Standard Chartered Saadiq Berhad

Pillar 3 Disclosures
31 December 2012

Incorporated in Malaysia with registered Company No. 823437K
Registered Office and Principal Place of Businesses
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1. Overview

Basel II

The Basel Committee on Banking Supervision ("BCBS") published a framework for International Convergence of Capital Measurement and Capital Standards (commonly referred to as 'Basel II'), which replaced the original 1988 Basel I Accord. Basel II is structured around three 'pillars' which are outlined below:-

- Pillar 1 sets out minimum regulatory capital requirements – the minimum amount of regulatory capital banks must hold against the risks they assume;
- Pillar 2 sets out the key principles for supervisory review of a bank's risk management framework and its capital adequacy. It sets out specific oversight responsibilities for the Board of Directors ("the Board") and senior management, thus reinforcing principles of internal control and other corporate governance practices; and
- Pillar 3, covered in the supplementary financial information (unaudited), aims to bolster market discipline through enhanced disclosure by banks.

Basel II provides three credit risk approaches of increasing sophistication, namely, The Standardised Approach ("TSA"), the Foundation Internal Ratings Based Approach ("FIRB") and the Advanced Internal Ratings Based Approach ("AIRB").

In Malaysia, BNM issued the Risk-Weighted Capital Adequacy Framework and Capital Adequacy Framework for Islamic Banks (General Requirements and Capital Components) on 29 June 2007 and came into effect on 1 January 2008. This document was last updated on 28 November 2012. The framework sets out the approaches for the computation of the risk weighted assets for Islamic banks. This framework forms part of the overall capital adequacy framework for Islamic banks, hence should be read alongside Capital Adequacy Framework for Islamic Banks (Capital Components) and Guidelines on Recognition and Measurement of Profit Sharing Investment Account as Risk Absorbent.

BNM has formally approved the Bank's use of the AIRB approach for calculating and reporting regulatory capital in June 2010. As a result, since July 2010 regulatory capital submission, the Bank has been using AIRB approach for calculating and reporting the credit risk capital requirement.

2. Capital management

The Bank's capital management approach is driven by its desire to maintain a strong capital base in support of its business development, to meet regulatory capital requirements at all times and to maintain good credit ratings.

Strategic, business and capital plans are drawn up annually covering a three year horizon and approved by the Board. The capital plan ensures that adequate levels of capital and an optimum mix of the different components of capital are maintained by the Bank to support its strategy.

The capital plan takes the following into account:-

- regulatory capital requirements;
- forecast demand for capital to support the credit ratings;
- increases in demand for capital due to business growth, market shocks or stresses;
- available supply of capital and capital raising options; and
- internal controls and governance for managing the Bank's risk, performance and capital.

The Bank uses internal models and other quantitative techniques in its internal risk management. Internal credit models are in use also to compute the amount of regulatory capital required.

The Bank operates processes and controls to monitor and manage capital adequacy across the organisation. It is overseen by the Asset and Liability Committee ("ALCO"), which is responsible for managing the balance sheet, capital and liquidity. A strong governance and process framework is embedded in the capital planning and assessment methodology. Overall responsibility for the effective management of risk rests with the Board.

ALCO is also responsible for the ongoing assessment of the demand for capital and the updating of the Bank's capital plan.

2. Capital management (continued)

Suitable processes and controls are in place to monitor and manage capital adequacy and ensure compliance with local regulatory ratios in all legal entities. These processes are designed to ensure that the Bank has sufficient capital available to meet local regulatory requirements at all times.

The Bank's ICAAP closely integrates the risk and capital assessment processes, and ensures that adequate levels of capital are maintained to support the Bank's current and projected demand for capital under expected and stressed conditions. The Bank's ICAAP, including methodologies in use for stress testing and economic capital calculations are aligned with those established at a Group level and has been designed to be applied consistently across the organisation to meet the Pillar 2 requirements of BNM.

For details on regulatory capital structure of the Bank, refer to Note 34 to the financial statements. All ordinary shares in issue confer identical rights in respect of capital, dividends and voting.

3. Risk management

Risk management is the set of end-to-end activities through which we make risk-taking decisions and we control and optimize the risk-return profile of the Bank. It is a bank-wide activity and starts right at the front-line. The management of risk lies at the heart of the Bank's business. Effective risk management is a central part of the financial and operational management of the Bank and fundamental to our ability to generate profits consistently and maximize the interests of shareholders and other stakeholders.

Through the Risk Management Framework, the Bank manages enterprise-wide risks. One of the main risks incurred arises from extending credit to customers through financing and trading operations. Beyond credit risk, the Bank is also exposed to a range of other risk types such as market, operational, Syariah, liquidity, reputational and other risks which are inherent in the Bank's strategy and business the Bank has chosen to participate in.

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

- **Balancing risk and return** : risk is taken in support of the requirements of stakeholders, in line with the Bank's strategy and within the Bank's risk appetite;
- **Responsibility** : it is the responsibility of all employees to ensure that risk-taking is disciplined and focused. The Bank takes account of its social responsibilities and its commitments to customers 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 ensure awareness of all known risks;
- **Competitive advantage** : seek to achieve competitive advantage through efficient and effective risk management and control.

Risk Governance

Risk governance refers to those parts of the Bank's overall governance mechanisms that relate to risk management and control. Risk governance is exercised through the decision making authority vested in individual managers and committees.

Ultimate responsibility for the effective management of risk rests with the Board. The Board delegates authority for the management of risk to several committees.

Acting with an authority delegated by the Board, the Board Risk Committee (BRC) has oversight over risk management framework and senior management activities in managing and controlling all risks. BRC is chaired by and consists only of non executive directors.

Executive Committee ("EXCO"), through its authority delegated by the Board, is responsible for executing strategy as approved by the Board and to ensure robust control environment. EXCO is also responsible for the management of pension and strategic risks.

ALCO, through its authority delegated by EXCO, is responsible for the management of capital ratios and the establishment of, and compliance with, policies relating to balance sheet management, including management of the Bank's liquidity and capital adequacy.

3. Risk management (continued)

Risk Governance (continued)

The Risk Management Committee (RMC) with its authority delegated by EXCO, shall hold executive responsibility for risk management and control of all risks, except those for which EXCO and ALCO have direct responsibilities. The RMC is also responsible for defining the Bank's overall risk management framework.

The Syariah Advisory Committee, through the authority delegated by the Board, is responsible for assuring that all Islamic Banking products and services comply with the Syariah requirement.

Flow of Authority

Authority flows from the RMC and ALCO to their sub-committees and may be cascaded further from there. Reporting of material risk exposures, risk issues and assurance with policies and standards is communicated from the relevant risk type committees up to the RMC, in accordance with their degree of materiality to the Bank. Line managers are also required to ensure that all risk exposures, risk issues and evidence of assurance with policy are classified in terms of the applicable risk control area, risk type and organizational levels.

Three Lines of Defence

- The first line of defence is that all employees are required to ensure the effective management of risks within the scope of their direct organizational responsibilities.
- The second line of defence comprises the Risk Control Owners, supported by their respective control functions. Risk Control Owners are responsible for ensuring that the residual risks within their scope of their responsibilities remain within appetite. The second line is independent of the origination, trading and sales functions to ensure that the necessary balance and perspective is brought to risk/return decisions.
- The third line of defence comprises the assurance provided by the Internal Audit function of the Group Internal Audit established at the immediate holding company which has no responsibilities for any of the activities it examines. Group Internal Audit provides independent assurance of the effectiveness of the management's control of its own business activities (first line) and of the processes maintained by the Risk Control Functions (the second line). As a result, GIA provides assurance that the overall system of control effectiveness is working as required within the Risk Management Framework.

Risk Function

The role of the risk function is led by the Country Chief Risk Officer. 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.

Risk Appetite

Risk appetite is the statement of the amount of risk that the Bank is willing to take in the pursuit of its strategic goals. When setting the risk appetite, the Bank considers overall risk management strategy/ approach and appropriate margin between actual risk exposure and its risk capacity. At country level, a detailed annual risk appetite assessment is performed, where its portfolio is assessed for how it contributes towards upholding the Group's risk appetite statement and to assess key issues and potential concerns around the country's business strategy and portfolio composition.

