Risk Management

(This section forms an integral part of OCBC's audited financial statements)

DEVELOPMENTS IN 2014

During 2014, OCBC Group took strategic steps to deepen our regional presence. We successfully acquired Wing Hang Bank, increased our stake in Bank of Ningbo and secured a provisional foreign bank licence in Myanmar. This geographic expansion reflected our continuing commitment to invest in higher growth markets even as we focused on solidifying our presence in our core markets of Singapore, Malaysia, Indonesia as well as our growing franchise in Greater China. At the same time, we have been enhancing our risk management capabilities to meet the increasing complexity of our regional expansion.

Group risk management oversight has been further strengthened during 2014 with systems that are able to provide daily and detailed reporting of liquidity and foreign exchange positions for better liquidity and structural foreign exchange risk management. During the year, the Control Assurance Function added Data Loss Prevention to its end-to-end monitoring of control effectiveness in the management of operational risk. In our continuing contributions to the management of cyber threats, OCBC helped to develop the "Cyber Incident Response Framework" and "Association of Banks in Singapore (ABS) Penetration Testing Guidelines" for use by Singapore banks. An OCBC-Wing Hang Bank Integration Steering Committee has also been closely monitoring adherence to various business and risk alignment initiatives in overseeing our Greater China exposures following the acquisition. Alignment in policies and procedures are also being monitored regularly across the Group to ensure that group risk standards and risk controls for all risk types are consistently applied.

As we look ahead in 2015, we see continuing volatility in regional foreign exchange markets as capital markets and countries in Asia adjust themselves to the strong revival of the US economy. There is also the uncertainty over the speed of return of global capital flows to the US as the Fed starts to normalise interest rate and a slower China economy that will mute intra-Asean trade flows and regional growth prospects. Furthermore, lower oil prices will stress those industries that rely heavily on oil-related revenues in our core markets. We remain vigilant over these developments that may adversely affect our loan portfolios, including the dampening effect of recent policy measures on the Singapore housing market and the pending curb on our unsecured consumer borrowing. However, our asset quality and capital position remain strong and our NPL ratios are better than the industry, while our capital base was made stronger by a successful S$3.3 billion rights issue in September 2014. Together with our enhanced risk management capabilities, we expect to continue to make progress in our regional expansion in 2015.

RISK MANAGEMENT IN OCBC GROUP

The OCBC Group believes that sound risk management is paramount to the success of our risk-taking activities. Our philosophy is to ensure that risks and returns remain consistent with our risk appetite. To achieve this, we proactively identify any emerging portfolio threats and credit concentrations at an early stage in order to develop timely risk-response strategies.

The key elements of OCBC Group's enterprise-wide risk management strategy are:

- **Risk appetite** – The Board of Directors approves the Group's risk appetite, and that all risks are managed in alignment with the risk appetite. Risk-taking decisions must be consistent with strategic business goals and returns should compensate for the risk taken.
- **Risk frameworks** – The Group's risk management frameworks for all risk types are effective, comprehensive, and consistent.
- **Holistic risk management** – Risks are managed holistically, with a view to understand the potential interactions among risk types.
- **Qualitative and quantitative evaluations** – Risks are evaluated both qualitatively and with appropriate quantitative analyses and robust stress testing. Risk models are regularly reviewed to ensure they are appropriate and effective.

The Board of Directors and senior management provide the direction to the Group's effective risk management that emphasises well-considered risk-taking and proactive risk management. This is reinforced with appropriate risk management staff, ongoing investments in risk infrastructure, regular review and enhancement of risk management policies and procedures, overlaid with a strong internal control environment throughout the Group. Accountability for managing risks is jointly owned among customer-facing and product business units, dedicated functional risk management units, as well as other support units such as Operations and Technology. Group Audit also provides independent assurance that the Group's risk management system, control and governance processes are adequate and effective. Rigorous portfolio management tools such as stress testing and scenario analyses identify possible events or market conditions that could adversely affect the Group. These results are taken into account in the Group's capital adequacy assessment and setting of risk limits.

This risk management chapter discusses the risk management practices, policies, and frameworks of OCBC Group, excluding Great Eastern Holdings ("GEH") and Bank OCBC NISP. GEH and Bank OCBC NISP are listed companies that publish their own annual reports that contain information on their risk management frameworks and practices (refer to Note 39 in the Group's Financial Statements for information on GEH's risk management). Group management collaborates with GEH and Bank OCBC NISP on aligning their risk management practices to Group risk standards through knowledge sharing and training.

All other banking subsidiaries are required to implement risk management policies that conform to Group standards including the adoption of stricter local regulations where necessary. Approving authority and limit structures are consistent with the Group to ensure proper ownership and accountability. OCBC Wing Hang is also progressively adopting Group's risk management practices.

RISK GOVERNANCE AND ORGANISATION

The Board of Directors establishes the Group's risk appetite and risk principles. The Board Risk Management Committee ("BRMC") is the principal Board committee that oversees the Group's risk management. It reviews and approves the Group's overall risk management philosophy, risk management frameworks, major risk policies, and risk models. The BRMC also oversees the establishment and operation of the risk management systems, and receives regular reviews as to their effectiveness. The Group's various risk exposures, risk profiles, risk concentrations, and trends are regularly reported to the Board of Directors and senior management for review and action.

