

Company No. 295400 W



OCBC Bank (Malaysia) Berhad  
(Incorporated in Malaysia)

## **Basel II Pillar 3 Market Disclosures 31 December 2015**

*The disclosure in this section refers to OCBC Bank (M) Berhad Group position. OCBC Bank (M) Berhad Group consists of OCBC Bank (Malaysia) Berhad and OCBC Al-Amin Bank Berhad which are members of the Overseas-Chinese Banking Corporation Group in Singapore.*

BASEL II PILLAR 3 MARKET DISCLOSURES – 31 DECEMBER 2015

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OCBC Bank (Malaysia) Berhad  
(Incorporated in Malaysia)

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

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 2015.

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 paramount to the success of its 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 approves the OCBC 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 commensurate with the risks taken.
- **Risk frameworks** – The OCBC 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 in use are regularly reviewed and independently validated to ensure that they are fit-for-use.

We believe that effective risk management starts with well-considered risk-taking strategies, and further supported by a robust and proactive risk management process. This is reinforced with competent risk management staff, on-going investments in risk infrastructure and systems, regular review and enhancement of risk management policies and procedures. Cultivating a strong risk culture and robust internal control environment throughout OCBC Group are also paramount to sound risk management. Accountability for managing risks is jointly owned among customer-facing and product business units, dedicated and independent functional risk management units, as well as other support units such as Operations and Technology. Group Audit also provides independent assurance that OCBC Group’s risk management system, control and governance processes are in compliance with internal rules and standards and are effective. Rigorous portfolio management tools such as stress testing and scenario analyses are used to identify possible events or market conditions that could adversely affect OCBC Group’s portfolios. These results are taken into account during the formulation of OCBC Group’s business strategy, capital adequacy assessment and the setting of risk limits.

## **RISK GOVERNANCE AND ORGANISATION**

At OCBC (M) Group, the Board of Directors 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, 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, RMC and senior management for review and action.

The RMC is supported by the Group Risk Management Division ("GRM"), headed by the Country 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 and procedures, risk measurements and methodologies. 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 at OCBC Group level such as the Credit Risk Management Committee<sup>1</sup> 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 and Information Security 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 with 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 manage the risks of any new products or material variations in existing products.

<sup>1</sup> 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.

## **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”) 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 while its Islamic subsidiary, OCBC Al-Amin, is on the Basic Indicator Approach. Operational risk-weighted assets are derived by applying specified beta factors to the annual gross income for the prescribed business lines or prescribed alpha factor on the annual gross income 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 considering business plans and material risks under both normal and severe 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. We remain 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 its 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. 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 and historical data to estimate the potential worst-case risk scenario.

## **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, and reviews the credit profile of material portfolios to ensure that credit risk taking is aligned with business strategy and risk appetite. In addition, the CRMC recommends credit approval authority limits 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 reports are provided to the Board of Directors, RMC, 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 to adverse credit trends early, so that timely corrective actions can be taken.

## **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 underwriting standards, and risks that commensurate with 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, 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 product or credit programmes for mortgages, credit cards, unsecured loans, commercial property loans, and business term loans. Loans are underwritten that conform to clearly defined target markets, terms of lending and maximum loan size. 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 corporate or institutional customers, including any customer group's interdependencies, and take into consideration management quality, financial and business competitive profiles against industry and economic threats. Collaterals or other credit support are also used to mitigate potential losses. 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 units as well as credit risk functions.

### ***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 is not active in securitisation activities.

### **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 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 RMC. 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 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 for compliance with internal and regulatory requirements, which are also subject to independent review by Internal Audit.



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, 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, including income-producing real estate ("IPRE") specialised lending 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 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 for such exposures.

#### *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 progressively migrated 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 ability to repay. To manage credit risk, the Group accepts collateral and credit protection as credit risk mitigants, subject to the Group's policies on their eligibility.

Collateral forms a major portion of credit risk mitigants at the Group and it 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 discounts are applied to the market value of collateral, reflecting the quality, liquidity, volatility, and collateral type. The loan-to-value ratio is a main factor in secured lending decisions. 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. A discount is normally applied to 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 Association (“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, 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 strives to anticipate early problem credits and to proactively manage such credits. As we value long-term customer relationships, we are cognizant that some customers may face temporary financial distress and prefer to work closely with them at the onset of their difficulties. 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 according to the Group's internal credit grading system as "Pass" or "Special Mention", while impaired loans are categorised as "Substandard", "Doubtful" or "Loss".