Stress Testing

Stress testing and scenario analysis are used to assess the capability of the Bank to continue operating effectively under extreme but plausible trading conditions. Stress testing activities are performed as necessary, to evaluate the impact on the portfolio or on certain customer segments, as a result of developments in the market.

4.0 Regulatory capital requirement

Disclosure on capital adequacy under the Standardised and IRB approach

31 December 2012 Exposure class	Gross exposures RM'000	Net exposures RM'000	Risk weighted assets RM'000	Risk weighted assets absorbed by PSIA RM'000	Total risk weighted assets after effects of PSIA RM'000	Minimum Capital requirement at 8% RM'000
(a) Credit risk						
Exposures under the Standardised approach						
On-balance sheet exposures:-						
Corporates	218,888	217,388	217,388	-	217,388	17,391
Regulatory retail	362,010	362,010	271,569	-	271,569	21,726
Other assets	152,763	152,763	136,679	-	136,679	10,934
Defaulted exposures	917	917	1,092	-	1,092	87
Total on-balance sheet exposures	734,578	733,078	626,728	-	626,728	50,138
Off-balance sheet exposures:-						
Off-balance sheet exposures other than OTC derivative transactions and credit derivatives	105,768	105,768	93,970	-	93,970	7,518
Total off-balance sheet exposures	105,768	105,768	93,970	-	93,970	7,518
Total on and off-balance sheet exposures	840,346	838,846	720,698	-	720,698	57,656
Exposures under the IRB approach						
On-balance sheet exposures:-						
Sovereigns/central banks	2,797,679	2,821,679	138,595	-	138,595	11,088
Banks, development financial institutions & MDBs	530,952	530,952	46,009	-	46,009	3,681
Insurance companies, securities firms &					-	
fund managers	200,688	200,688	59,830	-	59,830	4,786
Corporates	1,215,121	1,191,121	950,942	(927,363)	23,579	1,886
Residential mortgages	589,730	589,730	154,599	-	154,599	12,368
Other retail	1,298,944	1,298,944	1,894,193	-	1,894,193	151,535
Defaulted exposures	88,702	88,702	206,210	-	206,210	16,497
Total on-balance sheet exposures	6,721,816	6,721,816	3,450,378	(927,363)	2,523,015	201,841
Off-balance sheet exposures:-						
OTC derivatives	21,601	21,601	29,403	-	29,403	2,352
Off-balance sheet exposures other than OTC derivative transactions and credit derivatives	559,249	559,249	183,797	(19,847)	163,950	13,116
Total off-balance sheet exposures	580,850	580,850	213,200	(19,847)	193,353	15,468
Total on and off-balance sheet exposures	7,302,666	7,302,666	3,663,578	(947,210)	2,716,368	217,309
(b) Large exposures risk requirement			-	-	-	-
(c) Market risk			-	-	-	-
(d) Operational risk (Basic indicator approach)			384,920	-	384,920	30,794
Total RWA and capital requirements			4,769,196	(947,210)	3,821,986	305,759

Tier 1 capital ratio and risk-weighted capital ratio

	Before effect of PSIA	After effect of PSIA
Tier 1 capital ratio	9.20%	11.48%
Risk-weighted capital ratio	9.20%	11.48%

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4.0 Regulatory capital requirement (continued)

Disclosure on capital adequacy under the Standardised and IRB approach (continued)

31 December 2011 Exposure class	Gross exposures RM'000	Net exposures RM'000	Risk weighted assets RM'000	Risk weighted assets absorbed by PSIA RM'000	Total risk weighted assets after effects of PSIA RM'000	Minimum Capital requirement at 8% RM'000
(a) Credit risk						
Exposures under the Standardised approach						
On-balance sheet exposures:-						
Corporates	106,244	106,244	106,244	-	106,244	8,500
Regulatory retail	56,704	56,513	42,386	-	42,386	3,391
Residential mortgages	8	8	3	-	3	-
Other assets	78,666	78,801	67,174	-	67,174	5,374
Defaulted exposures	215	215	322	-	322	26
Total on-balance sheet exposures	241,837	241,781	216,129	-	216,129	17,291
Off-balance sheet exposures:-						
Off-balance sheet exposures other than OTC derivative transactions and credit derivatives	6,954	6,954	6,457	-	6,457	517
Total off-balance sheet exposures	6,954	6,954	6,457	-	6,457	517
Total on and off-balance sheet exposures	248,791	248,735	222,586	-	222,586	17,808
Exposures under the IRB approach						
On-balance sheet exposures:-						
Sovereigns/central banks	2,870,513	2,870,513	142,996	-	142,996	11,440
Banks, development financial institutions & MDBs	159,561	159,561	7,932	-	7,932	635
Corporates	1,014,667	1,014,667	681,990	(530,364)	151,626	12,130
Residential mortgages	363,102	363,102	85,734	-	85,734	6,859
Other retail	1,305,721	1,305,721	1,912,068	-	1,912,068	152,965
Defaulted exposures	66,081	66,081	153,331	-	153,331	12,266
Total on-balance sheet exposures	5,779,645	5,779,645	2,984,051	(530,364)	2,453,687	196,295
Off-balance sheet exposures:-						
OTC derivatives	62,183	62,183	40,659	-	40,659	3,253
Off-balance sheet exposures other than OTC derivative transactions and credit derivatives	399,929	399,929	154,383	-	154,383	12,351
Defaulted exposures	27	27	30	-	30	2
Total off-balance sheet exposures	462,139	462,139	195,072	-	195,072	15,606
Total on and off-balance sheet exposures	6,241,784	6,241,784	3,179,123	(530,364)	2,648,759	211,901
(b) Large exposures risk requirement			-	-	-	-
(c) Market risk			-	-	-	-
(d) Operational risk (Basic indicator approach)			314,840	-	314,840	25,187
Total RWA and capital requirements			3,716,549	(530,364)	3,186,185	254,896

Tier 1 capital ratio and risk-weighted capital ratio

	Before effect of PSIA	After effect of PSIA
Tier 1 capital ratio	10.64%	12.42%
Risk-weighted capital ratio	10.64%	12.42%

5.0 Credit risk

Credit risk is the potential for loss due to the failure of a counterparty to meet its obligations to pay the Bank in accordance with agreed terms. 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

The Bank adopts credit policies and standards issued by Standard Chartered PLC Group. Standard Chartered PLC Group-wide credit policies and standards are considered and approved by its Group Risk Committee ("GRC"), which also oversees the delegation of credit approval and financing 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 Standard Chartered PLC 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 judgment and experience, in informed 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”), Risk-Weighted Assets ("RWA") and capital requirements on a transaction, counterparty and portfolio basis. The Bank 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, group of connected counterparty, 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. Internal Ratings Based ("IRB") portfolio metrics are widely used in these reports. Regular portfolio risk reports are made available at senior management committee meetings including RMC and BRC.

All IRB models are validated annually by an independent Group Model Validation team with findings presented to the Group Model Assessment Committee ("GMAC"), which in turn makes recommendations to the Group WB Risk Committee and Group CB Risk Committee for approval. The GMAC 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. As part of local governance, IRB model development and validation findings are subjected to local Model Assessment Committee (“MAC”), Risk Management Committee (“RMC”) and Board Risk Committee (“BRC”) review, endorsement and recommendation to the Board for approval. 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 Standard Chartered PLC Group’s Credit Committee (“GCC”). The GCC derives its authority from the GRC.

All other credit approval authorities are delegated by Group Risk and Country RMC to individuals at Country level based on their judgment 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 except for a few authorised cases. In those very few exceptions where they are not, originators can only approve limited exposures within defined risk parameters.

5. Credit risk (continued)

Concentration risk

Credit concentration risk is managed within concentration caps set by counterparty or groups of connected counterparties and by industry sector in Wholesale Banking; and by product in Consumer Banking. Additional targets are set and monitored for concentrations by credit rating. Credit concentrations are monitored by the RMC and concentration limits that are material to Standard Chartered PLC Group are reviewed and approved at least annually by the GCC at Group level.

Section 5.1 provides further analysis on the Bank's credit risk exposures.

Credit monitoring

The Bank regularly monitors credit exposures, portfolio performance, and external trends which may impact risk management outcomes. Internal risk management reports are presented to RMC, containing information on key economic trends, portfolio delinquency and financing impairment performance, as well as IRB portfolio metrics including credit grade migration.