The BRMC is supported by Group Risk Management Division ("GRM"), headed by the Group Chief Risk Officer. GRM has functional responsibility on a day-to-day basis for providing independent risk control and managing credit, market, operational, liquidity, and other key risks. Dedicated GRM officers establish Group-wide policies, risk measurement and methodology. They also monitor the Group's risk profiles and portfolio concentrations. The Group's risk management and reporting systems are designed to ensure that risks are comprehensively identified and evaluated to support risk decisions. Compensation of risk officers is determined independently of other business areas and is reviewed regularly to ensure compensation remains market competitive.

Senior management actively manages risks through various risk management committees, such as the Credit Risk Management Committee, the Market Risk Management Committee, the Asset and Liability Management Committee, the Operational Risk and Information Security Committee, as well as the Risk Capital Committee. Both risk-taking and risk control units are represented in these committees, emphasising shared risk management responsibilities.

Credit officers' approval authority limits are set in accordance to their relevant experience and qualifications. GRM officers also provide expertise during the design and approval of new products to ensure existing systems and processes are able to adequately support any new product risks.

BASEL REQUIREMENTS

OCBC Group has implemented the Monetary Authority of Singapore ("MAS") Notice 637 on Risk Based Capital Adequacy Requirements for banks incorporated in Singapore, including enhanced quality of regulatory capital base and expanded risk coverage under Basel III. As part of enhanced public disclosures on risk profile and capital adequacy, we commenced publishing mid-year disclosures on our investor relations website since 2013 (Please refer to the Pillar 3 Disclosures section for information as at 31 December 2014).

For credit risk, the Group has adopted the Foundation Internal Ratings-Based ("F-IRB") approach and supervisory slotting criteria to calculate credit risk-weighted assets for major non-retail portfolios, and the Advanced Internal Ratings-Based ("A-IRB") approach for major retail and small business lending portfolios. Other credit portfolios, including those belonging to OCBC Wing Hang, are on the Standardised Approach and they will be progressively migrated to the internal ratings-based approaches. The regulatory capital to be set aside for credit risk-weighted assets depends on various factors, including internal risk grades, product type, counterparty type, and maturity.

For market risk, the Group has adopted the Standardised Approach. Market risk-weighted assets are marked-to-market and are risk weighted according to the instrument category, maturity period, credit quality grade, and other factors. For operational risk, the Group has adopted the Standardised Approach except for Bank OCBC NISP and OCBC Wing Hang which have adopted the Basic Indicator Approach. Operational risk-weighted assets are derived by applying specified factors or percentages to the annual gross income for the prescribed business lines in accordance with regulatory guidelines.

The Group performs an Internal Capital Adequacy Assessment Process ("ICAAP") assessment annually to ensure the Group is able to maintain sound capital levels after consideration of material risks under various stress scenarios. Combined with the Board approved Risk Appetite Statement, the ICAAP process provides a high-level of assurance the Group will remain financially sound and prudently managed at all times.

Implementing the Basel framework is an integral part of our efforts to refine and strengthen, as well as to ensure our management of risks is appropriate for the risks we undertake. Group management remains vigilant to on-going industry and regulatory developments, including higher liquidity and capital requirements.

CREDIT RISK MANAGEMENT

Credit risk arises from the risk of loss of principal or income on the failure of an obligor or counterparty to meet their contractual obligations. As our primary business is commercial banking, the Group is exposed to credit risks from lending to consumer, corporate, and institutional customers. Trading and investment banking activities, such as trading of derivatives, debt securities, foreign exchange, commodities, securities underwriting, and settlement of transactions, also expose the Group to counterparty and issuer credit risks.

CREDIT RISK MANAGEMENT OVERSIGHT AND ORGANISATION

The Credit Risk Management Committee ("CRMC") is the senior management group that supports the CEO and the BRMC in proactively managing credit risk, including reshaping the credit portfolios. It reviews the Group's credit risk philosophy, framework, and policies, and aligns credit risk taking with business strategy and planning. In addition, the CRMC recommends credit approval authority limits, reviews the risk profile of material portfolios, and highlights any concentration concerns to higher management.

Credit Risk Management ("CRM") departments manage credit risk within pre-determined risk appetite, customer targets, limits and established risk standards. Dedicated risk functions are responsible for risk portfolio monitoring, risk measurement methodology, risk reporting, and remedial loan management.

Regular risk reporting is made to the Board of Directors, BRMC and the CRMC in a timely, objective, and transparent manner. These reports include detailed profiles on portfolio quality, credit migration, expected losses, and concentration risk exposures by business portfolio and geography. Such reporting alerts senior management to adverse credit trends early, so that timely corrective actions can be taken to ensure optimal use of capital resources.

CREDIT RISK MANAGEMENT APPROACH

OCBC's credit risk management framework covers the entire credit risk cycle, underpinned by comprehensive credit risk processes, as well as using models to efficiently quantify and manage risks in a consistent manner.

The Group seeks to take only credit risks that meet our underwriting standards, and risks that are commensurate with adequate returns to enhance shareholder value. As Fair Dealing remains an integral part of OCBC's core corporate values, credit extensions are only offered after a comprehensive assessment of the borrower's creditworthiness, as well as the suitability and appropriateness of the product offering. In addition, the key to our risk management success lies in the sound judgement of our experienced credit officers whose appointments are regularly reviewed.

