

Basel II Pillar 3 Market Disclosures 31 December 2016

BASEL II PILLAR 3 MARKET DISCLOSURES – 31 DECEMBER 2016

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<u>ATTESTATION BY CHIEF EXECUTIVE OFFICER PURSUANT TO RISK WEIGHTED CAPITAL ADEQUACY FRAMEWORK (BASEL II) – DISCLOSURE REQUIREMENTS (PILLAR 3)</u>

The risk disclosures set out in the Risk Management Chapter and Basel II Pillar 3 Market Disclosure are generally in conformance with the Bank Negara Malaysia Risk Weighted Capital Adequacy Framework (Basel II) – Disclosure Requirements (Pillar 3) and Capital Adequacy Framework for Islamic Banks (CAFIB-Basel II) – Disclosure Requirements (Pillar 3) for the Group as at 31 December 2016.

ONG ENG BIN CHIEF EXECUTIVE OFFICER

Kuala Lumpur

Risk Management

OCBC (M) Group (hereinafter referred as the "Group") consists of OCBC Bank (Malaysia) Berhad ("OCBC Bank") and OCBC Al-Amin Bank Berhad ("OCBC Al-Amin") which are members of the Oversea-Chinese Banking Corporation Group ("OCBC Group") in Singapore.

RISK MANAGEMENT IN OCBC GROUP

OCBC Group believes that sound risk management is critical 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 identify 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 ("Board") sets the OCBC Group's risk appetite, which serves to guide the level and nature of risks that the OCBC Group takes. Risks are managed prudently for the long-term sustainability of OCBC Group, and risk-taking decisions must therefore be consistent with strategic business goals and risk-adjusted return expectations. Portfolio risk limits, aligned to the risk appetite, are used to guide business operating boundaries.
- *Risk frameworks* The OCBC Group's risk management frameworks supported by policies, processes and controls are subject to robust governance structures to ensure that they are effective, comprehensive, and consistent.
- *Holistic risk management* Risks are managed holistically, with a view to understand the potential interconnectivity among risk types. Both risk-taking and risk-control units actively engage in regular enterprise-wide forums to identify and assess material emerging risks and opportunities. These assessments serve as inputs for both business and risk management purposes such as portfolio strategy, stress test and internal capital adequacy assessment.
- Qualitative and quantitative evaluations Risks are evaluated both qualitatively and quantitatively. Rigorous stress tests are also performed on portfolios to ensure that risks are kept within control under various plausible stress scenarios. Risk models in use are regularly reviewed and independently validated to ensure that they are fit for use.

Cultivating a strong risk culture and robust internal control environment throughout OCBC Group is necessary for sound risk management. Customer-facing business units, product teams, independent functional risk management units and other support units such as Operations and Technology are all actively involved in risk management processes. Group Audit conducts risk-based audits and provides independent assurance that our risk management systems and controls, and governance processes are effective and comply with both regulatory requirements and internal rules and standards. Group Audit also evaluates the overall risk awareness and control consciousness of management in discharging their risk and control responsibilities during audits through a Management

Control Oversight Rating ("MCOR"). Awareness, aptitude and attitude towards risk control issues are factors used in MCOR evaluation.

Stress testing and sensitivity analyses are integral to our risk management framework. They help senior management identify possible adverse events and assess potential vulnerability in our portfolios. These results are considered in business strategy formulation, capital adequacy assessment and risk limits setting.

All new products and services are governed by a New Product Approval Process ("NPAP") and approved by the New Product Approval Committee ("NPAC") which reports into Group Risk Management Division ("GRM"). This process provides a platform to ensure all risks associated with new product, channel and service launches are comprehensively identified and assessed before market introduction.

RISK GOVERNANCE AND ORGANISATION

At OCBC (M) Group, the Board establishes the Group's risk appetite and risk principles. The Risk Management Committee ("RMC") is the principal Board committee that oversees the Group's risk management. It sets the Group's overall risk management philosophy and approves risk management frameworks, major risk policies, and risk models. The RMC also oversees the establishment and operation of the risk management systems, receiving regular reviews on their effectiveness. The Group's various risk reports, including key stress test results and action plans, are regularly submitted to the Board, RMC and senior management to apprise them of the Group's risk profile.

The RMC is supported by the GRM, headed by the Country Chief Risk Officer. GRM is an independent risk and control oversight function that supports the Group's business development within a prudent, consistent and effective risk management framework and governance structure. This includes the establishment of relevant risk management frameworks, policies and procedures, risk measurements and methodologies. GRM also reviews and monitors the Group's risk profiles and portfolio concentrations and highlights any significant vulnerabilities and risk issues to the respective risk management committees. Our risk management and reporting systems are designed to ensure that risks are comprehensively identified and evaluated to support risk decisions.

The independence of risk management from business functions ensures that we achieve the necessary balance between risk-taking and return considerations. The compensation of risk officers is also determined independently of other business areas and reviewed to ensure it remains market competitive.

