797
Total	1,656	1,467

The table below details the operational risk capital requirement for the Group's significant subsidiaries presented in accordance with the regulatory requirements applicable in the countries in which they are incorporated.

	31.12.09 Operational risk capital requirement $million	31.12.08 Operational risk capital requirement $million
Standard Chartered Bank	665	491
Standard Chartered Bank (HK) Ltd	303	279
Standard Chartered First Bank Korea Ltd	219	184

7. Immaterial portfolios

Non Trading Book Equities & Specialised Lending Exposures
For the purposes of BIPRU requirements 11.5.15 & 11.5.11 the holdings of non-trading book equities and the specialised lending portfolio are considered immaterial. At 31 December 2009, non-trading book equity holdings amount to $2.0 billion and specialised lending exposure total $1.6 billion, which together total less than 1 per cent of the Group's total exposure.

8. Forward looking statements

It is possible that this document could or may contain forward-looking statements that are based on current expectations or beliefs, as well as assumptions about future events. These forward-looking statements can be identified by the fact that they do not relate only to historical or current facts. Forward-looking statements often use words such as anticipate, target, expect, estimate, intend, plan, goal, believe, will, may, should, would, could or other words of similar meaning. Undue reliance should not be placed on any such statements because, by their very nature, they are subject to known and unknown risks and uncertainties and can be affected by other factors that could cause actual results, and the Group's plans and objectives, to differ materially from those expressed or implied in the forward-looking statements.

There are several factors which could cause actual results to differ materially from those expressed or implied in forward looking statements. Among the factors that could cause actual results to differ materially from those described in the forward looking statements are changes in the global, political, economic, business, competitive, market and regulatory forces, future exchange and interest rates, changes in tax rates and future business combinations or dispositions.

The Group undertakes no obligation to revise or update any forward looking statement contained within this document, regardless of whether those statements are affected as a result of new information, future events or otherwise.

9. Acronyms

ABS	Asset Backed Security
AIRB	Advanced Internal Ratings Based
ALCO	Asset and Liability Committee
ALM	Asset and Liability Management
ARC	Audit and Risk Committee
ARROW	Advanced Risk Response Operating Framework
BIPRU	Prudential Sourcebook for Banks, Building Societies and Investment Firms
CAD2	Capital Adequacy Directive 2
CCF	Credit Conversion Factor
CCR	Counterparty Credit Risk
CDOs	Collateralised Debt Obligations
CMBS	Commercial Mortgage Backed Securities
CMC	Capital Management Committee
CRD	Capital Requirements Directive
CRM	Credit Risk Mitigation
CSA	Credit Support Annexes
EAD	Exposure at Default
ECAI	External Credit Assessment Institutions
FSA	Financial Services Authority (UK)
FSS	Financial Supervisory Service (Korea)
FSV	Forced Sale Value
GALCO	Group Asset and Liability Committee
GCC	Group Credit Committee
GCMC	Group Capital Management Committee
GCRO	Group Chief Risk Officer
GENPRU	General Prudential Sourcebook for Banks, Building Societies, Insurers, and Investment Firms
GMR	Group Market Risk
GMRC	Group Market Risk Committee
GORC	Group Operational Risk Committee
GRC	Group Risk Committee
GSAM	Group Special Asset Management
IAS	International Accounting Standard
ICAAP	Internal Capital Adequacy Assessment Process
ICG	Individual Capital Guidance
IIP	Individual Impairment Provision
IRB	Internal Ratings Based
IFRS	International Financial Reporting Standards
LGD	Loss Given Default
LMC	Liquidity Management Committee
MAC	Model Assessment Committee
MTM	Mark-to-Market
PD	Probability of Default
PIP	Portfolio Impairment Provision
RMBS	Residential Mortgage Backed Securities
RMF	Risk Management Framework
RTO	Risk Type Owner
RWA	Risk Weighted Assets
SME	Small and Medium Enterprises
SPE	Special Purpose Entity
SREP	Supervisory Review and Evaluation Process
VaR	Value at Risk

Appendix 1 – Group entities

At 31 December 2009, the principal subsidiary undertakings, all indirectly held and principally engaged in the business of banking and provision of other financial services, were as follows:

Country and place of incorporation or registration	Main areas of operation	Group interest in ordinary share capital %
Standard Chartered Bank, England and Wales	United Kingdom, Middle East, South Asia, Asia Pacific, Americas and, through Group companies, Africa	100.00
Standard Chartered First Bank Korea Limited, Korea	Korea	100.00
Standard Chartered Bank Malaysia Berhad, Malaysia	Malaysia	100.00
Standard Chartered Bank (Pakistan) Limited, Pakistan	Pakistan	98.99
Standard Chartered Bank (Taiwan) Limited, Taiwan	Taiwan	100.00
Standard Chartered Bank (Hong Kong) Limited, Hong Kong	Hong Kong	100.00
Standard Chartered Bank (China) Limited, China	China	100.00
Standard Chartered Bank (Thai) Public Company Limited, Thailand	Thailand	99.99
Standard Chartered Bank Nigeria Limited	Nigeria	100.00
Standard Chartered Bank Kenya Limited	Kenya	74.30
Standard Chartered Private Equity Limited, Hong Kong	Hong Kong	100.00

The below table lists the entities where accounting treatment differs from the prudential treatment as described on page 4.

Associate	Prudential treatment	Main areas of operation	Group interest in ordinary share capital %
Asia Commercial Bank	Deducted from capital resources	Vietnam	15.00
China Bohai Bank	Deducted from capital resources	China	19.90
Fleming Family & Partners	Proportionally consolidated	Asia	20.00
MCashback Limited	Proportionally consolidated	UK	30.00
Merchant Solutions Limited	Proportionally consolidated	Hong Kong	44.00