MACQUARIE BANK

Pillar 3 disclosures

Macquarie Bank
March 2020

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MACQUARIE BANK

ASX Release

MACQUARIE BANK RELEASES MARCH PILLAR 3 DISCLOSURE DOCUMENT

26 May 2020 - The Macquarie Bank Limited March 2020 Pillar 3 disclosure document was released today on the Macquarie website www.macquarie.com. These disclosures have been prepared in accordance with the Australian Prudential Regulation Authority (APRA) requirements of Prudential Standard APS 330: Public Disclosure.

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Introduction

Macquarie Bank Limited (MBL) is an Authorised Deposit-taking Institution (ADI) regulated by the Australian Prudential Regulation Authority (APRA). MBL is accredited under the Foundation Internal Ratings Based Approach (FIRB) for credit risk, the Advanced Measurement Approach (AMA) for operational risk, the Internal Model Approach (IMA) for market risk and interest rate risk in the banking book. These advanced approaches place a higher reliance on a bank's internal capital measures and therefore require a more sophisticated level of risk management and risk measurement practices.

On 1 January 2013, reforms to the Basel II capital adequacy framework came into effect (the Basel III framework).

APRA has implemented the Basel III framework, and in some areas has gone further by introducing stricter requirements (APRA superequivalence). This report details MBL's disclosures as required by APRA Prudential Standard APS 330: Public Disclosure as at 31 March 2020 together with the 31 March 2019 comparatives where appropriate.

On 1 July 2019, APRA implemented the standardised approach for measuring counterparty credit risk exposures (SA-CCR). The March 2020 disclosures include the implementation of the SA-CCR. The comparative period for March 2019 has not been restated.

This report also describes Macquarie's risk management policies and risk management framework and the measures adopted to monitor and report within this framework. Detailed in this report are the major components of capital structure, the key risk exposures and the associated capital requirements. The key risk exposures are credit risk (including securitisation exposures, credit valuation adjustment, and exposures to central counterparties), market risk, operational risk and interest rate risk in the banking book. Each of these risks are individually discussed in later sections of this report where the individual risk components, measurement techniques and management practices are detailed.

Macquarie Level 2 regulatory group capital, liquidity and leverage ratios and relevant comparatives are set out in the table below.

Capital, Liquidity and Leverage Ratios	**As at 31 March 2020**	As at 31 March 2019
Common Equity Tier 1 capital ratio[1]	**12.2%**	11.4%
Total Tier 1 capital ratio[1]	**13.6%**	13.5%
Total capital ratio[1]	**15.2%**	15.6%
Leverage ratio	**5.7%**	5.3%
Liquidity coverage ratio [2]	**173.5%**	104.6%
Net stable funding ratio[1]	**118.1%**	112.9%

(1) The Macquarie Level 2 regulatory group capital and liquidity ratios are above the regulatory minimum required by APRA, and the Board imposed internal minimum requirement.

(2) The Liquidity Coverage Ratio for the 3 months to 31 March 2020 is calculated from 63 daily LCR observations (31 March 2019 is calculated from 61 daily LCR observations). For 31 March 2020, the Macquarie Level 2 regulatory group LCR is above the regulatory minimum required by APRA, and the Board imposed internal minimum requirement. The LCR for March 2019 is calculated according to APRA's clarification, announced on 24 July 2019, related to intra-group funding provided to MBL. MGL raises long-term funding and places surplus funds with MBL, in the form of intra-group loans. At the time of APRA's clarification it was noted that these loans had represented around 10-15% of MBL's total funding over the past year. They had been included in the calculation of MBL's Liquidity Coverage Ratio according to their contractual tenor and were documented under a master loan agreement, in place since 2007, which included a Material Adverse Change (MAC) clause.
APRA clarified that the existence of a MAC clause in the master agreement between MGL and MBL meant that repayment of intra-group funding could be accelerated and thereby fall short of the LCR horizon of 30 days. Macquarie removed the MAC clause on 28 June 2019 to restore the contractual tenor of the loans and ensure there would be no impact on MBL's LCR calculation going forward. "LCR pro forma" is calculated reflecting the arrangements following the removal of the MAC clause in the master loan agreement between MGL and MBL. LCR pro forma for March 2019 was 154%.

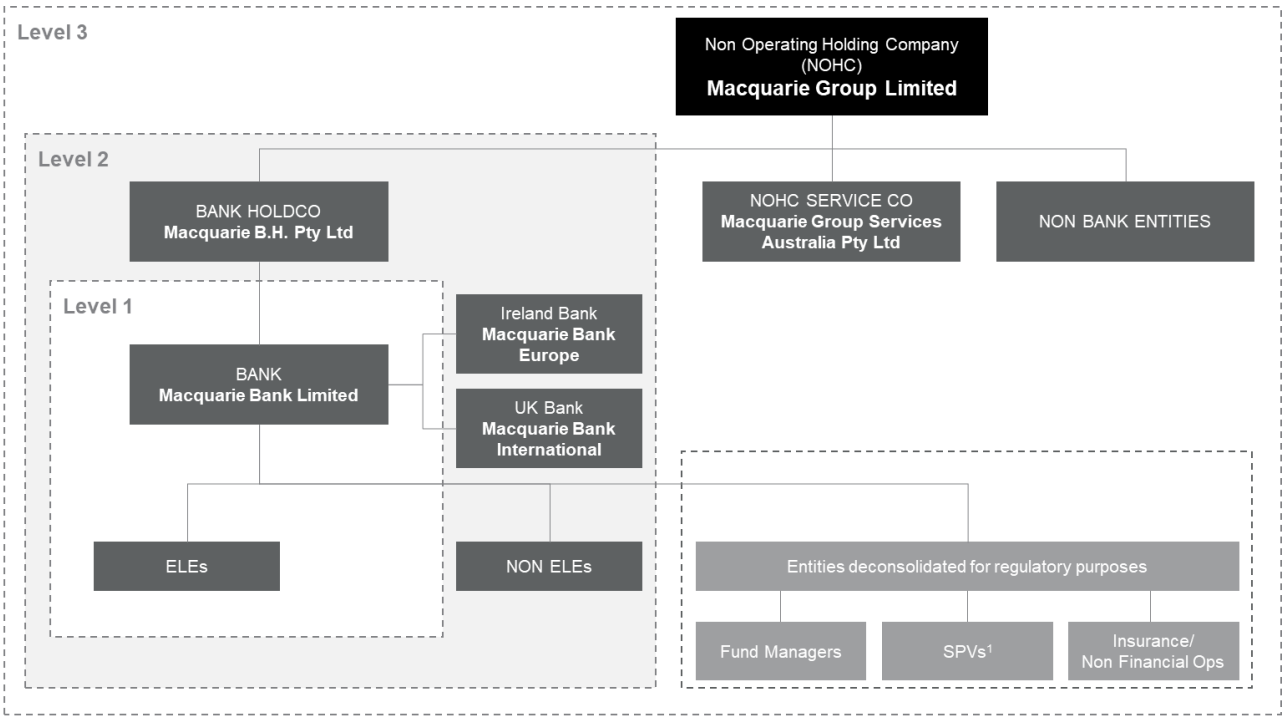
1.0 Overview

1.1 Scope of Application

MBL, as an approved ADI, is required to comply with the disclosure requirements of APS 330 on a Level 2 basis, as described below.

1.1.1 Macquarie Regulatory Group

The regulatory consolidated group is different to the accounting consolidated group and identifies three different levels of consolidation as illustrated below:



1. These are securitisation vehicles that achieve Regulatory Capital Relief per APS 120.

Reporting levels are in accordance with APRA definitions contained in APRA Prudential Standard APS 110: Capital Adequacy.

MBL and certain subsidiaries which meet the APRA definition of Extended Licensed Entities (ELE) are reported to APRA as Level 1. Level 2 consists of MBL, its subsidiaries and its immediate parent (Macquarie B.H. Pty Ltd) but excluding certain subsidiaries of MBL which are required by APRA to be deconsolidated for APRA reporting purposes. Equity investments into these entities by the Level 2 group are required to be deducted from Common Equity Tier 1 (CET1) capital under APRA Prudential Standard APS 111 Capital Adequacy: Measurement of Capital. The subsidiaries which are deconsolidated for regulatory purposes include mortgage and leasing special purpose vehicles (SPVs) for which Macquarie has satisfied APS 120 Attachment A operational requirements for regulatory capital relief and entities conducting insurance, funds management and non-financial operations. These deconsolidated entities result in the Macquarie Level 2 group for regulatory purposes differing from MBL and its subsidiaries, the Consolidated Entity for accounting purposes. Therefore, the disclosures made in this report are for a different group of entities to those made in the financial report of MBL and its subsidiaries, the Consolidated Entity. A list of entities deconsolidated for Level 2 reporting purposes is included in Appendix 2.

References in this report to Macquarie refer to the Level 2 regulatory group as described above. Unless otherwise stated, all disclosures in this report represent the Level 2 regulatory group prepared on a Basel III basis.

MBL is part of the larger Macquarie Group Limited Consolidated Group (MGL Group), which includes Macquarie Group Limited (MGL) and its subsidiaries (referred to as 'Level 3'). APS 330 does not require disclosures relating to the Level 3 Group, however, some limited Level 3 disclosures are made in this report (refer section 4.0).

Comments on policies in this report generally reflect policies adopted across the MGL Group, unless it is stated that the policies are specific to any one part of the group.

1.0 Overview
continued

1.2 Frequency

The qualitative disclosures in this report are required to be updated on an annual basis and more frequently if significant changes to policies are made. This report has been updated as at 31 March 2020 and policies disclosed within are effective at this time. The capital adequacy and summarised credit risk exposure quantitative disclosures are published on a quarterly basis. All other quantitative disclosures are published semi-annually in conjunction with Macquarie's half year (30 September) and annual (31 March) reporting cycles.

1.3 Report Conventions

The disclosures in this report are not required to be audited by an external auditor. However, the disclosures have been prepared on a basis consistent with information submitted to APRA. Under the revised APS 310 Audit and Related Matters, the information submitted to APRA is required to be either audited or reviewed by an external auditor at Macquarie's year end, being 31 March.

Averages have been prepared in this report for certain disclosures as required by APS 330.

All numbers in this report are in Australian Dollars and have been rounded to the nearest million, unless otherwise stated.

Where necessary, comparative information has been restated to conform with changes in presentation in the current year, unless otherwise stated.

The Appendices include a Glossary of Terms used throughout this document.

1.4 Overview of the Basel III Regulatory Capital Framework

Basel III is designed to raise the resilience of the banking sector by strengthening the regulatory capital framework, building on the three pillars of the Basel II framework. The framework seeks to increase the sensitivity to risk in the capital calculations and to ensure that this is aligned with an ADI's internal processes for assessing risk. Consequently, there are a number of different approaches to risk calculation that allows use of internal models to calculate regulatory capital. A bank may be accredited to use the advanced approaches when it can demonstrate the integrity and sophistication of its risk management framework. It must also ensure that its internal estimates of risk are fully integrated into corporate governance functions as well as internal calculations of capital. Further to this, the most advanced approaches are available if a bank has sufficient depth and history of default data to enable it to generate its own Probability of Default (PD) estimates based on its own loss experience.

The requirements of Basel III are contained within three broad sections or 'Pillars'.

1.4.1 Pillar 1

The first section of the Basel III framework covers the rules by which Risk Weighted Assets (RWA) and capital adequacy must be calculated.

Macquarie has been approved by APRA to apply the FIRB approach for credit risk capital calculation. This approach utilises the PD and internal rating assigned to the obligor. The exposure is weighted using this internal PD and a Loss Given Default (LGD) value set by APRA. Credit Conversion Factors are applied to off balance sheet exposures based on the nature of the exposure. Operational risk is calculated using the AMA.

Market risk and interest rate risk in the banking book is calculated using the internal model approach.

1.4.2 Pillar 2

Pillar 2 (the Supervisory Review Process) of the Basel III framework requires ADIs to make their own assessments of capital adequacy in light of their risk profile and to have a strategy in place for maintaining their capital levels. Macquarie's Internal Capital Adequacy Assessment Process (ICAAP) addresses its requirements under Pillar 2.

The ICAAP is part of Macquarie's overall risk management framework; its key features include:

- Comprehensive risk assessment process;
- Internal assessment of capital adequacy using Macquarie's economic capital model (refer section 4.1);
- Risk appetite setting (refer section 4.2);
- Capital management plans designed to ensure the appropriate level and mix of capital given Macquarie's risk profile; and
- Regular reporting of capital adequacy and monitoring of risk profile against risk appetite.

Macquarie's ICAAP is subject to Board and senior management oversight and internal control review.

1.4.3 Pillar 3

These disclosures have been formulated in response to the requirements of Pillar 3 of the Basel III Framework. APRA has laid down the minimum standards for market disclosure in its APS 330.

This report includes a breakdown of both on and off-balance sheet exposures, RWA and Liquidity measures. The report consists of sections covering:

- Risk Management Governance and Framework
- Capital Management
- Credit Risk Measurement
- Provisioning
- Credit Risk Mitigation
- Securitisation
- Credit Valuation Adjustment
- Exposures to Central Counterparties
- Market Risk
- Equity Risk
- Operational Risk
- Leverage Ratio
- Liquidity Coverage Ratio
- Net Stable Funding Ratio

2.0 Risk Management Governance and Framework

2.1 Risk Governance at Macquarie

Role of the Board

The role of the Board is to promote the long-term interests of Macquarie, taking into account Macquarie's specific and broader responsibilities to its shareholders, funders, clients, staff and the communities in which it operates. The Board is committed to oversight of Macquarie's performance, risk management and culture and to promoting the creation of enduring value. Macquarie's robust risk management framework supports the Board in its role. The Board is ultimately responsible for the framework, including oversight of its operation by Management.

Role of Management

The Group Heads of the Operating and Central Service Groups are responsible for implementation of the risk management framework in their Groups. They are required semi-annually to attest that key risks have been identified and are adequately controlled in their Groups. These management representations support the sign-off of the half year and the full year financial statements.

Three lines of defence

The assumption of risk is made within a calculated and controlled framework that assigns clear risk roles and responsibilities represented by 'three lines of defence':

- primary responsibility for risk management lies with the business. The risk owner is the first line of defence. An important part of the role of all staff throughout Macquarie is to ensure they manage risks appropriately
- the Risk Management Group (RMG) forms the second line of defence and provides independent and objective review and challenge, oversight, monitoring and reporting in relation to Macquarie's material risks
- Internal Audit, as the third line, provides independent and objective risk-based assurance on the compliance with, and effectiveness of, the Group's financial and risk management framework.

2.2 Macquarie's Risk Management Framework

Macquarie's risk management framework is the totality of systems, structures, policies, processes and people within the Group that identify, measure, monitor, report and control or mitigate internal and external sources of material risk. Material risks are those that could have a material impact, financial or non-financial on Macquarie. Macquarie's material risks include aggregate, asset, conduct, credit, environmental and social (including climate change), equity, financial crime, legal, liquidity, market, operational (including cyber and information security), regulatory and compliance, reputational, strategic, tax, and work health and safety risks. The risk management framework applies to all Operating and Central Service Groups.

Core risk management principles

Macquarie's approach to risk management is based on stable and robust core risk management principles. These are:

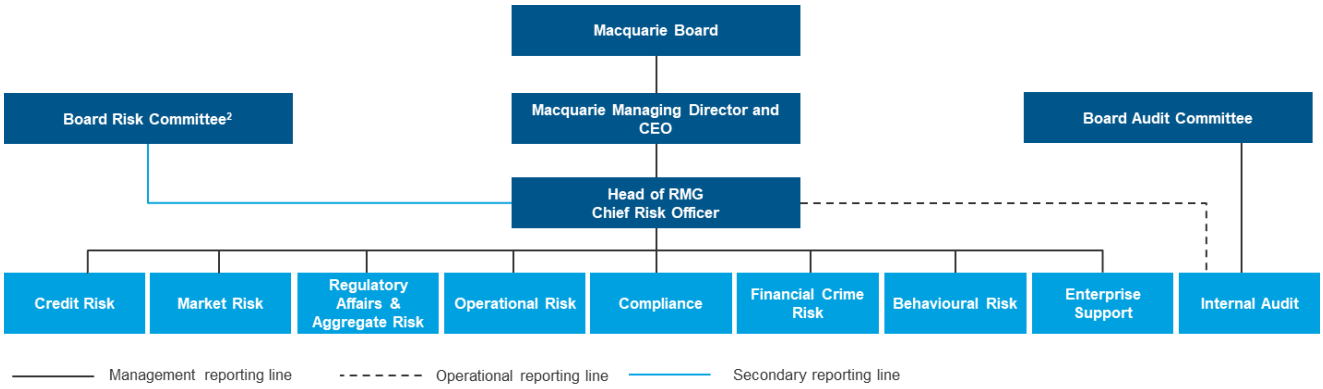
- **ownership of risk at the business level**: Group Heads are responsible for ownership of all material risks that arise in, or because of, the business' operations, including identification, measurement, control and mitigation of these risks. Before taking decisions, clear analysis of the risks is sought to ensure those taken are consistent with the risk appetite and strategy of Macquarie
- **understanding worst case outcomes**: Macquarie's risk management approach is based on examining the consequences of worst case outcomes and determining whether these are acceptable and within Macquarie's risk appetite. This approach is adopted for all material risk types and is often achieved by stress testing. Macquarie operates a number of sophisticated quantitative risk management processes, but the foundation of the approach is the informed consideration of both quantitative and qualitative inputs by highly experienced professionals
- **requirement for an independent sign-off by RMG**: Macquarie places significant importance on having a strong, independent Risk Management Group charged with signing off all material risk acceptance decisions. It is essential that RMG has the capability to do this effectively. RMG has invested in recruiting skilled professionals, including those with trading or investment banking experience. For all material proposals, RMG's opinion must be sought at an early stage in the decision-making process. The approval document submitted to Senior Management must include independent input from RMG on risk and return.

2.0 Risk Management Governance and Framework continued

2.3 Risk Management Group Structure

RMG, which forms the second line of defence, is an independent and centralised function responsible for independent and objective review and challenge, oversight, monitoring and reporting in relation to Macquarie's material risks. RMG designs and oversees the implementation of the risk management framework.

RMG is structured into specialist functional divisions[1], depicted below, and employs an integrated approach to risk analysis and management across risk classes. RMG's assessment and monitoring of risks involves a collaborative effort across the divisions to ensure a detailed analysis takes place both at the individual and aggregate risk level. Effective risk management is a function of both rigorous processes and the ability of experienced professionals to provide new perspectives on the risks they are considering. RMG attracts high calibre candidates. It recruits experienced individuals both from within Macquarie and externally.



(1) As of 1 March 2020, the Qualitative Application Division has formally become part of the Regulatory Affairs and Aggregate Risk Division (RAAR) and renamed Model Validations.

(2) The Board Risk Committee assists the Board by providing oversight of Macquarie's risk management framework and advising the Board on Macquarie's risk position, risk appetite, risk culture and risk management strategy. In addition the Board Governance and Compliance Committee assists the Board in fulfilling its responsibility for oversight of the regulatory and compliance risk framework of Macquarie, reviews and monitors the conduct risk management framework, and reviews the environmental and social risk and work health and safety policies, practices and performance.

2.3.1 Internal Audit

The Internal Audit Division, as the third line, provides independent and objective risk-based assurance to the Board Audit Committee (BAC), other Board Committees and Senior Management on the compliance with, and effectiveness of, Macquarie's financial and risk management framework. Internal Audit assesses whether material risks have been properly identified and key controls have been properly designed and are operating effectively and sustainably to mitigate those material risks.

The BAC has primary power of direction over the Internal Audit Division and is accountable for reviewing the effectiveness of the Internal Audit function. The Head of Internal Audit reports functionally to the BAC and is primarily accountable to them. The Head of Internal Audit has unrestricted access to the Committee and its Chair and meets privately with the BAC members regularly during the year. The BAC reviews and monitors the performance, degree of independence and remuneration of the Head of Internal Audit. The BAC also approves any appointment and removal of the Head of Internal Audit. The Head of Internal Audit reports operationally to the CRO for day-to-day management.

3.0 Capital Structure

3.1 Total Available Capital

The Macquarie Level 2 regulatory group capital supply is detailed in the table below.

	As at 31 March 2020 $m	As at 31 March 2019 $m
Common Equity Tier 1 capital		
Paid-up ordinary share capital	**8,508**	7,507
Retained earnings	**4,350**	2,852
Reserves	**990**	515
Gross Common Equity Tier 1 capital	**13,848**	10,874
Regulatory adjustments to Common Equity Tier 1 capital:		
Goodwill	**47**	42
Deferred tax assets	**489**	420
Net other fair value adjustments	**(12)**	(61)
Intangible component of investments in subsidiaries and other entities	**53**	50
Loan and lease origination fees and commissions paid to mortgage originators and brokers	**441**	411
Shortfall in provisions for credit losses	**317**	269
Equity exposures	**588**	678
Capitalised Software	**69**	79
Other Common Equity Tier 1 capital deductions	**203**	147
Total Common Equity Tier 1 capital deductions	**2,195**	2,035
Net Common Equity Tier 1 capital	**11,653**	8,839
Additional Tier 1 capital		
Additional Tier 1 capital instruments	**1,315**	1,626
Gross Additional Tier 1 capital	**1,315**	1,626
Deductions from Additional Tier 1 capital	**–**	–
Net Additional Tier 1 capital	**1,315**	1,626
Total Net Tier 1 capital	**12,968**	10,465
Tier 2 capital		
Tier 2 capital instruments and other	**1,592**	1,598
Total capital base	**14,560**	12,063

3.0 Capital Structure
continued

3.2 Common Equity Tier 1 Capital

Macquarie's Common Equity Tier 1 capital under Basel III consists of ordinary share capital, retained earnings and certain reserves. $A1,000 million of additional ordinary shares were issued by Macquarie Bank Limited to its parent entity of Macquarie B.H.Pty Ltd in March 2020. These additional ordinary shares are eligible to be included as Common Equity Tier 1 capital at Regulatory Level 2 Group from the issuance month onwards.

3.3 Additional Tier 1 Capital

Macquarie's Tier 1 capital consists of Common Equity Tier 1 capital and Additional Tier 1 capital (hybrids).

Macquarie's Additional Tier 1 capital consists of Macquarie Income Securities (MIS) and Macquarie Additional Capital Securities (MACS).

MIS are a perpetual instrument with no ordinary equity conversion rights. MIS were listed for trading on the Australian Stock Exchange (now known as the Australian Securities Exchange) in 1999. MIS distributions are paid quarterly at a floating rate of BBSW plus 1.7% per annum and payment is subject to certain conditions including profitability of the Bank. MIS are included in Additional Tier 1 capital under Basel III transitional rules. MIS were repaid on 15 April 2020, followed by a redemption on 16 April 2020.

MACS were issued by MBL, acting through its London Branch in March 2017. MACS are subordinated, unsecured notes that pay discretionary, non-cumulative, semi-annual fixed rate cash distributions. Subject to certain conditions the MACS may be redeemed on 8 March 2027, or every 5th anniversary thereafter. MACS can be exchanged for a variable number of fully paid MGL ordinary shares on an acquisition event (where a person acquires control of MBL or MGL), where MBL's common equity Tier 1 capital ratio falls below 5.125%, or where APRA determines MBL would be non-viable without an exchange or a public sector injection of capital (or equivalent support).

BCN were issued by MBL in October 2014 and are quoted on the Australian Securities Exchange. The BCN pay discretionary, semi-annual floating rate cash distributions equal to six month BBSW plus 3.30% per annum margin, adjusted for franking credits. These instruments are non-cumulative and unsecured and may be redeemed at face value on 24 March 2020, 24 September 2020 and 24 March 2021 (subject to certain conditions being satisfied) or earlier in specified circumstances. The BCN can be converted into a variable number of MGL ordinary shares (subject to certain conditions being satisfied) on these redemption dates; mandatorily exchanged on 24 March 2023; exchanged earlier upon an acquisition event (with the acquirer gaining control of MGL or MBL); or where APRA determines MBL would be non-viable without an exchange or a public sector injection of capital (or equivalent support). On 24 March 2020, MBL redeemed the BCN. No BCN were exchanged during the period before their redemption.

3.4 Tier 2 Capital

Macquarie's Tier 2 capital consists of a portion of certain credit loss reserves plus subordinated debt instruments. A portion of subordinated debt is included under Basel III transitional rules which require the value recognised to amortise by 10% each year until no part of the instruments are included after 10 years.

MBL has issued cumulative convertible subordinated debt amounting to $US750 million in June 2015 which is Basel III compliant and not subject to the transitional rules referred to above. This is reported at the value of liability at the period end date.

3.5 Restrictions on Capital

Various restrictions or costs exist on the transfer of capital within the Macquarie accounting consolidated group. For example:

- Licensed entities such as Australian Financial Services Licensed (AFSL) entities are required to maintain minimum capital requirements to comply with their licence. Macquarie seeks to maintain a sufficient level of capital within these entities to ensure compliance with these regulations;
- Where retained earnings are transferred from related entities, tax costs may be payable on repatriation which may reduce the actual amount of available capital;
- As an ADI, Macquarie is subject to the prudential limits imposed by APRA Prudential Standard APS 222: Associations with Related Entities;
- RMG also manage and monitor internal limits on exposures to related entities which, combined with APRA's prudential limits, seeks to minimise contagion risk.

4.0 Capital Adequacy

4.1 Capital Management

Macquarie's capital management strategy is to maximise shareholder value through optimising the level and use of capital resources, whilst also providing the flexibility to take advantage of opportunities as they may arise.

The capital management objectives are to:

- continue to support Macquarie's credit rating;
- ensure sufficient capital resources to support Macquarie's business and operational requirements;
- maintain sufficient capital to exceed externally imposed capital requirements; and
- safeguard Macquarie's ability to continue as a going concern.

Macquarie's capital management strategy uses both internal and external measures of capital. Internally, Macquarie has developed an economic capital model that is used to quantify MGL Group's aggregate level of risk. The economic capital framework complements the management of specific risk types such as equity, credit, market and operational risk by providing an aggregate view of MGL Group's risk profile.

The economic capital model is used to support business decision-making and has two main applications:

- capital adequacy assessment; and
- risk-adjusted performance measurement.

Capital adequacy is assessed for both MGL Group and the Level 2 regulatory group. In each case, capital adequacy is assessed on a regulatory basis and on an economic basis, with capital requirements assessed as follows:

Economic capital adequacy means an internal assessment of capital adequacy, designed to ensure Macquarie has sufficient capital to absorb potential losses and provide creditors with the required degree of protection.

Potential losses are quantified using the Economic Capital Adequacy Model (ECAM). These potential losses are compared to the capital resources available to absorb loss, consisting of book equity and eligible hybrid equity. Earnings are also available to absorb losses, however, only a fraction of potential earnings is recognised as a buffer against losses.

APRA has approved Macquarie's ECAM for use in calculating the regulatory capital requirement of the Non-Bank Group. The ECAM is based on similar principles and models as the Basel III regulatory capital framework for banks, as shown in the table below with both calculating capital at a one year, 99.9% confidence level. This 99.9% confidence level is broadly consistent with the acceptable probability of default implied by Macquarie's credit ratings.

Entity	Regulatory	Economic
Level 2 regulatory group	Capital to cover RWA and regulatory deductions, according to APRA's ADI prudential standards	Internal model, covering exposures of the Bank Group
MGL Group	Level 2 regulatory group capital requirement plus economic capital requirement of the Non-Bank Group	Internal model, covering all exposures of the MGL Group

Risk[1]	Basel III	ECAM
Credit	Capital requirement generally determined by Basel III IRB formula, with some parameters specified by the regulator (e.g. loss given default)	Capital requirement generally determined by Basel III IRB formula, but with internal estimates of key parameters
Equity	Harmonised Basel III: 250%, 300% or 400% risk weight, depending on the type of investment[2], Deduction from Common Equity Tier 1 above a threshold APRA Basel III: 100% Common Equity Tier 1 deduction	Extension of Basel III credit model to cover equity exposures. Capital requirement between 36% and 84% of face value; average 50%
Market	3 times 10 day 99% Value at Risk (VaR) plus 3 times 10 day 99% Stressed Value at Risk (SVaR), plus a specific risk charge	Scenario-based approach
Operational	Advanced Measurement Approach	Advanced Measurement Approach

(1) The ECAM also covers non-traded interest rate risk and the risk on assets held as part of business operations, including: fixed assets, goodwill, intangible assets, capitalised expenses.