Lending to Consumers and Small Businesses

Credit risks for the consumer and small business sectors are managed on a portfolio basis with credit programmes for mortgages, credit cards, unsecured loans, auto loans, commercial property loans, and business term loans. Loans are underwritten that conform to clearly defined target markets, terms of lending and maximum loan sizes. Credit origination source analysis and independent verification of documents are in place to prevent fraud. The portfolios are closely monitored monthly using MIS analytics. Scoring models are also used in the credit decision process for most products to enable objective, consistent decisions and efficient processing. Behavioural scores are used to identify potential problem credits early.

Lending to Corporate and Institutional Customers

Loans to corporate and institutional customers are individually assessed and approved by experienced risk officers. They identify and assess the credit risks of large corporate or institutional customers, or customer groups, taking into consideration management quality, financial and business competitive profiles against industry and economic threats. Collateral or other credit support are also assessed to mitigate and reduce risks. Credit extensions are guided by pre-defined target market and risk acceptance criteria. To ensure objectivity in credit extension, co-grantor approvals and shared risk ownership are required from both the business unit as well as credit risk functions. OCBC Wing Hang approves credits by a Credit Committee.

Lending to Private Banking Customers

Credit extensions to our wealth management clients in the Bank of Singapore are subject to comprehensive credit assessment and compliance to loan ratios and margin requirements. Joint approvals from the business and risk units also ensure objectivity. Loan advance rates are dependent on the liquidity, volatility and diversification of the collateral portfolio under stressed conditions. Credit exposures that are secured by marketable securities are subject to daily valuation and independent price verification controls.

Credit Risk from Investment or Trading Activities

Counterparty credit risks from our trading, derivative, and debt securities activities are closely monitored and actively managed to protect against potential losses in replacing a contract if a counterparty defaults. Counterparty credit limits are established for each counterparty following an assessment of the counterparty's creditworthiness in accordance with internal policies, as well as the suitability and appropriateness of the product offering. Credit exposures are also controlled through independent monitoring and prompt reporting of excesses and breaches against approved limits and risk mitigation thresholds.

The Group has limited exposure to asset-backed securities and collateralised debt obligations and is not active in securitisation activities.

INTERNAL CREDIT RATING MODELS

Internal credit rating models are an integral part of OCBC Group's credit risk management, decision-making process, and capital assessment. These internal rating models and the parameters – probability of default ("PD"), loss given default ("LGD"), and exposure at default ("EAD") – are factors used in limit setting, credit approval, monitoring, reporting, remedial management, stress testing, and internal assessment of the adequacy of capital and provisions.

Model risk is managed under an internal Model Risk Management framework, including an internal ratings framework, to govern the development and validation of rating models and the application of these models. Approval for material models and annual validation results rests with the BRMC. All models are subject to independent validation before implementation to ensure that all aspects of the model development process have met internal standards. The models are developed with active participation by credit experts from risk taking and risk control units. In addition, the models are also subject to annual review (or more frequently, where necessary) and independent validation to ensure the models are performing as expected, and that the assumptions used in model development remain appropriate. All rating models are assessed against regulatory requirements to ensure compliance.

The Group's internal risk grades are not explicitly mapped to external credit agency ratings. Nevertheless, our internal risk grades may correlate to external ratings in terms of the probability of default ranges as factors used to rate obligors would be similar; an obligor rated poorly by an external rating agency is likely to have a weaker internal risk rating.

A-IRB for Major Retail Portfolios

The Group has adopted the Advanced Internal Ratings-Based ("A-IRB") approach for major retail portfolios, including residential mortgages, credit cards, auto loans, as well as small business lending. Internal rating models, developed from internal data, are used to estimate PD, LGD, and EAD parameters for each of these portfolios. Application and behaviour scorecards are used as key inputs for several retail PD models. Product, collateral, and geographical characteristics are major factors used in the LGD and EAD models.

F-IRB for Major Non-Retail Portfolios

The Group's major non-retail portfolios are on the Foundation Internal Ratings-Based ("F-IRB") approach. Under this approach, internal models are used to estimate the PD for each obligor, while LGD and EAD parameters are prescribed by MAS. These PD models are statistically-based or expert judgement models that use both quantitative and qualitative factors to assess an obligor's repayment capacity and are calibrated to expected long-term average one-year default rate over an economic cycle. Expert judgement models are typically used for portfolios with low defaults following inputs from relevant internal credit experts. The models also comply with the regulatory criteria for parameterisation. For major specialised lending portfolios, risk grades derived from internal models are mapped to the five supervisory slotting categories as prescribed in MAS Notice 637. The risk weights prescribed for these slotting categories are used to determine the regulatory capital requirements for such exposures.

IRB Approach for Securitisation Exposures

The credit risk-weighted assets for securitisation exposures are computed using the ratings-based method for such exposures as prescribed by MAS Notice 637.

Standardised Approach for Other Portfolios

Other credit portfolios, such as OCBC Wing Hang, Bank OCBC NISP, Bank of Singapore and exposures to sovereigns are under the Standardised Approach, and will be progressively migrated to the ratings-based approaches. Regulatory prescribed risk weights based on asset class and external ratings from approved credit rating agencies, where available, are used to determine regulatory capital. Approved external rating agencies include Standard & Poor's, Moody's, and Fitch.