Clients 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 Early Alert Committee ("EAC"). 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 Group Special Assets Management (“GSAM”), the specialist recovery unit.

In Consumer Banking, portfolio delinquency trends are monitored continuously at a detailed level. Individual customer behaviour is also tracked and informs financing 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 specialised recovery team.

The Small and Medium Enterprise (“SME”) business is managed within Consumer Banking in two distinct segments: Discretionary Financing, and Programme Financing, differentiated by the annual turnover of the counterparty. Accounts under Discretionary Financing are monitored in line with Wholesale Banking procedures, while accounts under Programme Financing are monitored in line with other Consumer Banking accounts. Past due accounts under Discretionary Financing that meet the agreed criteria for management by GSAM are managed by GSAM.

(i) Internal Ratings Based approach to credit risk

The Bank uses the IRB approach to manage credit risk for its portfolios. This allows the Bank 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. It is the Bank's internal estimate of PD for all customers in each customer 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 disbursed from the undisbursed portion in a committed facility. LGD is the percentage of EAD that the Bank expects to lose in the event of obligor default.

All assets under the IRB approach have sophisticated PD, LGD and EAD/CCF models developed to support the credit decision making process. RWA under the IRB approach is determined by BNM's specified formulae dependent on the Bank's estimates of PD, LGD, EAD and CCF. The development, use and governance of models under the IRB approach is covered in more detail in Section 5 (iv).

Banks are allowed 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 Bank's credit risk-weighted assets.

5. Credit risk (continued)

Credit monitoring (continued)

(ii) Standardised approach to credit risk

The Standardised approach is applied to portfolios that are classified as permanently exempt from the IRB approach, and those portfolios that are currently under transition to the IRB approach.

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 BNM and is based on the asset class to which the exposure is assigned.

(iii) Credit risk mitigation

Potential credit losses from any given account, customer or portfolio are mitigated using a range of tools such as collateral, credit insurance/takaful, 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 properties, marketable securities, bank guarantees and letters of credit.

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/takaful companies, parent companies, shareholders and Credit Guarantee Corporation ("CGC"). 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 financing is maintained at fair value.

For further information regarding credit risk mitigation in the trading book see Section 5 (vii).

5. Credit risk (continued)

Credit monitoring (continued)

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 Group Consumer Banking Risk Committee.

In order to be recognised as security and for the financing 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 Standard Chartered PLC 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 the Group and the Bank as the loss payee under the insurance/takaful policy.

Detailed procedures over collateral management are in place for each business within the Bank.

Section 5.2 provides further analysis on the Bank's credit risk exposures after the effect of CRM.

5. Credit risk (continued)

Credit monitoring (continued)

(iv) Internal Ratings Based models

Model governance

The IRB models used by the Bank calculate a conservative PD, LGD and EAD, as borne out by the model performance data. The product of this is a conservative view of Regulatory Expected Loss, which is considered necessary for the calculation of regulatory capital.

Models are developed by Standard Chartered PLC's Group Analytics teams within the Consumer Banking and Wholesale Banking risk functions and Standard Chartered PLC's Group Risk. The model development process is conducted and documented in line with specific criteria setting out the minimum standards for model development. All IRB models are validated annually by a model validation team reporting to Standard Chartered PLC's Chief Credit Officer, thereby maintaining independence from the model building processes. Model validation findings are presented to GMAC 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 BRC periodically review overall model performance. As part of local governance, IRB model development and validation findings are subject to the review of the local MAC, RMC and BRC for endorsement and recommendation to the Board for approval.

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 realised 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.

Locally, models are tabled with the Bank's MAC, RMC and BRC for review, endorsement and recommendation to the Board for approval. These decision making bodies are comprised of senior management whose role is to review model assumptions, performance, local regulatory requirements, agree on appropriate model use for local business decision making and capital reporting.

5. Credit risk (continued)

Credit monitoring (continued)

(iv) Internal Ratings Based models (continued)

PD model development

Standard Chartered PLC 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, Standard Chartered PLC 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.

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

Standard Chartered PLC 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 and product have predictive content.

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

5. Credit risk (continued)

Credit monitoring (continued)

(iv) Internal Ratings Based models (continued)

EAD model development
An EAD model is developed for exposures such as lines of credit and other commitments. Based on Standard Chartered PLC Group's experience (and supplemented by external data), EAD models assess changes to limits and the likely disbursement of committed and uncommitted limits as an exposure approaches default. The factor generated by the model and applied to the undisbursed limit is referred to as the Credit Conversion Factor.

Standard Chartered PLC 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, IRB models also support risk-based pricing methodologies and measures used to assess business performance such as Economic Capital, Economic Revenue and Economic Profit.

The models are governed by relevant policies and procedures.

Section 5.3 provides further analysis on the Bank's credit risk exposures under the IRB approach.

Wholesale Banking model results

The Bank started its operation in October 2008. There have been no defaults ever and hence no information provided for observed PD, realised LGD and realised EAD.

AIRB PD estimates are computed as of 1 January 2012 and are compared with default observations through 31 December 2012 for three exposure class. The predicted LGD is based on the model output as of 1 January 2012.

	Predicted PD %	Observed PD %	Predicted LGD %	Realised LGD %	Predicted EAD/ Realised EAD
IRB exposures					
Central governments or central banks	0.0%	0.0%	26.2%	-	-
Institutions	0.1%	0.0%	27.5%	-	-
Corporates	1.2%	0.0%	33.8%	-	-

Consumer Banking model results

Consumer Banking models have been developed for majority of its portfolios. Predicted PD was computed as at 1 January 2012 and compared to the actual default observations over a one year period ended 31 December 2012. The observed higher default rate for Other Retail assets class as compared to the predicted PD is attributed primarily to personal financing exposures, of which a series of portfolio initiatives has been implemented to manage this exposure.

The realised LGD is calculated based on recoveries over a 24 month workout period and compared to predicted LGD. Realised LGD is lower than the predicted values for Other Retail asset class, primarily due to the model using "downturn" parameter settings to predict LGD. The realised LGD for residential mortgages was higher than predicted LGD due to small number of defaults that caused volatility in the realised LGD.

No material difference between predicted EAD as compared to realised EAD.

5. Credit risk (continued)

Credit monitoring (continued)

(iv) Internal Ratings Based models (continued)

Consumer Banking model results (continued)

	Predicted PD %	Actual PD %	Predicted LGD %	Actual LGD %	Predicted EAD/ Actual EAD
IRB exposures					
Residential mortgages	5.2%	2.1%	17.6%	22.1%	1.0
Other retail exposures	8.8%	12.0%	92.0%	82.7%	1.1

Actual losses

The table below shows net individual impairment charges as at 31 December 2011 versus net individual impairment charges raised during the 2012 financial year for IRB exposure classes. The net individual impairment charge is a point in time actual charge raised in accordance with accounting standards that require the Bank to either provide for or write-off debts when certain conditions are met as described in section 5 (vi) Problem credit management and provisioning.

	31 December 2012 Net individual impairment charges RM'000	31 December 2011 Net individual impairment charges RM'000
Residential Mortgages	1,587	4,293
Other Retail	67,135	48,063
	68,722	**52,356**

(v) 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 Standard Chartered PLC Group's internal estimate of PD 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. In Wholesale Banking, 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. In Consumer Banking, credit grades 1A to 12D are assigned to performing customers or accounts. Both Default and debt relief accounts ("DRP") (restructured accounts under the Bank's Debt Relief Program) are treated as non performing accounts.

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

5. Credit risk (continued)

Credit monitoring (continued)

(v) Risk grade profile (continued)

As a guide, the table below presents the Bank's credit grades corresponding 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	AA–	A/A–
3B	A+	A–/BBB+
4A	A/A–	BBB+
4B	A–/BBB+	BBB
5A	BBB	BBB/BBB–
5B	BBB–	BBB–/BB+
6A	BB+	BB+
6B	BB+	BB
7A	BB	BB,BB–
7B	BB	BB–
8A	BB–	BB–/B+
8B	BB–	B+
9A	B+	B
9B	B+	B/B–
10A	B	B–
10B	B	B–/CCC
11A/B/C	B–	CCC
12A/B/C	N/A	N/A

* Represents corporates/non-bank financial institutions.

Credit grades for Consumer Banking accounts covered by IRB 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 Bank's internal data. For Consumer Banking portfolios where IRB models have not yet been developed, the probability of default is calculated using historical portfolio delinquency flow rates and expert judgment, where applicable.