Senior management actively manages risks through various risk management committees at OCBC Group level such as the Credit Risk Management Committee¹ and the Market Risk Management Committee, as well as various risk management committees at OCBC (M) Group level such as the Asset and Liability Management Committee and the Operational Risk Management 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 based on their relevant experience, qualifications and track records. GRM officers also provide expertise during the design and approval of new products to ensure that the systems and processes are able to adequately manage the risks of any new products risks.

BASEL REQUIREMENTS

The Group has implemented the Bank Negara Malaysia ("BNM") Risk-Weighted Capital Adequacy Framework ("RWCAF") for banks incorporated in Malaysia, 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, the Group has made additional disclosures since 2010. Please refer to the OCBC (M) Group Basel II Pillar 3 Market Disclosure section in the financial statements for more information.

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 are on the Standardised Approach ("SA"). 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. Risk weights for market risk assets are specified according to the instrument category, maturity period, credit quality grade, as well as other factors and applied to the corresponding notional amount as prescribed under BNM.

For operational risk, the Group has adopted the Standardised Approach while its Islamic subsidiary, OCBC Al-Amin, is on the Basic Indicator Approach ("BIA"). Operational risk-weighted assets are derived by applying specified factors to the annual gross income for the prescribed business lines (SA) or a fixed percentage of positive annual gross income over the previous three years (BIA) in accordance with regulatory guidelines.

The Group conducts the Internal Capital Adequacy Assessment Process ("ICAAP") assessment at least annually to evaluate if the Group is able to maintain sound capital levels after considering business plans and material risks under both base case and severe stress scenarios. Remedial actions are proposed where necessary to ensure that the Group remains prudently managed.

Implementing the Basel framework is an integral part of our efforts to refine and strengthen our management of risks. We closely follow on-going industry and regulatory developments, including higher liquidity and capital requirements.

¹ The Credit Risk Management Committee at OCBC (M) Group is responsible in reviewing and managing the Group's credit portfolio, as well as aligning credit risk management with business strategy and planning.

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 its contractual obligations. As our primary business is commercial banking, the Group is exposed to credit risks from lending to consumers and corporate or 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. For derivative transaction, the total credit exposure is quantified by the transaction's current positive mark-to-market value plus an appropriate add-on factor for potential future exposure.

Credit Risk Management Oversight and Organisation

The Credit Risk Management Committee ("CRMC") is the senior management group that supports the CEO and the RMC in proactively managing credit risk, including reshaping the credit portfolios. It oversees the execution of the Group's credit risk management framework and policies, processes, infrastructure, methodologies and systems. The CRMC reviews the credit profile of material portfolios to ensure that credit risk taking is aligned with business strategy and risk appetite. The CRMC also recommends and monitors risk limits, as well as highlight any material risk issues to the CEO and RMC.

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 portfolio risk monitoring, risk measurement methodology, risk reporting, and remedial loan management.

Regular risk reports are provided to the Board, RMC, CEO 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. Such reporting alerts senior management, RMC and the Board to adverse credit trends early, so that timely corrective actions can be taken. To further strengthen the OCBC Group's risk analytics capability to deliver better holistic insights, we reorganised various risk analytics and reporting teams into a single global function reporting directly to the Group Chief Risk Officer.

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 its target market and risk acceptance criteria, lending rules and risk return expectations in order to add shareholder value. As Fair Dealing is a core corporate value, any complex product sales are made only after applicable suitability and appropriateness tests are met. In addition to effective risk

management practices, the judgement of our experienced credit officers is also key to our successful risk management.

Lending to Consumers and Small Businesses

Credit risks for the consumer and small business sectors are managed on a portfolio basis under credit programmes such as mortgages, credit cards, unsecured loans, commercial property loans, and business term loans. Loans made under these programmes should fall within the defined target markets, meet the stipulated lending criteria and comply with the applicable loan advance ratio. Systems and processes such as source identification of credit origination and independent verification of documentation are in place to prevent fraud. The portfolios are closely monitored monthly using MIS analytics. Application models are also used in the credit decision process for most products to enable objective, consistent and fast decisions. Behavioural models are used to identify potentially problematic loans early.

Lending to Corporate and Institutional Customers

Loans to corporate and institutional customers are individually assessed, risk rated and approved by experienced risk officers. The officers identify and assess the credit risks of these customers, including any customer group's interdependencies, and take into consideration management quality, business, financial and competitive profiles against industry and economic threats. Collaterals or other credit support are also used to mitigate credit 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 and credit risk units.

Credit Risk from Investment or Trading Activities

Counterparty credit risks arising from our trading, derivative, and debt securities activities are actively managed to protect against potential losses in replacing a contract if a counterparty defaults. Counterparty credit limits are established for each counterparty based on our assessment of the counterparty's creditworthiness, the suitability and appropriateness of the product offered and alignment with approved trading mandates and strategies. Credit exposures are also controlled through independent monitoring where breaches against approved limits or products are promptly escalated to senior management and highlighted to an independent Control Assurance Unit.