Credit facilities are classified as restructured assets when the Bank has granted concessions or restructured repayment terms on non-commercial basis to borrowers who are facing difficulties in meeting the original repayment schedules. Such restructured assets are classified in the appropriate impaired loans grades if it demonstrates an increased in credit risk 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, risk-based event specific triggers, as well as 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 collection efforts.

#### *Impairment Allowances for Loans, Advances and Financing*

The Group maintains impairment allowances for loans, advances and financing that are sufficient to absorb credit losses inherent in its loans, advances and financing portfolio. Total loans, advances and financing reserves comprise individual impairment allowances against each impaired loans, advances and financing and collective impairment allowances for all loans, advances and financing to cover any losses that are not yet evident.

Individual impairment allowance is provided if the recoverable amount is lower than the net carrying amount of the loans, advances and financing. Recoverable amount refers to the present value of estimated future cash flows discounted at original effective interest rate. If a loan/financing has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate.

Financial assets that have not been individually assessed are grouped together and collectively assessed for impairment allowance. These financial assets are grouped according to their credit risk characteristics and collectively assessed for impairment allowance. In addition, the Group also maintains a regulatory reserve in compliance with BNM's requirement to maintain, in aggregate, collective impairment allowance and regulatory reserve of no less than 1.2% of gross loans, advances and financing, net of individual impairment allowance.

The Group's policy for loans, advances and financing allowances is guided by Malaysian Financial Reporting Standard 139 ("MFRS139").

### *Write-Offs*

Uncollectible loans, advances and financing or portion of loans, advances and financing classified as impaired are written off 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 statement of profit or loss on an accruals 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. Interest income on impaired loans is recognised on receipt basis.

### *Collateral Held Against Impaired Loans*

Real estate in Malaysia forms the main type of collateral for the Group's impaired loans. 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. The Group is exposed to market risks from its trading 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 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 on-going interactions with the business units.

### **Market Risk Measurements**

#### *Value-At-Risk*

Value-at-risk ("VaR") is a measurement of potential loss for the Group's trading activities under normal market conditions based on the latest 250 days scenarios. VaR is measured and monitored by its individual market risk components, namely interest rate risk, foreign exchange risk, price risk, and credit spread risk, as well as at the consolidated aggregate level. The VaR methodology applied is the historical simulation VaR based on 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, One Basis Point Move in Credit Spreads ("CS01") 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.

## **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 and theoretical P&L against the model's statistical assumptions.

## **ASSET LIABILITY MANAGEMENT**

Asset liability management is the strategic management of the balance sheet structure and liquidity needs, 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 statement of financial position 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 and the MRM Department within GRM.

### **Asset Liability Management Approach**

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

## **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 and Information Security Committee ("ORISC") is the senior management group 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 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 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, a Control Assurance Function has been established 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 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.



### *Outsourcing Risk Management*

The Group recognises the risks associated with outsourcing arrangements. The Group has in place an outsourcing programme to manage subcontractor 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 ORISC in managing the Group’s outsourcing risk.

### *Physical and People Security Risk Management*

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

### *Business Continuity Risk Management*

The Group’s business continuity management 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. Senior management also provides an annual attestation to the RMC. The attestation includes a measurement of the programme’s maturity, extent of alignment to BNM guidelines, and a declaration of acceptable residual risk. The Group has also enhanced its ability to respond to external calamities and crisis such as Middle East respiratory syndrome coronavirus (MERS-CoV) and terrorism related incident during the year.

### *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 RMC. Internal 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 different stakeholders, and 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*

Each business unit is responsible for the adequacy and effectiveness of controls in managing both regulatory and legal risks. Senior management provides the state of regulatory compliance via an annual regulatory compliance certification to the CEO and Board of Directors.

### **Technology and Information Security Risk Management**

The Group protects and ensures the confidentiality, integrity, and availability of its information assets by implementing appropriate security controls and backup systems to guard against the misuse or compromise of information assets. In 2015, the Group further enhanced its operational risk approach by holistically including technology and information security risk as an integral part of the ORM framework. This change provides assurance that technology and information security risks are properly identified, managed, monitored, mitigated and reported in a structured and consistent manner. Senior management attests annually to the CEO and the RMC, on the adequacy and effectiveness of technology controls including any key control deficiencies and remedial plans.