(2) Includes all Banking Book equity investments, plus net long Trading Book holdings in financial institutions.

Macquarie Level 3 regulatory group is currently well capitalised. The capital surplus is available to support growth, provide strategic flexibility and accommodate regulatory change and capital volatility. In order to reduce volatility in Macquarie's capital position, Macquarie actively manages the sensitivity of its capital position to foreign currency movements.

The capital adequacy results are reported to the MGL Board and senior management on a regular basis, together with projections of capital adequacy under a range of scenarios.

4.0 Capital Adequacy
continued

4.2 Risk Appetite Setting

Macquarie's risk appetite is the degree of risk that the Group is prepared to accept in pursuit of its strategic objectives and business plan. This is detailed in Macquarie's Board approved *Risk Appetite Statement* (RAS). The RAS describes Macquarie's risk appetite, being the nature and amount of risk that Macquarie is willing to accept in pursuit of an appropriate and resilient long-term return on its capital. The RAS states transactions must generate returns proportionate to the risks. Accordingly, a risk and return analysis is required for all significant new deals, products and businesses.

The RAS is accessible to all staff and is referred to in the *Code of Conduct*. The principles of the RAS are implemented primarily through the following mechanisms:

Policies

Policies are a key tool to ensure that risks taken are consistent with the Board approved RAS. They set out the principles that govern the acceptance and management of risks. They are designed to influence and determine all major decisions and actions, and all activities must take place within the boundaries set by them.

Limits

In many cases, limits translate risk appetite principles into hard constraints on individual businesses. These consist of granular limits for specific risk types as well as the Global Risk Limit that constrains Macquarie's aggregate level of risk. Macquarie sets the Global Risk Limit with reference not only to capital but also to earnings so that in a prolonged, severe downturn, earnings and surplus capital are sufficient to cover losses and maintain market confidence in Macquarie.

Under Macquarie's 'no limits, no dealing' approach, compliance with specific limits is monitored by the Business and RMG. These granular limits are set to allow businesses to achieve their near-term plans while promoting a reassessment of the opportunity and associated risks as the limit is approached.

New product and business approval process

All new businesses and significant changes to existing products, processes or systems are subject to a rigorous, interactive approval process that adheres to the principles stated in the *RAS*. This results in constructive dialogue on risk matters between RMG and the relevant business.

This formal process is designed so that the proposed transaction or operation can be managed properly, without creating unwanted risks for Macquarie. All relevant risks are reviewed to ensure they are identified and addressed prior to implementation. These risks are also monitored on an ongoing basis. The approvals of RMG, Financial Management Group, Legal and Governance and other relevant stakeholders within Macquarie are obtained. RMG also checks that all necessary internal approvals are obtained prior to commencement. The Operational Risk division within RMG oversees the new product and business approval process.

The Risk Appetite Test – An aggregate stress test

The key tool that the Board uses to quantify aggregate risk appetite is the Risk Appetite Test. This is a Macquarie-wide stress test that considers losses and earnings under a severe economic downturn scenario with the aim of Macquarie emerging from that scenario with sufficient capital to continue operating.

The Risk Appetite Test asserts that potential losses must be less than the Global Risk Limit, which comprises underlying earnings that Macquarie can achieve in a downturn (downturn forward earnings capacity) plus surplus regulatory capital. Consideration is also given to the year-by-year outcome of the modelled downturn scenario to ensure that market confidence is maintained.

Operating Groups and Divisions estimate downturn forward earnings capacity under a downturn scenario provided to them by RMG. RMG reviews the estimates for consistency with scenario assumptions and across groups.

Aggregate risk breaks down into two categories:

- **Business risk**, meaning decline in earnings through deterioration in volumes and margins due to market conditions; and
- **Potential losses**, including potential credit losses, write-downs of equity investments, operational risk losses and losses on trading positions.

Business risk is captured by the difference in base case and downturn forward earnings estimates. Potential losses are quantified using stress testing models, which translate scenario parameters (GDP, unemployment, interest rates etc) into loss and transition rates. A principal use of the Risk Appetite Test is in setting the Equity Risk Limit (ERL). This limit constrains Macquarie's aggregate level of risk arising from principal equity positions, managed fund holdings, property equity investments and other equity investments. Any changes to the ERL are sized to ensure that even under full use of this limit and allowing for growth in other risk types, the requirements of the Risk Appetite Test will be met.

4.3 Risk Weighted Assets (RWA)

RWA are a risk based measure of exposures used in assessing overall capital usage of the Level 2 regulatory group. When applied against eligible regulatory capital the overall capital adequacy is determined. RWA are calculated in accordance with APRA Prudential Standards.

The table below sets out the RWA exposures for the Macquarie Level 2 regulatory group.

APS 330 Table 6 (b) to (f)

	As at 31 March 2020 $m	As at 31 March 2019 $m
Credit risk		
Subject to IRB approach		
Corporate[1],[3]	**29,246**	19,860
SME Corporate	**3,581**	3,573
Sovereign	**382**	211
Bank[1],[3]	**1,499**	1,424
Residential Mortgages	**17,757**	13,890
Other Retail	**4,220**	4,375
Retail SME	**3,515**	3,695
Total RWA subject to IRB approach[1]	**60,200**	47,028
Specialised lending exposures subject to slotting criteria[2]	**6,545**	3,847
Subject to Standardised approach		
Corporate	**262**	333
Residential Mortgages	**740**	762
Other Retail	**1,928**	2,673
Total RWA subject to Standardised approach[1]	**2,930**	3,768
Credit risk RWA for securitisation exposures	**758**	875
Credit Valuation Adjustment RWA	**7,635**	3,093
Exposures to Central Counterparties RWA[3]	**835**	1,644
RWA for Other Assets	**2,089**	1,769
Total Credit risk RWA	**80,992**	62,024
Market risk RWA	**3,971**	5,382
Operational risk RWA	**10,655**	10,111
Interest rate risk in the banking book RWA	**–**	–
Total RWA	**95,618**	77,517

(1) Refer section 6.0 for more details on exposures calculated under the IRB and Standardised approaches.
(2) Specialised lending exposures subject to supervisory slotting criteria are measured using APRA determined risk weightings.
(3) Bilateral exposures to Central Counterparties are reported as credit exposures under APS 180 effective 1st July 2019.

4.0 Capital Adequacy
continued

Ratios for Common Equity Tier 1, Total Tier 1, and Total capital are set out below.

APS 330 Table 6 (g)

Capital Ratios	**As at 31 March 2020**	As at 31 March 2019
Macquarie Level 2 regulatory group Common Equity Tier 1 capital ratio	**12.2%**	11.4%
Macquarie Level 2 regulatory group Total Tier 1 capital ratio	**13.6%**	13.5%
Macquarie Level 2 regulatory group Total capital ratio	**15.2%**	15.6%
Macquarie Level 1 regulatory group Common Equity Tier 1 capital ratio	**11.3%**	11.4%
Macquarie Level 1 regulatory group Total Tier 1 capital ratio	**12.7%**	13.5%
Macquarie Level 1 regulatory group Total capital ratio	**14.3%**	15.6%

APRA requires Authorised Deposit-taking Institutions (ADIs) to have a minimum ratio of Tier 1 capital to risk weighted assets (RWA) of 8.5% at both Level 1 and Level 2, including the 2.5% capital conservation buffer, with at least 7.0% in the form of Common Equity Tier 1 capital. In addition, APRA may impose ADI specific minimum capital ratios which may be higher than these levels.

At 31 March 2020, the countercyclical capital buffer requirement for Macquarie Level 2 regulatory group is 3 basis points.

5.0 Credit Risk Measurement

5.1 Credit Risk Overview

Credit risk is defined as the risk that a counterparty will fail to complete its contractual obligations when they fall due (default risk) or changes in the creditworthiness of the obligor (migration risk). The consequent loss is either the amount of the loan or financial obligation not paid back, the change in the value of a non-traded debt instrument, or the loss incurred in replicating a trading contract with a new counterparty.

RMG Credit maintains a comprehensive and robust framework for the identification, analysis and monitoring of credit risks arising in each business. Key aspects of this framework are detailed below.

5.2 Credit Risk Management

Macquarie's philosophy on credit risk management reflects the principle of separating prudential control from operational management. The responsibility for approval of initial credit limits is delegated to specific individuals.

Credit risk approvals reflect two principles:

- a requirement for dual sign-off; and
- a requirement that, above specified limits, all credit exposures must be approved outside the business line proposing to undertake them.

5.2.1 Analysis and Approval of Exposures

The MGL and MBL Boards are responsible for establishing the framework for approving credit exposures. The Boards delegate discretions to approve credit exposure to designated individuals within the Group whose capacity to prudently exercise authority has been assessed.

Operating groups are assigned modest levels of credit discretions. Credit exposures above these levels are assessed independently by RMG and approved by experienced RMG staff, the CEO and the Boards as required.

Macquarie enforces a strict 'no limit, no dealing' rule. All proposed transactions are analysed and approved by designated individuals before they can proceed.

All wholesale credit exposures are reviewed at least once a year, or more frequently if required. Retail credit exposures are monitored on a portfolio basis.

5.2.2 Macquarie Ratings

All corporate, sovereign and bank counterparties (wholesale) customer limits and exposures are allocated a Macquarie Group rating (MQ rating) which broadly correspond with Standard and Poor's (S&P), Fitch and Moody's Investor Services credit ratings. Each MQ rating has been assigned a PD derived from Standard and Poor's long term average one year default rates for similarly rated obligors. A LGD percentage is additionally assigned to each limit and exposure, reflecting the economic loss estimated to result if default occurs, taking into account the security supporting the credit exposure.

Ratings provided by External Credit Assessment Institutions (ECAI) are considered throughout the rating process but are supplementary to the internal rating process.

The table on next page outlines the internal MQ Ratings relative to ECAI ratings.

MQ ratings are used to:

- assess the default risk of credit exposures for management reporting, credit approval of limits, risk attribution and regulatory purposes;
- assist in credit decisions by providing guidelines and tools that promote a more consistent analytical approach;
- assist in the process of sharing credit knowledge (including knowledge of specialised and unique companies, industries and products); and
- provide a basis for disclosing and reporting to investors and the market.

Each MQ rating band is associated with an estimate of the PD by the counterparty on its financial obligations and provides a consistent measure across the Level 2 regulatory group. Applicable at either the borrower or transaction level, a rating must be justified and set as part of the credit approval and review process.

The ratings process combines a quantitative analysis by way of scoring industry specific risk factors and a qualitative assessment based on expert judgement.

5.0 Credit Risk Measurement
continued

5.2.2 Macquarie Ratings (continued)

Rating System

Macquarie	S&P	Fitch	Moody's
MQ1	AAA	AAA	Aaa
MQ2	AA+ AA AA-	AA+ AA AA-	Aa1 Aa2 Aa3
MQ3	A+	A+	A1
MQ4	A	A	A2
MQ5	A-	A-	A3
MQ6	BBB+	BBB+	Baa1
MQ7	BBB	BBB	Baa2
MQ8	BBB-	BBB-	Baa3
MQ9	BB+	BB+	Ba1
MQ10	BB	BB	Ba2
MQ11	BB-	BB-	Ba3
MQ12	B+	B+	B1
MQ13	B	B	B2
MQ14	B-	B-	B3
MQ15	CCC+ CCC CCC-	CCC+ CCC CCC-	Caa1 Caa2 Caa3
MQ16	CC C	CC C	Ca C
MQ99	D	RD/D	D

For wholesale counterparties, Macquarie utilises a number of industry templates and a sovereign template to assess the appropriate MQ ratings. These industry templates are designed to ensure that Macquarie ratings take into account the different risk factors that affect different industries. Analysts are required to input a range of quantitative and qualitative factors and then consider the MQ rating output. At the same time as considering the appropriate MQ rating, analysts are also required to consider the appropriate LGD. For economic capital purposes, LGDs are stressed estimates, taking into account the security, jurisdiction, seniority and quality of the balance sheet. For regulatory capital, MBL uses the APRA supervisory estimates for LGDs.

For retail counterparties, PDs and LGDs are assigned to retail pools. Retail exposures are allocated to pools, such that each pool has homogenous risk. PDs and LGDs are calculated using the following methods:

- **PDs**: calculate the long-run average default rate from the internal and external default data available for each pool. When internal data is not available in sufficient quantity, external data is used but only in the case where it is relevant to the pool.
- **LGDs**: consider a downturn scenario and the loss that would be incurred for this scenario on defaulted loans in each pool.

Macquarie applies a standard definition of default, which is that an item is considered defaulted when it is either (i) 90 days past due; or (ii) unlikely to pay. 'Unlikely to pay' is defined in Macquarie policies based on APRA standards.

All templates and models are validated annually by RMG Credit with oversight from the Credit Models Review Committee. The following annual validation activities are undertaken:

- validation of wholesale ratings templates;
- validation of wholesale PD estimates;
- validation of wholesale LGD estimates;
- wholesale ratings migration analysis;
- validation of retail PDs;
- validation of retail LGDs; and
- approval of any changes to credit risk models.

Macquarie has developed system functionality to support the allocation of internal ratings. This application ensures that all supporting factors and weightings are stored together with the system-generated rating. Approvers have access to all of these details through the credit approval process. Details are also maintained of any rating override which must be accompanied by specific commentary from the credit analyst and which is subject to regular review.

Macquarie considers that ratings are an integral part of determining the creditworthiness of the obligor. However, Macquarie does not believe that model and template output should replace thorough and thoughtful analysis. In addition to the system details, credit analysts must also provide specific justification of the internal rating as part of their overall credit analysis of each counterparty. Credit approvers consider and approve the internal rating for the counterparty in relation to the size and tenor of their proposed credit limits.

All proposals for significant deals, products and businesses must contain an analysis of risk-adjusted returns, based on the ECAM which for credit exposures is a function of the assessed credit rating (together with other factors such as maturity and estimates of LGD). In assessing these proposals, the Executive Committee and Board consider these returns together with other relevant factors. They therefore form an important element in ensuring the visibility and impact of the MQ rating to the overall risk acceptance decision.

Risk-adjusted performance metrics for each business unit are prepared on a regular basis and distributed to senior management and the Board as well as to business units. These performance metrics are based on Regulatory Capital and Economic Capital usage and are a significant factor when allocations of performance-based remuneration are determined for each business.

5.2.3 Measuring and Monitoring Exposures

Credit exposures are calculated differently according to the nature of the obligation. Loan assets are reported at amortised cost and fair value whereas derivative contracts are measured according to both internal and regulatory measures of Counterparty Credit Exposure. Exposures are assessed in the context of the replacement cost of the contract should the counterparty default prior to the maturity of the trade.

Derivative revaluation based measures are calculated using valuation models which are consistent with those used for determining mark to market values for financial reporting purposes and are reported daily to RMG Credit.

5.0 Credit Risk Measurement
continued

For regulatory purposes, exposure at default is calculated according to the Standardised Approach to Counterparty Credit Risk (SA-CCR) outlined in APRA ADI Prudential Standards 180 (APS 180) and comprises of replacement cost (RC) and potential future exposure (PFE). The RC is a function of derivative revaluation, collateralisation and the terms of any variation margin agreement in place with a counterparty. The PFE is a function of the outstanding notional of derivative contracts with a counterparty, the nature of these contracts, the level of collateralisation and whether these contracts are subject to variation margining. The sum of the RC and the PFE is subject to a regulatory prescribed scaling factor, the alpha multiplier, which equals 1.4.

The internal measure of counterparty credit exposure is calculated as a function of market movements. A range of exposure profiles are calculated representing portfolio exposures at different confidence levels or under predefined scenarios through the life of the portfolio. At a minimum, counterparty credit limits are set for all businesses against a consistent low probability (high confidence) profile. The effect of this limit framework is to ensure that there is a low probability of exposures exceeding the original approved limit. The models and parameters used to determine future asset prices and consequent portfolio exposures are reviewed and approved by RMG quarterly, significant changes in volatility or market conditions result in more frequent reviews.

High confidence level exposure measures are supplemented by regular and ad hoc exposure sensitivity analysis to evaluate the effect of extreme stress on the portfolio.

Exposure relating to derivatives are calculated on a net basis where appropriate legal netting arrangements are in effect. The details of what products can be netted for each counterparty are recorded in legal documentation systems. These systems are tightly integrated into the exposure calculation functionality and serve to ensure that netting is only performed when the legal basis for this has been formally assessed and confirmed.

Where trading gives rise to settlement risk, this risk is normally assessed at full face value of the settlement amount. However, Macquarie utilises a number of market standard clearing mechanisms to ensure that the bulk of settlements are effected on a secured basis or through exchanges where a Delivery vs payment (DVP) settlement process is ensured.

Contingent exposures arising from the issuance of guarantees, letters of credit and performance bonds are also reported daily.

On and off-balance sheet exposures are considered together for approval, monitoring and reporting purposes. Credit exposures of all types are calculated and reported daily.

Each business is responsible for calculating their credit exposures to ensure that they stay within credit limits. In addition, these exposures are supplied to RMG Credit on a daily basis for centralised limit monitoring. Any excesses identified are investigated and escalated as appropriate to both business line and RMG management. All reportable excesses are summarised and reported to the Board monthly. All wholesale limits and ratings are reviewed at least once a year, or more frequently if necessary, to ensure any deterioration is identified and reflected in an adjustment to limits and/or their MQ rating. Furthermore, other indicators of deterioration in credit quality are regularly monitored, such as share price and credit default swap spread movements, covenant breaches and external credit ratings downgrades. Where appropriate, these are reported to senior management and where recoverability is in doubt, appropriate provisions are held.

A review of the Credit and Equity Portfolio analysing exposure concentrations by counterparty, country, risk type, industry and credit quality is carried out quarterly and reported to the Board semi-annually. Policies are in place to limit large exposures to single counterparties and sectoral concentrations.

5.2.4 Credit Assurance

Credit Assurance (CA) is a centralised function within RMG which independently verifies the effectiveness of Macquarie's credit risk management. The role of the CA is to provide an independent assurance of analysis and process to support credit quality and the effectiveness of credit controls.

Key responsibilities are:

- assuring the quality of wholesale credit approvals through sample testing;
- reporting on the effectiveness (design and performance) of RMG Credit's critical controls including sample testing to ensure compliance with key Credit policies and the effectiveness of critical controls; and
- overseeing Business (Retail) CA functions in Banking and Financial Services (BFS).

RMG CA reports to the RMG Head of Operational Risk to ensure independence. In addition to regular reporting to senior management and the Chief Risk Officer, CA is required to report at least annually to the Board. In the interim, matters that require Board attention are reported via the Chief Risk Officer.

5.3 Macquarie's Credit Risk Exposures

Credit exposures are disclosed in the following pages based on:

- geographic distribution;
- maturity profile;
- measurement approach;
- risk weight banding; and
- risk grade.

Disclosures in this section have been prepared on a gross credit exposure basis. Gross credit risk exposure relates to the potential loss that Macquarie would incur as a result of a default by an obligor. The gross credit risk exposures are calculated as the amount outstanding on drawn facilities and the exposure at default on undrawn facilities along with derivatives and repurchase agreements. The exposure at default is calculated in a manner consistent with APRA Prudential Standards.

Exposures have been based on a Level 2 regulatory group as defined in section 1.1.1. The gross credit risk exposures in this section will differ from the disclosures in the MBL and its subsidiaries, the Consolidated Entity financial report as gross credit risk exposures include off balance sheet exposures but exclude the exposures of subsidiaries which have been deconsolidated for APRA reporting purposes.

The exposures below exclude the impact of:

- credit risk mitigation (discussed in section 8);
- securitisation exposures (discussed in section 9);
- CVA (discussed in section 10);
- central counterparty exposures (discussed in section 11)
- trading book on balance sheet exposures (discussed in section 12); and
- equity exposures (discussed in section 13).

APS 330 Table 7(b)

Portfolio Type	**As at 31 March 2020 $m**	As at 31 March 2019 $m
Corporate[1]	**54,217**	41,844
SME Corporate[2]	**5,045**	4,844
Sovereign	**5,205**	3,776
Bank	**7,569**	7,482
Residential Mortgages	**64,393**	48,708
Other Retail	**9,822**	10,844
Retail SME	**4,831**	5,308
Other Assets[3]	**6,901**	9,694
Total Gross Credit Exposure	**157,983**	132,500

(1) Corporate includes specialised lending exposure of $5,999 million as at 31 March 2020 (31 March 2019: $3,222 million).
(2) SME Corporate includes specialised lending exposure of $711 million as at 31 March 2020 (31 March 2019: $626 million).
(3) The major components of Other Assets are unsettled trades, related party exposures and fixed assets.

5.0 Credit Risk Measurement
continued

APS 330 Table 7(b) (continued)

	As at 31 March 2020				For the 12 months to 31 March 2020
		Off Balance sheet			
	On Balance Sheet $m	Non-market related[1] $m	Market related $m	Total $m	Average Exposures[2] $m
Subject to IRB approach					
Corporate	17,585	8,607	21,764	47,956	43,122
SME Corporate	3,636	698	–	4,334	4,276
Sovereign	2,200	2,705	300	5,205	4,490
Bank	3,414	724	3,431	7,569	7,525
Residential Mortgages	53,401	9,755	–	63,156	55,296
Other Retail	7,831	–	–	7,831	7,937
Retail SME	4,816	15	–	4,831	5,070
Total IRB approach	92,883	22,504	25,495	140,882	127,716
Specialised Lending	3,673	815	2,222	6,710	5,279
Subject to Standardised approach					
Corporate	–	262	–	262	297
Residential Mortgages	1,237	–	–	1,237	1,255
Other Retail	1,991	–	–	1,991	2,397
Total Standardised approach	3,228	262	–	3,490	3,949
Other Assets	5,074	1,096	731	6,901	8,298
Total Gross Credit Exposures	104,858	24,677	28,448	157,983	145,242

(1) Securities Financing Transactions have been considered as non-market related exposures as per revised APS112 effective 1st July 2019.
(2) Average exposures have been calculated on year end spot positions.

APS 330 Table 7(b) (continued)

	As at 31 March 2019				For the 12 months to 31 March 2019
		Off Balance sheet			
	On Balance Sheet $m	Non-market related[1] $m	Market related $m	Total $m	Average Exposures $m
Subject to IRB approach					
Corporate	18,265	9,223	10,801	38,289	39,065
SME Corporate	3,566	652	–	4,218	3,998
Sovereign	2,397	1,297	82	3,776	3,180
Bank	2,921	999	3,562	7,482	7,803
Residential Mortgages	39,449	7,987	–	47,436	44,349
Other Retail	8,042	–	–	8,042	8,008
Retail SME	5,295	13	–	5,308	4,958
Total IRB approach	79,935	20,171	14,445	114,551	111,361
Specialised Lending	2,495	709	644	3,848	4,789
Subject to Standardised approach					
Corporate	–	333	–	333	517
Residential Mortgages	1,272	–	–	1,272	1,787
Other Retail	2,802	–	–	2,802	3,308
Total Standardised approach	4,074	333	–	4,407	5,612
Other Assets	5,580	3,598	516	9,694	11,211
Total Gross Credit Exposures	92,084	24,811	15,605	132,500	132,973

(1) Securities Financing Transactions have been considered as non-market-related off-balance sheet as per revised APS112 effective 1st July 2019. Comparative period has been restated.

5.0 Credit Risk Measurement
continued

APS 330 Table 7(f) & (i)

	As at 31 March 2020				For the 12 months to 31 March 2020	
	Gross Credit Exposure $m	Impaired Facilities $m	Past Due > 90 days[1] $m	Specific Provisions $m	Charges for Specific Provisions $m	Write-offs[4] $m
Subject to IRB approach						
Corporate[2]	53,955	479	31	(157)	(183)	–
SME Corporate[2]	5,045	163	47	(47)	(41)	–
Sovereign	5,205	–	–	–	–	–
Bank	7,569	–	–	–	–	–
Residential Mortgages	63,156	378	148	(3)	(1)	–
Other Retail	7,831	135	–	(31)	(25)	–
Retail SME	4,831	110	–	(21)	(31)	–
Total IRB approach	147,592	1,265	226	(259)	(281)	–
Subject to Standardised approach						
Corporate	262	–	–	–	–	–
Residential Mortgages	1,237	–	–	–	–	–
Other Retail	1,991	46	–	(19)	(33)	–
Total Standardised approach	3,490	46	–	(19)	(33)	–
Other Assets[3]	6,901	8	–	–	–	–
Total	157,983	1,319	226	(278)	(314)	–

(1) In accordance with APRA prudential definitions, Past Due >90 days do not form part of impaired facilities as they are well secured, and represent the full amount outstanding, not just the amount that is past due.
(2) IRB Corporate and SME Corporate includes specialised lending.
(3) Impaired Facilities of $A8m includes other assets acquired through security enforcement subsequent to facility foreclosure.
(4) Under AASB 9, there are no longer direct write-offs to Income Statement. A financial asset is written-off when there is no reasonable expectation of recovering it. At the time of writing-off a financial asset it is adjusted against the Expected Credit Loss (ECL) provision created over the life of the asset and not directly written-off to Income Statement.

APS 330 Table 7(f) & (i)

	As at 31 March 2019				For the 12 months to 31 March 2019	
	Gross Credit Exposure $m	Impaired Facilities $m	Past Due > 90 days[1] $m	Individually Assessed Provisions $m	Charges for Individually Assessed Provisions $m	Write-offs[4] $m
Subject to IRB approach						
Corporate[2]	41,511	242	32	(38)	(48)	–
SME Corporate[2]	4,844	92	63	(24)	(18)	–
Sovereign	3,776	–	–	–	–	–
Bank	7,482	–	–	–	–	–
Residential Mortgages	47,436	258	115	(3)	(2)	–
Other Retail	8,042	110	–	(33)	(31)	–
Retail SME	5,308	56	–	(15)	(21)	–
Total IRB approach	118,399	758	210	(113)	(120)	–
Subject to Standardised approach						
Corporate	333	–	–	–	–	–
Residential Mortgages	1,272	–	–	–	–	–
Other Retail	2,802	72	–	(34)	(37)	–
Total Standardised approach	4,407	72	–	(34)	(37)	–
Other Assets[3]	9,694	21	–	–	–	–
Total	132,500	851	210	(147)	(157)	–

(1) In accordance with APRA prudential definitions, Past Due >90 days do not form part of impaired facilities as they are well secured, and represent the full amount outstanding, not just the amount that is past due.
(2) IRB Corporate and SME Corporate includes specialised lending.
(3) Impaired Facilities of $A21m includes other assets acquired through security enforcement subsequent to facility foreclosure.
(4) Under AASB 9, there are no longer direct write-offs to Income Statement. A financial asset is written-off when there is no reasonable expectation of recovering it. At the time of writing-off a financial asset it is adjusted against the Expected Credit Loss (ECL) provision created over the life of the asset and not directly written-off to Income Statement.

5.0 Credit Risk Measurement
continued

5.4 Credit Risk by Geographic Distribution

The credit risk exposures below have been based on a geographical split by domicile of the counterparty.