Internal Credit Rating Models

Internal credit rating models are an integral part of the 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 and limit utilisation monitoring, credit approval, reporting, remedial management, stress testing, and internal assessment of the capital adequacy and provisions.

Model risk is managed under an internal model risk management framework, including an internal credit rating model framework, to govern the development, validation,

application and performance monitoring of these models. Approval for material models use and annual validation results rests with the RMC. The models are developed with the active participation of credit experts from risk-taking and risk-control units and subject to independent validation before implementation to ensure that all aspects of the model development process have met internal standards. In addition, the models are 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 internal and regulatory requirements, which are also subject to independent review by Group Audit and approval by regulators.

The Group's internal risk grades are not explicitly mapped to external credit ratings. Nevertheless, our internal risk grades may correlate to external credit 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 A-IRB approach for major retail portfolios, including residential mortgages, credit cards and 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, including income-producing real estate ("IPRE") specialised lending are on the 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 BNM. 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 internal credit experts. The models also comply with the regulatory criteria for parameterisation. For other specialised lending portfolios namely Project Finance, Object Finance and Commodities Finance, risk grades derived from internal models are mapped to the five supervisory slotting categories as prescribed in BNM RWCAF. The risk weights prescribed for these slotting categories are used to determine the regulatory capital requirements.

Standardised Approach for Other Portfolios

Other credit portfolios, such as exposures to sovereigns and Islamic personal financing are under the Standardised Approach. These portfolios will be assessed for progressive migration to the internal 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, Fitch, Rating Agency Malaysia ("RAM") and Malaysian Rating Corporation Berhad ("MARC").

Credit Risk Control

Credit Risk Mitigation

Transactions are entered into primarily on the strength of a borrower's creditworthiness and debt servicing ability. To manage credit risk, the Group accepts collateral and credit protection as credit risk mitigants, subject to meeting the eligibility criteria. Collateral includes both physical and financial assets. The value of collateral is prudently assessed on a regular basis, and valuations are performed by independent qualified appraisers. Appropriate haircuts are applied to the market value of collateral, reflecting the underlying nature of the collateral, quality, liquidity and volatility. The loan-to-value ratio is a major factor in secured lending decisioning. The Group also accepts guarantees from individuals, corporates, and institutions as a form of support.

To manage counterparty credit risk, financial collaterals may be taken to partially or fully cover mark-to-market exposures on outstanding positions. Collateral agreements, typically covered under market standard documentation such as International Swaps and Derivatives Association ("ISDA") Agreements, include a minimum threshold amount where additional collateral is to be posted by either party if the mark-to-market exposures exceed an agreed threshold. Agreements may also contain rating triggers where additional collateral posting is required in the event of a rating downgrade.

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, portfolio, and industry segments. 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.

While we are steadily diversifying our exposure, we have significant exposure to the real estate market in Malaysia. Dedicated specialist real estate teams manage this risk with focus on client selection, project viability, collateral quality, and real estate cycle trends. Regular stress tests are also made to identify potential vulnerabilities on the real estate portfolio.

The Group is in compliance with BNM Circular on Guidelines on Lending to the Broad Property Sector ("BPS") and Lending for the Purchase of Shares and Units of Unit Trust Funds dated 29/03/1997, which limits BPS exposure to not more than 20% of its total outstanding loans, advances and financing.

Remedial Management

The Group constantly review and assess our portfolios of credits to detect potential problem credits at an early stage. As we value customer relationships, we will work with customers facing financial distress and work closely with them. We recognise the opportunity to promote customer loyalty and retention in such instances, even as we enforce strict discipline and priority on remedial management to minimise credit loss.

Loans, advances and financing are categorised as "Pass" or "Special Mention", while impaired loans ("ILs") are categorised as "Substandard", "Doubtful" or "Loss".

Credit facilities are classified as restructured assets when the Bank has granted concessions or restructured repayment terms to borrowers who are facing difficulties in meeting the original repayment schedules. Such restructured assets are classified in the appropriate impaired loans grades and will not be restored to performing loan status until the borrowers have demonstrated sustained ability to meet all future obligations under the restructured terms.

The Group has dedicated specialist workout teams to manage problem exposures. Time and risk-based event specific triggers are used to develop collection and asset recovery strategies. The Group uses analytical data such as delinquency buckets and adverse status tags for delinquent consumer loans to constantly fine-tune and prioritise its collection efforts.

Impairment Allowances for Loans, Advances and Financing

The Group maintains loan allowances that are sufficient to absorb credit losses inherent in its loans, advances and financing portfolio. Total loan loss allowance comprises of individual impairment allowances for impaired loans and collective impairment allowance for all performing loans, advances and financing to cover expected losses that are not yet evident.