### *Cyber Security Risk Management*

With the rise in cyber threats, the Group has remained an active participant in cyber security initiatives within the banking sector. We are a member of the Industry Cyber Working Group (“ICWG”) formed by BNM which main objective is to serve as a platform for effective information and intelligence sharing and cooperation on Cyber related matters among Financial institutions (“FIs”), disseminate latest Cyber threats and trend as well as the modus operandi, share remedial measures where appropriate among members to mitigate Cyber risks, assist in Cyber-related initiatives for FIs and facilitate cross-sector collaboration.

## **SHARIAH GOVERNANCE**

Shariah principles are the foundation of the practice of Islamic Finance through the observance of the tenets, conditions and principles espoused by Shariah. To ensure all the operations and activities of OCBC Al-Amin complies with Shariah rules and principles at all times. OCBC Al-Amin is governed by the Shariah Governance Framework of OCBC Al-Amin Bank Berhad (“SGF”) which in essence sets out the following:

- Defines Shariah governance structures, policies and processes to ensure that all its operations and business activities are in accordance with Shariah principles;
- Provides comprehensive guidance to the Board, Management and Shariah Committee (“SC”) of OCBC Al-Amin in discharging their respective duties in matters relating to Shariah ; and
- Outlines the functions relating to Shariah Review, Shariah Audit, Shariah Research and Secretariat, and Shariah Non Compliance Risk Management processes.

The SGF is applicable to all employees of OCBC Al-Amin and also extends to all employees of OCBC Bank who are involved in the business and operations of OCBC Al-Amin under shared services and other service providers under outsourcing arrangements.

### *Shariah Non-Compliance Risk*

Shariah Non-Compliance Risk Management is a unique feature of the Bank's risk management framework. Shariah Non-Compliance Risk arises from 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.

The responsibility for complying with Shariah rules and principles, does not only lie/reside with the Board and Management; as compliance with all relevant regulations is a key part of our organisational culture, every business division and their staff are also responsible and accountable for any breaches of applicable laws, guidelines, rules and regulations related to Islamic banking and finance.

During the life cycle of the products and services, the Shariah requirements that were embedded in the said products and services must also be strictly adhered to and failing which, the income generated from the Islamic banking business potentially cannot be recognised and will be donated to charities.

The key components of the Bank's Shariah Non-Compliance Risk Management process are namely:

- **Risk Identification** – Identification of the potential Shariah non-compliance events
- **Risk Assessment / Measurement** – Assessment and measurement of the impact of the potential Shariah non-compliance event. The process takes into account the existing controls that have been put in place and their effectiveness in mitigating the Shariah Non-Compliance Risk.
- **Mitigation / Control / Awareness** – Shariah Non-Compliance Risk are mitigated by implementing and putting in place appropriate control measures, such as policies, guidelines and procedures on Shariah requirements. The Bank's Shariah Review team will periodically review the operations and processes of the Bank's activities and will escalate any potential non-compliance events to the Shariah Committee for decision. Training programs are also being offered to all personnel that are involved in the Shariah Banking activities and operations.
- **Monitoring & Reporting** – Establishing early warning, monitoring and reporting mechanism on Shariah Non-Compliance Risk exposures.

All potential Shariah non-compliance events are submitted to the Bank's Shariah Committee for decision in order to determine the status of the events and income status.

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Upon confirmation and decision by the SC, all Actual and Potential Shariah Non-Compliance Events (“SNCEs”) are to be reported to BNM within the required timeframe set by BNM.

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 2015)

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 <sup>1</sup> RM million	RWA RM million
<b>Credit Risk</b>		
Standardised Approach		
Corporate	18	18
Sovereign & Central Bank	15,943	203
Retail	876	833
Equity	109	109
Securitisation	-	-
Others	643	469
<b>Total Standardised</b>	<b>17,589</b>	<b>1,632</b>
Internal Ratings-Based (IRB) Approach		
Foundation IRB		
Corporate	31,155	27,694
Bank	7,104	1,118
Public Sector Entity	916	148
Advanced IRB		
Residential Mortgage	33,801	4,971
Qualifying Revolving Retail	1,490	559
Other Retail - Small Business	13,976	6,585
Specialised Lending under Supervisory Slotting Criteria	174	244
<b>Total IRB</b>	<b>88,616</b>	<b>41,319</b>
<b>Total Credit Risk</b>	<b>106,205</b>	<b>42,951</b>
<b>Large Exposure Risk Requirement</b>		<b>14</b>
<b>Market Risk</b>		
Standardised Approach		1,498
<b>Total Market Risk</b>		<b>1,498</b>
<b>Operational Risk</b>		
Standardised Approach <sup>2</sup>		4,255
<b>Total Operational Risk</b>		<b>4,255</b>
<b>Total RWA</b>		<b>48,718</b>