APS 330 Table 7(c)

	As at 31 March 2020				
Portfolio Type	**Asia Pacific $m**	**Australia $m**	**EMEA* $m**	**Americas $m**	**Total $m**
Corporate	**4,249**	**10,904**	**20,812**	**18,252**	**54,217**
SME Corporate	**–**	**5,045**	**–**	**–**	**5,045**
Sovereign	**462**	**1,127**	**2,169**	**1,447**	**5,205**
Bank	**1,339**	**2,012**	**2,354**	**1,864**	**7,569**
Residential Mortgages	**209**	**64,034**	**105**	**45**	**64,393**
Other Retail	**–**	**9,109**	**609**	**104**	**9,822**
Retail SME	**–**	**4,831**	**–**	**–**	**4,831**
Other Assets	**1,429**	**3,223**	**987**	**1,262**	**6,901**
Total Gross Credit Exposure	**7,688**	**100,285**	**27,036**	**22,974**	**157,983**

* EMEA represents Europe, United Kingdom, Middle East and Africa

	As at 31 March 2019				
Portfolio Type	Asia Pacific $m	Australia $m	EMEA* $m	Americas $m	Total $m
Corporate	3,197	8,500	16,959	13,188	41,844
SME Corporate	–	4,844	–	–	4,844
Sovereign	243	884	1,863	786	3,776
Bank	853	2,102	2,960	1,567	7,482
Residential Mortgages	152	48,431	84	41	48,708
Other Retail	–	10,109	630	105	10,844
Retail SME	–	5,308	–	–	5,308
Other Assets	1,623	5,350	1,314	1,407	9,694
Total Gross Credit Exposure	6,068	85,528	23,810	17,094	132,500

* EMEA represents Europe, United Kingdom, Middle East and Africa

5.5 Credit Risk Distribution by Counterparty Type

The credit risk exposures by Basel III risk type (portfolio type) below have been classified based on counterparty split of the exposure.

APS 330 Table 7(d)

	As at 31 March 2020				
Portfolio Type	**Financial Institution $m**	**Government $m**	**Corporate $m**	**Retail $m**	**Total $m**
Corporate	**17,740**	**15**	**36,085**	**377**	**54,217**
SME Corporate	**216**	**–**	**4,277**	**552**	**5,045**
Sovereign	**2,295**	**2,904**	**6**	**–**	**5,205**
Bank	**7,569**	**–**	**–**	**–**	**7,569**
Residential Mortgages	**1,463**	**–**	**1,836**	**61,094**	**64,393**
Other Retail	**12**	**–**	**1,014**	**8,796**	**9,822**
Retail SME	**–**	**–**	**3,270**	**1,561**	**4,831**
Other Assets	**4,606**	**578**	**1,714**	**3**	**6,901**
Total Gross Credit Exposure	**33,901**	**3,497**	**48,202**	**72,383**	**157,983**

	As at 31 March 2019				
Portfolio Type	Financial Institution $m	Government $m	Corporate $m	Retail $m	Total $m
Corporate	15,629	83	25,845	287	41,844
SME Corporate	242	–	4,058	544	4,844
Sovereign	1,908	1,858	10	–	3,776
Bank	7,482	–	–	–	7,482
Residential Mortgages	1,551	–	1,390	45,767	48,708
Other Retail	14	–	1,100	9,730	10,844
Retail SME	1	–	3,503	1,804	5,308
Other Assets	6,969	599	2,121	5	9,694
Total Gross Credit Exposure	33,796	2,540	38,027	58,137	132,500

5.0 Credit Risk Measurement
continued

5.6 Credit Risk by Maturity Profile

The credit risk exposures below have been based on residual contractual maturity of the exposure.

APS 330 Table 7(e)

	As at 31 March 2020			
Portfolio Type	**≤1 year $m**	**1 ≤ 5 years $m**	**> 5 years $m**	**Total $m**
Corporate	**33,380**	**17,058**	**3,779**	**54,217**
SME Corporate	**1,014**	**3,213**	**818**	**5,045**
Sovereign	**4,634**	**426**	**145**	**5,205**
Bank	**5,352**	**1,930**	**287**	**7,569**
Residential Mortgages	**111**	**244**	**64,038**	**64,393**
Other Retail	**1,402**	**7,550**	**870**	**9,822**
Retail SME	**251**	**4,525**	**55**	**4,831**
Other Assets	**4,807**	**1,352**	**742**	**6,901**
Total Gross Credit Exposure	**50,951**	**36,298**	**70,734**	**157,983**

	As at 31 March 2019			
Portfolio Type	≤1 year $m	1 ≤ 5 years $m	> 5 years $m	Total $m
Corporate	27,778	10,889	3,177	41,844
SME Corporate	969	3,081	794	4,844
Sovereign	3,468	244	64	3,776
Bank	4,330	2,308	844	7,482
Residential Mortgages	106	225	48,377	48,708
Other Retail	1,552	8,210	1,082	10,844
Retail SME	586	4,687	35	5,308
Other Assets	5,067	4,019	608	9,694
Total Gross Credit Exposure	43,856	33,663	54,981	132,500

Macquarie is approved by APRA to use the Basel III Foundation Internal Ratings Based (FIRB) Approach for credit risk for its wholesale portfolios. Approval for the FIRB approach enables Macquarie to rely on its own internal estimates for some of the necessary credit risk components in determining the capital requirement for a given credit exposure. Internal estimates are used for PD and Maturity, while for wholesale exposures APRA provided estimates must be used for LGD and Exposures at Default (EAD).

A number of retail businesses have been accredited to use the Internal Ratings Based (IRB) Approach, whereby retail exposures are assigned to pools based on both borrower and transaction risk and where the PD and LGD estimates are derived from Macquarie's loss history for exposures in that pool.

Macquarie has a number of portfolios which do not have a statistically significant loss history and therefore do not qualify for the IRB approach to credit risk. Accordingly, the Standardised approach is applied to these portfolios and they are assessed periodically to determine if a change to the IRB approach can be substantiated.

Other portfolios will remain Standardised either because they are in run-off or have been approved by APRA as such. The obligors in these portfolios are not rated by any of the recognised ECAI (S&P, Moody's & Fitch) as they are primarily composed of individual borrowers or small businesses. Consequently, these exposures are risk-weighted at 100%.

A summary of the applicable IRB or Standardised treatment to the Macquarie credit portfolios is set out in the table below.

Exposure Type	Approach	Treatment
Primarily all credit exposures to Corporate (including SME Corporate), Bank and Sovereign counterparties	IRB	MQ rating is mapped to the S&P ratings scale S&P historical default data is used to estimate a PD for each rating grade
All exposures subject to Supervisory Slotting Treatment	IRB	Exposure is slotted based on a combination of its MQ rating and LGD, with APRA determined supervisory risk weights assigned to each exposure
Macquarie originated auto and equipment lease exposures in Australia	IRB	Through-the-cycle pool PDs and downturn LGDs
Macquarie originated and purchased Residential Mortgages in Australia[1]	IRB	Through-the-cycle pool PDs and downturn LGDs The regulatory floor of 20% applies to the LGD of the portfolio.
Other Residential Mortgages	Standardised	Risk Weighted per APS 112
Other auto and equipment lease exposures in Australia	Standardised	Risk Weighted per APS 112
Credit card exposures in Australia	Standardised	100% risk-weighted
Personal loan exposures in Australia	Standardised	100% risk-weighted
Margin loan exposures in Australia	IRB	A 20% risk-weight prescribed in APS113 Capital Adequacy: Internal Ratings-based Approach to Credit Risk is applied
Retail investment loan exposures. The majority are capital protected	Standardised	100% risk-weighted
Related party exposures	IRB	Risk Weighted per APS 113

(1) Excludes loans to self-managed superannuation funds secured by residential property and reverse mortgages, which are considered as other residential mortgages under standardised approach.

6.0 Calculation of Credit Risk Exposures

6.1 Credit Risk Exposures by Measurement Approach

The table below sets out the gross exposures by Basel III portfolio class as required by APRA under APS 330.

APS 330 Table 7(i)

Portfolio Type	**As at 31 March 2020 $m**	As at 31 March 2019 $m
Subject to IRB approach		
Corporate	**53,955**	41,511
SME Corporate	**5,045**	4,844
Sovereign	**5,205**	3,776
Bank	**7,569**	7,482
Residential Mortgages	**63,156**	47,436
Other Retail	**7,831**	8,042
Retail SME	**4,831**	5,308
Total IRB approach	**147,592**	118,399
Subject to Standardised approach		
Corporate	**262**	333
Residential Mortgages	**1,237**	1,272
Other Retail	**1,991**	2,802
Total Standardised approach	**3,490**	4,407
Other Assets[1]	**6,901**	9,694
Total Gross Credit Exposure	**157,983**	132,500

[1] The major components of Other Assets are unsettled trades, related party exposures and fixed assets.

6.2 Credit Risk Exposures by Risk Weight

The tables below detail total credit exposures by risk weight bandings for the standardised portfolio and risk weightings for specialised lending exposures.

The disclosure of Standardised exposures below shows gross credit exposures before and after the impact of risk mitigation by collateral and guarantees.

APS 330 Table 8(b) Standardised Approach Exposures

	As at 31 March 2020		As at 31 March 2019	
Risk Weight	**Total Gross Credit Exposure $m**	**Exposure after mitigation by eligible collateral & guarantees $m**	Total Gross Credit Exposure $m	Exposure after mitigation by eligible collateral & guarantees $m
0%	**–**	**–**	51	–
> 0% ≤ 20%	**–**	**–**	–	–
> 20% ≤ 35%	**59**	**59**	66	66
> 35% ≤ 50%	**675**	**675**	692	692
> 50% ≤ 75%	**483**	**483**	483	483
> 75% ≤ 100%	**2,273**	**2,273**	3,115	3,115
> 100% ≤ 150%	**–**	**–**	–	–
> 150%	**–**	**–**	–	–
Total	**3,490**	**3,490**	4,407	4,356

IRB Approach Exposures

Specialised lending exposures subject to supervisory slotting	**Gross Credit Exposure**	
Risk Weight	**As at 31 March 2020 $m**	As at 31 March 2019 $m
70%	**1,084**	407
90%	**1,896**	1,006
115%	**3,523**	2,327
250%	**59**	32
Default[1]	**148**	76
Total	**6,710**	3,848

[1] Default specialised lending exposures are assessed for impairment (refer section 7).

6.0 Calculation of Credit Risk Exposures
continued

6.3 Credit Risk Exposures by Risk Grade

This section sets out the gross credit exposures split by PD for Non-Retail portfolios and Expected Loss (EL) for Retail portfolios.

The tables below provide a breakdown of gross credit exposures into each PD band for the Non-Retail portfolios under the Basel III FIRB classes of Corporate, SME Corporate, Sovereign and Bank as shown in section 6.1.

APS 330 Table 9(d)

	As at 31 March 2020 PD Grade							
Non-Retail	**0 <= 0.03% $m**	**0.03% <= 0.15% $m**	**0.15% <= 1% $m**	**1% <= 5% $m**	**5% <= 15% $m**	**15% <= 100% $m**	**Default $m**	**Total Gross Credit Exposure $m**
Corporate	**1,932**	**12,476**	**23,366**	**9,270**	**4,640**	**1,255**	**1,016**	**53,955**
SME Corporate	**–**	**–**	**1,332**	**3,038**	**401**	**62**	**212**	**5,045**
Sovereign	**4,304**	**846**	**27**	**24**	**4**	**–**	**–**	**5,205**
Bank	**865**	**6,098**	**521**	**79**	**5**	**1**	**–**	**7,569**
Total Gross Credit Exposure	**7,101**	**19,420**	**25,246**	**12,411**	**5,050**	**1,318**	**1,228**	**71,774**

	As at 31 March 2019 PD Grade							
Non-Retail	0 <= 0.03% $m	0.03% <= 0.15% $m	0.15% <= 1% $m	1% <= 5% $m	5% <= 15% $m	15% <= 100% $m	Default $m	Total Gross Credit Exposure $m
Corporate	925	14,433	16,310	5,729	3,169	194	751	41,511
SME Corporate	–	–	1,384	2,830	387	62	181	4,844
Sovereign	2,987	782	5	2	–	–	–	3,776
Bank	2,295	4,993	103	70	21	–	–	7,482
Total Gross Credit Exposure	6,207	20,208	17,802	8,631	3,577	256	932	57,613

6.3 Credit Risk Exposures by Risk Grade (continued)

Included within Total Gross Credit Exposures in the previous page are exposures for undrawn commitments. These undrawn commitment exposures are set out in the following tables.

APS330 Table 9(d) (continued)

	As at 31 March 2020 PD Grade							
Undrawn Commitments	**0 <= 0.03% $m**	**0.03% <= 0.15% $m**	**0.15% <= 1% $m**	**1% <= 5% $m**	**5% <= 15% $m**	**15% <= 100% $m**	**Default $m**	**Total Gross Credit Exposure $m**
Corporate	**–**	**234**	**1228**	**482**	**295**	**32**	**29**	**2,300**
SME Corporate	**–**	**–**	**198**	**378**	**17**	**4**	**11**	**608**
Sovereign	**34**	**–**	**–**	**4**	**–**	**–**	**–**	**38**
Bank	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total Undrawn Commitments	**34**	**234**	**1,426**	**864**	**312**	**36**	**40**	**2,946**

	As at 31 March 2019 PD Grade							
Undrawn Commitments	0 <= 0.03% $m	0.03% <= 0.15% $m	0.15% <= 1% $m	1% <= 5% $m	5% <= 15% $m	15% <= 100% $m	Default $m	Total Gross Credit Exposure $m
Corporate	1	637	914	496	122	12	35	2,217
SME Corporate	–	–	216	319	28	1	4	568
Sovereign	35	–	–	–	–	–	–	35
Bank	–	–	–	–	–	–	–	–
Total Undrawn Commitments	36	637	1,130	815	150	13	39	2,820

6.0 Calculation of Credit Risk Exposures
continued

6.3 Credit Risk Exposures by Risk Grade (continued)

The tables below provide a breakdown of gross credit exposures into each EL category for the Retail portfolios under the Basel III classes of Residential Mortgages, Other Retail and Retail SME as shown in section 6.1.

APS330 Table 9(d) (continued)

	As at 31 March 2020 Expected Loss Categories					
Retail	**0 < 0.1% $m**	**0.1% < 0.3% $m**	**0.3% < 3% $m**	**3% < 10% $m**	**10% < 100% $m**	**Total Gross Credit Exposure $m**
Residential Mortgages	**26,814**	**31,364**	**3,992**	**527**	**459**	**63,156**
Other Retail	**–**	**3,659**	**3,320**	**715**	**137**	**7,831**
Retail SME	**26**	**184**	**3,786**	**720**	**115**	**4,831**
Total Gross Credit Exposure	**26,840**	**35,207**	**11,098**	**1,962**	**711**	**75,818**

	As at 31 March 2019 Expected Loss Categories					
Retail	0 < 0.1% $m	0.1% < 0.3% $m	0.3% < 3% $m	3% < 10% $m	10% < 100% $m	Total Gross Credit Exposure $m
Residential Mortgages	19,867	22,624	4,087	518	340	47,436
Other Retail	–	3,600	3,540	782	120	8,042
Retail SME	194	206	3,941	879	88	5,308
Total Gross Credit Exposure	20,061	26,430	11,568	2,179	548	60,786

6.3 Credit Risk Exposures by Risk Grade (continued)

Included within Total Gross Credit Exposures in the previous page are exposures for undrawn commitments. These undrawn commitment exposures are set out in the following tables.

APS330 Table 9(d) (continued)

	As at 31 March 2020 Expected Loss Categories					
Undrawn Commitments	**0 < 0.1% $m**	**0.1% < 0.3% $m**	**0.3% < 3% $m**	**3% < 10% $m**	**10% < 100% $m**	**Total $m**
Residential Mortgages	**6,848**	**2,660**	**216**	**29**	**1**	**9,754**
Retail SME	**15**	**–**	**–**	**–**	**–**	**15**
Total Undrawn Commitments	**6,863**	**2,660**	**216**	**29**	**1**	**9,769**

	As at 31 March 2019 Expected Loss Categories					
Undrawn Commitments	0 < 0.1% $m	0.1% < 0.3% $m	0.3% < 3% $m	3% < 10% $m	10% < 100% $m	Total $m
Residential Mortgages	6,232	1,484	240	29	–	7,985
Retail SME	11	–	–	–	–	11
Total Undrawn Commitments	6,243	1,484	240	29	–	7,996

7.0 Provisioning

7.1 Impaired Facilities and Past Due

Facilities are classified as impaired when there is doubt regarding the collectability of some or all of the contractual payments due from a counterparty. The contractual payments include principal outstanding, interest and other related charges.

Exposures will be assessed for impairment where there is objective evidence of impairment. Objective evidence of impairment may include market, economic or legal factors impacting upon the ability of a counterparty to meet their repayment obligations. The assessment process consists of a comparison of the carrying value of the exposure and the present value of its estimated future cash flows (recoverable amount).

The estimation of expected future cash flows takes into consideration:

- external valuations of the asset (taking into account the value of any security held);
- costs of recovery; and
- the timeframe for realisation of recovery and/or sale of security.

The estimated future cash flows are discounted at the effective interest rate to determine the recoverable amount of the financial asset.

Facilities that are more than 90 calendar days past contractual due date can be classified as either:

- impaired facility if it meets the criteria for impairment as detailed above; or
- past due where the facility is assessed as well secured.

For the purposes of this report, past dues represent the full amount outstanding, not just the amount that is past due.

In line with guidance from APRA in their FAQs, Macquarie Bank has applied the regulatory capital approach specified to those loans where the COVID-19 repayment deferral was granted. Nature and terms of the financial assistance offered to customers by Macquarie Bank under the COVID-19 support package can be seen here:
macquarie.com/au/en/about/news/2020/comprehensive-support-package-for-australians-dealing-with-coronavirus-covid-19-impacts.html

Loans where the COVID-19 payment pause was applied up to 30 April 2020 for Macquarie Bank:

COVID-19 Payment Pause	Loans Count	Exposure $m
Personal Banking (Home Loans + Credit Cards)	**11,372**	**5,293**
Vehicle and Asset Finance (inc. Wholesale)	**49,697**	**2,018**
Business Banking (inc. Business Bank Home Loans)	**1,861**	**1,482**

7.2 Specific Provisions and General Reserve for Credit Losses

Specific Provisions

Facilities that are assessed as impaired are subject to a recoverability test. Specific provisions are calculated as per the APRA Prudential Standard APS 220: Credit Quality (APS 220) and are generally measured as the difference between the contractual and expected cash flows from the individual exposure, discounted using the effective interest rate for that exposure.

General Reserve for Credit Losses

The General Reserve for Credit Losses (GRCL) is required under APS 220 to cover credit losses prudently estimated but not certain to arise over the full life of all individual facilities making up the credit risk portfolio.

Provisions representing 12 months expected credit loss (ECL) on performing loans (referred to as stage 1 provisions under AASB 9), are allocated to GRCL as they are held against future, presently unidentified losses. ECL provisions are determined based on the point-in-time probability of default (PD) over the next 12 months and the lifetime losses associated with such PD, adjusted for forward looking information.

Regulatory Specific Provisions

Lifetime ECL provisions on under-performing and non-performing loans (referred to as stage 2 and 3 provisions under AASB 9) deemed ineligible to be included in the GRCL, are considered regulatory specific provisions. Lifetime ECL provisions are determined with reference to the financial asset's lifetime PD and the lifetime losses associated with that PD, adjusted for forward looking information.

In response to COVID-19, Macquarie Bank revised certain model inputs resulting in increased provisions for the period. For details on ECL refer to note 11 for Expected Credit Losses in the MBL Annual Report.

7.3 Regulatory Expected Loss (REL)

REL represents the estimated future credit losses expected to be incurred in a portfolio. For non-defaulted exposures, REL is calculated as a function of the outstanding exposure, PD and LGD whereas REL for defaulted Corporate, Sovereign and Bank exposures under the FIRB approach is determined as the product of LGD and EAD. LGDs are defined by APRA for Corporate, Bank and Sovereign. Specialised lending exposures subject to supervisory slotting criteria are measured using APRA determined risk weightings. For defaulted retail exposures under the IRB approach, REL is based on the best estimate of loss. The excess of REL over eligible provisions is required by APRA to be deducted from Common Equity Tier 1 capital. Eligible provisions include credit related provisions, partial write-offs, and discounts on defaulted assets. As at 31 March 2020, the total REL was $1,285 million (31 March 2019: $943 million), with the excess of REL over eligible provisions resulting in a Common Equity Tier 1 deduction of $317 million (31 March 2019: $269 million).

7.4 Provisions by Counterparty Type

The table below details impaired facilities, past due and specific provisions.

APS 330 Table 7(f)

	As at 31 March 2020			As at 31 March 2019		
	Impaired Facilities $m	**Past Due >90 days $m**	**Specific Provisions $m**	Impaired Facilities $m	Past Due >90 days $m	Specific Provisions $m
Subject to IRB approach						
Corporate	**479**	**31**	**(157)**	242	32	(38)
SME Corporate	**163**	**47**	**(47)**	92	63	(24)
Residential Mortgages	**378**	**148**	**(3)**	258	115	(3)
Other Retail	**135**	**–**	**(31)**	110	–	(33)
Retail SME	**110**	**–**	**(21)**	56	–	(15)
Total IRB approach	**1,265**	**226**	**(259)**	758	210	(113)
Subject to Standardised approach						
Residential Mortgages	**–**	**–**	**–**	–	–	–
Other Retail	**46**	**–**	**(19)**	72	–	(34)
Total Standardised approach	**46**	**–**	**(19)**	72	–	(34)
Other Assets[1]	**8**	**–**	**–**	21	–	–
Total	**1,319**	**226**	**(278)**	851	210	(147)
Additional regulatory specific provisions[2]			**(343)**			(228)

(1) Includes other assets acquired through security enforcement subsequent to facility foreclosure.

(2) Includes stage 2 provisions deemed ineligible for GRCL. Combined with $53 million (31 March 2019: $51 million) of stage 3 provisions (which are not specific provisions on impaired facilities) primarily related to IRB Corporate and Standardised Other Retail.

7.0 Provisioning
continued

APS 330 Table 9(e)

	For the 12 months to 31 March 2020		For the 12 months to 31 March 2019	
	Charges for Specific provisions $m	**Write-offs[1] $m**	Charges for Specific provisions $m	Write-offs[1] $m
Subject to IRB approach				
Corporate	**(183)**	**–**	(48)	–
SME Corporate	**(41)**	**–**	(18)	–
Residential Mortgages	**(1)**	**–**	(2)	–
Other Retail	**(25)**	**–**	(31)	–
Retail SME	**(31)**	**–**	(21)	–
Total IRB approach	**(281)**	**–**	(120)	–
Subject to Standardised approach				
Other Retail	**(33)**	**–**	(37)	–
Total Standardised approach	**(33)**	**–**	(37)	–
Total	**(314)**	**–**	(157)	–

[1] Under AASB 9, there are no longer direct write-offs to Income Statement. A financial asset is written-off when there is no reasonable expectation of recovering it. At the time of writing-off a financial asset it is adjusted against the Expected Credit Loss (ECL) provision created over the life of the asset and not directly written-off to Income Statement.

7.5 Provisions by Geographic Region

The tables below split impaired facilities, past due and provisions by geographic region. Note that the geographic split has been based on the domicile of the counterparty.

APS 330 Table 7(g)

	As at 31 March 2020			
Geographic Region	**Impaired Facilities $m**	**Past due > 90 days $m**	**Specific Provisions $m**	**GRCL $m**
Australia	**865**	**206**	**(131)**	**(130)**
EMEA	**115**	**1**	**(74)**	**(32)**
Americas	**263**	**19**	**(71)**	**(47)**
Asia Pacific	**76**	**–**	**(2)**	**–**
Total	**1,319**	**226**	**(278)**	**(209)**
Additional regulatory specific provisions			**(343)**	

	As at 31 March 2019			
Geographic Region	Impaired Facilities $m	Past due > 90 days $m	Specific Provisions $m	GRCL $m
Australia	630	184	(132)	(101)
EMEA	16	1	(5)	(20)
Americas	205	25	(10)	(27)
Asia Pacific	–	–	–	–
Total	851	210	(147)	(148)
Additional regulatory specific provisions			(228)	

7.6 General Reserve for Credit Losses

APS 330 Table 7(j)

	As at 31 March 2020 $m	As at 31 March 2019 $m
General reserve for credit losses before tax	**209**	148
Tax effect	**(49)**	(40)
General reserve for credit losses	**160**	108

7.0 Provisioning
continued

7.7 Movement in Provisions

The table below shows the movement of provisions over the 12 months to 31 March 2020.

APS 330 Table 7(h)

	GRCL $m	Specific Provisions and Additional Specific provision $m	Total $m
Provisions as at 31 March 2019	**148**	**375**	**523**
Charges (net of reversals) during the period	**26**	**442**	**468**
Assets written off or sold, previously provided for	**–**	**(165)**	**(165)**
Net transfer (to)/from other provisions	**31**	**(31)**	**–**
Adjustments for foreign exchange fluctuations	**4**	**–**	**4**
Provisions as at 31 March 2020	**209**	**621**	**830**

7.8 Analysis of Expected Credit Model Performance versus Actual Results

The table below relates only to Macquarie's portfolios measured under the IRB approach and compares actual results to the average estimate over the January 2008 to March 2020 period.

APS 330 Table 9(f)

	PD		Exposure at default	LGD	
Portfolio Type	Estimated %	Actual %	Estimate to Actual Ratio	Estimated %	Actual %
Corporate	**1.79%**	**0.88%**	**N/A[1]**	**N/A[1]**	**N/A[1]**
SME Corporate	**2.44%**	**2.55%**	**N/A[1]**	**N/A[1]**	**N/A[1]**
Sovereign	**0.13%**	**0.00%**	**N/A[1]**	**N/A[1]**	**N/A[1]**
Bank	**0.13%**	**0.00%**	**N/A[1]**	**N/A[1]**	**N/A[1]**
Residential Mortgages[2]	**1.16%**	**1.12%**	**100%**	**20.19%**	**3.74%**
Other Retail[2]	**1.81%**	**1.88%**	**112%**	**47.45%**	**26.65%**

(1) Macquarie is accredited under the Foundation Internal Ratings Based Approach (FIRB). As the LGD and EAD assumptions under FIRB are set by APRA for these portfolio types, disclosure of actual against estimates does not facilitate meaningful assessment of the performance of internal rating processes for these portfolios.

(2) Includes exposures disclosed as Retail SME.

8.0 Credit Risk Mitigation

8.1 Netting

Netting arises where a single legal obligation is created covering all transactions included in a netting agreement. The most common form of netting which Macquarie applies for these purposes is close-out netting.

Netting is applied to a counterparty balance only when appropriate documentation governing transactions between the Macquarie entity and the counterparty has been entered into, Legal Risk Management has confirmed that it is legally effective to net with that counterparty, and APRA Prudential Standard APS 112 Capital Adequacy: Standardised Approach to Credit Risk (APS 112), has been complied with.

8.1.1 Collateral Valuation and Management

RMG Credit limits are set and the related exposures are calculated before taking any non-cash collateral into consideration other than for securities finance transactions where liquid financial instruments are an inherent part of the lending arrangement. Typically, collateral is required for all but short-dated, vanilla trading activity.

A wide variety of collateral can be accepted depending on the counterparty and the nature of the exposure. Some of the most common forms are charges over:

- cash or gold deposits;
- debt or equity securities;
- company assets; and
- commercial or residential property.

Guarantees are frequently requested from banks, parent or associated companies. Relative ratings between the obligor and guarantor are monitored as part of the regulatory capital calculation process as mitigation will normally cease to be eligible if the rating of the guarantor falls below that of the underlying obligor. Collateral taken in the form of tradeable securities is revalued daily by the same application systems which are used to trade those particular products. Credit default swaps are not a common form of credit risk mitigation. Macquarie policies ensure that all security is taken in conjunction with a formal written agreement which gives Macquarie direct and unconditional rights over the collateral in the event of default by the obligor.