CREDIT RISK CONTROL

Credit Risk Mitigation

Transactions are entered into primarily on the strength of a borrower's creditworthiness and ability to repay. To manage credit risk, the Group accepts collateral as security, subject to Group policies on collateral eligibility. Collaterals include both physical and financial assets. The value of collaterals is prudently assessed on a regular basis, and valuations are performed by independent qualified appraisers. Appropriate discounts are applied to the market value of collaterals, reflecting the quality, liquidity, volatility, and collateral type. The loan-to-value ratio is a main factor in secured lending decision. OCBC Group also accepts guarantees from individuals, corporates, and institutions as a form of support.

For derivative contracts, the total credit exposure of the contract is the sum of the mark-to-market value and the estimate of the potential credit exposure over the remaining term of the contract. The Group calculates such exposures and uses statistical modelling tools to estimate the potential worst-case risk scenario. To manage counterparty credit risk, financial collaterals may be taken to partially or fully cover mark-to-market exposures on outstanding positions. A discount is normally applied on the collaterals to cover potential adverse market volatility and currency risk. The collateral agreement typically includes a minimum threshold amount where additional collateral is to be posted by either party if the mark-to-market exposures exceed an agreed threshold. Master agreements, such as those from International Swaps and Derivatives Agreement ("ISDA"), are also used and these allow for close out netting if either counterparty defaults. Some of our netting and collateral agreements may contain rating triggers, mostly in the event of a one-notch rating downgrade. Given the Group's investment grade rating, there is minimal increase in collaterals required to be provided to our counterparties under a one-notch downgrade occurrence.

Managing Credit Risk Concentrations

Credit risk concentrations may arise from lending to single customer groups, borrowers who are in similar activities, or diverse groups of borrowers being affected by similar economic or market conditions. To manage such concentrations, limits are established for single borrowing groups, products, industry segments, and country risks. These limits are aligned with the Group's business strategy, capacity and expertise. Impact on earnings and capital are also considered during the setting of limits.

The Group continues to diversify its country exposure as it expands its presence and activities in Greater China and Indonesia. As a key player at home, we have significant exposure to the real estate market in Singapore. Dedicated specialist real estate teams manage this risk with focus on client selection, collateral quality, project viability, and real estate cycle trends. Regular stress tests are also made to identify potential vulnerabilities on the real estate portfolio.

The Bank is in compliance with Section 35 of the Banking Act, which limits its exposure to real estate in Singapore to not more than 35% of its total eligible loan assets.

REMEDIAL MANAGEMENT

The Group constantly strives to anticipate early problem credits and proactively manage such credits as they start to deteriorate and/or restore to good health. As we value long-term customer relationships, we prefer to work closely with them at the onset of their difficulties. We recognise the opportunity to promote customer loyalty and retention, where appropriate, even as we enforce strict discipline on remedial management.

Loans are categorised as "Pass" or "Special Mention", while non-performing loans ("NPLs") are categorised as "Substandard", "Doubtful", or "Loss" in accordance with MAS Notice 612.

OCBC Group has dedicated specialist workout teams to manage problem exposures. Time, risk-based, and discounted cash flow approaches are used to develop collection and asset recovery strategies. The Group uses information and analytical data such as delinquency buckets and adverse status tags for delinquent consumer loans, to constantly fine-tune recovery efforts to gain optimal effectiveness, and to identify customer retention opportunities.

Impairment Allowances for Loans

The Group maintains loan allowances that are sufficient to absorb credit losses inherent in its loan portfolio. Total loan loss reserves comprise specific allowances against each NPL and a portfolio allowance for all loans to cover any losses that are not yet evident. The Group's policy for loan allowances is guided by Financial Reporting Standard 39 ("FRS 39"), as modified by MAS Notice 612.

Specific allowance is established when the present value of future recoverable cash flows of the impaired loan is lower than the carrying value of the loan. Assessment for impairment is conducted on a loan-by-loan basis. The exceptions are homogenous loans (such as housing loans, consumer loans, and credit card receivables) that fall below a certain materiality threshold. Such loans may be pooled together according to their risk characteristics and collectively assessed according to the degree of impairment severity, taking into account historical loss experience.

Portfolio allowances are set aside based on management's credit experiences and judgement for estimated inherent losses that may exist but have not been identified to any specific financial asset. Credit experiences are based on historical loss rates that take into account geographic and industry factors. A minimum 1% portfolio allowance is set aside under the transitional arrangement in MAS Notice 612.

Write-offs

Loans are written off against impairment allowances when the loss can be reasonably determined i.e. after recovery action has been exhausted or when recovery prospects are deemed remote.

Ceasing of Interest Accrual on Loans

When a loan is classified "Substandard", "Doubtful", or "Loss", interest income ceases to be recognised in the income statement on an accrual basis. However, this non-accrual of interest does not preclude the Group's entitlement to the interest income as it merely reflects the uncertainty in the collectability of such interest income.

Collateral Held Against NPLs

Real estate in Singapore forms the main type of collateral for the Group's NPLs. The realisable value of the real estate collateral is used to determine the adequacy of the collateral coverage. Cross collateralisation will only apply when exposures are supported by proper legal documentation.