Individual impairment allowances for credit losses are evaluated either individually or collectively for a portfolio. The amount of individual impairment allowance for an individual credit exposure is determined by ascertaining the difference between the present value of future recoverable cash flows of the impaired loan and the carrying value of the loan. For homogenous unsecured retail loans such as credit card receivables, individual impairment allowances are collectively assessed, taking into account the homogenous characteristics and historical loss experience of such loans.

Collective impairment allowance is provided based on our credit experience, historical loss rates and judgement for estimated inherent losses that may exist but may not been identified for any specific financial asset.

The Group's policy on classification and provisioning for loans, advances and financing is guided by Malaysian Financial Reporting Standard 139 ("MFRS139") and BNM's Policy on Classification and Impairment Provisions for Loans/Financing. The Group is

working towards implementing Malaysian Financial Reporting Standards 9 ("MFRS 9") which replaces MFRS139 with effect from 1 January 2018.

Write-Offs

Loans are written off against impairment after taking into consideration the realisable value of collateral, if any, when in the judgement of the management, there is no prospect of recovery.

Ceasing of Interest Accrual on Loans, Advances and Financing

When a loan is classified as impaired, 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 collection of such interest income. Once a loan/financing has been written down as a result of an impairment allowance, interest/finance income is recognised using the interest/profit rate used to discount the future cash flows for the purpose of measuring the impairment allowance.

Collateral Held Against Impaired Loans

The Group's impaired loans are largely secured by real estate in Malaysia. The realisable value of the collateral is used to determine the adequacy of the collateral coverage. Cross collateralisation will only apply when exposures are supported by proper legal documentation.

Responsible Financing

The Group recognises that promoting long-term sustainable development is fundamental to its continuing success. In this regard, the Group is committed to advancing environmental and social progress and to conducting its business in a responsible manner. In addition to including ESG assessment in its credit policy and implemented this as part of routine credit evaluation, the OCBC Group has in addition rolled out the new Responsible Financing Framework. This Framework aims to fully integrate ESG considerations into our credit evaluation and risk decisioning process in a more structured and systematic manner, including reputational risk assessment.

Relevant supporting policy and ESG risk assessment tools are in place for progressive rollout and implementation within the Group in 2017.

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, credit spreads, equity and commodity prices, or changes in volatility or correlations of such factors. The Group is exposed to market risks from its trading, client servicing and balance sheet management 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 Asset Liability Management Committee ("ALCO") is the senior management group that supports the RMC and the CEO in managing market risk. ALCO 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.

ALCO is supported by the Market Risk Management ("MRM") department 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 proactively managing risk within their approved trading strategies and investment mandates, while MRM acts as the independent monitoring unit to ensure sound governance. The key risk management activities of identification, measurement, monitoring, control, and reporting are regularly reviewed by MRM and ALCO to ensure effective risk management under prevailing market conditions.

Market Risk Identification

Risk identification is addressed via the Group's internal NPAP at product inception. Market risks are also identified by our risk managers from their on-going interactions with the business units.

Market Risk Measurements

Value-At-Risk

Value-at-risk ("VaR"), as 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 consolidated level. The VaR model is based on a historical simulation at a 99% confidence level and over a one-day holding period. As VaR is a statistical measure based on historical market fluctuations, past changes in market risk factors may not accurately predict forward-looking market conditions all the time. Under the defined confidence threshold, 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 important measure monitored on a daily basis. Other than VaR and PV01, other risk measurements used include notional positions, Profit & Loss ("P&L") for One Basis Point Move in Credit Spreads ("CS01") and derivative greeks for specific exposure types.

Stress Testing and Scenario Analyses

The Group 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 and risk profile as well as prevailing and forecast economic conditions. These analyses determine if potential losses from such extreme market conditions are within the Group's risk tolerance.

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), P&L, and other measures are also used to manage market risk exposures holistically.

Model Validation

Model validation is also an integral part of the Group's risk control process. Financial 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 P&L and risk measures generated by the financial models used in managing market risk exposures.

Back-Testing

To ensure the continued integrity of the VaR model, the Group regularly back-tests the VaR estimates against actual daily trading P&Ls and theoretical P&Ls to confirm that the VaR model does not underestimate market risk exposures.

System and Infrastructure Upgrade

The Group completed a multi-year project aimed at improving reporting and measurement capabilities through technology upgrade and methodology enhancements. The scope of this project covers areas such as automation of daily stress tests with analytical capability, enhancements on accuracy, granularity and coverage of VaR

elements as well as adding hardware capacity to meet further growth and reach.

ASSET LIABILITY MANAGEMENT

Asset liability management is the strategic management of the Group's balance sheet structure and liquidity requirements, covering liquidity sourcing and diversification and interest rate management.