To mitigate credit risk Macquarie makes frequent use of margining arrangements. In these cases, counterparties post collateral daily in the form of cash or liquid securities to cover outstanding trading positions. Macquarie also engages in reciprocal margining agreements with counterparties under ISDA or similar agreements where the Credit Support Annex can contain provisions whereby margining thresholds may vary in relation to the credit ratings of the respective parties. As part of the OTC Margining reforms in various jurisdictions in which Macquarie operates, limits have been imposed on thresholds, minimum transfer amounts and rounding for affected counterparties. Documents have been renegotiated with these counterparties in order to be compliant with these regulations. Margining thresholds are incorporated into the scenarios considered under the MGL Group liquidity policy which assesses the collateral and funding requirements in the event of a credit downgrade.

This is part of the general requirement of the MGL Group to be able to meet all obligations for a period of twelve months under both an individual and combined name and systemic challenge. The resultant increase in collateral requirements is included as an outflow in the scenarios – explicitly ensuring that Macquarie has sufficient funding coverage in this event.

Specific protocols surround the acceptance of real estate as collateral.

Prior to acceptance, any independent valuation must undergo a formal review process by which it is assessed for quality and adherence to policy and standing instructions. The escalation of this review and acceptance process will depend on:

- the type of property being valued;
- the dollar value of the property being valued; and
- the proposed loan-to-value ratio (LVR).

The value of all real estate collateral is assessed regularly and is re-valued where appropriate, be it on an asset specific basis or a market assessment across a pool of assets, such as residential mortgages. The interval between re-valuation is contingent on the type of property, extent of the property's encumbrance, the LVR at origination and the market conditions that have prevailed since the valuation was conducted. All prior claims on the property collateral are recorded and taken into consideration when calculating the available security value.

All details regarding security together with netting/margining rules are recorded in collateral management systems which support the operational control framework.

8.1.2 Wrong Way Risk

Specific wrong-way risk occurs when exposure to the counterparty is positively correlated with the counterparty's probability of default. RMG Credit runs a monthly monitoring process to ensure that all instances of specific wrong-way risk are identified and appropriately escalated. General wrong-way risk occurs when the probabilities of counterparty defaults are positively correlated with market risk factor movements. Macquarie considers these correlations as part of the credit assessment process.

8.0 Credit Risk Mitigation
continued

8.2 Exposures Mitigated by Eligible Collateral

Eligible financial collateral is defined in APS 112 as cash, certificates of deposit, bank bills, certain rated debt issues and listed equities. Other items that are eligible for recognition as collateral include mortgages over commercial or residential real estate (subject to the satisfaction of certain requirement listed in APS113).

As noted, Macquarie takes a wide range of collateral of which only a portion is eligible under APS 112. All collateral is recorded in appropriate systems with clear definition by type and eligibility status. Ineligible collateral under APRA standards is excluded from the capital calculation process.

Some types of collateral which are eligible by definition may be determined to be ineligible or adjusted with an appropriate haircut at the time of calculation due to mismatches of maturity or currency between the collateral and the underlying exposures.

For capital adequacy purposes, eligible cash collateral is considered in calculating the capital requirement. For non-cash collateral, a regulatory haircut is applied to both the gross credit exposure and the value of the collateral, and these adjusted amounts are used as the basis of calculating the capital requirement.

The tables below show gross credit exposures by Basel III portfolio under the IRB approach and the amount of risk exposure which is mitigated by APRA defined eligible collateral, guarantees or credit derivatives.

APS 330 Table 10(b) & (c)

	As at 31 March 2020			
Measurement Approach	**Total Gross Credit Exposure[1] $m**	**Eligible Financial Collateral $m**	**Other Eligible Collateral $m**	**Exposures Covered by Guarantees $m**
Subject to IRB approach				
Corporate	**53,955**	**747**	**63**	**2,724**
SME Corporate	**5,045**	**75**	**913**	**–**
Sovereign	**5,205**	**–**	**–**	**–**
Bank	**7,569**	**–**	**–**	**36**
Residential Mortgages	**63,156**	**N/A**	**N/A**	**–**
Other Retail	**7,831**	**N/A**	**N/A**	**–**
Retail SME	**4,831**	**N/A**	**N/A**	**–**
Total IRB approach	**147,592**	**822**	**976**	**2,760**

1 Per APS 180, the impact of eligible collateral for market related contracts is embedded in the calculation of total gross credit exposure and is not separately reported as eligible financial collateral.

	As at 31 March 2019			
Measurement Approach	Total Gross Credit Exposure $m	Eligible Financial Collateral $m	Other Eligible Collateral $m	Exposures Covered by Guarantees $m
Subject to IRB approach				
Corporate	41,511	1,866	78	2,905
SME Corporate	4,844	73	896	–
Sovereign	3,776	4	–	1
Bank	7,482	1,339	–	–
Residential Mortgages	47,436	N/A	N/A	–
Other Retail	8,042	N/A	N/A	–
Retail SME	5,308	N/A	N/A	196
Total IRB approach	118,399	3,282	974	3,102

8.3 Counterparty Credit risk

Counterparty Credit Risk (CCR) is the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. An economic loss would occur if the transactions or portfolio of transactions with the counterparty has a positive economic value for MGL Group at the time of default. Unlike exposure to credit risk through a loan, where the exposure to credit risk is unilateral and only the lending bank faces the risk of loss, CCR creates a bilateral risk of loss whereby the market value for many different types of transactions can be positive or negative to either counterparty. The market value is uncertain and can vary over time with the movement of underlying market factors.

Regulatory capital is allocated to CCR exposures using the SA-CCR, which reflects expected exposure to the counterparty and its risk-rating. Economic capital also reflects correlations and diversification impacts across risk types.

As at 31 March 2020, a unilateral one-notch and two-notch downgrade in the MBL's rating would have resulted in a further $243m million and $353m million (credit rating downgrade postings are cumulative) of collateral being posted to other counterparties respectively. Collateral stress tests are also conducted on the MBL's counterparties so that it can monitor for likely collateral stresses in the event of a counterparty downgrade.

APS 330 Table 11(b)

Exposures at default for counterparty exposures	**As at 31 March 2020 $m**	As at 31 March 2019 $m
Replacement cost excluding collateral	**19,558**	*
Replacement cost with eligible collateral (A)	**10,628**	*
Potential future exposure (PFE) (B)	**9,787**	*
Exposures at default [(A+B) * 1.4]	**28,581**	12,860
Comprising of:		
Interest rate	**1,617**	985
Credit	**196**	117
Equity	**1,347**	544
Foreign exchange	**9,734**	3,459
Commodity	**15,687**	7,755
Exposures at default	**28,581**	12,860

APS 330 Table 11(c)

	As at 31 March 2020		As at 31 March 2019	
Notional amount of credit derivatives	**Protection Bought $m**	**Protection Sold $m**	Protection Bought $m	Protection Sold $m
Own credit portfolio	**1,953**	**1,862**	1,968	1,522
Client intermediation activities	**–**	**–**	–	–
Total	**1,953**	**1,862**	1,968	1,522
Credit default swaps (CDS)	**1,953**	**1,847**	933	1,522
Total return swaps	**–**	**15**	1,035	–
Total	**1,953**	**1,862**	1,968	1,522

9.0 Securitisation

9.1 Overview

The revised APS 120 Securitisation (APS 120) became effective 1 January 2018. A securitisation is defined as "a financing structure where the cash flow from a pool is used to make payments on obligations to at least two tranches or classes of creditors (typically holders of debt securities), with each tranche or class entitled to receive payments from the pool before or after another class of creditors, thereby reflecting different levels of credit risk."

Macquarie engages in a range of activities in the securitisation market, including playing the following roles:

- Originator, Arranger, Manager and Servicer on Macquarie mortgage and auto and equipment finance securitisation programs;
- Lead Manager on Macquarie originated and third party securitisations;
- Swap Counterparty to Macquarie originated and third party securitisations;
- Warehouse facility provider to several third-party originators;
- Liquidity facility provider to several third-party originators and provider of redraw facilities to all Macquarie Mortgage SPVs; and
- Investor in third-party securitisation transactions.

Macquarie has also established contingent liquidity securitisation SPVs that issue and hold Residential Mortgage Backed Securities (RMBS) eligible for repurchase with the RBA.

Macquarie may, as sponsor, use the following types of special purpose vehicles to securitise third-party exposures:

- trusts, and
- special purpose companies,

issuing RMBS or asset-backed securities (ABS).

Following are the affiliated entities which the MGL group manages or advises and which can invest either in the securitisation exposures that Macquarie has securitised or in SPVs for whom Macquarie is a sponsor (i.e. manager, adviser, dealer or liquidity and/or credit enhancement provider):

- Macquarie Core Australian Fixed Interest Fund
- Macquarie Debt Market Opportunity Fund
- Macquarie Australian Diversified Income (High Grade) Fund
- Macquarie Australian Diversified Income Fund
- Macquarie True Index Global Bond Fund
- Macquarie Global Income Opportunities Fund – SICAV
- Macquarie Global Multi-Sector Fixed Income Fund
- Macquarie Global Income Opportunities Fund
- Macquarie Dynamic Bond Fund
- Macquarie True Index Sovereign Bond Fund
- Macquarie Income Opportunities Fund
- Macquarie True Index Cash Fund
- Macquarie Enhanced Australian Fixed Interest Fund

Any investments by these entities (if any) in securitisation exposures that Macquarie has securitised or sponsored does not form a majority of their investment portfolios and their investment represents a small percentage of the relevant securitisation issue.

9.1.1 Securitisation Risk Management

RMG is responsible for overseeing the management of the risk arising from all securitisation exposures. RMG approves all securitisation transactions and exposures arising from securitisation activity.

RMG Regulatory Affairs and Aggregate Risk Division (RAAR) reviews transactions where Macquarie acts as originator, manager or sponsor to ensure compliance with APS 120 and other regulations. RMG Credit sets limits on securitisation exposures and reviews transactions to identify all risks involved. RMG Market Risk reviews market exposures associated with securitisations, such as swaps, and other exposures held in the trading book. Macquarie's primary risk mitigant is the limit framework and approval process governing exposures to securitisations.

In addition to credit risk, securitised assets can be subject to liquidity risk, interest rate risk, and in some instances FX risk. The nature and scale of these risks varies from transaction to transaction. All securitised assets are subject to a degree of operational risk associated with documentation and the collection of cashflows.

Securitisation exposures are measured daily and monitored by RMG. RMG completes an annual review of all securitisation exposures and limits. Regulatory capital is calculated on all securitisation exposures using the available approaches in APS 116 and APS 120.

Macquarie applies the following approaches to the calculation of regulatory capital for securitisation exposures under APS 120:

- the External Ratings Based approach (ERBA); or
- the Supervisory Formula Approach (SFA).

If one of the above approaches does not apply to an exposure, then the exposure will be deducted from Common Equity Tier 1 Capital (CET1).

S&P, Moody's and Fitch Ratings have all been used to rate Macquarie securitisations. They have been used to rate notes and commercial paper issued by Macquarie securitisation and Commercial Paper programs.

Mitigation of credit risk on securitisation exposures is performed in accordance with Macquarie's overall credit risk mitigation policy. Details of the policy can be found in section 8.0 of this disclosure.

9.1.2 Accounting for Securitisation

Securitisation transactions undertaken by Macquarie are accounted for in accordance with Australian Accounting Standards. As noted, securitised positions are managed in a number of SPVs.

Where these SPVs are deconsolidated for regulatory purposes under APS 120, they still need to be assessed under Australian Accounting Standards to determine whether these SPVs should be considered part of the accounting consolidated group.

Control exists when the parent is exposed, or has rights, to variable returns from its involvement with an entity and has the ability to affect those returns through its power over that entity. In Macquarie's case, it has been determined that under Australian Accounting Standards, Macquarie consolidates Macquarie mortgage SPVs and auto and equipment finance SPVs. The assets and liabilities in these SPVs detailed in the tables within this section are consolidated into the Macquarie accounting consolidated group on the basis Macquarie controls those SPVs.

Banking book securitised assets consolidated by Macquarie are held on the balance sheet at amortised cost. Securitised exposures in the trading book are held at fair value. There has been no material change to the methods of valuation from the prior period.

If there are circumstances where Macquarie is required to provide financial support for securitised assets, a relevant liability is recognised on the Bank's balance sheet. Where a liability does not currently exist but could arise in the future as a result of uncertain events not wholly within Macquarie's control, a contingent liability is disclosed to the extent such an obligation may, but probably will not, require an outflow of resources. A contingent liability does not give rise to an actual liability being recognised on the Bank's balance sheet.

Further information on accounting policies as they relate to securitisation exposures, including key assumptions and inputs to valuation processes and Macquarie's policies on accounting consolidation, can be found in the Macquarie Bank Limited financial report.

9.0 Securitisation
continued

9.2 Securitisation Exposures

9.2.1 Originating ADI Securitisation Exposures

The table below sets out the assets originated or sponsored by Macquarie where the exposures have subsequently been securitised.

Macquarie has not undertaken any synthetic securitisation in the banking and trading book.

APS 330 Table 12(g) and (o)

	As at 31 March 2020		
	Total outstanding exposures securitised		
Exposure Type	**ADI originated assets[1] $m**	**ADI as sponsor[2] $m**	**Other $m**
Banking Book			
Residential Mortgages	**34,790**	**112**	**–**
Credit cards and other personal loans	**–**	**–**	**–**
Auto and equipment finance	**5,369**	**–**	**–**
Total Banking Book	**40,159**	**112**	**–**
Trading Book			
Residential Mortgages	**–**	**–**	**–**
Credit cards and other personal loans	**–**	**–**	**–**
Auto and equipment finance	**–**	**–**	**–**
Other	**–**	**–**	**–**
Total Trading Book	**–**	**–**	**–**
Total	**40,159**	**112**	**–**

(1) Included in the above are assets of $40,159 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.
(2) Included in the above are exposures held in third party warehouse funding facilities.

	As at 31 March 2019		
	Total outstanding exposures securitised		
Exposure Type	ADI originated assets[1] $m	ADI as sponsor[2] $m	Other $m
Banking Book			
Residential Mortgages	24,461	139	–
Credit cards and other personal loans	–	–	–
Auto and equipment finance	5,850	–	–
Total Banking Book	30,311	139	–
Trading Book			
Residential Mortgages	–	–	–
Credit cards and other personal loans	–	–	–
Auto and equipment finance	–	–	–
Other	–	–	–
Total Trading Book	–	–	–
Total	30,311	139	–

(1) Included in the above are assets of $30,311 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.
(2) Included in the above are exposures held in third party warehouse funding facilities.

9.2.2 Performance of Assets Securitised

The assets below have been originated and securitised by Macquarie. The table below identifies the total exposures and impairment of these assets.

APS 330 Table 12(h)

	As at 31 March 2020			
	Total outstanding exposures securitised			
Exposure Type	**Total outstanding exposures[1] $m**	**Impaired[2] $m**	**Past due[3] $m**	**ADI recognised loss from exposures securitised $m**
Residential Mortgages	**34,790**	**264**	**98**	**–**
Credit cards and other personal loans	**–**	**–**	**–**	**–**
Auto and equipment finance	**5,369**	**104**	**–**	**–**
Total	**40,159**	**368**	**98**	**–**

(1) Included in the above are assets of $40,159 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.
(2) Included in the above are impaired facilities of $368 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.
(3) Included in the above are past due >90 days facilities of $98 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.

	As at 31 March 2019			
	Total outstanding exposures securitised			
Exposure Type	Total outstanding exposures[1] $m	Impaired[2] $m	Past due[3] $m	ADI recognised loss from exposures securitised $m
Residential Mortgages	24,461	193	90	–
Credit cards and other personal loans	–	–	–	–
Auto and equipment finance	5,850	85	–	–
Total	30,311	278	90	–

(1) Included in the above are assets of $30,311 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.
(2) Included in the above are impaired facilities of $278 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.
(3) Included in the above are past due >90 days facilities of $90 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.

9.0 Securitisation
continued

9.2.3 Summary of Outstanding Exposures Intended to be Securitised

APS 330 Table 12(i) and (p)

MBL may securitise assets depending on a variety of factors, including market conditions and business requirements. The table below sets out identified assets as at the reporting date which are intended to be put into term securitisation deals.

Exposure Type	**As at 31 March 2020 $m**	As at 31 March 2019 $m
Banking Book		
Residential Mortgages[1]	–	650
Credit cards and other personal loans	–	–
Auto and equipment finance	–	–
Total Banking Book	–	650
Trading Book		
Residential Mortgages	–	–
Credit cards and other personal loans	–	–
Auto and equipment finance	–	–
Total Trading Book	–	–

[1] This exposure is intended for self-securitisation.

9.2.4 Securitisation Activity

Over the 12 months to 31 March 2020, Macquarie has undertaken the following securitisation activity. Macquarie may or may not retain an exposure to securitisation SPVs to which Macquarie has sold assets.

APS 330 Table 12(j) and (q)

	For the 12 months to 31 March 2020		
	Value of loans sold or originated into securitisation		Recognised gain or loss on sale
Exposure Type	**ADI originated $m**	**ADI as sponsor $m**	**$m**
Banking Book			
Residential Mortgages	**26,662**	**–**	**–**
Credit cards and other personal loans	**–**	**–**	**–**
Auto and equipment finance[1]	**2,506**	**–**	**–**
Other	**–**	**–**	**–**
Total Banking Book	**29,168**	**–**	**–**
Trading Book			
Residential Mortgages	**–**	**–**	**–**
Credit cards and other personal loans	**–**	**–**	**–**
Auto and equipment finance	**–**	**–**	**–**
Total Trading Book	**–**	**–**	**–**

(1) Exposures included in Auto and equipment finance that have been transferred from warehouse structures to term structures, may also have been originated to the warehouse within the same period. This would result in those exposures being included twice.

	For the 12 months to 31 March 2019		
	Value of loans sold or originated into securitisation		Recognised gain or loss on sale
Exposure Type	ADI originated $m	ADI as sponsor $m	$m
Banking Book			
Residential Mortgages	12,490	–	–
Credit cards and other personal loans	–	–	–
Auto and equipment finance[1]	2,895	–	–
Other	–	–	–
Total Banking Book	15,385	–	–
Trading Book			
Residential Mortgages	–	–	–
Credit cards and other personal loans	–	–	–
Auto and equipment finance	–	–	–
Total Trading Book	–	–	–

(1) Exposures included in Auto and equipment finance that have been transferred from warehouse structures to term structures, may also have been originated to the warehouse within the same period. This would result in those exposures being included twice.

9.0 Securitisation
continued

Originating ADI Securitisation Exposures

APS 330 Table 12(r) – Trading Book

	As at 31 March 2020			
	Total outstanding exposures securitised			
	Standard Approach		IMA Approach	
Exposure Type	**Traditional $m**	**Synthetic $m**	**Traditional $m**	**Synthetic $m**
Residential Mortgages	–	–	–	–
Credit cards and other personal loans	–	–	–	–
Auto and equipment finance	–	–	–	–
Other	–	–	–	–
Total	–	–	–	–

	As at 31 March 2019			
	Total outstanding exposures securitised			
	Standard Approach		IMA Approach	
Exposure Type	Traditional $m	Synthetic $m	Traditional $m	Synthetic $m
Residential Mortgages	–	–	–	–
Credit cards and other personal loans	–	–	–	–
Auto and equipment finance	–	–	–	–
Other	–	–	–	–
Total	–	–	–	–

9.3

9.3.1 Exposures Arising from Securitisation Activity by Asset Type

This table sets out the on and off balance sheet securitisation exposures originated or purchased, broken down by asset type.

APS 330 Table 12(k) and (s)

	As at 31 March 2020		
	Total outstanding exposures securitised[1]		
Exposure Type	**On balance sheet $m**	**Off balance sheet $m**	**Total exposures $m**
Banking Book			
Residential Mortgages	**36,984**	**–**	**36,984**
Credit cards and other personal loans[2]	**487**	**–**	**487**
Auto and equipment finance	**5,482**	**2**	**5,484**
Other	**448**	**151**	**599**
Total Banking Book	**43,401**	**153**	**43,554**
Trading Book			
Residential Mortgages	**–**	**–**	**–**
Credit cards and other personal loans	**–**	**–**	**–**
Auto and equipment finance	**–**	**–**	**–**
Other	**–**	**–**	**–**
Total Trading Book	**–**	**–**	**–**

(1) Included in the above are assets of $40,159 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in Level 2 regulatory group.
(2) Relates to invested securitisation positions.

	As at 31 March 2019		
	Total outstanding exposures securitised[1]		
Exposure Type	On balance sheet $m	Off balance sheet $m	Total exposures $m
Banking Book			
Residential Mortgages	26,525	209	26,734
Credit cards and other personal loans[2]	156	14	170
Auto and equipment finance	6,085	3	6,088
Other	193	175	368
Total Banking Book	32,959	401	33,360
Trading Book			
Residential Mortgages	–	–	–
Credit cards and other personal loans	–	–	–
Auto and equipment finance	–	–	–
Other	20	–	20
Total Trading Book	20	–	20

(1) Included in the above are assets of $30,311 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in Level 2 regulatory group.
(2) Relates to invested securitisation positions.

9.0 Securitisation
continued

9.3.2 Exposure by Risk Weight Band

Banking Book

APS 330 Table 12(l)

	As at 31 March 2020		As at 31 March 2019	
	Securitisation exposure subject to ERBA			
Risk weight band	**Gross Credit Exposure $m**	**Risk Weighted Assets $m**	Gross Credit Exposure $m	Risk Weighted Assets $m
=<20%	**2,548**	**509**	1,954	387
>20%–50%	**69**	**28**	62	25
>50%–100%	**17**	**12**	336	219
>100%–140%	**90**	**94**	62	66
Total	**2,724**	**643**	2,414	697

	As at 31 March 2020		As at 31 March 2019	
	Securitisation exposure subject to SFA			
Risk weight band	**Gross Credit Exposure $m**	**Risk Weighted Assets $m**	Gross Credit Exposure $m	Risk Weighted Assets $m
=<20%	**544**	**82**	225	34
>20%–50%	**105**	**33**	398	145
>50%–100%	**–**	**–**	–	–
>100%–150%	**–**	**–**	–	–
>150%–650%	**–**	**–**	–	–
>650%–<1250%	**–**	**–**	–	–
Total	**649**	**115**	623	179

	As at 31 March 2020	As at 31 March 2019
	CET1 Deduction[1]	
Exposure Type	**$m**	$m
Residential Mortgages	**1**	2
Credit cards and other personal loans	**–**	–
Auto and equipment finance	**1**	3
Other	**21**	10
Total	**23**	15

[1] Includes Resecuritisation Exposures $1 million as at 31 March 2020 (31 March 2019: $1 million).

Trading Book

APS 330 Table 12(t) & (u)

	As at 31 March 2020		As at 31 March 2019	
	Securitisation exposure subject to Standard Approach			
Risk weight band	Gross Credit Exposure $m	Risk Weighted Assets $m	Gross Credit Exposure $m	Risk Weighted Assets $m
=< 20%	–	–	–	–
>20%–50%	–	–	–	–
>50%–100%	–	–	–	–
>100%–140%	–	–	–	–
Total	–	–	–	–

	As at 31 March 2020		As at 31 March 2019	
	Securitisation exposure subject to IMA Approach			
Risk weight band	Gross Credit Exposure $m	Risk Weighted Assets $m	Gross Credit Exposure $m	Risk Weighted Assets $m
=< 20%	–	–	–	–
>20%–50%	–	–	–	–
>50%–100%	–	–	–	–
>100%–150%	–	–	–	–
>150%–650%	–	–	–	–
>650%–<1250%	–	–	–	–
Total	–	–	–	–

	As at 31 March 2020	As at 31 March 2019
	CET1 Deduction	
Exposure Type	$m	$m
Residential Mortgages	–	–
Credit cards and other personal loans	–	–
Auto and equipment finance	–	–
Other	–	20
Total	–	20

9.0 Securitisation
continued

9.3.3 Resecuritisation Exposure

APS 330 Table 12(n) and (w)

	As at 31 March 2020	As at 31 March 2019
	Gross Credit Exposure[1]	
Exposure Type	**$m**	$m
Banking book		
Exposures with Credit Risk Mitigation	**–**	–
Exposures without Credit Risk Mitigation	**1**	1
Exposure to Guarantors by ratings:	**–**	–
Total banking book	**1**	1
Trading book		
Exposures with Credit Risk Mitigation	**–**	–
Exposures without Credit Risk Mitigation	**–**	–
Exposures to Guarantors by ratings:	**–**	–
Total trading book	**–**	–

[1] Exposures deducted from CET1 capital.

10.0 Credit Valuation Adjustment

10.1 Credit Valuation Adjustment

Under Basel III, and in accordance with APS 180 Capital Adequacy: Counterparty Credit risk ADI's are subject to a capital charge for potential mark-to-market losses on OTC derivatives (i.e. credit valuation adjustments) associated with a deterioration in the credit worthiness of a counterparty.

The CVA RWA is shown in the table below.

CVA capital	**As at 31 March 2020 $m**	As at 31 March 2019 $m
Total CVA RWA[1]	**7,635**	3,093

[1] Change in Credit Valuation Adjustment RWA is primarily aligned with OTC derivatives exposure combined with credit quality of the derivative counterparties.

11.0 Exposure to Central Counterparties

11.1 Exposures to Central Counterparties

Under Basel III, and in accordance with APS 180 Capital Adequacy: Counterparty Credit Risk ADI's are required to hold capital against exposures arising from trades cleared by central counterparties. This includes outstanding trade exposures (excluding bilateral trades), collateral placed with the clearing house (excluding collateral placed in bankruptcy remote manner), and default fund contributions.

The RWA on exposures arising from cleared trades as at 31 March 2020 is $835 million (31 March 2019 is $1,644 million). Details of the components of these exposures are shown in the tables below.

	As at 31 March 2020		
Central counterparty trade exposure[1]	**Trade Exposure $m**	**Prefunded Default Fund Contribution $m**	**RWA $m**
Exposures to qualifying central counterparty	**7,320**	**452**	**816**
Exposures to non-qualifying central counterparty	**19**	**–**	**19**
Total central counterparty exposures	**7,339**	**452**	**835**

[1] Central counterparty exposure excludes exposures treated as bilateral exposures under APS 180.

	As at 31 March 2019		
Central counterparty trade exposure	Trade Exposure $m	Prefunded Default Fund Contribution $m	RWA $m
Exposures to qualifying central counterparty	4,921	427	798
Exposures to non-qualifying central counterparty	–	–	–
Bilateral exposures from cleared trades[1]	1,630	–	846
Total central counterparty exposures	6,551	427	1,644

[1] This represents exposure to clients arising from the provision of clearing services and broker exposures subject to bilateral treatment.

12.0 Market Risk

12.1 Market Risk

Market risk is the risk of adverse changes in the value of Macquarie's trading positions as a result of changes in market conditions. Macquarie is exposed to the following risks:

- **Price**: The risk of loss due to changes in price of a risk factor (Interest rates, foreign exchange, commodities etc.)
- **Volatility**: The risk of loss due to changes in the volatility of a risk factor
- **Basis**: Risk of imperfect correlation between offsetting investments in a hedging strategy
- **Correlation**: Risk that the actual correlation between two assets or variables is different from the assumed correlation
- **Illiquid market**: Risk of inability to sell assets or close out positions in thinly-traded markets at close to the last market prices
- **Concentration**: Risk of over concentration of trading exposures in certain markets and products
- **Valuation adjustments (XVA)**: Risk of valuation adjustments to derivative positions; specifically, Credit Valuation Adjustment (CVA), Debit Valuation Adjustment (DVA) and Funding Valuation Adjustment (FVA)

Macquarie has long favoured transparent scenario analysis over complex statistical modelling as the cornerstone of risk measurement.

12.1.1 Traded Market Risk

All trading activities contain calculated elements of risk taking. Macquarie is prepared to accept such risks provided they are within agreed limits, independently and correctly identified, calculated and monitored by RMG and reported to senior management on a regular basis.