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

The Bank 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 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. Consumer Banking pricing considers obligor's risk profile (as it takes into account the financing size and customer segment), pricing regulations if any, and competition in the market place;
- 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 Bank do not have over concentration of low credit quality assets. The Bank's concentration risk monitoring dashboard utilises IRB Model output such as credit grades, PD, LGD and EADs. In Consumer Banking, portfolio limits are based on recession loss;
- Provisioning – The Bank complies with BNM's "Guidelines on Classification and Impairment Provisions for Loans/Financing" which prescribes that banking institutions are required to maintain Collective Impairment Provisions ("CIP") of at least 1.5% of total outstanding financing and advances, net of individual impairment provisions;

5. Credit risk (continued)

Credit monitoring (continued)

(v) Risk grade profile (continued)

- Risk Appetite assessment – 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 assessment; and
- Economic Capital – PD, LGD and EAD are key components of the model in credit risk economic capital calculation.

(vi) Problem credit management and provisioning

Consumer Banking
In Consumer Banking, where there are large numbers of small value financing, a primary indicator of potential impairment is delinquency. However, not all delinquent financing (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 Bank measures 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) 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 CIP is raised on a portfolio basis. CIP 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 CIP methodology provides for accounts for which an individual impairment provision has not been raised.

For unsecured products, the entire outstanding amount is generally written off at 150 days past due. Secured financing IIP are raised at 150 days past due.

The provisions are based on the estimated present values of future cash flows, in particular those resulting from the realisation of security. Following such realisations any remaining amount 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 of 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 is accelerated for all restructured accounts to 90 days past due (unsecured).

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

Wholesale Banking
Financing are classified as impaired and considered impaired where analysis and review indicates that full payment of either profit or principal is questionable, or as soon as payment of profit or principal is 90 days overdue. Impaired accounts are managed by GSAM, which is separate from the main businesses. Where any amount is considered irrecoverable, an IIP is raised. This provision is the difference between the financing 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. In any decision relating to the raising of provisions, the Bank 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.

Section 5.5 provides further analysis on the Bank's exposures on problem credit management and provisioning.

5. Credit risk (continued)

Credit monitoring (continued)

(vii) Counterparty credit risk in the trading book

Counterparty credit risk ("CCR") is the risk that the Bank's counterparty in a foreign exchange, profit rate, commodity, equity or credit derivative contract defaults prior to maturity date of the contract and that the Bank 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 financing limits to banks and customers.

The Bank 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.

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 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 Bank negotiates CSA terms for certain counterparties where the thresholds related to each party are dependent on their internal rating model. Such clauses are typically mutual in nature. It is therefore recognised that a downgrade in the Bank'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 Bank, 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 Bank 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 Ringgit equivalent amount owed by the counterparty to the Bank 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 vary according to the underlying asset class and tenor of each trade.

Section 5.6 provides further analysis on the Bank's off-balance sheet and counterparty credit risk.

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5.0 Credit risk

5.1 Exposure values

The following tables detail the Bank'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 outstanding and accrued profit and fees, plus a proportion of the undrawn component of the facility. The amount of the undisbursed facility included is dependant on the product type, and for IRB exposure classes this amount is modeled internally.

Geographical analysis

The below tables provide the Bank's EAD analysed by the booking location of the exposure.

31 December 2012	Malaysia RM'000	Others RM'000	Total RM'000
IRB exposures			
Sovereigns/Central banks	2,797,679	-	2,797,679
Banks, development financial institutions & multilateral development banks ("MDBs")	539,226	-	539,226
Insurance/Takaful companies, securities firms & fund managers	201,309	-	201,309
Corporate exposures (excluding specialised financing	1,358,729	6,820	1,365,549
and firm-size adjustment)			-
Corporate exposures (with firm-size adjustment)	11,085	-	11,085
Specialised financing	117,066	-	117,066
Retail exposures	2,270,752	-	2,270,752
Residential mortgages	*874,190*	-	*874,190*
Other retail exposures	*1,396,562*	-	*1,396,562*
Total IRB exposures	**7,295,846**	**6,820**	**7,302,666**
Standardised exposures			
Corporates	277,704	-	277,704
Regulatory retail	409,879	-	409,879
Other assets	152,763	-	152,763
Total Standardised exposures	**840,346**	**-**	**840,346**
Total credit risk exposures	**8,136,192**	**6,820**	**8,143,012**

5.0 Credit risk (continued)

5.1 Exposure values (continued)

Geographical analysis (continued)

31 December 2011	Malaysia RM'000	Others RM'000	Total RM'000
IRB exposures			
Sovereigns/Central banks	2,870,513	-	2,870,513
Banks, development financial institutions & multilateral development banks ("MDBs")	76,964	119,347	196,311
Insurance/Takaful companies, securities firms & fund managers	498	-	498
Corporate exposures (excluding specialised financing and firm-size adjustment)	1,202,094	10,339	1,212,433
Corporate exposures (with firm-size adjustment)	77,312	-	77,312
Qualifying corporate purchased receivables	-	-	-
Specialised financing	108,196	-	108,196
Retail exposures	1,776,521	-	1,776,521
Residential mortgages	*383,194*	-	*383,194*
Other retail exposures	*1,393,327*	-	*1,393,327*
Total IRB exposures	**6,112,098**	**129,686**	**6,241,784**
Standardised exposures			
Corporates	111,211	-	111,211
Regulatory retail	58,906	-	58,906
Residential mortgages	8	-	8
Other assets	78,666	-	78,666
Total Standardised exposures	**248,791**	**-**	**248,791**
Total credit risk exposures	**6,360,889**	**129,686**	**6,490,575**

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5.0 Credit risk (continued)

5.1 Exposure values (continued)

Sector or economic purpose analysis

The below tables provide the Bank's EAD analysed by sector or economic purpose of the exposure.

31 December 2012	Agricultural, hunting, forestry and fishing RM'000	Mining and quarrying RM'000	Manufacturing RM'000	Electricity, gas and water RM'000	Construction RM'000	Wholesale & retail trade and restaurants & hotels RM'000	Transportation, storage and communication RM'000	Finance, insurance/ takaful and services RM'000	Real estate RM'000	Household RM'000	Others RM'000	Total RM'000
IRB exposures												
Sovereigns/Central banks	-	-	-	-	-	-	-	2,797,679	-	-	-	2,797,679
Banks, development financial institutions & MDBs	-	-	-	-	-	-	-	530,952	-	-	8,274	539,226
Insurance/Takaful companies, securities firms & fund managers	-	-	-	-	-	-	-	200,871	-	-	438	201,309
Corporate exposures (excluding specialised financing and firm-size adjustment)	151,643	68,638	441,334	-	28,150	314,287	202,513	120,115	-	-	38,869	1,365,549
Corporate exposures (with firm-size adjustment)	-	-	-	-	3,000	3,008	1,504	3,573	-	-	-	11,085
Specialised financing	-	-	-	-	-	-	-	-	117,066	-	-	117,066
Retail exposures	-	-	-	-	444	1,369	-	171	-	2,224,094	44,674	2,270,752
Residential mortgages	-	-	-	-	-	-	-	-	-	874,190	-	874,190
Other retail exposures	-	-	-	-	444	1,369	-	171	-	1,349,904	44,674	1,396,562
Total IRB exposures	**151,643**	**68,638**	**441,334**	**-**	**31,594**	**318,664**	**204,017**	**3,653,361**	**117,066**	**2,224,094**	**92,255**	**7,302,666**
Standardised exposures												
Corporates	1,313	-	45,753	-	21,233	37,915	20,410	11,908	22,279	-	116,893	277,704
Regulatory retail	2,136	1,902	102,432	2,225	42,971	116,348	23,464	28,480	5,470	3,624	80,827	409,879
Residential mortgages	-	-	-	-	-	-	-	-	-	-	-	-
Other assets	-	-	-	-	-	-	-	-	-	-	152,763	152,763
Total Standardised exposures	**3,449**	**1,902**	**148,185**	**2,225**	**64,204**	**154,263**	**43,874**	**40,388**	**27,749**	**3,624**	**350,483**	**840,346**
Total credit risk exposures	**155,092**	**70,540**	**589,519**	**2,225**	**95,798**	**472,927**	**247,891**	**3,693,749**	**144,815**	**2,227,718**	**442,738**	**8,143,012**