Asset Liability Management Oversight and Organisation

ALCO is the senior management group that is responsible for the management of the Group's balance sheet and liquidity 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 Department within the Group Finance Division. The Asset Liability Management ("ALM") department within GRM monitors the banking book interest rate and liquidity risk profiles for the Group under both baseline and stressed scenarios.

Asset Liability Management Approach

The asset liability management framework comprises liquidity risk management, and interest rate 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.

The Group's liquidity management process involves establishing liquidity management policies and limits, regular monitoring against liquidity risk limits, regular stress testing, and refining 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. 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 and products. In addition, liquid assets in excess of regulatory requirements are maintained to strengthen our ability to meet liquidity needs during a 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 and are consistent with our risk appetite parameters.

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, and 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.

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 manage both 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 Management Committee ("ORC") is the senior management group that oversees the execution of the Group's operational risk management, including technology and information security risk practices. ORC ensures that various risk management programmes that are in place are appropriate and 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 independently oversees 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 industry recognised accreditation programme to raise competency levels in managing operational risk.

Operational Risk Management Approach

The 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 strong risk management and control culture.

Each business unit undertakes self-assessment on a regular basis by assessing the robustness of its 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 the risks result in material losses. To enhance controls over trading activities and data loss prevention, we have specific risk units in place to perform end-to-end surveillance over these areas.

Senior management attests annually to the CEO, Board Audit Committee and RMC, on the adequacy and effectiveness of the internal control and risk management systems and also reports on key control deficiencies and accompanying remedial plans. Operational risk losses and incidents data trends are also analysed and reported regularly.

To mitigate operational losses, insurance programmes are in place to protect the Bank and its employees against adverse events. These programmes cover crime, cyber risks, professional indemnity, directors' and officers' liability, property damage and public liability.

Outsourcing Risk Management

The Group recognises the risks associated with outsourcing arrangements. As part of the Group's outsourcing risk management programme, we have a multi-disciplinary outsourcing managing group in place to manage outsourcing risks in a structured, systematic and consistent manner. An Outsourcing Management Control Group ("OMCG"), comprising members from different risk and internal control functions, has been set up to support the ORC in managing the Group's outsourcing risk.

Physical and People Security Risk Management

The Group has a programme to ensure that physical and security risk to people and assets is adequately addressed. This includes having a unit to actively monitor and scan global events that may pose a risk to OCBC locations, employees and assets. This unit provides advisories and response procedures to better prepare the Bank and its employees against these risk events.

Business Continuity Risk Management

The Group has a comprehensive and robust business continuity management programme that aims to minimise the interruption to essential business activities and services during times of crisis. This is achieved through the implementation of robust recovery strategies and business recovery plans which are reviewed and tested annually. Senior management also provides an annual attestation to the RMC which includes a measurement of the

programme's maturity, extent of alignment to BNM 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 the ORC and RMC. We enhanced our fraud detection capabilities during 2016 with the deployment of a Fraud Surveillance System and the formation of a Fraud Surveillance Unit. Group Audit independently reviews all fraud and whistle-blowing cases, and reports their finding to the Board Audit Committee.

Reputational Risk Management

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

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 Risk Management

The Group hold itself to high standards when conducting business and at all times observe and comply with applicable laws, rules and standards. The Group has in place a compliance risk programme which defines the required environment and organisational components for managing the risk in a structured systematic and consistent manner. Each business unit is responsible for having adequate and effective controls to manage both regulatory and legal risks. Senior management provides the CEO and Board of Directors with an annual Regulatory Compliance Certification regarding the state of regulatory compliance.

Technology and Information Security Risk Management

Technology and information security ("TISR") risk management is an integral part of the ORM framework. The Group adopts a holistic approach to ensure that TISR risks are properly monitored, assessed, mitigated and reported. Appropriate controls are in place to ensure confidentiality, integrity, and availability of our information assets.

The Group strengthened its cyber defense capability during 2016 to counter the growing sophistication of cyber attacks. Additional controls against advanced malware threats,

mitigation measures against DDoS attacks for critical internet services were implemented. We also raised our staff awareness and vigilance through regular awareness campaigns.

Anti-Money Laundering / Countering the Financing of Terrorism Risk Management

The Group has in place a structured framework and programme for combating money laundering and countering the financing of terrorism that is implemented across the organisation. This incorporates the BNM's Guidelines on Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) – Banking and Deposit-Taking Institutions (Sector 1) and is in line with the principles or guidelines set by international organisations, such as the Basel Committee and Wolfsberg Group.

The Group's programme is aimed at managing and mitigating potential exposure to existing and emerging money laundering and terrorism financing ("ML/TF") risks emanating from the various customer segments, products and services and delivery channels. It includes observance of sanctions required by BNM. In this regard, we have implemented appropriate policies and procedures to conduct customer due diligence to know our customers as well as transaction monitoring capabilities to detect unusual or suspicious transactions.