MARKET RISK MANAGEMENT

Market risk is the risk of loss of income or market value due to fluctuations in factors such as interest rates, foreign exchange rates, equity and commodity prices, or changes in volatility or correlations of such factors. OCBC Group is exposed to market risks from its trading and client servicing activities.

Our market risk management strategy and market risk limits are established within the Group's risk appetite and business strategies, taking into account macroeconomic and market conditions. Market risk limits are subject to regular review.

MARKET RISK MANAGEMENT OVERSIGHT AND ORGANISATION

The Market Risk Management Committee ("MRMC") is the senior management committee that supports the BRMC and the CEO in market risk oversight. The MRMC establishes the market risk management objectives, framework, and policies governing prudent market risk taking, which are backed by risk methodologies, measurement systems, and internal controls.

The MRMC is supported at the working level by Market Risk Management ("MRM") within GRM. MRM is the independent risk control unit responsible for operationalising the market risk management framework to support business growth while ensuring adequate risk control and oversight.

MARKET RISK MANAGEMENT APPROACH

Market risk management is a shared responsibility. Business units are responsible for undertaking proactive risk management within their approved trading strategies and investment mandates, whilst MRM acts as the independent monitoring unit to ensure sound governance. Key risk management activities of identification, measurement, monitoring, control, and reporting are regularly reviewed to ensure effective risk management.

MARKET RISK IDENTIFICATION

Risk identification is addressed via the Group's new product approval process at product inception. Market risks are also identified by our risk managers from their other ongoing interactions with the business units.

MARKET RISK MEASUREMENTS

Value-At-Risk

Value-at-risk ("VaR"), a key market risk measure for the Group's trading activities, is a component of aggregate market risk appetite. VaR is measured and monitored by its individual market risk components, namely interest rate risk, foreign exchange risk, equity risk and credit spread risk, as well as at the aggregate level. VaR is based on a historical simulation approach and is applied against a one-day holding period at a 99% confidence level. As VaR is a statistical measure based on historical market fluctuations, it might not accurately predict forward-looking market conditions all the time. As such, losses on a single trading day may exceed VaR, on average, once every 100 days.

Risk Measures

As the Group's main market risk is interest rate fluctuations, Present Value of a Basis Point ("PV01"), which measures the change in value of interest rate sensitive exposures resulting from one basis point increase across the entire yield curve, is an additional measure monitored on a daily basis. Other than VaR and PV01, the Group also utilises notional amounts, CS01 (1 Basis Point move in Credit Spreads) and derivative greeks for specific exposure types, where appropriate, to supplement its risk measurements.

Stress Testing and Scenario Analyses

The Group also performs stress testing and scenario analyses to better quantify and assess potential losses arising from low probability but plausible extreme market conditions. The stress scenarios are regularly reviewed and fine-tuned to ensure that they remain relevant to the Group's trading activities, risk profile, and prevailing and forecast economic conditions. These analyses determine if potential losses from such extreme market conditions are within the Group's risk tolerance.

The table below provides a summary of the Group's trading VaR profile by risk types as at 31 December 2014 and 31 December 2013.

RISK MONITORING AND CONTROL

Limits

Only authorised trading activities for approved products may be undertaken by the various trading units. All trading risk positions are monitored on a daily basis against approved and allocated limits by independent support units. Limits are approved to reflect available and anticipated trading opportunities, with clearly defined exception escalation procedures. Exceptions, including any temporary breaches, are promptly reported and escalated to senior management for resolution. Multiple risk limits (VaR and risk sensitivities), profit/loss, and other measures allow for more holistic analysis and management of market risk exposures.

Model Validation

Model validation is also an integral part of the Group's risk control process. Risk models are used to price financial instruments and to calculate VaR. The Group ensures that the models used are fit for their intended purpose, through internal verification and assessment. Market rates used for risk measurements and valuation are sourced independently, thereby adding further to the integrity of the trading profits and losses ("P&L"), risk and limit control measurements.