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5.0 Credit risk (continued)

5.1 Exposure values (continued)

Sector or economic purpose analysis (continued)

31 December 2011	Agricultural, hunting, forestry and fishing RM'000	Mining and quarrying RM'000	Manufacturing RM'000	Electricity, gas and water RM'000	Construction RM'000	Wholesale & retail trade and restaurants & hotels RM'000	Transportation, storage and communication RM'000	Finance, insurance/ takaful and services RM'000	Real estate RM'000	Household RM'000	Others RM'000	Total RM'000
IRB exposures												
Sovereigns/Central banks	-	-	-	-	-	-	-	2,870,513	-	-	-	2,870,513
Banks, development financial institutions & MDBs	-	-	-	-	-	-	-	196,311	-	-	-	196,311
Insurance/Takaful companies, securities firms & fund managers	-	-	-	-	-	-	-	498	-	-	-	498
Corporate exposures (excluding specialised financing and firm-size adjustment)	123,383	39,475	488,212	-	10,620	154,822	197,907	124,980	52,707	-	20,327	1,212,433
Corporate exposures (with firm-size adjustment)	-	41,611	16,079	-	5,002	2,459	3,979	8,182	-	-	-	77,312
Specialised financing	-	-	-	-	-	-	-	-	108,196	-	-	108,196
Retail exposures	-	-	-	-	-	1,368	333	-	-	1,716,494	58,326	1,776,521
Residential mortgages	-	-	-	-	-	-	-	-	-	383,194	-	383,194
Other retail exposures	-	-	-	-	-	1,368	333	-	-	1,333,300	58,326	1,393,327
Total IRB exposures	**123,383**	**81,086**	**504,291**	**-**	**15,622**	**158,649**	**202,219**	**3,200,484**	**160,903**	**1,716,494**	**78,653**	**6,241,784**
Standardised exposures												
Corporates	1,313	-	32,925	-	10,495	14,738	3,546	-	26,332	-	21,862	111,211
Regulatory retail	-	-	32,369	2,292	2,129	9,876	1,972	8,404	-	1,036	828	58,906
Residential mortgages	-	-	-	-	-	-	-	-	-	8	-	8
Other assets	-	-	-	-	-	-	-	-	-	-	78,666	78,666
Total Standardised exposures	**1,313**	**-**	**65,294**	**2,292**	**12,624**	**24,614**	**5,518**	**8,404**	**26,332**	**1,044**	**101,356**	**248,791**
Total credit risk exposures	**124,696**	**81,086**	**569,585**	**2,292**	**28,246**	**183,263**	**207,737**	**3,208,888**	**187,235**	**1,717,538**	**180,009**	**6,490,575**

5.0 Credit risk (continued)

5.1 Exposure values (continued)

Residual contractual maturity analysis

The following tables show the Bank's residual maturity of EAD by each principal category of exposure class.

31 December 2012	Up to 1 year RM'000	> 1 - 5 years RM'000	Over 5 years RM'000	Total RM'000
IRB exposures				
Sovereigns/Central banks	2,797,679	-	-	2,797,679
Banks, development financial institutions & MDBs	532,832	2,326	4,068	539,226
Insurance/Takaful companies, securities firms & fund managers	613	200,688	8	201,309
Corporate exposures (excluding specialised financing and firm-size adjustment)	842,069	214,710	308,770	1,365,549
Corporate exposures (with firm-size adjustment)	11,085	-	-	11,085
Specialised financing	56,074	60,992	-	117,066
Retail exposures	596,897	1,245,203	428,652	2,270,752
Residential mortgages	*528,878*	*6,825*	*338,487*	*874,190*
Other retail exposures	*68,019*	*1,238,378*	*90,165*	*1,396,562*
Total IRB exposures	**4,837,249**	**1,723,919**	**741,498**	**7,302,666**
Standardised exposures				
Corporates	14,994	115,455	147,255	277,704
Regulatory retail	5,134	300,485	104,260	409,879
Other assets	152,763	-	-	152,763
Total Standardised exposures	**172,891**	**415,940**	**251,515**	**840,346**
Total credit risk exposures	**5,010,140**	**2,139,859**	**993,013**	**8,143,012**

Note: The above table shows that exposures with residual contractual maturity more than 5 years amounted to RM993,013,000. Of this amount, 46% are collateralized.

5.0 Credit risk (continued)

5.1 Exposure values (continued)

Residual contractual maturity analysis (continued)

31 December 2011	Up to 1 year RM'000	> 1 - 5 years RM'000	Over 5 years RM'000	Total RM'000
IRB exposures				
Sovereigns/Central banks	2,846,513	24,000	-	2,870,513
Banks, development financial institutions & MDBs	177,117	8,715	10,479	196,311
Insurance/Takaful companies, securities firms & fund managers	27	182	289	498
Corporate exposures (excluding specialised financing and firm-size adjustment)	596,021	377,711	238,701	1,212,433
Corporate exposures (with firm-size adjustment)	66,129	11,183	-	77,312
Specialised financing	107,433	763	-	108,196
Retail exposures	71,044	1,246,876	458,601	1,776,521
Residential mortgages	*11,816*	*4,814*	*366,564*	*383,194*
Other retail exposures	*59,228*	*1,242,062*	*92,037*	*1,393,327*
Total IRB exposures	**3,864,284**	**1,669,430**	**708,070**	**6,241,784**
Standardised exposures				
Corporates	5,230	54,125	51,856	111,211
Regulatory retail	2,849	50,318	5,739	58,906
Residential mortgages	8	-	-	8
Other assets	78,666	-	-	78,666
Total Standardised exposures	**86,753**	**104,443**	**57,595**	**248,791**
Total credit risk exposures	**3,951,037**	**1,773,873**	**765,665**	**6,490,575**

Note: The above table shows that exposures with residual contractual maturity more than 5 years amounted to RM765,665,000. Of this amount, 70% are collateralized.

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5.0 Credit risk (continued)

5.2 Credit risk mitigation

The following tables disclose the total exposure before the effect of Credit Risk Mitigation ("CRM") and the exposures covered by guarantees/credit derivatives, eligible financial collateral and other eligible collateral, shown by exposure class.

31 December 2012	Exposures before CRM RM'000	Exposures covered by guarantees or credit derivatives RM'000	Exposures covered by eligible financial collateral RM'000	Exposures covered by other eligible collateral RM'000
On-balance sheet exposures				
Sovereigns/Central banks	2,797,679	-	-	-
Banks, development financial institutions & MDBs	530,952	-	-	-
Insurance companies, securities firms & fund managers	200,688	-	2,592	-
Corporates	1,322,701	23,066	40,312	245,023
Regulatory retail	1,660,954	-	-	-
Residential mortgages	589,730	-	-	536,560
Other assets	152,763	-	-	-
Specialised financing/investment	111,308	-	-	-
Defaulted exposures	89,619	-	-	3,144
Total on-balance sheet exposures	**7,456,394**	**23,066**	**42,904**	**784,727**
Off-balance sheet exposures				
OTC derivatives	21,601	-	-	-
Off balance sheet exposures other than OTC derivatives or credit derivatives	665,017	-	-	161,780
Defaulted exposures	-	-	-	-
Total off-balance sheet exposures	**686,618**	**-**	**-**	**161,780**
Total on and off-balance sheet exposures	**8,143,012**	**23,066**	**42,904**	**946,507**

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5.0 Credit risk (continued)

5.2 Credit risk mitigation (continued)

31 December 2011	Exposures before CRM RM'000	Exposures covered by guarantees or credit derivatives RM'000	Exposures covered by eligible financial collateral RM'000	Exposures covered by other eligible collateral RM'000
On-balance sheet exposures				
Sovereigns/Central banks	2,870,513	-	-	-
Banks, development financial institutions & MDBs	159,561	-	-	-
Corporates	1,013,477	24,000	26,391	315,129
Regulatory retail	1,362,425	135	56	-
Residential mortgages	363,110	-	-	358,479
Other assets	78,666	-	-	-
Specialised financing/investment	107,434	-	-	-
Defaulted exposures	66,296	-	-	6,926
Total on-balance sheet exposures	**6,021,482**	**24,135**	**26,447**	**680,534**
Off-balance sheet exposures				
OTC derivatives	62,183	-	-	-
Off balance sheet exposures other than OTC derivatives or credit derivatives	406,883	-	1,808	12,088
Defaulted exposures	27	-	-	27
Total off-balance sheet exposures	**469,093**	**-**	**1,808**	**12,115**
Total on and off-balance sheet exposures	**6,490,575**	**24,135**	**28,255**	**692,649**

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5.0 Credit risk (continued)

5.3 Exposures under IRB approach

Exposures under the IRB approach by risk grade or PD band for non-retail exposures

The below tables analyse the Bank's PD range or internal risk grading for non-retail exposures.