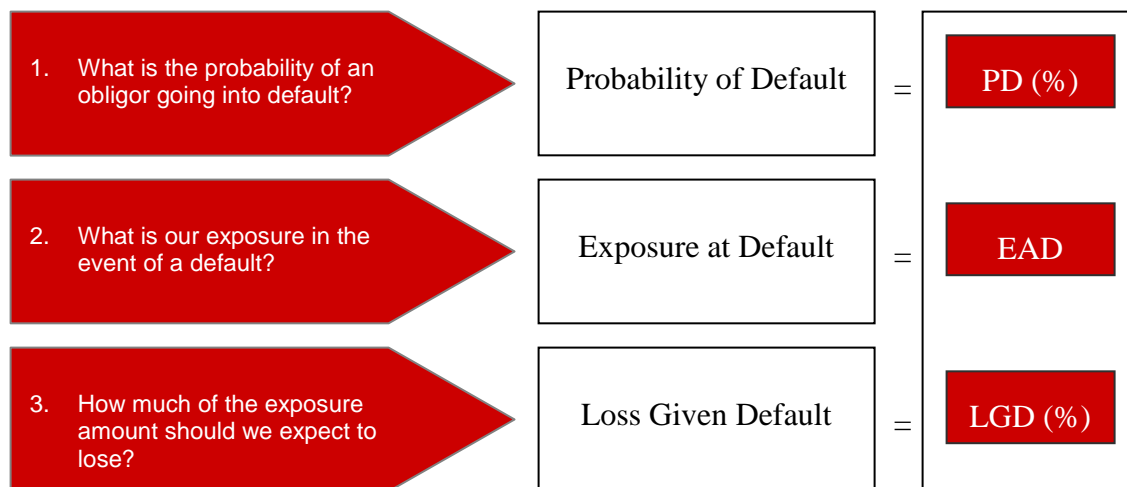
Note:

<sup>1</sup> EAD refers to exposure at default after credit risk mitigation

<sup>2</sup> 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%	15,800
20% - 35%	88
50% - 90%	361
100%	1,180
>100%	51
<b>Total</b>	<b>17,480</b>
Rated exposures	15,944
Unrated exposures	1,536

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.

Risk Weight	EAD RM million
100%	109
<b>Total</b>	<b>109</b>

### Securitisation Exposures

There is no securitization and re-securitisation exposure in the banking and trading books as at 31 December 2015.

### Specialised Lending Exposures under Supervisory Slotting Criteria

Specialised lending exposures include project and object financing.

	EAD RM million	Average Risk Weight
Strong	-	-
Good	-	-
Satisfactory	152	122%
Weak	22	265%
Default	-	NA
<b>Total</b>	<b>174</b>	<b>140%</b>

### 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

PD Range	EAD RM million	Average Risk Weight
up to 0.05%	601	28%
> 0.05 to 0.5%	8,240	46%
> 0.5 to 2.5%	14,029	92%
> 2.5 to 9%	6,616	139%
> 9%	875	192%
Default	794	NA
<b>Total</b>	<b>31,155</b>	<b>89%</b>

#### Bank Exposures

PD Range	EAD RM million	Average Risk Weight
up to 0.05%	4,926	13%
> 0.05 to 0.5%	2,025	20%
> 0.5 to 2.5%	153	40%
> 2.5 to 9%	#	119%
> 9%	-	-
Default	-	NA
<b>Total</b>	<b>7,104</b>	<b>16%</b>

#### Public Sector Entity Exposures

PD Range	EAD RM million	Average Risk Weight
up to 0.05%	916	16%
> 0.05 to 0.5%	-	-
> 0.5 to 2.5%	-	-
> 2.5 to 9%	-	-
> 9%	-	-
Default	-	NA
<b>Total</b>	<b>916</b>	<b>16%</b>

"#" 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*

PD Range	EAD RM million	Undrawn Commitment RM million	EAD Weighted Average	
			LGD	Risk Weight
up to 0.5%	24,774	3,947	13%	8%
> 0.5 to 3%	6,356	636	14%	21%
> 3 to 10%	880	39	14%	53%
> 10%	1,427	51	14%	78%
100%	364	25	18%	40%
<b>Total</b>	<b>33,801</b>	<b>4,698</b>	<b>13%</b>	<b>15%</b>