RMG monitors positions within Macquarie according to a limit structure that sets limits for all exposures in all markets. Limits are applied at a granular level to individual trading desks, through increasing levels of aggregation to Divisions and Operating Groups, and ultimately, Macquarie. This approach removes the need for future correlations or scenarios to be precisely predicted as all risks are stressed to the extreme and accounted for within the risk profile agreed for each business and Macquarie in aggregate.

Limits are approved by senior management with appropriate authority for the size and nature of the risk and Macquarie adheres to a strict 'no limit, no dealing' policy. If a product or position has not been authorised and given a limit structure by RMG, then it cannot be traded. Material breaches of the approved limit structure are communicated monthly to the Macquarie and Macquarie Bank Boards.

RMG sets three complementary limit structures:

- **Contingent loss limits**: Worst case scenarios that shock prices and volatilities by more than has occurred historically. Multiple scenarios are set for each market to capture the non-linearity and complexity of exposures arising from derivatives. A wide range of assumptions about the correlations between markets is applied
- **Position limits**: Volume, maturity and open position limits are set on a large number of market instruments and securities in order to constrain concentration risk and to avoid the accumulation of risky, illiquid positions
- **Value-at-Risk (VaR) limits**: Statistical measure based on a 10-day holding period and a 99% confidence level, as stipulated by the APRA capital adequacy standard. The model is validated daily by back testing a one-day VaR against hypothetical and actual daily trading profit or loss.

The risk of loss from incorrect or inappropriate pricing and hedging models is mitigated by the requirement for all new pricing models to be independently tested by the specialists within Model Risk and Quant Analytics ('MRQA') within RMG.

12.1.2 Aggregate Measures of Market Risk

Traded market risk

Aggregate traded market risk is constrained by two risk measures, Value at Risk (VaR) and the Macro-Economic Linkages (MEL) stress scenarios. The VaR model predicts the maximum likely loss in Macquarie's trading portfolio due to adverse movements in global markets over holding periods of one and ten days. The MEL scenario uses the contingent loss approach to capture simultaneous, worst case movements across all major markets. Whereas MEL focuses on extreme price movements, VaR focuses on unexceptional changes in price so that it does not account for losses that could occur beyond the 99% level of confidence. Stress testing therefore remains the predominant focus of RMG as it is considered to be the most effective mechanism to reduce Macquarie's exposure to unexpected market events.

Interest rate risk in the banking book (IRRBB)

Aggregate IRRBB is constrained by two measures, Economic Value Sensitivity (EVS) and Earnings at Risk (EaR). The EVS metric measures the change in net present value of the banking book as a result of changes in interest rates. The EaR model constrains the impact on reported income for a change in interest rates, including the Net Interest Income for accrual portfolios.

12.0 Market Risk
continued

12.1.3 Value at Risk Model

VaR provides a statistically based summary of overall market risk in the Group. The VaR model uses a Monte Carlo simulation to generate normally distributed price and volatility paths for approximately 6,200 benchmarks, using volatilities and correlations based on three years of historical data. Emphasis is placed on more recent market movements to more accurately reflect current conditions. Each benchmark represents an asset at a specific maturity, for example, one year crude oil futures or spot gold. The benchmarks provide a high level of granularity in assessing risk, covering a range of points on yield curves and forward price curves, and distinguishing between similar but distinct assets; for example crude oil as opposed to heating oil, or gas traded at different locations. Exposures to individual equities within a national market are captured by specific risk modelling incorporated directly into the VaR model.

The integrity of the VaR model is tested against daily hypothetical and actual trading outcomes (profit and loss) and reported to APRA quarterly.

12.1.4 Macro Economic Linkage Model

MEL scenarios are large, simultaneous, 'worst case' movements in global markets. The MEL scenarios consider very large movements in a number of markets at once, based on Macquarie's understanding of the economic linkages between markets. The MEL scenarios reflect a market 'shock' or 'gap' as opposed to a sustained deterioration.

12.2 Market Risk Capital Requirement

APRA has approved the use of Macquarie's internal model to calculate regulatory capital for market risk under APS116.

The internal model calculation is based upon:

- Value at Risk using a 10 day time horizon at a 99% confidence level.
- Stressed Value at Risk using a 10 day time horizon at a 99% confidence level.
- Regulatory capital for debt security specific risk is calculated using the APRA standard method (see section 12.2.3).

The sum of the VaR and debt security specific risk amounts is scaled by 12.5 in accordance with APRA policy to arrive at the traded market risk RWA, which was $3,971 million as at 31 March 2020 (31 March 2019: $5,382 million).

There were three hypothetical and one actual trading losses that exceeded the 1-day 99% VaR calculated for the 12 months ended 31 March 2020. The observed number of back-testing exceptions indicates continued acceptable operation of the VaR model.

12.2.1 Value at Risk Figures (10-day 99%)

APS 330 Table 14(f)

	For the 12 months to 31 March 2020				For the 12 months to 31 March 2019			
	VaR over the current reporting period				VaR over the previous reporting period			
	Mean value $m	**Max value $m**	**Min value $m**	**VaR (31-Mar) $m**	Mean value $m	Max value $m	Min value $m	VaR (31-Mar) $m
Commodities	**45**	**67**	**27**	**33**	72	165	45	56
Equities[1]	**12**	**17**	**5**	**5**	11	17	7	13
Foreign Exchange	**4**	**11**	**2**	**3**	5	16	2	5
Interest Rates	**6**	**8**	**4**	**6**	7	8	6	6
Aggregate	**45**	**69**	**28**	**35**	70	159	39	52

(1) Equities figures incorporate the Equity specific risk amount.

12.2.2 Stressed Value at Risk Figures (10-day 99%)

APS 330 Table 14(f)

	For the 12 months to 31 March 2020				For the 12 months to 31 March 2019			
	VaR over the current reporting period				VaR over the previous reporting period			
	Mean value $m	**Max value $m**	**Min value $m**	**VaR (31-Mar) $m**	Mean value $m	Max value $m	Min value $m	VaR (31-Mar) $m
Commodities	**61**	**98**	**36**	**60**	81	182	39	57
Equities[1]	**38**	**61**	**14**	**14**	25	47	13	39
Foreign Exchange	**10**	**33**	**0**	**15**	16	72	2	12
Interest Rates	**17**	**22**	**11**	**15**	28	35	19	20
Aggregate	**62**	**95**	**30**	**52**	79	168	31	65

(1) Equities figures incorporate the Equity specific risk amount.

12.0 Market Risk
continued

12.2.3 Debt Security Specific Risk Figures

Regulatory capital for Macquarie's debt security specific risk (including securitisations held in the trading book) is calculated using the APRA standard method.

APS 330 Table 13(b)

	As at 31 March 2020 $m	As at 31 March 2019 $m
Debt specific risk	**58**	28

The specific risks referred to above arise from movements in credit curves in the Macquarie trading book.

12.2.4 Interest Rate Risk in the Banking Book (IRRBB)

Interest rate exposures, where possible, are transferred into the trading books of Commodities and Global Markets and Group Treasury, and managed under traded market risk limits. The residual risks in the banking book are not material but are nevertheless monitored and constrained by RMG and reported to senior management monthly. Macquarie measures and monitors interest rate risk on both an economic value and earnings basis. IRRBB is measured on a monthly basis using an APRA approved repricing gap model with monthly bucketing of exposures.

The total IRRBB capital is calculated for each currency in accordance with APS 117 Capital Adequacy: Interest Rate Risk in the Banking Book (Advanced ADIs). Macquarie's internal model sums the change in economic value arising from the following risk categories:

- Repricing and yield curve (parallel and non-parallel moves);
- Basis (imperfect correlation between indices of the same tenor)
- Optionality (breakdowns in assumptions used for hedging); and
- Embedded gains and losses (difference between the fair-value and book-value arising from past interest rate movements).

The IRRBB RWA as at 31 March 2020 is $nil million (31 March 2019: $nil million).

APS 330 Table 17(b)

	As at 31 March 2020	As at 31 March 2019
	Change in economic value	
Stress testing: interest rate shock applied	**$m**	$m
AUD		
200 basis point parallel increase	**3.5**	(10.1)
200 basis point parallel decrease	**(3.2)**	10.0
CAD		
200 basis point parallel increase	**(0.3)**	(0.3)
200 basis point parallel decrease	**0.3**	0.3
EUR		
200 basis point parallel increase	**(7.6)**	(1.1)
200 basis point parallel decrease	**23.3**	10.3
GBP		
200 basis point parallel increase	**(3.4)**	(2.6)
200 basis point parallel decrease	**9.7**	6.6
USD		
200 basis point parallel increase	**(9.9)**	(6.7)
200 basis point parallel decrease	**55.2**	7.1

Note that the brackets in the above table indicate a loss in economic value due to movements in interest rates.

	As at 31 March 2020 $m	As at 31 March 2019 $m
IRRBB regulatory capital requirement – AUD	**–**	–

13.0 Equity Risk

Equity risk is the risk of loss arising from banking book equity-type exposures. These exposures include:

- holdings in specialised funds managed by Macquarie;
- property equity, including property trusts and direct property equity investments; and
- other equity investments.

All of the above equity risk positions are subject to an aggregate Equity Risk Limit (ERL). The ERL is set by the Board by reference to the Risk Appetite Test that is described further in the Capital Adequacy section 4. When the Board sets the limit, it also considers the level of earnings, capital and market conditions. RMG reviews the limit semi-annually and reports the results of the review to the Group Risk and Compliance Committee (GRCC) and the Board.

13.1 Accounting for Equity Holdings in the Banking Book

Equity investment positions have varying accounting treatments depending on the nature of the exposure. These include:

- equity accounting for investments in associates;
- Investment fair valued through profit or loss. Macquarie has not elected to designate any equity positions as fair value through OCI.

In addition to equity investment positions in the Banking Book, Macquarie also has equity investments in trading portfolios at fair value through profit or loss, which are included in the Market Risk calculation.

13.1.1 Investments in Associates

Equity accounting is applied to investments in which Macquarie has significant influence or joint control (joint ventures). These equity investments are described as Investments in Associates. Equity accounting is applied such that Macquarie's share of its investee's post acquisition profit or losses are recorded in Macquarie's income statement, and the share of its post-acquisition movements in reserves in Macquarie's Consolidated Statement of Comprehensive Income. Dividends or distributions from associates or joint ventures reduce the carrying amount of the investment. Where there is an indicator of impairment, the carrying amount of the investment is tested for impairment by comparing its recoverable amount with its carrying value. Impairment losses are recognised as impairment charges as part of other operating income and charges. A reversal of a previously recognised impairment loss is recognised only to the extent that the investment's carrying value does not exceed the carrying amount that would have been determined (including consideration of any equity accounted losses), if no impairment loss had been recognised.

13.1.2 Fair value Investments through profit or loss

Fair value reflects the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Quoted prices or rates are used to determine fair value where an active market exists. If the market for a financial instrument is not active, fair values are estimated using present value or other valuation techniques, using inputs based on market conditions prevailing at the measurement date.

Gains and losses arising from subsequent changes in fair value of equity investments are recognised in the Income Statement within investment income under other operating income and charges.

13.2 Equity Investments

The table below details the carrying value of equity investments held by Macquarie, in comparison to the applicable fair value of these equities. The categorisation of listed and unlisted investments is required for APRA regulatory reporting purposes – these include the equity investments under each of the accounting classifications outlined above. Valuations have been based on the requirements of accounting standards.

APS 330 Table 16(b) and (c)

	As at 31 March 2020		As at 31 March 2019	
Equity investments	**Carrying value $m**	**Fair value[2] $m**	Carrying value $m	Fair value[2] $m
Value of listed (publicly traded) equities[1]	**39**	**39**	53	53
Value of unlisted (privately held) equities[1]	**383**	**383**	386	386
Total	**422**	**422**	439	439

(1) At MBL and its subsidiaries, the Consolidated Entity.

(2) Includes Investments in Associates which are equity accounted and not fair valued and undrawn commitments (off balance sheet) which are deemed in the nature of equity for Regulatory Capital purposes.

13.3 Capital Requirements Arising from Equity Risks

Equity investments are deducted from Common Equity Tier 1 capital under APRA's version of the Basel III rules.

APS 330 Table 16(f)

Deduction amount	**As at 31 March 2020 $m**	As at 31 March 2019 $m
Equity investments[1]	**416**	418

(1) At Level 2 regulatory group.

13.4 Gains and Losses on Equity Investments

APS 330 Table 16(d) and (e)

Gains / (losses) on equity investments	**As at 31 March 2020 $m**	As at 31 March 2019 $m
Cumulative realised gains[1]	**30**	87
Total unrealised gains/(losses)	**(21)**	27
Total unrealised gains/(losses) included in Tier 1	**(21)**	27

(1) Gains are defined as proceeds on sale less costs net of provisions

14.0 Operational Risk

Operational risk is inherent in Macquarie's business. Macquarie defines operational risk as the risk of loss resulting from inadequate or failed internal processes, controls or systems or from external events.

It also includes the failure or inadequate management of other risk types.

14.1 Macquarie's Operational Risk Management Framework

Operational Risk Objectives

Macquarie's *Operational Risk Management Framework* (*ORMF*) is designed to identify, assess and manage operational risks within the organisation. The key objectives of the framework are:

- risk identification, analysis and acceptance.
- execution and monitoring of risk management practices.
- reporting and escalation of risk information on a routine and exception basis.

Operational Risk Management Process

Operating and Central Service Groups implement the *ORMF* in a manner that is tailored to their specific operational risk profile. However, to ensure consistency and minimum standards the framework includes the following mandatory elements:

- A robust change management process to ensure operational risks in new activities or products are identified, addressed and managed prior to implementation
- An operational risk self-assessment process to identify operational risks at the business level, evaluate controls and develop action plans to address deficiencies
- Recording operational risk incidents in a centralised reporting system. Incidents are analysed to identify trends and establish lessons learnt on the effectiveness of controls
- Allocation of operational risk capital to all Macquarie businesses as a tool to further encourage positive behaviour in Macquarie's day-to-day management of operational risk
- Macquarie-wide policies that require a consistent approach and minimum standards on specific operational risk matters
- Embedded operational risk representatives in Operating Groups who act as delegates of the Operating Group Head. These representatives are required to assess whether operational risks are addressed appropriately and that the *ORMF* is executed within their area.

Structure and Organisation of the Operational Risk Function

Most Macquarie operational risk staff operate at the business level. These Business Operational Risk Managers (BORMs) are responsible for embedding operational risk management within their business. They report directly to the relevant business and have a dotted reporting line to the Head of RMG Operational Risk.

RMG Operational Risk is a division of RMG and is managed separately from other risk disciplines within RMG. RMG Operational Risk is responsible for ensuring the *ORMF* remains appropriate and that skilled resources are available to support it. It is also responsible for Macquarie's operational risk capital measurement methodology.

RMG regularly reports on the operational risk profile and the effectiveness of the Framework to the BRiC and to senior management.

14.2 Operational Risk Capital Calculation

APRA approved Macquarie's use of the AMA for assessing operational risk capital in December 2007.

Macquarie holds operational risk capital to absorb potential losses arising from operational risk exposures.

Macquarie's operational risk capital framework has two main elements:

- A bi-annual scenario approach for modelling operational risk losses and to determine operational risk capital
- a process for allocating capital to businesses based on risk exposures.

Operational risk scenarios identify key risks that, while very low in probability may, if they occurred, result in large losses. When identifying the potential for such losses, consideration is given to the individual statistical distribution for each scenario, external loss data, internal loss data, risk and control factors and the contribution of expert opinion from Operating and Central Service Groups. Scenario estimates are then modelled to determine the operational risk component of regulatory capital required to be held by Macquarie at the 99.9th percentile.

Over time, changes in operational risk capital reflect:

- new or significantly changed business activity or growth
- changes in the external environment such as new regulations or movements in the economic cycle.

Mitigation of Operational Risk through Insurance

Macquarie does not currently use insurance in its AMA model for the purpose of operational risk capital reduction.

Operational Risk – RWA

The operational risk RWA as at 31 March 2020 is $10,655 million (31 March 2019: $10,111 million).

15.0 Leverage Ratio Disclosures

The leverage ratio is a non-risk based ratio that is intended to restrict the build-up of excessive leverage in the banking system and acts as a supplementary measure to create a back-stop for the risk-based capital requirements.

The Basel Committee on Banking Supervision (BCBS), in December 2017, confirmed that the leverage ratio will have a minimum regulatory requirement of 3%, effective from 1 January 2018. In November 2019, APRA released a draft standard on the Leverage ratio which included a minimum leverage ratio requirement of 3.5% for IRB banks. These changes are proposed to apply from 1 January 2023.

Macquarie Bank Group's March 2020 APRA leverage ratio has increased by 0.4% from the December 2019 APRA leverage ratio of 5.3%. This is primarily driven by the increase in Tier 1 Capital attributed to an increase in share capital during the period.

Summary leverage ratio

Capital and total exposures	**31 March 2020 $m**	31 December 2019 $m	30 September 2019 $m	30 June 2019 $m
Tier 1 Capital	**12,968**	11,748	11,716	11,039
Total exposures	**228,058**	221,718	214,705	204,538
Leverage ratio				
Macquarie Level 2 regulatory group Leverage ratio	**5.7%**	5.3%	5.5%	5.4%

15.1 Leverage Ratio Disclosure Template

APS 330 Table 18

Item		As at 31 March 2020
On-balance sheet exposures		**$m**
1	On-balance sheet items (excluding derivatives and securities financing transactions (SFTs), but including collateral)	**142,438**
2	(Asset amounts deducted in determining Tier 1 capital)	**(1,703)**
3	**Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 and 2)**	**140,735**
Derivative exposures		
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	**17,758**
5	Add-on amounts for potential future credit exposure (PFCE) associated with all derivatives transactions	**21,849**
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the Australian Accounting Standards	**–**
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	**(2,553)**
8	(Exempted central counterparty (CCP) leg of client-cleared trade exposures)	**(7,410)**
9	Adjusted effective notional amount of written credit derivatives	**1,862**
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	**(471)**
11	**Total derivative exposures (sum of rows 4 to 10)**	**31,035**
SFT exposures		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	**39,395**
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	**(944)**
14	CCR exposure for SFT assets	**1,956**
15	Agent transaction exposures	**–**
16	**Total SFT exposures (sum of rows 12 to 15)**	**40,407**
Other off-balance sheet exposures		
17	Off-balance sheet exposure at gross notional amount	**18,556**
18	(Adjustments for conversion to credit equivalent amounts)	**(2,675)**
19	**Other off-balance sheet exposures (sum of rows 17 and 18)**	**15,881**
Capital and total exposures		
20	Tier 1 Capital	**12,968**
21	**Total exposures (sum of rows 3, 11, 16 and 19)**	**228,058**
Leverage ratio		
22	**Leverage ratio**	**5.7%**

15.0 Leverage Ratio Disclosures
continued

15.2 Summary Comparison of Accounting Assets versus Leverage Ratio Exposure Measure

Item		As at 31 March 2020 $m
1	Total consolidated assets as per published financial report	**226,136**
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	**(15)**
3	Adjustment for assets held on the balance sheet in a fiduciary capacity pursuant to the Australian Accounting Standards but excluded from the leverage ratio exposure measure	**–**
4	Adjustments for derivative financial instruments	**(13,475)**
5	Adjustment for SFTs (i.e. repos and similar secured lending)	**1,234**
6	Adjustment for off-balance sheet exposures (i.e. Conversion to credit equivalent amounts of off-balance sheet exposures)	**15,881**
7	Other adjustments	**(1,703)**
8	**Leverage ratio exposure**	**228,058**

16.0 Liquidity Coverage Ratio Disclosures

Liquidity Coverage Ratio disclosure template

APS 330 Table 20

		For the 3 months to 31 March 2020		For the 3 months to 31 December 2019	
	Liquidity Coverage Ratio disclosure template	**Total unweighted value (average) $m**	**Total weighted value (average) $m**	Total unweighted value (average) $m	Total weighted value (average) $m
	Liquid assets, of which:				
1	High quality liquid assets (HQLA)	*	**21,335**	*	17,626
2	Alternative liquid assets (ALA)	*	**8,044**	*	7,971
3	Reserve Bank of New Zealand (RBNZ) securities	*	**–**	*	–
	Cash outflows				
4	Retail deposits and deposits from small business customers, of which:	**42,797**	**3,983**	41,253	3,811
5	Stable deposits	**16,026**	**801**	15,304	765
6	Less stable deposits	**26,771**	**3,182**	25,949	3,046
7	Unsecured wholesale funding, of which:	**21,213**	**14,589**	19,726	13,351
8	Operational deposits (all counterparties) and deposits in networks for cooperative banks	**5,602**	**1,395**	5,594	1,392
9	Non-operational deposits (all counterparties)	**11,107**	**8,690**	12,117	9,944
10	Unsecured debt	**4,504**	**4,504**	2,015	2,015
11	Secured wholesale funding	*	**1,273**	*	1,039
12	Additional requirements, of which:	**24,219**	**12,161**	25,882	12,185
13	Outflows related to derivatives exposures and other collateral requirements	**10,641**	**10,641**	9,865	9,865
14	Outflows related to loss of funding on debt products	**381**	**381**	310	310
15	Credit and liquidity facilities	**13,197**	**1,139**	15,707	2,010
16	Other contractual funding obligations	**17,431**	**17,359**	14,739	14,691
17	Other contingent funding obligations	**7,740**	**472**	7,150	425
18	**Total cash outflows**	*	**49,837**	*	45,502
	Cash Inflows				
19	Secured lending (e.g. reverse repos)	**28,332**	**6,834**	22,293	5,997
20	Inflows from fully performing exposures	**4,124**	**3,448**	4,215	3,566
21	Other cash inflows	**22,622**	**22,622**	19,718	19,718
22	**Total cash inflows**	**55,078**	**32,904**	46,226	29,281
23	**Total liquid assets**	*	**29,379**	*	25,597
24	**Total net cash outflows**	*	**16,933**	*	16,221
25	**Liquidity Coverage Ratio (%)[1]**	*	**173.5%**	*	157.8%

* Undisclosed

(1) The LCR for the 3 months to 31 March 2020 is calculated from 63 daily LCR observations (3 months to 31 December 2019 was calculated from 63 daily LCR observations).

16.0 Liquidity Coverage Ratio Disclosures
continued

The Liquidity Coverage Ratio (LCR)

The LCR requires unencumbered liquid assets be held to cover expected net cash outflows (NCOs) under a regulatory-defined stress scenario lasting 30 calendar days. Macquarie's 3 month average LCR to 31 March 2020 was 173.5% (based on 63 daily observations). This was an increase of 15.7% from the average for the 3 months to 31 December 2019, as a result of an increase in high quality liquid assets (HQLA) partially offset by an increase in net cash outflows.

Macquarie sets internal management and Board-approved minimum limits for the LCR above the regulatory minimum level and monitors its aggregate LCR position against these limits on a daily basis. Macquarie also monitors the LCR position on a standalone basis for major currencies in which it operates, with the HQLA portfolio being denominated and held in both Australian Dollars and a range of other currencies to ensure Macquarie's liquidity requirements are broadly matched by currency.

Macquarie actively considers the impact of business decisions on the LCR, as well as other internal liquidity metrics that form part of the broader liquidity risk management framework. Macquarie's LCR fluctuates on a daily basis as a result of normal business activities and, accordingly, ongoing fluctuations in the reported LCR are expected and are not necessarily indicative of a changing risk appetite. Some examples of factors that can influence the LCR include wholesale funding activities (such as upcoming maturities and pre-funding expected future asset growth), the degree of activity in Macquarie's capital markets facing businesses, the composition and nature of liquid asset holdings, and a variety of other external market considerations that could impact day-to-day collateral requirements.

High Quality Liquid Assets (HQLA) and the Committed Liquidity Facility (CLF)

In addition to cash and central bank deposits, Macquarie's liquid assets portfolio includes Australian Dollar Commonwealth Government and semi-Government securities, any CLF allocation as well as foreign currency HQLA securities.

Macquarie's CLF allocation for calendar year 2020 is $8,500 million, which is reflected in the disclosure template under 'Alternative Liquid Assets (ALA)'. Note the disclosed balance of $8,044 million reflects the required 'open-repo' of internal self-securitised RMBS with the RBA (which increases cash balances in the Exchange Settlement Account (ESA) with the RBA but is considered an ongoing 'utilisation' of the CLF). On 19 March 2020, the RBA announced that it was establishing a Term Funding Facility (TFF) that would offer authorised deposit taking institutions (ADIs) three year funding at a rate of 0.25% per annum in response to COVID-19. As at 31 March 2020, MBL (being an ADI) has an allowance of $1.9 billion. MBL has not included the TFF in its LCR or NSFR for the March quarter.

Net Cash Outflows (NCOs)

Net Cash Outflows (NCOs) in the LCR include contractual and assumed cash outflows, offset by certain allowable contractual cash inflows. Some of the key drivers of Macquarie's NCOs include:

Retail and SME deposits: assumed regulatory outflow relating to deposits from retail and SME customers that are at-call or potentially callable within 30 days. Note that any superannuation deposits received through a self-managed trust are required by APRA to be classified as 'less stable', even though the majority of these deposits are covered by the FCS.

Unsecured wholesale funding: includes remaining deposits which are not received from retail or SME customers along with unsecured debt balances contractually maturing within 30 days.

Secured wholesale funding and lending: represent inflows and outflows from secured lending and borrowing activities contractually maturing within 30 days, such as repurchase and reverse repurchase agreements.

Outflows relating to derivative exposures and other collateral requirements: includes gross contractual cash outflows relating to contractually maturing derivative contracts (with gross inflows on maturing derivative contracts profiled in 'other cash inflows'). Further, contingent liquidity outflows such as potential collateral requirements from market movements, a 3-notch credit ratings downgrade and withdrawal of excess collateral placed with Macquarie are also included in this category.

Inflows from fully performing exposures: In Macquarie's LCR, a large component of this balance relates to excess liquidity placed on an overnight or very short-term basis with third parties (internally considered part of the cash and liquid asset portfolio).

Other contractual funding obligations and other cash inflows: includes other gross flows not profiled elsewhere in the LCR. The volumes in these categories are large relative to Macquarie's total cash outflows and inflows, however they include the following balances in particular:

Segregated client funds placed with Macquarie: Macquarie acts as a clearing agent for clients on various futures exchanges. Clients place margin with Macquarie and Macquarie places this margin either directly with the exchange, holds it in other segregated external asset accounts or retains a portion on deposit with Macquarie. Although these funds are segregated from Macquarie, some of the balances are recorded on a gross basis on Macquarie's balance sheet and APRA require these to be profiled as gross inflows and outflows in the LCR.

Security and broker settlement balances: these represent securities that have been purchased or sold by Macquarie that have not yet settled and broker balances where stock has been bought or sold on behalf of clients but payment has not been made to / received from the client. APRA require these balances to be reflected on a gross basis in the LCR as 100% weighted inflows and outflows. The net effect of these balances on Macquarie's average LCR is negligible.