31 December 2012	0<0.04% RM'000	0.04<0.17% RM'000	0.17<0.59% RM'000	0.59<3.05% RM'000	3.05<12.00% RM'000	12.00<100% RM'000	Default or 100% RM'000
Non-retail exposures (EAD)							
On-balance sheet exposures							
Sovereign	2,797,679	-	-	-	-	-	-
Bank	-	530,952	-	-	-	-	-
Corporate	24,000	401,077	245,823	729,759	15,150	-	-
Total on-balance sheet exposures	**2,821,679**	**932,029**	**245,823**	**729,759**	**15,150**	**-**	**-**
Undrawn commitments							
Corporate	-	26,095	23,350	12,434	-	-	-
Total undrawn commitments	**-**	**26,095**	**23,350**	**12,434**	**-**	**-**	**-**
Derivatives							
Bank	-	8,274	-	-	-	-	-
Corporate	-	-	-	13,327	-	-	-
Total derivatives	**-**	**8,274**	**-**	**13,327**	**-**	**-**	**-**
Contingent							
Corporate	-	-	94,900	109,094	-	-	-
Total contingent	**-**	**-**	**94,900**	**109,094**	**-**	**-**	**-**
Exposure weighted average LGD (%)							
Sovereign	26.20%	-	-	-	-	-	-
Bank	-	26.20%	-	-	-	-	-
Corporate	67.27%	49.16%	44.25%	41.10%	6.20%	-	-
Exposure weighted average risk weight (%)							
Sovereign	4.68%	-	-	-	-	-	-
Bank	-	8.68%	-	-	-	-	-
Corporate	32.22%	27.64%	46.39%	97.44%	26.65%	-	-

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5.0 Credit risk (continued)

5.3 Exposures under IRB approach (continued)

Exposures under the IRB approach by risk grade or PD band for non-retail exposures (continued)

31 December 2011	0<0.04% RM'000	0.04<0.17% RM'000	0.17<0.59% RM'000	0.59<3.05% RM'000	3.05<12.00% RM'000	12.00<100% RM'000	Default or 100% RM'000
Non-retail exposures (EAD)							
On-balance sheet exposures							
Sovereign	2,870,513	-	-	-	-	-	-
Bank	119,347	40,214	-	-	-	-	-
Corporate	-	55,651	254,915	624,305	79,796	-	-
Total on-balance sheet exposures	**2,989,860**	**95,865**	**254,915**	**624,305**	**79,796**	**-**	**-**
Undrawn commitments							
Corporate	-	23,002	26,660	6,856	125	-	-
Total undrawn commitments	**-**	**23,002**	**26,660**	**6,856**	**125**	**-**	**-**
Derivatives							
Bank	-	33,418	-	3,332	-	-	-
Corporate	-	-	-	25,433	-	-	-
Total derivatives	**-**	**33,418**	**-**	**28,765**	**-**	**-**	**-**
Contingent							
Corporate	-	-	25,271	276,425	-	-	-
Total contingent	**-**	**-**	**25,271**	**276,425**	**-**	**-**	**-**
Exposure weighted average LGD (%)							
Sovereign	26.57%	-	-	-	-	-	-
Bank	26.20%	24.91%	-	26.20%	-	-	-
Corporate	-	51.67%	52.01%	26.62%	21.86%	-	-
Exposure weighted average risk weight (%)							
Sovereign	4.98%	-	-	-	-	-	-
Bank	4.68%	8.85%	-	49.90%	-	-	-
Corporate	-	21.01%	43.52%	67.45%	74.70%	-	-

5.0 Credit risk (continued)

5.3 Exposures under IRB approach (continued)

Exposures under the IRB approach by risk grade or PD band for retail exposures

The below tables analyse the Bank's PD range for retail exposures.

31 December 2012	0<0.11% RM'000	0.11<0.30% RM'000	0.30<0.43% RM'000	0.43<3.05% RM'000	3.05<9.20% RM'000	9.20<100% RM'000	Default or 100% RM'000
Retail exposures (EAD)							
On-balance sheet exposures							
Residential mortgage	59	37,455	32,137	414,400	70,291	35,388	3,558
Other retail	7,977	4,948	4,181	511,583	509,375	260,880	85,144
Total on-balance sheet exposures	**8,036**	**42,403**	**36,318**	**925,983**	**579,666**	**296,268**	**88,702**
Undrawn commitments							
Residential mortgage	-	-	-	274,935	5,426	541	-
Other retail	-	-	-	11,955	499	20	-
Total undrawn commitments	**-**	**-**	**-**	**286,890**	**5,925**	**561**	**-**
Exposure weighted average LGD (%)							
Residential mortgage	12.35%	12.16%	12.16%	12.42%	12.40%	13.00%	16.57%
Other retail	17.97%	18.82%	20.99%	91.11%	93.47%	94.09%	85.60%
Exposure weighted average risk weight (%)							
Residential mortgage	6.01%	8.78%	11.14%	24.75%	47.31%	70.61%	103.18%
Other retail	3.29%	9.79%	13.06%	119.78%	145.97%	202.06%	237.88%

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5.0 Credit risk (continued)

5.3 Exposures under IRB approach (continued)

Exposures under the IRB approach by risk grade or PD band for retail exposures (continued)

31 December 2011	0<0.11% RM'000	0.11<0.30% RM'000	0.30<0.43% RM'000	0.43<3.05% RM'000	3.05<9.20% RM'000	9.20<100% RM'000	Default or 100% RM'000
Retail exposures (EAD)							
On-balance sheet exposures							
Residential mortgage	45	28,536	22,554	250,449	37,452	24,066	7,566
Other retail	11,801	7,697	6,959	393,413	655,917	229,934	58,515
Total on-balance sheet exposures	**11,846**	**36,233**	**29,513**	**643,862**	**693,369**	**254,000**	**66,081**
Undrawn commitments							
Residential mortgage	-	-	-	11,752	338	409	27
Other retail	9	-	-	18,476	9,500	1,106	-
Total undrawn commitments	**9**	**-**	**-**	**30,228**	**9,838**	**1,515**	**27**
Exposure weighted average LGD (%)							
Residential mortgage	12.32%	12.28%	12.32%	12.64%	12.67%	13.56%	20.65%
Other retail	20.94%	21.09%	25.38%	89.31%	93.97%	94.22%	83.67%
Exposure weighted average risk weight (%)							
Residential mortgage	2.99%	5.75%	8.12%	19.86%	44.69%	68.94%	113.66%
Other retail	3.61%	10.90%	15.88%	119.56%	146.34%	204.31%	247.34%

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5.0 Credit risk (continued)

5.3 Exposures under IRB approach (continued)

Retail exposures under the IRB approach by expected loss range for retail exposures

The below tables analyse the Bank's expected loss range for retail exposures.