Back-testing

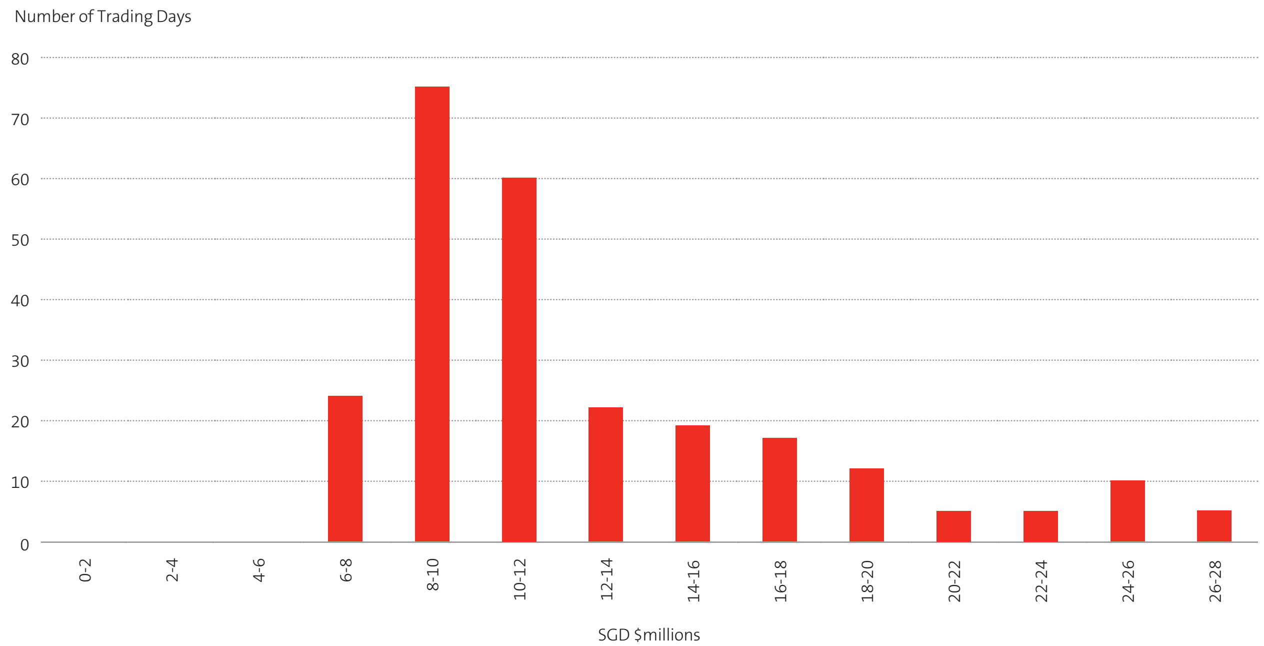
To ensure the continued integrity of the VaR model, the Group conducts back-testing to confirm the consistency of actual daily trading P&L, as well as theoretical P&L against the model's statistical assumptions.

VaR BY RISK TYPE – Trading Portfolio

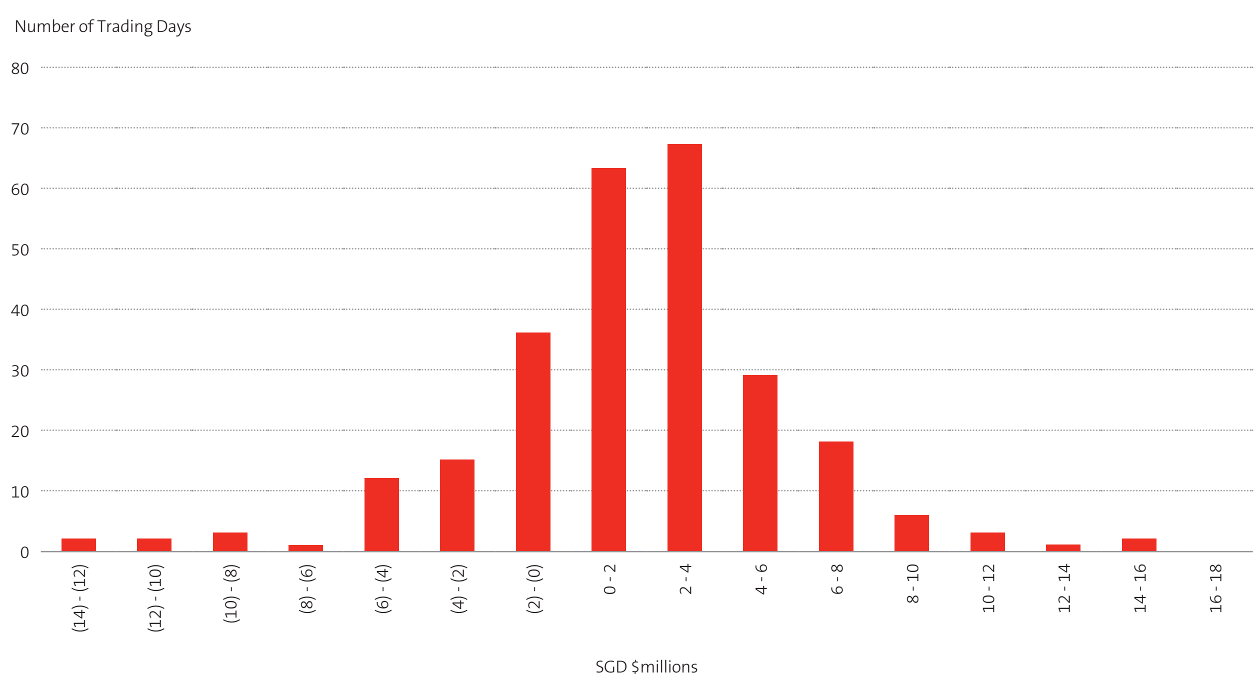
	2014				2013			
SGD Millions	**Year End**	**Average**	**Minimum**	**Maximum**	**Year End**	**Average**	**Minimum**	**Maximum**
Interest Rate VaR	**2.96**	**7.83**	**2.36**	**21.43**	7.85	8.33	6.31	12.97
Foreign Exchange VaR	**8.02**	**6.96**	**2.59**	**11.46**	7.50	5.05	2.98	8.98
Equity VaR	**0.52**	**0.96**	**0.34**	**1.51**	1.01	1.26	0.75	1.91
Credit Spread VaR	**5.11**	**3.00**	**1.55**	**5.49**	1.59	3.01	1.59	4.90
Diversification Effect [1]	**-6.33**	**-6.16**	**NM**[2]	**NM**[2]	-0.40	-7.79	NM[2]	NM[2]
Aggregate VaR	**10.28**	**12.60**	**6.05**	**27.62**	17.56	9.84	7.14	17.56

(1) Diversification effect is computed as the difference between Aggregate VaR and sum of asset class VaRs.
(2) Not meaningful as the minimum and maximum VaR may have occurred on different days for different asset classes.