17.0 Net Stable Funding Ratio Disclosures

Net Stable Funding Ratio disclosure template

APS 330 Table 21

		As at 31 March 2020				
		Unweighted value by residual maturity				
	Net Stable Funding Ratio disclosure template	No maturity $m	<6 months $m	>=6 months to < 1yr $m	>= 1yr $m	Weighted value $m
	Available Stable Funding (ASF) Item					
1	**Capital**	13,848	–	–	2,661	16,509
2	Regulatory Capital	13,848	–	–	2,469	16,317
3	Other capital instruments	–	–	–	192	192
4	**Retail deposits and deposits from small business customers**	43,318	7,344	–	–	46,520
5	Stable deposits	15,899	2,570	–	–	17,546
6	Less stable deposits	27,419	4,774	–	–	28,974
7	**Wholesale funding**	12,146	31,636	7,473	38,007	48,910
8	Operational deposits	6,055	–	–	–	3,028
9	Other wholesale funding	6,091	31,636	7,473	38,007	45,882
10	**Liabilities with matching interdependent assets**	–	–	–	–	–
11	**Other Liabilities**	6,518	20,115	105	48	100
12	NSFR derivative liabilities	*			11,042	*
13	All other liabilities and equity not included in the above categories	6,518	9,073	105	48	100
14	**Total ASF**	*	*	*	*	112,039
	Required Stable Funding (RSF) Item					
15(a)	**Total NSFR (HQLA)**	*	*	*	*	992
15(b)	**ALA**	*	*	*	*	850
15(c)	**RBNZ securities**	*	*	*	*	–
16	**Deposits held at other financial institutions for operational purposes**	–	–	–	–	–
17	**Performing loans and securities**	15,885	39,920	6,250	71,686	73,077
18	Performing loans to financial institutions secured by Level 1 HQLA	3,365	17,909	–	–	2,127
19	Performing loans to financial institutions secured by non–Level 1 HQLA and unsecured performing loans to financial institutions	7,153	14,236	1,033	4,612	8,337
20	Performing loans to non– financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and public sector entities (PSEs), of which:	2,080	6,044	4,258	17,128	21,549
21	With a risk weight of less than or equal to 35% under APS 112	–	76	84	1,165	837
22	Performing residential mortgages	–	800	755	48,840	36,980
23	With a risk weight equal to 35%	–	734	696	44,795	33,393
24	Securities that are not in default and do not qualify as HQLA, including exchange– traded equities	3,287	931	204	1,106	4,084
25	**Assets with matching interdependent liabilities**	–	–	–	–	–
26	**Other assets:**	5,343	9,504	85	38,055	19,307
27	Physical traded commodities, including gold	4,483	*	*	*	3,810
28	Assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs)	*		3,925		3,337
29	NSFR derivative assets	*		15,858		4,816
30	NSFR derivative liabilities before deduction of variation margin	*		15,825		3,165
31	All other assets not included in the above categories	860	9,504	85	2,447	4,179
32	**Off-balance sheet items**	*		15,460		683
33	**Total RSF**	*	*	*	*	94,909
34	**Net Stable Funding Ratio (%)**	*	*	*	*	118.1%

* Undisclosed

17.0 Net Stable Funding Ratio Disclosures
continued

Net Stable Funding Ratio disclosure template

APS 330 Table 21

		As at 31 December 2019				
		Unweighted value by residual maturity				
	Net Stable Funding Ratio disclosure template	No maturity $m	<6 months $m	>=6 months to < 1yr $m	>= 1yr $m	Weighted value $m
	Available Stable Funding (ASF) Item					
1	**Capital**	12,328	–	–	2,876	15,204
2	Regulatory Capital	12,188	–	–	2,587	14,775
3	Other capital instruments	140	–	–	289	429
4	**Retail deposits and deposits from small business customers**	39,177	7,592	–	–	42,966
5	Stable deposits	14,832	2,640	–	–	16,599
6	Less stable deposits	24,345	4,952	–	–	26,367
7	**Wholesale funding**	11,685	42,641	7,407	30,931	42,274
8	Operational deposits	5,624	–	–	–	2,812
9	Other wholesale funding	6,061	42,641	7,407	30,931	39,462
10	**Liabilities with matching interdependent assets**	–	–	–	–	–
11	**Other Liabilities**	7,045	12,251	–	20	20
12	NSFR derivative liabilities	*			6,421	*
13	All other liabilities and equity not included in the above categories	7,045	5,830	–	20	20
14	**Total ASF**	*	*	*	*	100,464
	Required Stable Funding (RSF) Item					
15(a)	**Total NSFR (HQLA)**	*	*	*	*	2,501
15(b)	**ALA**	*	*	*	*	840
15(c)	**RBNZ securities**	*	*	*	*	–
16	**Deposits held at other financial institutions for operational purposes**	–	–	–	–	–
17	**Performing loans and securities**	17,884	35,342	6,348	70,434	73,273
18	Performing loans to financial institutions secured by Level 1 HQLA	2,653	12,145	–	–	1,480
19	Performing loans to financial institutions secured by non–Level 1 HQLA and unsecured performing loans to financial institutions	8,453	15,569	1,453	5,756	10,086
20	Performing loans to non– financial corporate clients, loans to retail and small business customers, and loans to sovereigns, central banks and public sector entities (PSEs), of which:	2,049	6,574	4,379	17,378	22,005
21	With a risk weight of less than or equal to 35% under APS 112	–	82	80	1,126	813
22	Performing residential mortgages	–	373	298	46,137	34,177
23	With a risk weight equal to 35%	–	324	263	42,051	30,543
24	Securities that are not in default and do not qualify as HQLA, including exchange–traded equities	4,729	681	218	1,163	5,525
25	**Assets with matching interdependent**	–	–	–	–	–
26	**Other assets**	7,392	7,904	85	19,975	14,425
27	Physical traded commodities	6,550	*	*	*	5,568
28	Assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs)	*		2,656		2,258
29	NSFR derivative assets	*		7,436		1,015
30	NSFR derivative liabilities before deduction of variation margin	*		7,671		1,534
31	All other assets not included in the above categories	842	7,904	85	2,212	4,050
32	**Off-balance sheet items**	*		16,260		715
33	**Total RSF**	*	*	*	*	91,754
34	**Net Stable Funding Ratio (%)**	*	*	*	*	109.5%

* Undisclosed

The Net Stable Funding Ratio (NSFR)

The NSFR is a twelve month structural funding metric, requiring that 'available stable funding' (ASF) be sufficient to cover 'required stable funding' (RSF), where 'stable' funding has an actual or assumed maturity of greater than twelve months. Macquarie's NSFR on 31 March 2020 and 31 December 2019 was 118.1% and 109.5% respectively. The NSFR increased over the quarter as a result of an increase in ASF which was only partially offset by an increase in RSF over the quarter.

The NSFR seeks to encourage ADIs to fund their activities with more stable sources of funding on an ongoing basis, and thereby promote greater balance sheet resilience. It also aims to reduce an ADI's reliance on less stable sources of funding. These requirements are in line with Macquarie's Board-approved Liquidity Policy and Risk Tolerance.

Macquarie sets internal management and Board-approved minimum limits for the NSFR above the regulatory minimum level and monitors its aggregate NSFR position against these limits on a daily basis.

Whilst the NSFR and LCR are regulatory minima, Macquarie also models additional internal liquidity scenarios covering both market-wide and Macquarie name-specific crises. Macquarie actively considers the impact of business decisions on the NSFR and LCR, as well as other internal liquidity metrics that form part of its broader liquidity risk management framework.

Macquarie's NSFR fluctuates as a result of normal business activities and, accordingly, ongoing fluctuations in the reported NSFR are expected and are not necessarily indicative of a changing risk appetite. Some examples of factors that can influence the NSFR include wholesale funding activities (such as pre-funding expected future asset growth), growth in home loans and customer deposits, equity and hybrids issuance, the degree of activity in Macquarie's capital markets facing businesses, and a variety of other external market considerations.

Calculation of the Net Stable Funding Ratio

Under the regulatory rules, Available Stable Funding factors are applied to Macquarie's capital and liabilities; while Required Stable Funding factors are applied to assets and off-balance sheet exposures. This calculation is shown in table 21 on pages 65 and 66, and is based on spot balances.

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- Although Pillar 3 disclosures are intended to provide transparent disclosures on a common basis the information contained in this document may not be directly comparable with other banks. This may be due to a number of factors such as:
  - The mix of business exposures between banks
  - Pillar 2 capital requirements are excluded from this disclosure but play a major role in determining both the total capital requirements of the bank and any surplus capital available.
  - Difference in implementation of Basel III framework i.e. APRA has introduced stricter requirements (APRA superequivalence).

Appendix 1 Regulatory Capital Reconciliation

1.1 Common Disclosures Template

The capital disclosures detailed in the template below represents Basel III common disclosure requirements. These tables should be read in conjunction with section 1.2 Regulatory Balance sheet and section 1.3 Reconciliation between common disclosures template and the Regulatory Balance Sheet.

	Common Equity Tier 1 capital: instruments and reserves $m	As at 31 March 2020 $m	Table Reference
1	Directly issued qualifying ordinary shares (and equivalent for mutually-owned entities) capital	8,508	Table f
2	Retained earnings	4,350	
3	Accumulated other comprehensive income (and other reserves)	990	
4	Directly issued capital subject to phase out from CET1 (only applicable to mutually-owned companies)	–	
5	Ordinary share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	–	
6	**Common Equity Tier 1 capital before regulatory adjustments**	13,848	
	Common Equity Tier 1 capital : regulatory adjustments		
7	Prudential valuation adjustments	–	
8	Goodwill (net of related tax liability)	47	Table b
9	Other intangibles other than mortgage servicing rights (net of related tax liability)	138	Table b
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	69	Table a
11	Cash-flow hedge reserve	(157)	
12	Shortfall of provisions to expected losses	278	
13	Securitisation gain on sale (as set out in paragraph 562 of Basel II framework)	–	
14	Gains and losses due to changes in own credit risk on fair valued liabilities	145	
15	Defined benefit superannuation fund net assets	–	
16	Investments in own shares (if not already netted off paid-in capital on reported balance sheet)	–	
17	Reciprocal cross-holdings in common equity	–	
18	Investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions, where the ADI does not own more than 10% of the issued share capital (amount above 10% threshold)	–	Table c
19	Significant investments in the ordinary shares of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions (amount above 10% threshold)	–	Table c
20	Mortgage service rights (amount above 10% threshold)	–	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)	–	Table a
22	Amount exceeding the 15% threshold	–	
23	of which: significant investments in the ordinary shares of financial entities	–	Table c
24	of which: mortgage servicing rights	–	
25	of which: deferred tax assets arising from temporary differences	–	Table a
	APRA Specific Regulatory Adjustments	–	
26	National specific regulatory adjustments (sum of rows 26a, 26b, 26c, 26d, 26e, 26f, 26g, 26h, 26i and 26j)	1,675	
26a	of which: treasury shares	–	
26b	of which: offset to dividends declared under a dividend reinvestment plan (DRP), to the extent that the dividends are used to purchase new ordinary shares issued by the ADI	–	
26c	of which: deferred fee income	–	
26d	of which: equity investments in financial institutions not reported in rows 18, 19 and 23	333	Table c
26e	of which: deferred tax assets not reported in rows 10, 21 and 25	420	Table a
26f	of which: capitalised expenses	489	
26g	of which: investments in commercial (non-financial) entities that are deducted under APRA prudential requirements	255	Table c
26h	of which: covered bonds in excess of asset cover in pools	–	

Appendix 1 Regulatory Capital Reconciliation
continued

	Common Equity Tier 1 capital: instruments and reserves $m	As at 31 March 2020 $m	Table Reference
26i	of which: undercapitalisation of a non-consolidated subsidiary	–	
26j	of which: other national specific regulatory adjustments not reported in rows 26a to 26i [1]	178	
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions	–	
28	**Total regulatory adjustments to Common Equity Tier 1**	2,195	
29	**Common Equity Tier 1 Capital (CET1)**	11,653	
	Additional Tier 1 Capital: instruments	–	
30	Directly issued qualifying Additional Tier 1 instruments	1,222	
31	of which: classified as equity under applicable accounting standards	–	
32	of which: classified as liabilities under applicable accounting standards	1,222	
33	Directly issued capital instruments subject to phase out from Additional Tier 1	93	
34	Additional Tier 1 instruments (and CET1 instruments not included in row 5) issued by subsidiaries and held by third parties (amount allowed in group ATI)	–	
35	of which: instruments issued by subsidiaries subject to phase out	–	
36	**Additional Tier 1 Capital before regulatory adjustments**	1,315	Table d
	Additional Tier 1 Capital: Regulatory adjustments	–	
37	Investments in own Additional Tier 1 instruments	–	
38	Reciprocal cross-holdings in Additional Tier 1 instruments	–	
39	Investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions, where the ADI does not own more than 10% of the issued share capital (amount above 10% threshold)	–	
40	Significant investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation (net of eligible short positions)	–	
41	National specific regulatory adjustments (sum of rows 41a, 41b and 41c)	–	
41a	of which: holdings of capital instruments in group members by other group members on behalf of third parties	–	
41b	of which: investments in the capital of financial institutions that are outside the scope of regulatory consolidations not reported in rows 39 and 40	–	
41c	of which: other national specific regulatory adjustments not reported in rows 41a and 41b	–	
42	Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions	–	
43	**Total regulatory adjustments to Additional Tier 1 capital**	–	
44	**Additional Tier 1 capital (AT1)**	1,315	
45	**Tier 1 Capital (T1=CET1+AT1)**	12,968	
	Tier 2 Capital: instruments and provisions		
46	Directly issued qualifying Tier 2 instruments	1,222	Table e
47	Directly issued capital instruments subject to phase out from Tier 2	345	Table e
48	Tier 2 instruments (and CET1 and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group T2)	–	
49	of which: instruments issued by subsidiaries subject to phase out	–	
50	Provisions	25	
51	**Tier 2 Capital before regulatory adjustments**	1,592	
	Tier 2 Capital: regulatory adjustments		
52	Investments in own Tier 2 instruments	–	
53	Reciprocal cross-holdings in Tier 2 instruments	–	
54	Investments in the Tier 2 capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions, where the ADI does not own more than 10% of the issued share capital (amount above 10% threshold)	–	
55	Significant investments in the Tier 2 capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions	–	

(1) Includes $139m also applicable for Basel III regulatory adjustments.

	Common Equity Tier 1 capital: instruments and reserves $m	As at 31 March 2020 $m	Table Reference
56	National specific regulatory adjustments (sum of rows 56a, 56b and 56c)	–	
56a	of which: holdings of capital instruments in group members by other group members on behalf of third parties	–	
56b	of which: investments in the capital of financial institutions that are outside the scope of regulatory consolidation not reported in rows 54 and 55	–	
56c	of which: other national specific regulatory adjustments not reported in rows 56a and 56b	–	
57	**Total regulatory adjustments to Tier 2 capital**	–	
58	**Tier 2 capital (T2)**	1,592	
59	**Total capital (TC=T1+T2)**	14,560	
60	**Total risk-weighted assets based on APRA standards**	95,618	
	Capital ratios and buffers		
61	**Common Equity Tier 1 (as a percentage of risk-weighted assets)**	12.2%	
62	**Tier 1 (as a percentage of risk-weighted assets)**	13.6%	
63	**Total capital (as a percentage of risk-weighted assets)**	15.2%	
64	**Buffer requirement (minimum CET1 requirement of 4.5% plus capital conservation buffer of 2.5% plus any countercyclical buffer requirements expressed as a percentage of risk-weighted assets)**	7.0%	
65	of which: capital conservation buffer requirement	2.5%	
66	of which: ADI-specific countercyclical buffer requirements	0.0%	Table h
67	of which: G-SIB buffer requirement (not applicable)	N/A	
68	**Common Equity Tier 1 available to meet buffers (as a percentage of risk-weighted assets)**[1]	11.7%	
	National minima (if different from Basel III)		
69	National Common Equity Tier 1 minimum ratio (if different from Basel III minimum)	N/A	
70	National Tier 1 minimum ratio (if different from Basel III minimum)	N/A	
71	National total capital minimum ratio (if different from Basel III minimum)	N/A	
	Amount below thresholds for deductions (not risk-weighted)		
72	Non-significant investments in the capital of other financial entities	42	Table c
73	Significant investments in the ordinary shares of financial entities	291	Table c
74	Mortgage servicing rights (net of related tax liability)	N/A	
75	Deferred tax assets arising from temporary differences (net of related tax liability)	420	Table a
	Applicable caps on the inclusion of provisions in Tier 2		
76	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	25	
77	Cap on inclusion of provisions in Tier 2 under standardised approach	143	
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	–	
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	413	
	Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2018 and 1 Jan 2022)		
80	Current cap on CET1 instruments subject to phase out arrangements	N/A	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities	N/A	
82	Current cap on AT1 instruments subject to phase out arrangements	93	
83	Amount excluded from AT1 instruments due to cap (excess over cap after redemptions and maturities)	307	
84	Current cap on T2 instruments subject to phase out arrangements	345	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	1,812	

[1] This represents CET1 ratio of the ADI, less any common equity used to meet the ADI's Tier 1 and Total Capital requirements.

Appendix 1 Regulatory Capital Reconciliation continued

1.2 Regulatory Balance Sheet as at 31 March 2020

	Macquarie Bank Group Consolidated[1] $m	Adjustment[2] $m	Level 2 Regulatory Balance Sheet $m	Template/ Reconciliation Table Reference
Assets				
Cash and bank balances	7,847	(47)	7,800	
Cash collateral on securities borrowed and reverse repurchase agreements	37,708	–	37,708	
Trading assets	16,251	–	16,251	
Margin money and settlement assets	12,183	(16)	12,167	
Derivative assets	44,845	(335)	44,510	
Financial Investments	7,484	(54)	7,430	
Other assets	3,267	(381)	2,886	
Loan assets	87,719	81	87,800	
Due from related body corporate entities	5,278	652	5,930	
Property, plant and equipment	2,598	(45)	2,553	
Interests in associates and joint ventures	251	–	251	
Intangible assets[3]	185	–	185	Table b
Investment in regulatory non-consolidated subsidiaries	–	161	161	Table c (Footnote 2)
Deferred tax assets	520	(31)	489	Table a
Total Assets	226,136	(15)	226,121	
Liabilities				
Cash collateral on securities lent and repurchase agreements	2,322	–	2,322	
Trading liabilities	5,363	–	5,363	
Margin money and settlement Liabilities	19,052	–	19,052	
Derivative liabilities	37,823	(36)	37,787	
Deposits	67,253	–	67,253	
Other liabilities	2,946	(579)	2,367	
Bank Borrowings	3,047	(6)	3,041	
Due to related body corporate entities	22,115	594	22,709	
Debt issued	46,922	–	46,922	
Deferred tax liabilities	69	(1)	68	
Total Liabilities excluding loan capital	206,912	(28)	206,884	
Loan capital	4,997	–	4,997	Table d
Total liabilities	211,909	(28)	211,881	
Net Assets	14,227	13	14,240	
Equity				
Contributed equity	8,899	–	8,899	Table f
Reserves	991	(1)	990	Row 3
Retained earnings	4,336	14	4,350	Row 2
Total capital and reserves attributable to equity holders of Macquarie Bank Limited	14,226	13	14,239	
Non-controlling Interests	1	–	1	Table g
Total equity	14,227	13	14,240	

(1) As per Macquarie Bank Limited financial report as at 31 March 2020.

(2) Reflects the deconsolidation of certain subsidiaries for APRA reporting purposes. The subsidiaries which are deconsolidated for regulatory purposes include entities conducting insurance, funds management and non-financial operations. Assets and Liabilities of mortgage and leasing special purpose vehicles (SPV) where Macquarie has satisfied APS 120 Attachment A operational requirements for regulatory capital relief are not included in the Level 2 regulatory group.

(3) The intangible component of investments in non-consolidated subsidiaries is included in intangible assets.

1.3 Reconciliation between Common Disclosures Template and Level 2 Regulatory Balance Sheet

Table a	31 March 2020 $m	Template Reference
Deferred Tax Assets		
Total Deferred Tax Assets per Level 2 Regulatory Balance Sheet	489	
Less: Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	(69)	Row 10
Less: Deferred tax assets (temporary differences) – Amounts below prescribed threshold	(420)	Row 26e, 75
Total per Common Disclosure Template – Deferred Tax Asset – amount exceed 10%/15% threshold	–	Row 21 / 25

Table b	31 March 2020 $m	Template Reference
Intangible Assets		
Total Intangible Assets as per Level 2 Regulatory Balance Sheet	185	
Less: capitalised software and other intangibles	(85)	Row 9
Less: intangible component of deconsolidated subsidiaries	(53)	Row 9
Total per Common Disclosure Template – Goodwill	47	Row 8

Table c	31 March 2020 $m	Template Reference
Equity Investments		
Significant investment in financial entities[(1),(2)]	291	Row 73
Non-significant investment in financial entities[(1)]	42	Row 72
Total Investments in financial institutions	333	Row 26d
Investment in commercial entities[(1),(2)]	255	Row 26g
Total Equity Investments before applying prescribed threshold	588	
Less: amounts risk weighted under Harmonised Basel III guidelines	(588)	
Total per Common Disclosure Template – Equity Investments	–	Row 18, 19, 23

Table d	31 March 2020 $m	Template Reference
Additional Tier 1 Capital		
Total Loan Capital per Level 2 Regulatory Balance Sheet	4,997	
Less: Accrued interest	(5)	
Add: Capitalised expenses deducted in Common Equity Tier 1 Capital[(3)]	9	Included in Row 26f
Less: Fair value hedge adjustments[(4)]	(150)	
Less: Tier 2 capital instruments reported in Table e	(3,629)	Table e
Additional Tier 1 Capital (MACS)	1,222	
Add: Other Equity Instruments (MIS) included in contributed equity	400	Table f
Less: Basel III transitional amortisation	(307)	
Total per Common Disclosure Template – Additional Tier 1 Capital	1,315	Row 36

(1) Equity Investments are classified in the Level 2 Regulatory Balance Sheet across Investments in Associates, Financial Investments and Investment in regulatory non-consolidated subsidiaries. In addition, the Level 2 regulatory group has undrawn commitments (off balance sheet) which are deemed in the nature of equity for Regulatory Capital purposes.

(2) Included in significant investment in financial entities is $105 million of equity investments in regulatory non-consolidated subsidiaries. Included in investment in commercial entities is $56 million of equity investments in regulatory non-consolidated subsidiaries.

(3) Unamortised issue cost relating to capital instruments are netted against each instrument on the Level 2 Regulatory Balance Sheet. For regulatory capital purposes, the unamortised costs are deducted at CET1 as part of capitalised expenses in row 26f of the Common Disclosures Template.

(4) For regulatory capital purposes, APRA requires these instruments to be included as if they were unhedged.

Appendix 1 Regulatory Capital Reconciliation
continued

Table d (continued)	31 March 2020 $m	Template Reference
Additional Tier 1 Capital Instruments		
Macquarie Income Securities	93	
Macquarie Additional Capital Securities	1,222	
Total per Common Disclosure Template – Additional Tier 1 Capital	**1,315**	Row 36

Table e	31 March 2020 $m	Template Reference
Total Tier 2 Capital per Balance Sheet		
Total Tier 2 Capital per Balance Sheet	3,629	Table d
Less: Accrued Interest	(87)	
Add: Capitalised expenses deducted in Common Equity Tier 1 Capital	4	Included in Row 26f
Less: Fair value hedge adjustments[1]	(167)	
Less: Basel III transitional amortisation	(1,812)	
Total per Common Disclosure Template – Tier 2 Capital	**1,567**	Row 46+47
Tier 2 Capital Instruments		
Subordinated Debt – EUR600m – eligible for transition	(152)	
Subordinated Debt – USD1.0bn – eligible for transition	(193)	
Subordinated Debt – USD750m– fully qualified Tier 2 instrument	(1,222)	
Total per Common Disclosure Template – Tier 2 Capital	**(1,567)**	Row 46+47

Details on the main features of Capital instruments included in the Level 2 regulatory group's Regulatory Capital, (Ordinary Share Capital, Additional Tier 1 Capital and Tier 2 capital) as required by APS 330 Attachment B can be found at: **macquarie.com/investors**

Table f	31 March 2020 $m	Template Reference
Contributed Equity		
Total Contributed Equity as per Level 2 Regulatory Balance Sheet	8,899	
Less: Additional tier 1 instruments (MIS) included in share capital	(400)	Table d
Add: Capitalised expenses deducted in Common Equity Tier 1 Capital	9	Included in Row 26f
Total per Common Disclosure Template – Contributed Equity	**8,508**	Row 1

[1] For regulatory capital purposes, APRA requires these instruments to be included as if they were unhedged.

Table g	31 March 2020 $m	Template Reference
Non Controlling Interests		
Total Non Controlling Interests as per Level 2 Regulatory Balance Sheet	**1**	
Less: other non controlling interests not included in capital	**(1)**	
Total per Common Disclosure Template – Non Controlling Interests	**–**	Row 5

Table h

Countercyclical Capital Buffer

The Countercyclical Capital Buffer (CCyB) is an extension of the capital conservation buffer which must be held in the form of CET1 capital, ranging from 0 to 2.5%. The CCyB is designed to ensure that ADIs build up capital buffers when excess aggregate credit growth is judged to be associated with a build-up of system-wide risk. The CCyB is calculated as the weighted average of the jurisdictional buffers set by the relevant national authority where an ADI has private sector credit exposures, excluding exposures to Banks and Sovereigns.

	RWA $m	Jurisdictional buffer	Countercyclical buffer requirement[1]	Template Reference
Germany	**1,408**	**0.250%**	**0.0044%**	
France	**1,183**	**0.250%**	**0.0037%**	
Ireland	**601**	**1.000%**	**0.0076%**	
Hong Kong	**412**	**1.000%**	**0.0052%**	
Norway	**362**	**1.000%**	**0.0046%**	
Luxembourg	**214**	**0.250%**	**0.0007%**	
Czech Republic	**103**	**1.750%**	**0.0023%**	
Slovakia	**93**	**1.500%**	**0.0018%**	
Denmark	**18**	**1.000%**	**0.0002%**	
Bulgaria	**2**	**0.500%**	**0.0000%**	
Others	**75,018**	**0.000%**	**0.0000%**	
Total	**79,414**		**0.0304%**	Row 66

(1) Calculated as each country's share of total private sector credit exposures multiplied by the CCyB applicable to each country.

Appendix 2 List of Entities Deconsolidated from the Level 1 and Level 2 Regulatory Group for APRA Reporting Purposes

31 March 2020	Total Assets[(1),(2),(3),(4)]	Total Liabilities[(1),(2),(3),(4)]
Funds Management		
Elise Nominees Pty Limited	–	–
Macquarie Asset Management Inc.	4	–
Macquarie Australia Securities Pty Limited	2	(1)
Macquarie Fonds GmbH	–	–
Macquarie Fondsmanagement GmbH	2	(1)
Macquarie Global Bond Fund	–	–
Macquarie Investment Management Ltd	164	(25)
Macquarie Investment Services Limited	1	–
Macquarie Management GmbH	–	–
Macquarie Master Small Companies Fund	3	(3)
Macquarie NRAS Trust	–	–
Macquarie Prism Pty Limited	3	–
Macquarie Private Portfolio Management Pty Limited	–	–
Macquarie Professional Series Global Equity Fund	–	–
Macquarie Securities Management Pty Limited	4	(1)
Macquarie Treuvermögen GmbH	–	–
Macquarie Vermögenstreuhand GmbH	–	–
Non-Financial Operations		
Avenal Power Center, LLC	15	(12)
Capital Meters Limited	39	(35)
Comercializadora Energia de la Reforma S. de R.L. de C.V.	85	(80)
Corona Energy Limited	33	–
Corona Energy Retail 1 Limited	54	(37)
Corona Energy Retail 2 Limited	60	(31)
Corona Energy Retail 3 Limited	7	(1)
Corona Energy Retail 4 Limited	199	(185)
Corona Energy Retail 5 Limited	–	–
Corona Gas Management Limited	5	(2)
Ion Energy Pte Limited	–	–
Liberty Green Renewables Indiana, LLC	4	(1)
Macquarie Business Solutions Pty Limited	2	–
Macquarie Commodities (Singapore) Pte. Limited	2	–
Macquarie Corona Energy Holdings Limited	21	(4)
Macquarie Electronics USA Inc	5	(1)
Macquarie Energy Services Pty Limited	2	(2)
Nu Mobile Pty Limited	3	(2)
Propertyiq Pty Limited	12	(4)
Propertyiq Strata Pty Limited	1	–
Pt Macquarie Commodities Indonesia	1	(1)
Resource Marine Pte. Limited	41	(33)

31 March 2020	Total Assets[(1),(2),(3),(4)]	Total Liabilities[(1),(2),(3),(4)]
Insurance		
Macquarie (Bermuda) Limited	72	(69)
Macquarie Life Limited	337	(307)

(1) These balances, along with any Australian GAAP adjustment where required, are included in Macquarie Bank Group's audited Australian GAAP financial report for the year ended 31 March 2020. The financial report under local GAAP of certain entities may be subjected to separate audits from the Macquarie Bank Group audit and these audits may not be complete as at the date of this report.