31 December 2012	Up to 0.10% RM'000	>0.10 to 0.20% RM'000	>0.20 to 0.50% RM'000	>0.50 to 1.00% RM'000	>1.00 to 30.00% RM'000	>30 to <100% RM'000	100% RM'000
Retail exposures (EAD)							
On-balance sheet exposures							
Residential mortgage	128,925	75,060	225,014	103,363	60,926	-	-
Other retail	17,106	9,626	2,378	45,861	1,156,466	152,651	-
Total on-balance sheet exposures	**146,031**	**84,686**	**227,392**	**149,224**	**1,217,392**	**152,651**	**-**
Undrawn commitments							
Residential mortgage	177	1	17,623	262,554	547	-	-
Other retail	-	-	11,059	49	1,366	-	-
Total undrawn commitments	**177**	**1**	**28,682**	**262,603**	**1,913**	**-**	**-**
Exposure weighted average risk weight (%)							
Residential mortgage	10.04%	17.99%	22.27%	32.93%	67.30%	-	-
Other retail	7.56%	16.54%	32.97%	87.37%	147.40%	228.16%	-

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5.0 Credit risk (continued)

5.3 Exposures under IRB approach (continued)

Retail exposures under the IRB approach by expected loss range for retail exposures (continued)

31 December 2011	Up to 0.10% RM'000	>0.10 to 0.20% RM'000	>0.20 to 0.50% RM'000	>0.50 to 1.00% RM'000	>1.00 to 30.00% RM'000	>30 to <100% RM'000	100% RM'000
Retail exposures (EAD)							
On-balance sheet exposures							
Residential mortgage	133,928	83,493	91,918	25,037	36,292	-	-
Other retail	26,457	14,617	2,634	18,282	1,193,698	108,548	-
Total on-balance sheet exposures	**160,385**	**98,110**	**94,552**	**43,319**	**1,229,990**	**108,548**	**-**
Undrawn commitments							
Residential mortgage	654	599	10,511	68	694	-	-
Other retail	9	11	12,085	244	16,435	307	-
Total undrawn commitments	**663**	**610**	**22,596**	**312**	**17,129**	**307**	**-**
Exposure weighted average risk weight (%)							
Residential mortgage	9.91%	18.83%	28.55%	45.18%	76.21%	-	-
Other retail	8.96%	18.45%	35.12%	89.16%	148.82%	236.72%	-

5.0 Credit risk (continued)

5.3 Exposures under IRB approach (continued)

The following tables set out exposures subject to the supervisory risk weights under the IRB approach for the Bank.

31 December 2012	Strong or 70% RM'000	Good or 90% RM'000	Satisfactory or 115% RM'000	Weak or 250% RM'000	Default or 0% RM'000
Income producing real estate					
- Total exposures	-	111,416	5,650	-	-
- Risk weighted assets		100,274	6,498	-	-

31 December 2011	Strong or 70% RM'000	Good or 90% RM'000	Satisfactory or 115% RM'000	Weak or 250% RM'000	Default or 0% RM'000
Income producing real estate					
- Total exposures	-	51,087	57,109	-	-
- Risk weighted assets		45,978	65,675	-	-

5.0 Credit Risk (continued)

5.4 Exposures under Standardised approach

Risk weights under the Standardised approach

The following tables set out analysis of risk weights under the Standardised approach for the Bank.

31 December 2012	← Exposures After Netting and Credit Risk Mitigation →				Total exposures after netting and credit risk mitigation	Total risk weighted assets
	Corporates* RM'000	Regulatory retail RM'000	Residential mortgages RM'000	Other assets RM'000	RM'000	RM'000
Risk weights						
0%	-	-	-	16,084	16,084	-
20%	-	-	-	-	-	-
35%	-	150	-	-	150	53
50%	-	214	-	-	214	107
75%	-	408,565	-	-	408,565	306,424
100%	276,204	386	-	136,679	413,269	413,268
150%	-	564	-	-	564	846
Total exposures	276,204	409,879	-	152,763	838,846	720,698
Risk-weighted assets by exposures	276,204	307,815	-	136,679	720,698	
Average risk weight	100.0%	75.1%	-	89.5%	85.9%	
Deduction from capital base	-	-	-	-	-	

31 December 2011	← Exposures After Netting and Credit Risk Mitigation →				Total exposures after netting and credit risk mitigation	Total risk weighted assets
	Corporates* RM'000	Regulatory retail RM'000	Residential mortgages RM'000	Other assets RM'000	RM'000	RM'000
Risk weights						
0%	-	-	-	11,627	11,627	-
20%	-	-	-	-	-	-
35%	-	-	8	-	8	3
75%	-	58,500	-	-	58,500	43,875
100%	111,211	-	-	67,174	178,385	178,385
150%	-	215	-	-	215	323
Total exposures	111,211	58,715	8	78,801	248,735	222,586
Risk-weighted assets by exposures	111,211	44,198	3	67,174	222,586	
Average risk weight	100.0%	75.3%	37.5%	85.2%	89.5%	
Deduction from capital base	-	-	-	-	-	

* All corporate standardised exposures are unrated.

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5.0 Credit risk (continued)

5.5 Problem credit management and provisioning

Impairment provisions analysed by customers' business or industry

The following tables show the Bank's collective impairment provisions and movement in individual impairment provisions by each principal category of customers' business or industry for Consumer Banking and Wholesale Banking.

31 December 2012	Collective impairment provisions as at 31 December 2012 RM'000	Individual impairment provisions held as at 1 January 2012 RM'000	Net individual impairment charge during the financial period RM'000	Amounts written off or other movements during the financial period RM'000	Individual impairment provisions held as at 31 December 2012 RM'000
Financing and advances to individuals					
Mortgages	1,667	2,091	1,587	(3,285)	393
Others	73,304	339	67,126	(64,934)	2,531
Small and medium enterprises and others	2,611	79	1,389	(1,018)	450
Consumer Banking	**77,582**	**2,509**	**70,102**	**(69,237)**	**3,374**
Agriculture	33	-	-	-	-
Mining and quarrying	29	-	-	-	-
Manufacturing	280	-	-	-	-
Construction	5	-	-	-	-
Real estate	88	-	-	-	-
Wholesale & retail trade and restaurants & hotels	104	-	-	-	-
Transportation, storage and communication	184	-	-	-	-
Finance, insurance/takaful and business services	69	-	-	-	-
Others	23	-	-	-	-
Wholesale Banking	**815**	**-**	**-**	**-**	**-**

5.0 Credit risk (continued)

5.5 Problem credit management and provisioning (continued)

Impairment provisions analysed by customers' business or industry (continued)

31 December 2011	Collective impairment provisions as at 31 December 2011 RM'000	Individual impairment provisions held as at 1 January 2011 RM'000	Net individual impairment charge during the financial year RM'000	Amounts written off or other movements during the financial year RM'000	Individual impairment provisions held as at 31 December 2011 RM'000
Financing and advances to individuals					
Mortgages	833	1,285	4,293	(3,487)	2,091
Others	70,442	341	48,063	(48,065)	339
Small and medium enterprises and others	485	79	-	-	79
Consumer Banking	**71,760**	**1,705**	**52,356**	**(51,552)**	**2,509**
Agriculture	330	-	-	-	-
Mining and quarrying	263	-	-	-	-
Manufacturing	914	-	-	-	-
Construction	39	-	-	-	-
Real estate	536	-	-	-	-
Wholesale & retail trade and restaurants & hotels	424	-	-	-	-
Transportation, storage and communication	540	-	-	-	-
Finance, insurance/takaful and business services	256	-	-	-	-
Others	53	-	-	-	-
Wholesale Banking	**3,355**	**-**	**-**	**-**	**-**

5.0 Credit risk (continued)

5.5 Problem credit management and provisioning (continued)

The following table analyses the Bank's financing and advances past due but not impaired, analysed by customers' business and industry for Consumer Banking and Wholesale Banking.

	31 December 2012 RM'000	31 December 2011 RM'000
Financing and advances to individuals		
Mortgages	196,351	160,811
Others	129,688	75,241
Small and medium enterprises and others	66,571	30,570
Consumer Banking	392,610	266,622
Wholesale Banking	**-**	**-**

The following table analyses the Bank's financing and advances past due but not impaired, analysed by significant geographical areas.

	31 December 2012 RM'000	31 December 2011 RM'000
Malaysia	392,610	266,622
Others	-	-
	392,610	266,622

Summary analysis of financing and advances

The following table shows the Bank's impaired financing and advances, individual impairment provisions and collective impairment provisions by significant geographic areas.

	Within Malaysia RM'000	Outside Malaysia RM'000	Total RM'000
31 December 2012			
Gross impaired financing and advances	33,889	-	33,889
Individual impairment provisions	3,374	-	3,374
Collective impairment provisions	78,397	-	78,397
31 December 2011			
Gross impaired financing and advances	18,510	-	18,510
Individual impairment provisions	2,509	-	2,509
Collective impairment provisions	75,115	-	75,115

5.0 Credit risk (continued)

5.6 Off-balance sheet and counterparty credit risk

The following table analyses the Bank's off-balance sheet and counterparty credit risk.