The Group's anti-money laundering and countering the financing of terrorism ("AML/CFT") programme is subject to internal and external audits as well as regulatory inspections. The senior management and the Board have oversight of the programme, which is reviewed regularly to ensure that it remains robust and relevant with the evolving regulatory landscape and operating environment. They are kept apprised on enhancements to the programme as well as significant regulatory changes in the various host countries where we have business operations.

The Group regularly invests in the systems, upgrading or replacing them from time to time to strengthen its capabilities in customer risk management and transactions monitoring.

The Group recognises that its employees play an integral role in our AML/CFT efforts and have emphasised the importance of staying vigilant to ML/TF and sanctions risks to its business and network. To ensure that our employees understand these risks, they undergo basic training when they join the bank and regular refresher training thereafter. The Group also provides specific training to enable employees to carry out their respective roles and to keep abreast of developments in the financial industry. The Board and management committee are trained regularly to enable them to oversee our AML/CFT programme. The training encompasses AML/CFT and sanctions regulations, case studies depicting local or transnational criminal activities and new or developing typologies.

SHARIAH GOVERNANCE

Overview

OCBC Al-Amin Bank Berhad ("OABB") is governed by the Shariah Governance Framework ("SGF") of BNM, SGF of OABB and Islamic Financial Services Act 2013 ("IFSA") which in essence sets out the governance structure, policies and processes for the Bank's business, operations and activities. The SGF sets out the guidance to the Board of Directors, Shariah Committee and Management, and outlines functions such as Shariah Risk Management, Shariah Review, Shariah Audit and Shariah Research and Secretariat. The SGF is applicable to all employees of OABB and extends to all staff of OCBC Bank and other service providers who are involved in the business and operations of OABB under shared services or outsourcing arrangements.

Shariah Risk Management

Shariah Risk Management is a function to systematically identify, measure, monitor and control of Shariah non-compliance risks to mitigate any possibility of non-compliance. It shall form as part of the Islamic bank's integrated risk management framework. Shariah non-compliance risks arises from non-compliance events attributed by Islamic Banks' failure to comply with the Shariah rules and principles as determined by the Shariah Advisory Council ("SAC") of Bank Negara Malaysia, Shariah Advisory Council of the Securities Commission and Shariah Committee of Islamic Banks. As such, OABB shall at all times ensure its operations, business, affairs and activities are in compliance with Shariah, of which any failure may have adverse impact to the bank's financial position and also reputation.

The key components of OABB's Shariah Risk Management process are as follows:

- Identify, measure, control and monitor Facilitating the process of identifying, measuring, controlling and monitoring Shariah non-compliance risks inherent in OABB's business, operations and activities;
- Policies and Guidelines Formulating and recommending appropriate Shariah risk management policies and guidelines; and
- Risk awareness Developing and implementing processes for Shariah non-compliance awareness in OABB.

All potential Shariah non-compliance events are submitted to the Bank's Shariah Committee for their deliberation and decision. All Actual Shariah Non-Compliance Events ("SNCEs") are to be reported to BNM within the required timeframe.

Note:

In this document, for whatever that is related to Islamic Banking, the following terms shall apply:

- 1. Risk Weighted Capital Adequacy Framework (RWCAF) also refers to Capital Adequacy Framework for Islamic Bank (CAFIB) (inclusive of Disclosure Requirements for Pillar 3 where applicable);
- 2. Loan also refers to Financing;
- 3. Borrower also refers to Customer;
- 4. Interest also refers to Profit;
- 5. Interest Rate also refers to Benchmark Rate;
- 6. Lending also refers to Financing.

Basel II Pillar 3 Market Disclosure

OCBC Bank (M) Berhad Group – Position as at 31 December 2016)

The purpose of this disclosure is to provide the information in accordance with BNM Risk Weighted Capital Adequacy Framework (Basel II) – Disclosure Requirements (Pillar 3) and Capital Adequacy Framework for Islamic Bank (CAFIB - Basel II) – Disclosure Requirements (Pillar 3) Guidelines. This supplements the disclosure in the Risk Management Chapter as well as related information in the Notes to the Financial Statements.

Exposures and Risk Weighted Assets (RWA) by Portfolio

	EAD ¹	RWA
	RM million	RM million
Credit Risk		
Standardised Approach		
Corporate	13	13
Sovereign & Central Bank	14,767	146
Retail	617	619
Equity	109	109
Securitisation	-	-
Others	623	485
Total Standardised	16,129	1,372
Internal Ratings-Based (IRB) Approach Foundation IRB		
Corporate	32,155	28,017
Bank	8,886	1,229
Public Sector Entity	573	87
Advanced IRB		
Residential Mortgage	33,599	4,827
Qualifying Revolving Retail	1,567	564
Other Retail - Small Business	12,062	4,786
Specialised Lending under Supervisory Slotting Criteria	123	133
Total IRB	88,965	39,643
Total Credit Risk	105,094	41,015
Market Risk		
Standardised Approach		1,164
Total Market Risk		1,164
Operational Risk		
Standardised Approach ²		4,417
Total Operational Risk		4,417
Total RWA		46,596