(2) The total assets and liabilities should not be aggregated as certain entities are holding companies for other entities in the table shown above.

(3) Numbers are rounded to the nearest $A million. Asset balances are shown as positive and liability balances are shown as negative.

(4) The assets and liabilities for deconsolidated subsidiaries includes receivable from and payable to related entities.

Appendix 3 Annual Remuneration Disclosures

Introduction

This document has been prepared in accordance with the Australian Prudential Regulatory Authority (APRA) Prudential Standard APS 330 Public Disclosure (APS 330) for Authorised Deposit-taking Institutions (ADIs). The remuneration disclosures presented herein for the financial years ended 31 March 2020 and 31 March 2019 of Macquarie Bank Limited (MBL or Macquarie Bank) are separate to the requirements of the *Corporations Act 2001* (Cth) and may not be comparable to other information disclosed by MBL.

Macquarie Bank is a subsidiary of the Macquarie Group, and the Non Executive Directors (NEDs) are common to both the Board and the MGL Board (the Boards). Whilst subject to the remuneration framework determined by the Macquarie Group, the Board considers remuneration recommendations relating to the senior executives of Macquarie Bank. Throughout this disclosure document, references are made to the Macquarie Group's remuneration arrangements, as Macquarie Bank's remuneration arrangements are consistent with those of Macquarie Group.

The qualitative remuneration disclosures (sections 1 to 4) outline the remuneration framework consistent with the Macquarie Group's Remuneration Policy. Macquarie Group's Remuneration Policy applies to all employees globally. The quantitative information (section 5) relates to senior managers and material risk takers of MBL for the financial years ended 31 March 2020 and 31 March 2019. The Board Remuneration Committee (the BRC or the Committee) assists the Board in identifying the following groups of employees as senior managers and material risk takers as defined in paragraph 21 of APS 330 for the financial years ended 31 March 2020 and 31 March 2019 respectively:

		Number of individuals	
Roles		**2020**	2019
Senior managers	the MBL Executive Committee[1]	**8**	11[3]
Material risk takers	Executive Directors who are MBL Designated Executive Directors[2]	**26**	28[4]

(1) These individuals will be referred to as either senior managers or Executive Committee members throughout this document.
(2) Executive Directors who have a significant management or risk responsibility in the organisation. These individuals will be referred to as either material risk takers (MRTs) or Designated Executive Directors (Designated EDs) throughout this document.
(3) During the year one senior manager resigned from Executive Committee.
(4) During the year one material risk taker ceased to be a material risk taker of MBL.

1 Remuneration Governance

The MGL Board oversees the Macquarie Group's remuneration framework. The MGL Board has a BRC whose objective is to assist the Board and the Board of Macquarie Bank, a key operating subsidiary, with the Macquarie Group's remuneration policies and practices.

The BRC currently comprises seven independent Non-Executive Directors (NEDs):

Board Remuneration Committee members

Michael Hawker	Chairman
Gary Banks	Member
Jillian Broadbent	Member
Gordon Cairns	Member
Philip Coffey	Member
Diane Grady	Member
Peter Warne	Member

The BRC members have the required experience and expertise in human resources, remuneration and risk to enable them to achieve effective governance of the Macquarie Group's remuneration framework. The BRC has a regular meeting cycle and met nine times during FY2020. Strict processes are in place to ensure conflicts of interest are appropriately managed.

The BRC pays close attention to the design and the operation of remuneration practices for all of the Macquarie Group, not just for the most senior executives. The responsibilities of the BRC are outlined in its Charter, which is reviewed and approved annually by the Board. Some of the responsibilities include:

- overseeing the process for the annual review of the CEOs by the Macquarie Group and Macquarie Bank Boards
- recommending to the Board the remuneration outcomes for all Executive KMP, Designated Executive Directors and other senior executives
- assessing the effectiveness of the *Remuneration Policy* to ensure compliance with legal and regulatory requirements, as well as to support the alignment of remuneration with prudent risk taking and professional conduct across the organisation
- recommending the *Remuneration Policy* to the Board for approval.

The Charter is available at **macquarie.com/leadership-corporate-governance**.

Macquarie Group's strong remuneration governance framework provides the BRC with multiple opportunities to review and challenge both individual remuneration outcomes and the company-wide profit share pool. There is a consistent and comprehensive process for the BRC to assess performance and determine remuneration outcomes for Macquarie Bank's most senior staff.

The BRC has retained Pay Governance as its independent remuneration consultant, for the use of the MGL Board to obtain advice on the appropriateness of Macquarie Group's remuneration framework.

The only service that Pay Governance provides to the Macquarie Group is executive compensation consulting to the BRC. This year, Pay Governance provided information on global remuneration and regulatory trends, considered alignment with shareholder interests, compared individual remuneration for Executive KMP where relevant comparator company information was available and considered Macquarie Group's overall remuneration approach compared to comparator company organisations.

Board and Committee fees are reviewed annually. Per diem fees may also be paid from time to time for approved additional work. Macquarie Group's NEDs are remunerated for their services from the maximum aggregate amount approved for this purpose. MGL shareholders approved the current limit ($A5.0 million per annum) at MGL's 2019 Annual General Meeting. The Board ensures that NED remuneration for MGL and MBL taken together does not exceed this shareholder approved maximum amount. An internal review of NED fees was completed during the year. The Boards determined, following this review, that Board and Committee fees should remain unchanged, with the Chairman receiving an annual fee of $A267,000 and each Board member receiving an annual fee of $A78,000. Board and Committee fees are reviewed annually.

Appendix 3 Annual Remuneration Disclosures
continued

2 Remuneration Design and Structure

Macquarie Group's longstanding and consistent approach to remuneration continues to support the overarching objective of delivering strong company performance over the short and long-term, while prudently managing risk and reinforcing the *Code of Conduct* and *What We Stand For*. The Boards recognise that to achieve this objective, we must attract, motivate and retain exceptional people with deep industry expertise while aligning their interests with shareholders to meet the needs of clients and customers while ensuring that regulatory requirements are upheld. This broad approach has been in place since Macquarie Group's inception, evolving over time to ensure the framework continues to meet its overall objectives.

The Macquarie Group's remuneration approach has been a key driver of our sustained success as an international organisation. Staff are motivated to grow businesses over the medium to long-term, taking accountability for all decisions and their accompanying risk management, customer, economic and reputational consequences.

This approach has been fundamental in ensuring we can continue to attract, motivate and retain exceptional, entrepreneurial and ethical people across the global markets in which we operate. We hire world-class people in 31 highly competitive markets. These people come from, and compete in, various industry sectors (including hedge funds, private equity firms, global investment banks, fund managers, advisory boutiques, commodity houses and other banks as well as industries which are not specific to banking or financial services, for example, technology, accounting and engineering) across many jurisdictions.

An overview of the remuneration framework is set out below.

Overall remuneration objectives and principles

STRONG COMPANY PERFORMANCE OVER THE SHORT AND LONG-TERM	
Align interests of staff, shareholders and customers	Attract, motivate and retain high quality, ethical people
The Boards consider this is best achieved by supporting the following principles: – emphasising performance-based remuneration taking into consideration an individual's overall contribution to Macquarie Bank and the Macquarie Group – determining variable remuneration as a share of profits (not a short-term bonus) creating a true partnership between staff and shareholders to deliver sustained results for our customers and clients – driving behaviours which reflect Macquarie Bank's and the Macquarie Group's risk culture by motivating staff to be accountable for all decisions within the business and their accompanying risk management, customer, economic and reputational consequences – delivering remuneration in a way that provides significant long-term alignment with shareholders – remunerating high-performing staff appropriately, relative to global peers, so they are attracted to and stay with Macquarie Bank and the Macquarie Group – providing consistent arrangements over time to give staff the confidence to pursue multi-year initiatives.	
CREATING A LONG-TERM FOCUS	

Macquarie Group's remuneration framework works as an integrated whole. An individual's remuneration comprises fixed remuneration, profit share and, for Executive committee members (our Executive KMP), Performance Share Units (PSUs). The table below provides an overview of these components.

FIXED REMUNERATION	
Fixed	– for Executive Committee members, is a low level and a low proportion of total remuneration relative to the industry but sufficient to avoid inappropriate risk-taking – for risk and financial control staff, generally a higher proportion of total remuneration than for front office staff.
PERFORMANCE-BASED REMUNERATION	
Profit share	– all permanent employees are eligible to participate – significant portion of profit share is retained (100% for the Macquarie Group CEO[1] , the Macquarie Bank CEO, and all Executive Committee members in FY2020) with a long deferral period (three to seven years for Executive Committee members) – retained profit share is delivered in a combination of Macquarie Group equity and Macquarie-managed fund equity to strengthen alignment with future performance – Malus provisions apply to certain senior employees – retained profit share is subject to forfeiture upon leaving Macquarie Group except in certain circumstances (such as retirement from the Macquarie Group, redundancy, death, serious incapacitation, disability, serious ill-health or other limited exceptional circumstances).
PSUs	– are only awarded to Executive Committee members to drive company-wide performance – are a meaningful incentive but not the major element of total remuneration – vesting of PSUs is subject to achievement of performance hurdles measured equally against ROE relative to an international reference group (50%) and absolute EPS growth (50%) – PSU awards vest after four years[2] – no retesting of hurdles – an international reference group recognises the extent of the Macquarie Group's diversification and internationalisation. – Malus provisions apply – unvested PSUs are subject to forfeiture upon leaving Macquarie except in certain circumstances (such as retirement from Macquarie, redundancy, death, serious incapacitation, disability, serious ill-health or other limited exceptional circumstances).

(1) To further align the interests of staff and shareholders and to ensure we continue to retain key people through this period of economic uncertainty due to COVID-19, 100% of FY2020 profit share is being retained for the CEO and all Executive KMP and delivered in a combination of Macquarie Group equity and Macquarie-managed fund equity.

(2) The Macquarie Group is subject to the Banking Executive Accountability Regime (BEAR) effective 1 July 2019. The vesting period of PSUs awarded from FY2020 has been extended to four years, subject to performance hurdles. PSUs awarded prior to FY2020 vested in two equal tranches after three and four years.

The Boards have discretion to change the remuneration arrangements on an annual basis to meet changing market conditions as well as to comply with regulatory and corporate governance developments.

2.1 Risk and Financial Control Personnel

The Boards and management seek to ensure that remuneration for risk and financial control personnel, including the Chief Financial Officer (CFO), the Chief Risk Officer (CRO) and the Group General Counsel, is structured so that it does not compromise the independence of these personnel in carrying out their functions and is determined in a way that maintains Macquarie's robust risk management framework.

The proportion of fixed compensation for risk and financial control staff is generally higher than for other staff, with profit share allocations being less variable than those awarded to staff performing front office functions. The CRO, CFO and Group General Counsel are each responsible for reviewing the remuneration of all staff across Macquarie whose primary role is risk and financial control and for alerting the BRC to any pay discrepancies. Each of the CRO, CFO and General Counsel provide written confirmation to the BRC each year that remuneration for such staff has been determined in such a way that preserves the independence of the function and maintains Macquarie's robust risk management framework.

Appendix 3 Annual Remuneration Disclosures continued

3 Remuneration and Risk

Risk Culture

Macquarie Group's *What We Stand For* principles of Opportunity, Accountability and Integrity remain pivotal to our culture and effectively guide our staff in managing risk-reward and making decisions that realise opportunity for the benefit of our clients, our shareholders, our people and the communities in which we operate. Staff are made aware that these principles must form the basis of all behaviours and actions. These behavioural expectations are outlined in the Board approved *Code of Conduct*, which is actively promoted by Management and cascaded through the organisation through multiple mechanisms. Macquarie invests significant time and effort into communicating and reinforcing Macquarie's culture through senior management communications, policy reminders, training and learning and development activities.

Strong risk management is a fundamental part of everyone's role at Macquarie. Staff understand that they are rewarded for their performance, including their approach to managing risk. They also understand that there are potential consequences for non-compliance with Macquarie's behavioural expectations. Staff training and communications emphasise the link between risk, conduct, policy breaches and consequence management outcomes, including, where appropriate, adjustments to performance-based remuneration.

Alignment of remuneration with prudent risk taking

The Boards considers that the effective alignment of remuneration with prudent risk-taking is fundamental to its remuneration approach. Remuneration outcomes reflect an assessment of a range of factors including risk management, compliance and behavioural measures to promote good conduct and commitment to the *Code of Conduct* and *What We Stand For*. In addition, the remuneration framework is characterised by significant retention and long deferral periods, which enable risk outcomes to be considered over long periods.

The Boards and the BRC continue to take risk and conduct matters very seriously. There are robust processes in place to ensure that all risk, reputation and conduct-related matters are specifically considered when determining remuneration outcomes. These processes may result in a downward adjustment to group and/or individual profit share allocations where appropriate. A wide range of risks that could have a financial or non-financial impact on the Macquarie Group and Macquarie Bank are considered, including if there has been a detriment to customers.

To assist the Boards and the BRC:

- the Boards are able to assess Macquarie's culture in a number of ways including through staff survey results, human capital reporting, risk culture reports, consequence management reports, strategy presentations as well as through personal observation of management and staff behaviour and actions (including meeting with staff and visits to overseas offices)
- the Chief Risk Officer (CRO) provides the BRC with an independent report detailing material losses, large transactions with residual risk, significant regulatory and legal matters, significant compliance and operational incidents, internal audit issues, other non-financial risk matters as well as information regarding economic capital
- the Global Head of HR discusses the CRO's report with the Group Heads to ensure any matters listed are appropriately reflected in remuneration outcomes for relevant staff and provides a report to the BRC on how this has been achieved
- the General Counsel, in conjunction with HR, considers whether there are any incidents that should be brought to the attention of the BRC which might lead to a Malus determination and reports to the BRC at year end.

The BRC conducts a detailed review of all the material presented and uses this information when considering remuneration outcomes for relevant businesses and individuals.

Consequence management

The Macquarie Group operates a robust consequence management process whereby incidents, breaches of policy and misconduct are regularly reported to senior management. Macquarie Group's Consequence Management Guideline applies wherever a breach of internal policy or regulatory requirement is identified. Consequences may include further training, removal of delegated authorities or permissions, adjustments to performance-based remuneration, impact on promotion, formal warnings or termination. Where an employee has received a formal warning, their performance-based remuneration will likely be impacted and in some cases, it will be reduced to zero. Promotion decisions may also be impacted. Impacts may also be applied where a formal warning has not been issued. In each case, judgement is exercised as to the appropriate consequence(s) based on all the relevant circumstances. Where an individual's employment is terminated due to a compliance or conduct concern (or they resign), retained and unvested remuneration is forfeited as per Macquarie's standard policy.

To assist the Boards and the BRC:

- RMG and HR routinely provide information on identified breaches of policies and regulatory rules to (amongst other purposes) ensure appropriate consequence management is applied. RMG and HR data relating to employee conduct, including individual employee warnings, incidents and breaches is regularly reported to senior management
- the Global Head of HR annually reports to the BRC on the outcomes from the consequence management process and confirms these matters have been considered in determining remuneration and promotion outcomes where appropriate.

In FY2020, for Macquarie Bank, there were 79 (FY2019:89) matters involving conduct/policy breach that resulted in formal consequences. Of those matters:

- for 15 matters, termination of employment was the outcome (FY2019: 9)
- for 64 matters, a formal warning was issued (FY2019: 80). Where a formal warning was issued, additional consequences were applied as appropriate including additional training, removal of delegated authorities or permissions, adjustments to performance-based remuneration and/or impact to promotion. Of the 64 matters, 4 have resulted in individuals subsequently leaving Macquarie Bank.

These matters were considered to be isolated issues and there was no evidence of broader systemic conduct issues.

4 Approach to determining remuneration outcomes

The Macquarie Group's remuneration framework works as an integrated whole. An individual's remuneration comprises fixed remuneration, profit share and, for Executive Committee members (our Executive KMP), PSUs. The table below provides an overview of how these components are determined.

FIXED REMUNERATION	
Fixed	Reviewed annually and reflects technical and functional expertise, role scope, market practice and regulatory requirements.
PERFORMANCE-BASED REMUNERATION	

Profit share	The company-wide profit share pool is determined through a bottom-up assessment at both the business group and individual level:
	Business group profit share pools
	– reflect each business' contribution to company-wide profits taking into account liquidity, capital and funding usage
	– for Central Service Groups, based on the quality and integrity of control functions and support services; not primarily determined with reference to profitability
	– considers the risk profile of each business including consideration of any significant reputational, cultural or compliance matters
	– also considers overall remuneration levels in the market in which each business operates
	– other factors can impact the allocation to each business group such as quality of the income, whether the business is highly regulated or not, the maturity of the business, and the reliance on intellectual capital versus financial capital.
	Individual profit share allocations
	– based on business profits and individual contribution to profits for front office staff
	– primarily based on contribution to high quality control functions for risk management and financial control staff
	– for other support staff, based on their contribution to delivering high quality services to support the businesses
	– other factors considered include risk management and compliance (both financial and non-financial risks), business leadership (including customer outcomes), people leadership and professional conduct
	– may be adjusted downwards based on an assessment of both financial and non-financial risks including conduct issues that have arisen during the year
	– also considers relativities in the market in which each business operates.
	Company-wide profit share pool
	– is an aggregate of the bottom-up assessment conducted at both the business and individual level
	– is assessed for overall reasonableness, including consideration of:
	  – an internal reference based on the Macquarie Group's after-tax profits and its earnings over and above the estimated cost of capital
	  – the resultant compensation expense to income ratio and how it compares to that of peers
	– the Boards retain discretion to amend the final pool determined in accordance with the bottom-up assessment to ensure that all relevant factors, including risk and conduct matters, have been appropriately taken into consideration. For the sixth year in a row, the company-wide pool is substantially below the internal reference described above.
	– the Chief Financial Officer (CFO) confirms that payment of the profit share pool would not result in elimination of capital surpluses.

PSUs	– the pool is determined with reference to profits over recent years – the Boards retain discretion to determine the final PSU pool taking into consideration the risk profile of the Macquarie Group – individual allocations reflect role and complexity, and contribution to driving the collective performance of the Macquarie Group – the BRC considers both fair and face value when determining individual PSU allocations – PSUs are granted in August each year.

Appendix 3 Annual Remuneration Disclosures
continued

4.1 Standard profit share arrangements – retention levels, investment of retained profit share and vesting periods

The Macquarie Group retains a percentage of certain individuals' annual profit share allocation (retained profit share) which is invested in a combination of MGL ordinary shares under the Macquarie Group Employee Retained Equity Plan (MEREP) and Macquarie-managed fund equity notionally invested under the Directors' Profit Share (DPS) Plan[3]. Whilst they are employed, an individual's retained profit share vests and is released over a period that reflects the scope and nature of their role and responsibilities. These arrangements provide significant long-term alignment to shareholders and customers as well as enabling risk outcomes to be considered over long periods.

Retention and vesting arrangements are determined by the Board Remuneration Committee (BRC), according to prevailing market conditions, having regard to regulatory and remuneration trends. For each year's allocation, once the vesting period has been determined it remains fixed for that allocation.

This year, to further align the interests of staff and shareholders and to ensure we continue to retain key people through this period of economic uncertainty due to COVID-19, the Boards and Management have deemed it appropriate to increase retention rates for FY2020 profit share allocations. As a result, 100% of FY2020 profit share allocations will be retained for the Macquarie Group CEO, the Macquarie Bank CEO and all Executive Committee members (no cash component) and delivered in a combination of Macquarie equity and Macquarie-managed fund equity. For other senior staff, an additional 20%[4] of FY2020 profit share allocations will be retained, limiting the cash component of their profit share allocations. This approach is consistent with APRA's expectations.

The following table summarises the standard retention and vesting arrangements applicable for FY2020.

Role	Available profit share (%)[5]	Profit share retention (%)	Retained profit share investment		Vesting and release of profit share[6]
			MEREP (MGL ordinary shares) %	**DPS Plan** (Macquarie-managed fund equity) %	
CEO Macquarie Group	0	100	90	10	One-fifth in each of years 3 – 7
CEO Macquarie Bank	0	100	90	10	
Other Executive Committee members	0	100	80 – 90	10 – 20	
Designated Executive Directors[7]	30–50	50–70	80–100[8]	0–20	
Other Executive Directors	30-60	40-70	80–100[8]	0–20	One-third in each of years 3 – 5
Staff other than Executive Directors	40-75	25–60[9]	100[10]	0[10]	One-third in each of years 2 – 4

(3) Both the MEREP and DPS Plan are fundamental tools in the Macquarie Group's retention, alignment and risk management strategies, encompassing both long-term retention arrangements and equity holding requirements. The MEREP has a flexible plan structure that offers different types of equity grants depending on the jurisdiction in which the participating employees are based. In most cases, the equity grants are in the form of units comprising a beneficial interest in Macquarie ordinary shares held in a trust for the staff member (Restricted Share Units or RSUs). For further details on the MEREP, refer to Note 29 to the financial statements in the Financial Report. The DPS Plan comprises exposure to a notional portfolio of Macquarie-managed funds. Retained amounts are notionally invested over the retention period. This investment is described as 'notional' because Executive Directors do not directly hold securities in relation to this investment.

(4) For senior staff subject to the UK Remuneration Code (the UK Code) implementing the Capital Requirements Directive IV (CRD IV), retention rates for FY2020 have been set at 20% over what their retention rate would have been if they were not subject to the UK Code.

(5) Available profit share is delivered in cash except for staff subject to the UK Code implementing CRD IV, where 50% of available profit share is delivered in Macquarie equity and is subject to a 12-month hold period.

(6) For staff subject to the UK Code implementing CRD IV, retained profit share invested in MGL equity is subject to a further 12-month hold post the vesting period.

(7) Executive Directors who have a significant management or risk responsibility in the organisation.

(8) For staff subject to the UK Code implementing CRD IV, retained profit share is invested 60% in MGL equity and 40% in the DPS Plan.

(9) Above certain monetary thresholds.

(10) For staff other than *Executive* Directors, retained profit share is generally invested in MGL equity with the exception of those staff with funds responsibilities where retained profit share is invested in a combination of MGL equity and Macquarie-managed fund equity.

The Boards' discretion to change remuneration arrangements, as noted above, includes changes to profit share retention levels provided that the retention percentage is at least 30% for all Executive Directors.

In addition to the arrangements set out in the table above, different arrangements may apply in certain circumstances:

- retention rates, vesting and release schedules may vary for certain groups of staff who have become employees as a result of an acquisition, or for staff in certain jurisdictions, for example the European Union (EU), to ensure compliance with local regulatory requirements
- in limited circumstances, retained profit share may be allocated under arrangements other than the DPS Plan or the MEREP. For example, this may include investment in funds or products of a specific business group where there is a need to directly align the interests of staff with those of their clients.

4.2 Forfeiture of Retained Profit Share – Malus Events

Since 2012, the Boards or their delegates have had the ability to reduce or eliminate unvested profit share for certain senior employees in certain circumstances (Malus). The current Malus provisions provide the Boards or its delegates with the ability to reduce or eliminate in full, the unvested profit share awarded in respect of FY2015 onwards to certain senior employees if it determined that the individual has at any time:

- acted dishonestly (including, but not limited to, misappropriating funds or deliberately concealing a transaction)
- acted or failed to act in a way that contributed to a breach of a significant legal or significant regulatory requirement relevant to the Macquarie Group
- acted or failed to act in a way that contributed to MGL, Macquarie Bank or any Operating Group within the Macquarie Group incurring:
  - significant reputational harm
  - a significant unexpected financial loss, impairment charge, cost or provision
- acted or failed to act in a way that contributed to MGL or Macquarie Bank making a material financial restatement.

Each of the above is a Malus Event.

Additional provisions may apply to staff in certain jurisdictions to ensure compliance with local regulations. This includes, for example, staff in the European Union (EU) who are required to comply with local regulatory requirements. These individuals are subject to additional Malus and clawback provisions under EU regulations.

The Macquarie Group has always had and continues to have, the ability to terminate staff where a Malus Event has occurred, at which time any unvested profit share would be forfeited in full. The BRC considers whether, and the extent to which, to apply Malus, taking into account local employment laws, the nature and circumstances of the event and any other redress that has been or may be applied.

4.3 Early Vesting and Release of Retained Profit Share

An Executive Director's unvested retained profit share is only paid out on termination of employment in the case of retirement from the Macquarie Group, redundancy, death, serious incapacitation, disability, serious ill-health or other limited exceptional circumstances. The Boards have discretion to accelerate the vesting of retained profit share under these circumstances (subject to the conditions of early release as set out below).

Discretion may be exercised in certain other limited exceptional circumstances on the grounds of business efficacy, in relation to strategic business objectives, including in connection with the divestment or internalisation of Macquarie Group businesses, or when an employee resigns to fulfil a public service role in a governmental organisation or agency. Where such discretion is exercised, the Boards may impose such other conditions as it considers appropriate.

This year, such discretion has not been exercised.

4.3.1 Conditions of Early Release to Departing Executive Directors – Post Employment Events

In addition to the Malus provisions set out in section 4.2, where discretion has been exercised to accelerate the vesting of retained profit share of any departing Executive Director, the Boards may reduce or eliminate their retained profit share, if it determined that the Executive Director has at any time during their employment or the relevant release periods after their employment committed a Malus Event (as described above) or:

a) taken staff to a competitor or been instrumental in causing staff to go to a competitor, or
b) joined a competitor of the Macquarie Group or otherwise participated in a business that competes with the Macquarie Group.

Each of the above is a Post Employment Event.

Appendix 3 Annual Remuneration Disclosures
continued

In the case of death or serious incapacitation, the Boards will typically accelerate the vesting of retained profit share and immediately release it to the Executive Director or, to the Executive Director's legal personal representative. In other circumstances, the release will occur over the period from six months to two years after the Executive Director leaves, in accordance with the following table:

	First Period	Second Period	Third Period
Time post-departure	Six months	Six months to one year	One year to two years
Unvested retained profit share released	From all but the last two years of employment	From the second year prior to the end of employment	From the year prior to the end of employment
Subject to	No Malus Event or Post Employment Event as set out previously	No Malus Event or Post Employment Event during the First Period, and	No Malus Event or Post Employment Event during the First Period, and
		No Malus Event or Post Employment Event a) above during Second Period	No Malus Event or Post Employment Event a) during the Second Period, and
			No Malus Event during the Third Period
Where the release is by reason of retirement from the Macquarie Group	As above	As above and in addition, the release is subject to no Post Employment Event b) during the Second Period	As above and in addition, the release is subject to no Post Employment Event b) during the Second and/or Third Period

Where an Executive Director has a tax liability on termination of employment in respect of any unvested retained profit share, the Boards or its delegates have discretion to release unvested retained profit share up to an amount equal to the Executive Director's tax liability, at an earlier time than noted above.

4.4 Performance Share Units (PSUs)

Executive Committee members are the only group of staff eligible to receive PSUs, which are subject to forward-looking performance hurdles and determined with reference to the Macquarie Group's performance as a whole. As such, they provide an additional incentive to Executive Committee members to drive company-wide performance over the long-term and beyond their business group responsibilities. PSU awards are a meaningful incentive but are generally not the major element of an Executive Committee member's total remuneration.

Since their introduction, PSUs have been structured as DSUs[11] with performance hurdles. Holders have no right to dividend equivalent payments. There is no exercise price for PSUs.

As foreshadowed last year, the BEAR came into effect for Macquarie Bank on 1 July 2019 and the vesting period of PSUs awarded from FY2020 has been extended to four years.

[11] A DSU is a Deferred Share Unit and is one of the award types under the MEREP.