Frequency distribution of Group Trading Book Daily Total VaR
(One Day Holding Period) for FY 2014



Frequency distribution of Group Trading Daily P&L
for FY 2014



(This section forms an integral part of OCBC's audited financial statements)

ASSET LIABILITY MANAGEMENT

Asset liability management is the strategic management of the balance sheet structure and liquidity needs, covering liquidity sourcing and diversification, interest rate and structural foreign exchange management.

ASSET LIABILITY MANAGEMENT OVERSIGHT AND ORGANISATION

The Asset Liability Management Committee ("ALCO") is responsible for the oversight of our Group liquidity and balance sheet risks. The ALCO is chaired by the CEO and includes senior management from the business, risk and support units. The ALCO is supported by the Corporate Treasury within the Group Finance Division. Asset Liability Management within GRM monitors the banking book interest rate, structural foreign exchange and liquidity risk profile for OCBC under both business as usual and stressed scenarios.

ASSET LIABILITY MANAGEMENT APPROACH

The Asset Liability Management framework comprises liquidity risk management, interest rate risk mismatch management and structural foreign exchange risk management.

Liquidity Risk

The objective of liquidity risk management is to ensure that there are sufficient funds to meet contractual and regulatory financial obligations and to undertake new transactions.

Our liquidity management process involves establishing liquidity management policies and limits, regular monitoring against liquidity risk limits, regular stress testing, and establishing contingency funding plans. These processes are subject to regular reviews to ensure that they remain relevant in the context of prevailing market conditions.

Liquidity monitoring is performed daily within a framework for projecting cash flows on a contractual and behavioural basis. Simulations of liquidity exposures under stressed market scenarios are performed and the results are taken into account in the risk management processes. Structural liquidity indicators such as liquidity and deposit concentration ratios are employed to maintain an optimal funding mix and asset composition. Funding strategies are in place to provide effective diversification and stability in funding sources across tenors, products and geographies. In addition, liquid assets in excess of regulatory requirements are maintained for contingent use in the event of a liquidity crisis. These liquid assets comprise statutory reserve eligible securities as well as marketable shares and debt securities.

Interest Rate Risk

The primary goal of interest rate risk management is to ensure that interest rate risk exposures are maintained within defined risk tolerances.

Interest rate risk is the risk to earnings and capital arising from exposure to adverse movements in interest rates. The material sources of interest rate risk are repricing risk, yield curve risk, basis risk and optionality risk. A range of techniques are employed to measure these risks from an earnings and economic value perspective. One method involves the simulation of the impact of a variety of interest rate scenarios on the net interest income and the economic value of the Group's equity. Other measures include interest rate sensitivity measures such as PV01 as well as repricing gap profile analysis.

Limits and policies to manage interest rate exposures are established in line with the Group's strategy and risk appetite. Thresholds and policies are appropriately approved, and reviewed regularly to ensure they remain relevant against the external environment. Control systems are in place to monitor the risk profile against the approved risk thresholds.

Structural Foreign Exchange Risk

Structural foreign exchange exposure arises primarily from net investment in overseas branches, subsidiaries, strategic as well as property assets. The objective is to protect the capital through identifying, measuring, and managing the potential adverse impact of structural foreign exchange risk on capital deployed. OCBC actively manages this risk through hedges and match funding for foreign currency investments, in order to minimise impact.

Other Risks

The Group's foreign exchange risk residing in banking book comprised primarily structural foreign exchange exposures as non-structural foreign exchange exposures have been substantially transferred to trading book for foreign exchange risk management. The other risk residing in banking book was mainly attributable to non-strategic equity price risk arising from the Group's investment in equity securities. These non-strategic equity forms an insignificant portion of OCBC's securities overall portfolio excluding GEH.

System and Infrastructure Upgrade

During 2014, there was significant development of the systems and infrastructure for the modeling and reporting of the Basel III Liquidity Coverage Ratio ("LCR") as part of the daily regulatory compliance process starting on 1 January 2015. In addition, the daily reporting infrastructure for Net Stable Funding Ratio ("NSFR") continued its development, and will continue into 2015. Both these developments reflect a significant upgrade to the global banking system's liquidity compliance regime, and provide regulators with significantly enhanced granularity and insight into the liquidity position of banks. A corollary of this work for OCBC has been the ability to further centralise ALM risk reporting, capitalising on new and automated systems to provide management with even more granular, more timely and accurate internal management information.

OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, systems and management, or from external events. Operational risk management also covers fiduciary, legal and reputational risks.

The Group's operational risk management aims to both manage expected and unexpected losses, including those caused by catastrophic events. The twin goals enable new business opportunities to be pursued in a risk-conscious and controlled manner.

OPERATIONAL RISK MANAGEMENT OVERSIGHT AND ORGANISATION

The Operational Risk and Information Security Committee ("ORISC") is the senior management committee that oversees the execution of the Group's operational risk management, information security and technology risk practices. ORISC ensures that various risk management programmes that are in place are appropriate, effective, and support the Group's business strategy.