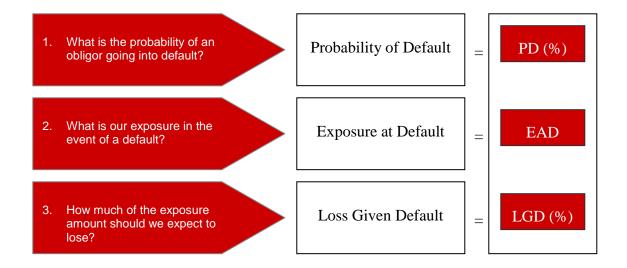
Note:

¹ EAD refers to exposure at default after credit risk mitigation

² OCBC Bank (M) Berhad Group and OCBC Bank (M) Berhad have adopted the Standardised Approach, with effect from 2012, while OCBC Al-Amin Bank Berhad is on the Basic Indicator Approach.

CREDIT RISK

With Basel II implementation, OCBC Bank (M) Berhad Group has adopted the Internal Ratings-Based (IRB) Approach for major credit portfolios, where 3 key parameters – Probability of Default (PD), Exposure at Default (EAD) and Loss Given Default (LGD) are used to quantify credit risk.



Credit Exposures under Standardised Approach

Credit exposures under standardised approach are mainly exposures to sovereign and central bank. Rated exposures relate mainly to sovereign and central bank while unrated exposures relate mainly to Islamic personal financing and other assets.

Risk Weight	EAD RM million
0%	14,672
20% - 35%	109
50% - 90%	105
100%	1,077
>100%	57
Total	16,020
Rated exposures	14,767
Unrated exposures	1,253

Note: Excludes Equity

Equity Exposures under Standardised Approach

Equity exposures for regulatory capital computation are risk weighted in accordance with BNM Risk-Weighted Capital Adequacy Framework (Basel II – Risk-Weighted Assets Computation) under the standardised approach.

	EAD
Risk Weight	RM million
100%	109
Total	109

Securitisation Exposures

There is no securitization and re-securitisation exposure in the banking and trading books as at 31 December 2016.

Specialised Lending Exposures under Supervisory Slotting Criteria

Specialised lending exposures include project and object financing.

	EAD RM million	Average Risk Weight
Strong	-	-
Good	-	-
Satisfactory	109	122%
Weak	-	-
Default	14	NA
Total	123	108%

Credit Exposures under Foundation Internal Ratings-Based Approach (F-IRBA)

Corporate exposures are mainly exposures to corporate and institutional customers, major non-bank financial institutions as well as financing of income-producing real estate. Bank exposures are mainly exposures to commercial banks. Public sector entity exposures refer to exposures to administrative bodies of federal/state/local governments.

Corporate Exposures

	EAD	Average
PD Range	RM million	Risk Weight
up to 0.05%	890	25%
> 0.05 to 0.5%	9,946	49%
> 0.5 to 2.5%	13,600	91%
> 2.5 to 9%	6,302	140%
> 9%	864	203%
Default	553	NA
Total	32,155	87%

Bank Exposures

	EAD	Average
PD Range	RM million	Risk Weight
up to 0.05%	6,685	10%
> 0.05 to 0.5%	2,137	25%
> 0.5 to 2.5%	64	55%
> 2.5 to 9%	#	171%
> 9%	-	=
Default	-	NA
Total	8,886	14%

Public Sector Entity Exposures

	EAD	Average
PD Range	RM million	Risk Weight
up to 0.05%	573	15%
> 0.05 to 0.5%	-	=
> 0.5 to 2.5%	-	-
> 2.5 to 9%	-	-
> 9%	-	-
Default	-	NA
Total	573	15%

[&]quot;#" represents amount less than RM0.5 million

Credit Exposures under Advanced Internal Ratings-Based Approach (A-IRBA)

Residential Mortgages are loans to individuals secured by residential properties. Qualifying Revolving Retail exposures are credit card facilities to individuals. Other Retail – Small Business exposures include lending to small businesses and commercial property loans to individuals.

Residential Mortgages

	EAD	Undrawn Commitment	EAD Weighte	ed Average
PD Range	RM million	RM million	LGD	Risk Weight
up to 0.5%	23,912	2,830	12%	7%
> 0.5 to 3%	6,563	595	13%	18%
> 3 to 10%	1,133	33	13%	51%
> 10%	1,419	49	13%	73%
100%	572	49	18%	48%
Total	33,599	3,556	12%	14%

Qualifying Revolving Retail Exposures

	EAD	Undrawn Commitment	EAD Weighte	ed Average
PD Range	RM million	n RM million	LGD	Risk Weight
up to 0.5%	1,103	1,660	78%	9%
> 0.5 to 3%	246	188	76%	50%
> 3 to 10%	118	59	80%	130%
> 10%	92	18	75%	202%
100%	8	-	75%	0%
Total	1,567	1,925	77%	36%