31 December 2012	Principal amount RM'000	Positive fair value of contracts RM'000	Negative fair value of contracts RM'000	Credit equivalent amount RM'000	Risk weighted assets RM'000
Direct credit substitutes	3,565	-	-	2,221	611
Transaction related contingent items	57,501	-	-	48,579	17,722
Short term self liquidating trade related contingencies	159,685	-	-	158,253	44,916
Financing of banks' securities or the posting of securities as collateral by banks, including instances where these arise out of repo-style transactions					
Foreign exchange related contracts					
One year or less	221,209	377	377	2,955	1,450
Profit rate related contracts					
One year or less	300,000	231	57	532	141
Over one year to five years	27,221	9,200	9,200	10,288	18,112
Over five years	125,228	223	223	7,826	9,700
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	752,751	-	-	156,312	113,258
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	827,365	-	-	299,652	101,260
	2,474,525	10,031	9,857	686,618	307,170

31 December 2011	Principal amount RM'000	Positive fair value of contracts RM'000	Negative fair value of contracts RM'000	Credit equivalent amount RM'000	Risk weighted assets RM'000
Direct credit substitutes	6,398	-	-	6,245	3,751
Transaction related contingent items	50,090	-	-	47,102	12,267
Short term self liquidating trade related contingencies	250,873	-	-	249,640	75,666
Financing of banks' securities or the posting of securities as collateral by banks, including instances where these arise out of repo-style transactions	-	-	-	-	-
Foreign exchange related contracts					
One year or less	328,431	11,216	11,208	18,764	3,817
Over one year to five years	-	-	-	-	-
Profit rate related contracts					
Over one year to five years	577,111	8,867	8,194	22,952	34,405
Over five years	284,339	491	491	20,467	2,437
Other commitments, such as formal standby facilities and credit lines, with an original maturity of over one year	297,783	-	-	27,200	27,568
Other commitments, such as formal standby facilities and credit lines, with an original maturity of up to one year	876,835	-	-	76,723	41,618
	2,671,860	20,574	19,893	469,093	201,529

6.0 Market risk

The Bank recognises market risk as the risk of loss resulting from changes in market prices and rates. The Bank is exposed to market risk arising principally from customer-driven transactions. The objective of the Bank'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 the Bank are:-

- Interest rate risk: arising from changes in yield curves, credit spreads and implied volatilities on interest rate options which influence profit rate options; and
- Currency exchange rate risk: arising from changes in exchange rates and implied volatilities on foreign exchange options.

The Bank has adopted the Standardised approach for market risk.

Market risk governance

The Board approves the Bank'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 2012.

The Board is responsible for setting Value at Risk ("VaR") limits at a business level. The Board 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 Bank. Limits by portfolios are proposed by the businesses within the terms of agreed policy.

All permanent limits are approved by the Board prior to implementation. Exceptions are escalated to the Board / Board's delegated committees. 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 which influence profit rate is measured in terms of exposure to a one basis point increase in yields, whereas foreign exchange is 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 Bank 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 Bank 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.

6. Market risk (continued)

Value at Risk (continued)

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

VaR is calculated as the Bank's exposure as at the close of business. 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. 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 quarterly 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 RMC has responsibility for reviewing stress exposures and, where necessary, enforcing reductions in overall market risk exposure. The RMC 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 which influence profit rates, credit spreads and exchange rates. This covers all major asset classes in the 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.

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 Bank functions as well as Standard Chartered PLC Group's Internal Audit on an ongoing basis. It is the Bank's policy that all assets and liabilities held are to be recorded in the financial accounts on a fair-value basis that is consistent with MFRS.

6. Market risk (continued)

Valuation framework (continued)

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 Standard Chartered PLC Group's 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 BRC provides oversight and governance of all policy.

Market risk VaR coverage

Profit rate risk (comparable to interest rate risk in conventional) from across the non-trading book portfolios is transferred to Financial Markets where it is managed by the Bank's Asset and Liability Management ("ALM") desks under the supervision of ALCO. The ALM desks deal in the market in approved financial instruments in order to manage the net profit rate risk (comparable to net interest rate risk in conventional), 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 Financing 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 profit and loss or reserves.

Foreign exchange risk on the non-trading book portfolios is minimised by match funding assets and liabilities in the same currency. Structural foreign exchange currency risks are not included within the Bank's VaR.

The table below analyses the Bank's VaR by primary categories of market risk:-

Value at Risk (VaR at 97.5%, 1 day)

31 December 2012

	←	2012	→	Actual as at
	Average	**High**	**Low**	**31 December 2012**
	RM'000	**RM'000**	**RM'000**	**RM'000**
Non-trading				
Profit rate risk (comparable to interest rate risk in conventional)	196	289	171	201

31 December 2011

	←	2011	→	Actual as at
	Average	**High**	**Low**	**31 December 2011**
	RM'000	**RM'000**	**RM'000**	**RM'000**
Non-trading				
Profit rate risk (comparable to interest rate risk in conventional)	280	330	234	279

6.0 Market risk

The table below details the disclosure for rate of return risk in the Banking Book, the increase or decline in earnings and economic value for upward and downward rate shocks which are consistent with shocks applied in stress test for measuring profit rate risk, broken down by various currencies where relevant:-

31 December 2012	Impact on positions as at reporting period (200 basis points) parallel shift	
Type of Currency	Increase/(decline) in earnings at risk RM'000	Increase/(decline) in economic value RM'000
Ringgit Malaysia	(31,703)	(406)
US Dollar	(1,772)	2
Euro	-	-
Pound Sterling	-	-
Japanese Yen	-	-

31 December 2011	Impact on positions as at reporting period (200 basis points) parallel shift	
Type of Currency	Increase/(decline) in earnings at risk RM'000	Increase/(decline) in economic value RM'000
Ringgit Malaysia	(17,137)	(96,442)
US Dollar	2,316	(494)
Euro	(398)	11
Pound Sterling	484	(7)
Japanese Yen	(127)	4

7.0 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 Bank's objective to minimise such exposures, subject to cost tradeoffs. This objective is met through a framework of policies and procedures originating from Standard Chartered PLC Group that drive our risk management approach through six inter-dependent risk management process categories of plan, inform, control, originate, optimize and communicate.

Governance structure

Governance over operational risk management is achieved through a defined structure of committees at the group, business and function. At each level, operational risk governance committees integrate into Standard Chartered PLC Group's and the Bank's overall risk governance structure. Standard Chartered PLC Group Operational Risk Committee ("GORC"), a subcommittee of Standard Chartered PLC Group's RMC, supervises the management of operational risks across all businesses and functions, while at a Country level, this role is performed by the Country Operational Risk Committee ("CORC"), a subcommittee of local RMC. 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

Standard Chartered PLC Group's operational risk management procedures and processes are integral components of the broader Risk Management Framework and is approved and adopted by the Board for local adoption. Operational risks are managed through an end to end process of plan, inform, control, originate, optimize and communicate. This six inter-dependent risk management process is performed at all levels across the Group and country level, and is the foundation of the risk 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 local and Standard Chartered PLC Group's governance committee.

Assurance

The Group Internal Audit ("GIA") function provides independent assurance of the effectiveness of management's control of its own business activities and of the processes maintained by the Risk Control Functions. As a result, GIA provides assurance that the overall system of control effectiveness is working as required within the Risk Management Framework.

Measurement

The Bank uses the Basic Indicator Approach ("BIA") to assess its regulatory capital requirements for Operational Risk. The operational risk capital charge for BIA is equal to the average of a fixed percentage of positive annual gross income over the previous three years.

8.0 Shariah non-compliant events and income

During the financial year, there were two (2011: five) Shariah non-compliant events being detected. None of these events have resulted in Shariah non-compliant income (2011: Nil).

9.0 Comparative figures

Certain comparative figures have been restated to conform with restatements made in the Bank's financial statements for the financial year ended 31 December 2012 arising from transition to MFRSs and to conform with current year presentation.

Chief Executive Officer Attestation

In accordance with Bank Negara Malaysia's Capital Adequacy Framework for Islamic Banks (CAFIB) - Disclosure Requirements (Pillar 3), I hereby attest that to the best of my knowledge, the disclosures contained in Standard Chartered Saadiq Berhad's Pillar 3 Disclosures report for the financial year ended 31 December 2012 are consistent with the manner in which the Bank assesses and manages its risk, and are not misleading in any particular way.

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Wasim Akhtar Saifi
Chief Executive Officer

Date: 24 April 2013