The Operational Risk Management ("ORM") department within GRM establishes the ORM framework, including supporting policies and techniques. The ORM department also provides independent oversight of operational risk monitoring and controls that reside within business, products and process owners. The ORM programmes are actively implemented through the respective Operational Risk Partners or managers in the business units and subsidiaries. Operational Risk Partners or managers are put through an accreditation programme to hone their skill sets and competencies to perform their roles effectively.

OPERATIONAL RISK MANAGEMENT APPROACH

OCBC Group adopts a framework that ensures operational risks are properly identified, managed, monitored, mitigated, and reported in a structured and consistent manner. The framework is underpinned by an internal control system that reinforces the Group's control culture by establishing clear roles and responsibilities for staff and preserving their rights in executing control functions without fear of intimidation or reprisal.

Each business unit undertakes regular self-assessment on the robustness of its own risk and control environment, including meeting all regulatory and legal requirements. Self-assessment declarations are subject to risk-based independent reviews. Performance metrics are also used to detect early warning signals and to drive appropriate management actions before risks become material losses. To enhance controls over trading activities and Data Loss Prevention, Control Assurance Function has been established to perform end-to-end surveillance over these key areas.

Senior management attests annually to the CEO, Audit Committee and BRMC, on the adequacy and effectiveness of the internal control system, as well as report key control deficiencies and accompanying remedial plans. Operational risk losses and incidents data trends are also analysed and regularly reported.

To mitigate operational losses resulting from significant risk events, the Group has in place an insurance programme which covers crime, civil liability, fraud, property damage, public liability, as well as directors' and officers' liability.

During the year, the Group further enhanced our resiliency to fraud and physical security risk by strengthening the risk culture through the roll-out of the ethics training programme. Security and fraud awareness related to cyber-attacks and internet-based threats were also raised.

Outsourcing

The Group recognises the risks associated with outsourcing arrangements. The Group has in place an outsourcing programme to manage these risks in a structured, systematic and consistent manner. Following the recent MAS Consultation Papers on "Guidelines on Outsourcing" and "Notice on Outsourcing", the Group has taken further steps to review and enhance its outsourcing risk management practices to be in compliance with the requirements.

Physical and People Security

The Group recognises that as it expands its regional footprint, its personnel and assets may be exposed to more external threats. To address this ever changing threat landscape, the Group has in place a physical and people security programme.

Business Continuity Management

The programme aims to reduce the interruption of essential business activities and services during times of crisis. Review and testing of its business recovery strategies and plans are carried out on an annual basis. Every year, senior management also provides an attestation to the BRMC. The attestation includes a measurement of the programme's maturity, extent of alignment to MAS guidelines, and a declaration of acceptable residual risk.

Fraud Risk Management

The Group's Fraud Risk Management and Whistle-Blowing programmes help prevent and detect fraud or misconduct. Fraud incident reports, including root cause analysis, extent of damage, supporting remedial actions and recovery steps of major incidents, are regularly reported to ORISC and BRMC. Group Audit independently reviews all fraud and whistle-blowing cases, with regular reporting to the Audit Committee.

Reputational Risk Management

Reputational risk is the current or prospective risk to earnings and capital arising from adverse perception of the image of the Group by customers, counterparties, shareholders, investors and regulators. We have a reputational risk management programme which focuses on understanding and managing our responsibilities towards our different stakeholders, and protecting our reputation. A key emphasis of the programme is effective information sharing and engagement with stakeholders.

(This section forms an integral part of OCBC's audited financial statements)

Fiduciary Risk Management

The Group has a fiduciary risk management programme to manage risks associated with fiduciary relationships from managing funds or providing other agency services. The programme provides guidelines on regular identification, assessment, mitigation, and monitoring of fiduciary risk exposures, to ensure the Group's compliance with applicable corporate standards.

Regulatory and Legal Risks

Each business unit is responsible for the adequacy and effectiveness of controls in managing both regulatory and legal risks. An annual Regulatory Compliance Certification is provided by senior management to the CEO and BRMC on the state of regulatory compliance.

TECHNOLOGY AND INFORMATION SECURITY RISK MANAGEMENT APPROACH

The Group protects and ensures the confidentiality, integrity, and availability of its information assets through implementing appropriate security controls to protect against the misuse or compromise of information assets. The Group's Technology Risk framework aligns to the Operational Risk framework and underpins the risk management that ensures technology risks are properly identified, managed, monitored, mitigated and reported in a structured and consistent manner. Senior management attests annually to the CEO and the Board, on the adequacy and effectiveness of technology controls and report key control deficiencies with remedial plans.

New and appropriate security technologies are regularly identified and implemented as part of OCBC's holistic approach to managing technology risk. In 2014, we enhanced our Technology Risk Management programmes with the setup of an independent technology and information security risk function to maintain oversight on technology risk management and exposures.

Cyber Security

With the rise in cyber threats, OCBC has remained an active participant in cyber security initiatives within the banking sector. As chairman of the ABS Standing Committee's cyber security awareness programmes, we take a leading role in collaborating with industry participants and key government agencies to formulate cyber security awareness programmes. Amongst the Standing Committee's key objectives are to influence technology risk management strategies, practices and to recommend solutions to counter cyber threats. During 2014, we helped to develop the "Cyber Incident Response Framework" and "ABS Penetration Testing Guidelines" for use by Singapore banks.