#### *Qualifying Revolving Retail Exposures*

PD Range	EAD RM million	Undrawn Commitment RM million	EAD Weighted Average	
			LGD	Risk Weight
up to 0.5%	944	1,495	75%	9%
> 0.5 to 3%	358	273	81%	51%
> 3 to 10%	93	33	76%	126%
> 10%	87	15	75%	197%
100%	8	-	75%	0%
<b>Total</b>	<b>1,490</b>	<b>1,816</b>	<b>77%</b>	<b>38%</b>

#### *Other Retail - Small Business Exposures*

PD Range	EAD RM million	Undrawn Commitment RM million	EAD Weighted Average	
			LGD	Risk Weight
up to 0.5%	2,779	1,099	32%	16%
> 0.5 to 3%	5,804	766	36%	36%
> 3 to 10%	4,579	301	41%	65%
> 10%	411	6	39%	96%
100%	403	12	41%	174%
<b>Total</b>	<b>13,976</b>	<b>2,184</b>	<b>37%</b>	<b>47%</b>

## 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 2015 RM million	Regulatory Expected Loss (Non-defaulted) as at 31 December 2014 RM million
Corporate	69	133
Bank	-	5
Public Sector Entities	-	#
Other Retail - Small Business	90	189
Retail	19	82
<b>Total</b>	<b>178</b>	<b>409</b>

"#" represents amount less than RM0.5 million

## Exposures Covered by Credit Risk Mitigation

	Eligible Financial Collateral RM million	Other Eligible IRB Collateral RM million	Amount by which credit exposures have been reduced by eligible credit protection RM million
<b>Standardised Approach</b>			
Corporate	5	-	-
Sovereign & Central Bank	-	-	-
Retail	26	-	-
Others	#	-	-
<b>Total</b>	<b>31</b>	<b>-</b>	<b>-</b>
<b>Foundation IRB Approach</b>			
Corporate	751	9,590	4
Bank	640	-	-
<b>Total</b>	<b>1,391</b>	<b>9,590</b>	<b>4</b>

Note:

- Not all forms of collateral or credit risk mitigation are included for regulatory capital calculations.
  - 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	1,996
Potential Future Exposure	2,323
Less: Effects of Netting	-
<b>EAD under Current Exposure Method</b>	<b>4,319</b>
Analysed by type:	
Foreign Exchange Contracts	3,366
Interest Rate Contracts	904
Equity Contracts	18
Gold and Precious Metals Contracts	-
Other Commodities Contracts	-
Credit Derivative Contracts	31
Less: Eligible Financial Collateral	643
<b>Net Derivatives Credit Exposure</b>	<b>3,676</b>

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

## Credit Derivatives

	Notional Amount RM million	
	Bought	Sold
Credit Derivatives Swap		
for own credit portfolio	-	-
for intermediation activities	521	521
<b>Total</b>	<b>521</b>	<b>521</b>

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

	<u>Gross Exposure</u>		<u>Risk Weighted</u>	<u>Min. Capital</u>
	<u>Long Position</u>	<u>Short Position</u>	<u>Assets</u>	<u>Requirement</u>
	<u>RM million</u>	<u>RM million</u>	<u>RM million</u>	<u>RM million</u>
Interest Rate Risk	30,230	28,739	1,081	87
Foreign Currency Risk	69	111	111	9
Equity Risk	115	49	181	14
Commodity Risk	9	7	10	1
Inventory Risk	-	-	-	-
Options Risk	9	#	115	9
<b>Total</b>	<b>30,432</b>	<b>28,906</b>	<b>1,498</b>	<b>120</b>

"#" represents amount less than RM0.5 million

## EQUITY EXPOSURES

Equity exposures comprise of investment in unquoted equity instruments. Equity exposures comprise investment in equity instruments that do not have a quoted market price in an active market and whose fair value cannot be reliably measured are measured at cost.

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

### Carrying Value of Equity Exposures

	<u>RM million</u>
Quoted equity exposure - AFS	#
Unquoted equity exposure - AFS	109
Quoted equity exposure - Associates	-
Unquoted equity exposure - Associates	-
<b>Total</b>	<b>109</b>

### Realised and Unrealised Gains and Losses

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

"#" 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 MYR116.9 million, or approximately +8.5% of reported net interest income. The corresponding impact from a 50 basis point decrease is an estimated reduction of MYR116.5 million in net interest income, or approximately -8.5% of reported net interest income.