Other Retail - Small Business Exposures

	EAD	Undrawn Commitment	EAD Weighte	ed Average
PD Range	RM million	RM million	LGD	Risk Weight
up to 0.5%	7,739	1,671	33%	18%
> 0.5 to 3%	2,399	133	41%	50%
> 3 to 10%	548	27	41%	67%
> 10%	968	8	41%	91%
100%	408	25	45%	224%
Total	12,062	1,864	36%	40%

Actual Loss and Expected Loss for Exposures under Foundation and Advanced IRB Approaches

Actual loss refers to net impairment loss allowance and direct write-off to the statement of profit or loss during the year. Expected loss ("EL") represents model derived and/or regulatory prescribed estimates of future loss on potential defaults over a one-year time horizon. Comparison of the two measures has limitations because they are calculated using different methods. EL computations are based on LGD and EAD estimates that reflect downturn economic conditions and regulatory minimums, and PD estimates that reflect long run through-the-cycle approximation of default rates. Actual loss is based on accounting standards and represents the point-in-time impairment experience for the financial year.

	Actual Loss for the 12 months ended 31 December 2016 RM million	Regulatory Expected Loss (Non-defaulted) as at 31 December 2015 RM million
Corporate	78	252
Bank	-	2
Public Sector Entities	-	_ #
Other Retail - Small Business	45	193
Retail	46	103
Total	169	550

[&]quot;#" represents amount less than RM0.5 million

Exposures Covered by Credit Risk Mitigation

	Eligible Financial Collateral RM million	Other Eligible Collateral RM million	Amount by which credit exposures have been reduced by eligible credit protection RM million
Standardised Approach			
Corporate	1	-	-
Sovereign & Central Bank	-	-	-
Retail	31	-	-
Others	#	-	<u> </u>
Total	32	-	<u>-</u>
Foundation IRB Approach			
Corporate	1,186	11,043	28
Bank	832	-	<u> </u>
Total	2,018	11,043	28

Note:

^{1.} Not all forms of collateral or credit risk mitigation are included for regulatory capital calculations.

^{2.} Does not include collateral for exposures under Advanced IRB Approach and Specialised Lending. "#" represents amount less than RM0.5 million

Counterparty Credit Risk Exposures

	RM million
Replacement Cost	1,966
Potential Future Exposure	2,287
Less: Effects of Netting	-
EAD under Current Exposure Method	4,253
Analysed by type:	
Foreign Exchange Contracts	3,164
Interest Rate Contracts	1,036
Equity Contracts	16
Gold and Precious Metals Contracts	-
Other Commodities Contracts	2
Credit Derivative Contracts	35
Less: Eligible Financial Collateral	832
Net Derivatives Credit Exposure	3,421

Note: Not all forms of collateral or credit risk mitigation are included for regulatory capital calculations.

Credit Derivatives

Notional Amount
RM million
Bought Sold

	Bought	Sold
Credit Derivatives Swap		
for own credit portfolio	-	-
for intermediation activities	495	495
Total	495	495

Note: Credit derivatives for own credit portfolio include trading portfolio and hedges, if any.

MARKET RISK

Exposure, Risk Weighted Assets and Capital Requirement by Market Risk Type under Standardised Approach

	Gross Ex	Gross Exposure		Min. Capital
	Long Position	Short Position	Assets	Requirement
	RM million	RM million	RM million	RM million
Interest Rate Risk	29,765	28,084	982	79
Foreign Currency Risk	157	168	168	13
Equity Risk	-	-	-	-
Commodity Risk	-	-	-	=
Inventory Risk	-	-	-	<u>-</u>
Options Risk	1	#	14	1
Total	29,923	28,252	1,164	93

[&]quot;#" represents amount less than RM0.5 million

EQUITY EXPOSURES

Equity exposures comprised investments in quoted and unquoted equity instruments.

Disclosures on accounting policy and fair value measurement of equity securities are in Notes to the Financial Statements 2 C (b) (iii), I (a) (ii) and 41 A (i) (c).

Carrying Value of Equity Exposures

RW MIIION
#
109
-
<u>-</u>
109

DM million

Realised and Unrealised Gains and Losses

	RM million
Gains/(losses) from disposal of AFS equities	-
Unrealised gains included in fair value reserve	95
Total	95

[&]quot;#" represents amount less than RM0.5 million

Interest Rate Risk in Banking Book

Based on a 50 basis point parallel rise in yield curves on the OCBC (M) Group's exposure to major currency i.e. Malaysian Ringgit, net interest income is estimated to increase by MYR139.5 million, or approximately +10.7% of reported net interest income. The corresponding impact from a 50 basis point decrease is an estimated reduction of MYR139.1 million in net interest income, or approximately -10.6% of reported net interest income.