4.4.1 Performance Hurdles for PSUs

The PSU hurdles are periodically reviewed by the BRC to ensure they continue to align the interests of staff and shareholders and provide a challenging but meaningful incentive to Executive Committee members. The BRC considers historical and forecast market data, the views of corporate governance bodies, shareholders and regulators, as well as market practice. No change has been made to the hurdles for FY2020.

The following summarises the key terms of PSUs and the performance hurdles:

	EPS CAGR hurdle	ROE hurdle
Application	50% of PSU award	50% of PSU award
Performance measure	Compound annual growth rate (CAGR) in EPS over the vesting period (four years[12])	Average annual ROE over the vesting period (four years[12]) relative to a reference group of global financial institutions[13]
Hurdle	Sliding scale applies: – 50% becoming exercisable at EPS CAGR of 7.5% – 100% at EPS CAGR of 12% For example, if EPS CAGR was 9.75%, 75% of the relevant awards would become exercisable.	Sliding scale applies: – 50% becoming exercisable above the 50th percentile – 100% at the 75th percentile For example, if ROE achievement was at the 60th percentile, 70% of the relevant awards would become exercisable.

Forfeiture

- Malus provisions apply
- The standard policy is that unvested PSUs will be forfeited upon termination
- to ensure continued alignment with shareholders post-termination, in the case of retirement from Macquarie, redundancy, death, serious incapacitation, disability, serious ill-health or other limited exceptional circumstances, the Boards or the BRC has the authority to either accelerate the vesting of PSUs or to permit the PSUs to continue to vest in accordance with the original award schedule and remain subject to the same performance hurdles
- should a change of control occur[14], the Boards or the BRC has discretion to determine how unvested PSUs should be treated, having regard to factors such as the length of time elapsed in the performance period, the level of performance to date and the circumstances of the change in control.

Rationale for hurdles

- ROE and EPS growth drive long-term shareholder value and are appropriate as the Executive Committee can affect outcomes on both measures. In contrast, Total Shareholder Return (TSR) is influenced by many external factors over which executives have limited control
- the approach is consistent with that advocated by APRA in not using TSR as a measure
- can be substantiated using information that is disclosed in audited financial statements
- a sliding scale diversifies the risk of not achieving the hurdles and provides rewards proportionate to performance for shareholders and is preferable to an all-or-nothing test, which some have argued could promote excessive risk-taking
- designed to reward sustained strong performance and are relatively well-insulated from short-term fluctuations. The time frame used for PSUs should also be considered in light of the three to seven year deferral of profit share for members of the Executive Committee.

(12) PSUs awarded prior to FY2020 vested in two equal tranches after three and four years.

(13) The reference group for awards made from 2013 is Bank of America Corporation, Barclays PLC, Credit Suisse Group AG, Deutsche Bank AG, Goldman Sachs Group Inc., JP Morgan Chase & Co., Lazard Ltd, Morgan Stanley and UBS AG. Comparator company information is presented in the same order throughout the Remuneration Report.

(14) Under the MEREP Plan Rules, a change in control occurs where a person acquires or ceases to hold a relevant interest in more than 30% of Macquarie shares or where the Board resolves that a person is in a position to remove one-half or more of the Non-Executive Directors.

Appendix 3 Annual Remuneration Disclosures
continued

Macquarie Group's EPS CAGR performance

EPS for FY2020 was 791.0 cents per share which is down 10% on the prior year.

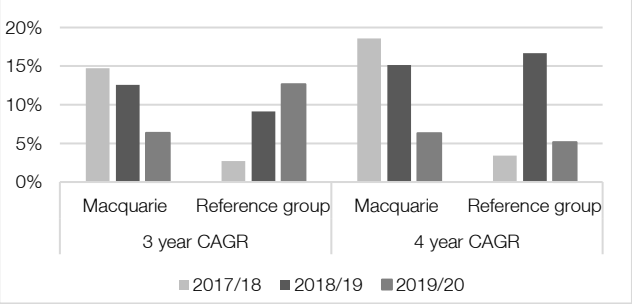
For PSUs (awarded prior to FY2020) to fully vest, Macquarie Group needs to achieve at least 12% CAGR over the vesting period.

Supporting the rigour of the hurdle, to achieve a full vesting the following cumulative EPS is required:

- over three years, a cumulative EPS growth of 40% is required
- over four years, a cumulative EPS growth of 57% is required.

The below graph shows EPS CAGR for Macquarie Group over three and four years. The average EPS CAGR of Macquarie's international reference group is shown for comparison only, noting that the EPS performance of the reference group does not form part of Macquarie Group's PSU hurdle.

Macquarie Group's 3 and 4 year EPS CAGR compared to an international reference group



Source: Bloomberg

Macquarie Group's ROE performance compared to an international reference group

Macquarie Group's ROE for FY2020 of 14.5% is down from 18.0% in the prior year but remains higher than the majority of the international reference group. In addition, Macquarie Group's three, five and ten-year average annual ROE exceeds the majority of the reference group.

Reference group ROE over ten years FY2011-2020

	1 year average % p.a.	3 year average % p.a.	5 year average % p.a.	10 year average % p.a.
Macquarie Group	**14.5**	**15.5**	**14.8**	**11.7**
Average of reference group	10.6	9.5	9.9	9.2
Company	10.7	9.5	8.3	4.7
Company	4.6	1.4	1.3	1.9
Company	7.8	3.4	(0.6)	2.7
Company	(9.7)	(3.8)	(5.0)	(0.7)
Company	10.0	9.4	9.0	9.3
Company	14.9	12.7	11.7	10.7
Company	37.5	36.1	47.2	40.5
Company	11.8	10.5	9.6	7.0
Company	8.0	6.2	7.2	7.0

Source: Bloomberg (reference group) and Macquarie as reported

Testing of hurdles

Under both performance hurdles, the objective is examined once only. Testing occurs annually on 30 June immediately before vesting on 1 July, based on the most recent financial year-end results available. PSUs that do not meet performance hurdles expire.

4.5 Other features of Macquarie's Remuneration Structure

Minimum shareholding requirement	Executive Directors are required to hold a relevant interest in MGL ordinary shares that have a value equal to 5% of an Executive Director's aggregate profit share allocation for each of the past five years (10 years for Executive Committee members), which can be satisfied by the requirements of the profit share retention policy. For Executive Committee members, compliance with this policy equates to a minimum shareholding requirement of between 180% to 710% of fixed remuneration.
Promotion Awards	Staff who are promoted to Associate Director, Division Director or Executive Director receive an allocation of MEREP awards based on Director-level set with reference to an Australian dollar value. Currently these awards range from $A25,000 to $A175,000 depending on the promotion level.
Hedging	The Macquarie Group prohibits staff from hedging shares held to meet the minimum shareholding requirement and unvested equity held in the MEREP.

Employment contracts

The following table summarises key features of the employment contracts for Executive Committee members including the CEO:

Length of contract	Permanent open-ended.
Remuneration review period	1 April to 31 March annually.
Profit share participation	Executive Committee members are eligible to be considered for a profit share allocation that ensures that a large part of their remuneration is 'at risk'.
PSU participation	Executive Committee members are eligible to receive PSUs.
Termination of employment	Requires no more than four weeks' notice[15] by Macquarie or the Executive Committee member (Post-employment restrictions apply).
Post-employment restrictions	Restrictions include non-solicitation provisions applicable for six months, and paid non-competition provisions applicable, at Macquarie's election, for up to three months post-termination.

[15] Subject to compliance with local regulatory and legal requirements. In Australia, Executive Directors given notice by the Macquarie Group may receive an additional week's notice if they are over 45 years of age and have more than two years' continuous service at the time of the termination of their employment. In the UK, the statutory minimum notice period increases from four weeks to a maximum 12 weeks based on years of service.

Appendix 3 Annual Remuneration Disclosures
continued

5 Quantitative Disclosures for Senior Managers and Material Risk Takers

The following tables have been prepared in accordance with APS 330 for the financial years ended 31 March 2020 and 31 March 2019. These tables are prepared on a different basis than those required by Australian Accounting Standards and the Corporations Act, as disclosed in Macquarie Bank's Annual Report.

These disclosures reflect remuneration for services to MBL for the reporting period when the individual was a senior manager or material risk taker.

5.1 Total Value of Remuneration Awards for Senior Managers and Material Risk Takers[1]

The following table sets out the total value of remuneration awarded to senior managers and material risk takers in respect of their performance for the financial years ended 31 March 2020 and 31 March 2019. 7 senior managers (FY2019: 11) and 25 material risk takers (FY2019: 28) received a variable remuneration award in respect of services to MBL in FY2020.

	Senior managers				Material risk takers			
	Non-Deferred		Deferred		Non-Deferred		Deferred	
$A'000	**2020**	2019	**2020**	2019	**2020**	2019	2020	2019
Fixed remuneration[2]								
Cash-based	**3,873**	5,582	**-**	-	**12,705**	17,813		-
Shares and share-linked instruments	**-**	-	**-**	-	**-**	-		-
Other	**-**	-	**-**	-	**-**	-		-
Variable remuneration[3]								
Cash-based	**-**	33,626	**-**	-	**19,116**	28,693		-
Shares and share-linked instruments[4]	**-**	-	**55,908**	66,370	**251**[5]	1,711[5]	30,049	30,588
Other	**-**	-	**-**	-		-		-

5.2 Deferred Remuneration for Senior Managers and Material Risk Takers – Total Value Outstanding, Vested and Any Downward Adjustments

The following table sets out the total value of deferred remuneration outstanding at 31 March 2020 and 31 March 2019 respectively, remuneration granted in previous years that vested during the current financial year and any realised reductions due to ex post explicit and implicit adjustments. All outstanding deferred remuneration is exposed to ex post explicit and implicit adjustments.

	Senior managers		Material risk takers	
$A'000	**2020**	2019	**2020**	2019
Outstanding deferred remuneration[6]				
Cash-based	**-**	-	**-**	-
Shares and share-linked instruments[7]	**125,005**	410,512	**103,995**	161,285
Deferred remuneration vested during the financial year[8]	**67,410**	90,707	**31,298**	37,952
Deferred remuneration adjustments during the financial year				
Reductions due to ex post explicit adjustments[9]	**(1,050)**	-	**-**	-
Reductions due to ex post implicit adjustments	**-**	-	**-**	-

As set out below, no senior managers were awarded a guaranteed or sign-on award for the financial year ended 31 March 2020 (FY2019: Nil). No guarantee awards and no sign-on award were granted to material risk takers during FY2020 (FY2019: Nil). During FY2020 one payment related to unused leave entitlements associated with termination was made to a senior manager (FY2019: Nil). No termination payments were made to a material risk taker during FY2020 (FY2019: Nil).

	Senior managers				Material risk takers			
	No. of individuals		Total amount		No. of individuals		Total amount	
$A'000	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Termination payments[10]	**1**	-	**188**	-	**-**	-	**-**	-

Notes to the quantitative remuneration disclosures

(1) Remuneration awarded in respect of FY2020 and FY2019 performance reflects remuneration relating to services to MBL for the portion of the relevant periods that each individual was a senior manager or material risk taker of MBL.

(2) Fixed remuneration comprises current year salary, including superannuation and other cash allowances.

(3) Variable remuneration awarded in respect of performance for FY2020 and FY2019 includes the total value of non-deferred and deferred components related to the FY2020 and FY2019 awards. The non-deferred (cash-based) components will be granted and paid in the following financial year and the payment of deferred components are deferred to a future period.

(4) Includes the value of retained profit share invested in MGL ordinary shares under the MEREP, retained profit share notionally invested in Macquarie managed-fund equity under the DPS Plan, and for senior managers, PSUs.

(5) This relates to EU Material Risk Takers in the UK for whom a portion of their non-deferred profit share is delivered in MGL ordinary shares in accordance with the Remuneration Code.

(6) Value as at 31 March 2020 and 31 March 2019 of unvested deferred remuneration.

(7) Includes the value as at 31 March 2020 (for FY2020) and 31 March 2019 (for FY2019) of retained profit share invested in MGL ordinary shares under the MEREP, retained profit share notionally invested in Macquarie managed-fund equity under the DPS Plan, and for senior managers, the fair value of PSUs at the same date. The value of retained profit share invested in the MEREP for FY2020 has been calculated based on the 31 March 2020 share price of $A85.75. For FY2019, the value of retained profit share invested in the MEREP has been calculated based on the 31 March 2019 share price of $A129.42.

(8) Value as at the date of vesting of deferred remuneration that vested during the financial years ended 31 March 2020 and 31 March 2019 for senior managers and material risk takers, including vesting for staff who terminated during FY2020. The value has been calculated based on the share price on the date of vesting which for FY2020 was in the range of $A119.93 to $A134.60 (FY2019: $A110.09 to $A124.02).

(9) Explicit adjustments include any realised reductions relating to forfeitures, lapses as a result of failure to meet performance hurdles, and adjustments made under the Malus and Post Employment Event provisions.

(10) This amount reflects payments made in FY2020 and FY2019 associated with termination of employment with Macquarie Group in accordance with Macquarie Group policies, Executive Director remuneration arrangements, individual employment agreements, and/or local legal requirements. Payments associated with termination will typically include unused long-service and annual leave entitlements, and redundancy amounts, where applicable, but will exclude the release (in accordance with Macquarie Group's remuneration arrangements) of deferred remuneration awarded in prior years which is included in deferred remuneration vested during the relevant financial year. There are no ex-gratia termination payments. Individuals may also retain deferred remuneration held in the MEREP, the DPS Plan or as PSUs (senior managers only), which may be released in future years subject to the relevant restriction periods, DPS release provisions and performance hurdles per Macquarie Group policies, Executive Director remuneration arrangements and/or individual employment agreements.

Appendix 4 List of APRA Quantitative Tables

APS 330 Table	Title	Section No
Attachment A	Common Disclosures Template	Appendix 1
Attachment D		
6 (b) to (f)	Risk Weighted Assets (RWA)	4.3
6 (g)	Capital Ratios	4.3
7 (b)	Macquarie's Credit Risk Exposures	5.3
7 (c)	Credit Risk by Geographic Distribution	5.4
7 (d)	Credit Risk Distribution by Counterparty Type	5.5
7 (e)	Credit Risk by Maturity Profile	5.6
7 (f)	Provisions by Counterparty Type	5.3 & 7.4
7 (g)	Provisions by Geographic Region	7.5
7 (h)	Movement in Provisions	7.7
7 (i)	Credit Risk Exposures by Measurement Approach	5.3 & 6.1
7 (j)	General Reserve for Credit Losses	7.6
8 (b)	Credit Risk Exposures by Risk Weight	6.2
9 (d)	Credit Risk Exposures by Risk Grade	6.3
9 (e)	Provisions by Counterparty Type	7.4
9 (f)	Analysis of Expected Credit Model Performance versus Actual Results	7.8
10 (b) & (c)	Exposures Mitigated by Eligible Collateral	8.2
11 (b)	Credit Equivalent Amounts for Counterparty Exposures	8.3
11 (c)	Notional Amount of Credit Derivatives	8.3
12 (g) & (o)	Originating ADI Securitisation Exposures	9.2.1
12 (h)	Performance of Assets Securitised	9.2.2
12 (i) & (p)	Summary of Outstanding Exposures Intended to be Securitised	9.2.3
12 (j), (q) & (r)	Securitisation Activity	9.2.4
12 (k) & (s)	Exposure by Type of Asset	9.3.1
12 (l)	Exposure by Risk Weight Band – Banking Book	9.3.2
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12 (u)	RWA by Risk Weight Band – Trading Book	9.3.2
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13 (b)	Debt Security Specific Risk Figures	12.2.3
14 (f)	Value at Risk Figures	12.2.1
14 (f)	Stressed Value at Risk Figures	12.2.2
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16 (d) & (e)	Gains and Losses on Equity Investments	13.4
16 (f)	Capital Requirements Arising from Equity Risks	13.3
17 (b)	Interest Rate Risk in the Banking Book	12.2.4
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18	Leverage Ratio Disclosure Template	15.1
19	Summary Comparison of Accounting Assets versus Leverage Ratio Exposure Measure	15.2
Attachment F		
20	Liquidity Coverage Ratio Disclosure Template	16.0
21	Net Stable Funding Ratio Disclosure Template	17.0
Attachment G		
22	Annual Remuneration Disclosure	Appendix 3

Appendix 5 Glossary of Terms

ADI	Authorised Deposit-taking Institution.
Additional Tier 1 Capital	A capital measure defined by APRA comprising high quality components of capital that satisfy the following essential characteristics: – provide a permanent and unrestricted commitment of funds; – are freely available to absorb losses; – rank behind the claims of depositors and other more senior creditors in the event of winding up of the issuer; and – provide for fully discretionary capital distributions.
Additional Tier 1 deductions	An amount deducted in determining Additional Tier 1 Capital, as defined in Prudential Standard APS 111 Capital Adequacy: Measurement of Capital.
ALA	Alternative Liquid Assets
AMA	Advanced Measurement Approach (for determining operational risk).
APRA	Australian Prudential Regulation Authority.
ADI Prudential Standards (APS)	APRA's ADI Prudential Standards. For more information refer to APRA website.
Associates	Associates are entities over which Macquarie has significant influence, but not control. Investments in associates may be further classified as Held for Sale ('HFS') associates. HFS associates are those that have a high probability of being sold within 12 months to external parties. Associates that are not held for sale are carried at cost and equity-accounted. Macquarie's share of the investment's post-acquisition profits and losses is recognised in the income statement and its share of post-acquisition movements in reserves is recognised within equity.
ASF	Available Stable Funding
AVC multiplier	Asset Value Correlation multiplier. A loading introduced as part of Basel III which is added to the correlation factor when calculating the RWA on exposures to certain financial institutions.
Bank Group	MBL and its subsidiaries.
Basel III IRB Formula	A formula to calculate RWA, as defined in Prudential Standard APS 113- Capital Adequacy: Internal Ratings-based Approach to Credit risk.
BAC	Board Audit Committee.
BCN	On 8 October 2014, MBL issued 4.3 million Macquarie Bank Capital Notes (BCN) at face value of $A100 each. BCN are subordinated, unsecured notes that pay discretionary, non-cumulative, semi-annual floating rate cash distributions and may be redeemed at face value on 24 March 2020, 24 September 2020 or 24 March 2021 (subject to certain conditions being satisfied) or earlier in specified circumstances. BCN can be converted into a variable number of MGL ordinary shares (subject to certain conditions being satisfied) on these redemption dates; mandatorily exchanged on 24 March 2023; exchanged earlier upon an acquisition event (with the acquirer gaining control of MGL or MBL); where MBL's common equity Tier 1 capital ratio falls below 5.125%, or where APRA determines MBL would be non-viable without an exchange or a public sector injection of capital (or equivalent support). BCN were fully redeemed by MBL at 24 March 2020.
BFS	Banking and Financial Services Group
The Board, Macquarie Bank Board	The Board of Voting Directors of Macquarie Bank Limited
BRC	Board Remuneration Committee
BRiC	Board Risk Committee
CA	Credit Assurance
CAF	Corporate and Asset Finance Group
CAGR	Compound Annual Growth Rate
CEO	Managing Director and Chief Executive Officer
CET1	Common Equity Tier 1 capital
CGM	Commodities and Global Markets Group
CFO	Chief Financial Officer

Appendix 5 Glossary of Terms
continued

Contingent liabilities	Defined in AASB 137 Provisions, Contingent Liabilities and Contingent Assets as a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity; or a present obligation that arises from past events but is not recognised because it is not probable to occur or the amount cannot be reliably measured.
CCE	Current Credit Exposure. The sum of the positive mark-to-market value (or replacement cost) of market-related contracts entered into by the ADI.
CCR	Counterparty Credit Risk
CEA	Credit Equivalent Amount. The on-balance sheet equivalent value of an off balance sheet transaction.
Central counterparty	A clearing house or exchange that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer, and therefore ensuring the future performance or open contracts.
CLF	Committed Liquidity Facility
Common Equity Tier 1 capital	A capital measure defined by APRA comprising the highest quality components of capital that fully satisfy all the following essential characteristics: – provide a permanent and unrestricted commitment of funds, – are freely available to absorb losses, – do not impose any unavoidable servicing charge against earnings; and – rank behind the claims of depositors and other creditors in the event of winding up. Common equity tier 1 capital comprises Paid Up Capital, Retained Earnings, and certain reserves.
Common Equity Tier 1 Capital Ratio	Common Equity Tier 1 Capital net of Common Equity Tier 1 deductions expressed as a percentage of RWA.
Common Equity Tier 1 deductions	An amount deducted in determining Common Equity Tier 1 Capital, as defined in Prudential Standard APS 111 Capital Adequacy: Measurement of Capital.
CRO	Chief Risk Officer
CVA	Credit Valuation Adjustment. The risk of mark-to-market losses on the expected counterparty risk to OTC derivatives.
Deconsolidated entities	Entities involved in conducting insurance, funds management and non-financial operations including special purpose vehicles (SPV)) for which Macquarie has satisfied APS 120 Attachment A operational requirements for regulatory capital relief.
Directors' Profit Share (DPS)	The DPS plan comprises exposure to a notional portfolio of Macquarie-managed funds. Retained amounts for Executive Directors are notionally invested over the retention period. This investment is described as 'notional' because Executive Directors do not directly hold securities in relation to this investment. However, the value of the retained amounts will vary as if these amounts were directly invested in actual securities, giving the Executive Directors an effective economic exposure to the performance of the securities. If the notional investment results in a notional loss, this loss will be offset against any future notional income until the loss is completely offset.
DSU	Deferred Share Unit issued under the MEREP
DVP	Delivery versus Payment
EAD	Exposure at Default – the gross exposure under a facility (the amount that is legally owed to the ADI) upon default of an obligor.
ECAI	External Credit Assessment Institution.
ECAM	Economic Capital Adequacy Model.
EL	Expected Loss, which is a function of EAD, PD and LGD.
ELE	Extended Licensed Entity is an entity that is treated as part of the ADI ('Level 1') for the purpose of measuring the ADI's capital adequacy and exposures to related entities. The criterion for qualification as an ELE is detailed in the APRA Prudential Standards.
EMEA	Europe, Middle East & Africa.
ERL	Equity Risk Limit – Board imposed limit by which equity risk positions are managed.
ERBA	External Rating Based Approach
Executive Key Management Personnel (Executive KMP)	Members of Executive Committee of MBL
Executive Voting Director	An Executive Board Member

FCS	Financial Claims Scheme
FICO	Fair Isaac Corporation
FIRB	Foundation Internal Ratings Based Approach (for determining credit risk)
GAAP	Generally Accepted Accounting Principles
Gross credit risk exposure	The potential loss that Macquarie would incur as a result of a default by an obligor excluding the impact of netting and credit risk mitigation.
GRCC	Group Risk and Compliance Committee
HQLA	High Quality Liquid Assets
ICAAP	Internal Capital Adequacy Assessment Process.
IRRBB	Interest Rate Risk in the Banking Book.
Impaired assets	An asset for which the ultimate collectability of principal and interest is compromised.
ISDA	International Swaps and Derivatives Association
LCR	Liquidity Coverage Ratio
Level 2 Regulatory Group	MBL, its parent Macquarie B.H. Pty Ltd and MBL's subsidiaries but excluding deconsolidated entities for APRA reporting purposes.
Level 3 Regulatory Group	MGL and its subsidiaries but excluding entities required to be deconsolidated for regulatory reporting purposes.
LGD	Loss given default is defined as the economic loss which arises upon default of the obligor.
LVR	Loan to Value Ratio
Macquarie	Level 2 regulatory group
Macquarie Income Securities (MIS)	The Macquarie Income Securities (MIS) are perpetual and carry no conversion rights. Distributions are paid quarterly, based on a floating rate of BBSW plus 1.7%. Subject to limitations on the amount of hybrids eligible for inclusion as Tier 1 Capital, they qualify as Tier 1 Capital and are treated as equity on the balance sheet. There are four million $A100 face value MIS on issue.
Macquarie Group	MGL and its subsidiaries
Malus	The discretion of the Board (from 2012) to reduce or eliminate unvested profit share amounts where it determines that an employee's action or inaction has caused the Macquarie Group significant reputational harm, caused a significant or unexpected financial loss or caused the Macquarie Group to make a material financial restatement.
MACS	On 8 March 2017, MBL, acting through its London Branch, issued $US750 million of Macquarie Additional Capital Securities (MACS). MACS are subordinated, unsecured notes that pay discretionary, non-cumulative, semi-annual fixed rate cash distributions. Subject to certain conditions the MACS may be redeemed on 8 March 2027, or each fifth anniversary thereafter. MACS can be exchanged for a variable number of fully paid MGL ordinary shares on an acquisition event (with the acquirer gaining control of MGL or MBL), where MBL's common equity Tier 1 capital ratio falls below 5.125%, or where APRA determines MBL would be non-viable without an exchange or a public sector injection of capital (or equivalent support).
MAM	Macquarie Asset Management Group
MBL	Macquarie Bank Limited ABN 46 008 583 542
MBL Consolidated Group	MBL and its subsidiaries
MEREP	Macquarie Group Employee Retained Equity Plan
MFHPL	Macquarie Financial Holdings Pty Limited
MGL	Macquarie Group Limited ABN 94 122 169 279
NCO	Net Cash Outflows
Non-Bank Group	MGL, MFHPL and its subsidiaries
NPAT	Net Profit after Tax
NSFR	Net Stable Funding Ratio
Operating Group	The Operating Groups consist of MAM, CAF, CGM, BFS and Macquarie Capital
ORMF	Operational Risk Management Framework

Appendix 5 Glossary of Terms
continued

PCE, PFCE	Potential Credit Exposure (PCE) / Potential Future Credit Exposure (PFCE). The potential exposures arising on a transaction calculated as the notional principal amount multiplied by a credit conversion factor specified by APRA.
PD	Probability of Default. The likelihood of an obligor not satisfying its financial obligations.
Post-2009 DPS	Retained directors' profit share which is deferred to future periods and held as a notional investment in Macquarie managed-fund equity.
PSU	Performance Share Unit issued under the MEREP
Reserve Bank of Australia (RBA)	Central bank of Australia with responsibility over monetary policy.
Risk-weighted assets (RWA)	A risk-based measure of an entity's exposures, which is used in assessing its overall capital adequacy.
RAS	Risk Appetite Statement
RMG	Risk Management Group
ROE	Return on Ordinary Equity
RSF	Required Stable Funding
RSU	Restricted Share Unit issued under the MEREP
RMBS	Residential Mortgage Backed Securities
Senior Executive	Macquarie Group's combined Division Director and Executive Director population.
Senior Management	Members of Macquarie Group's Executive Committee and Executive Directors who have significant management or risk responsibility in the organisation.
SFA	Supervisory Formula Approach
SFT	Securities Financing Transactions (SFT). SFTs are transactions such as repurchase agreements, reverse repurchase agreements and security lending and borrowing, where the value of the transactions depends on market valuations and the transactions are often subject to margin agreements.
SME	Small – Medium Enterprises
SPV's	Special purpose vehicles or securitisation vehicles.
Subordinated debt	Debt issued by Macquarie for which agreements between Macquarie and the lenders provide, in the event of liquidation, that the entitlement of such lenders to repayment of the principal sum and interest thereon is and shall at all times be and remain subordinated to the rights of all other present and future creditors of Macquarie. Subordinated debt is classified as liabilities in the Macquarie financial report and may be included in Tier 2 Capital.
Tier 1 Capital	Tier 1 capital comprises of (i) Common Equity Tier 1 Capital; and (ii) Additional Tier 1 Capital
Tier 1 Capital Deductions	Tier 1 capital deductions comprises of (i) Common Equity Tier 1 Capital deductions; and (ii) Additional Tier 1 Capital deductions.
Tier 1 Capital Ratio	Tier 1 Capital net of Tier 1 Capital Deductions expressed as a percentage of RWA.
Tier 2 Capital	A capital measure defined by APRA, comprising other components of capital which contribute to the strength of the entity.
Tier 2 Capital Deductions	An amount deducted in Tier 2 Capital, as defined in Prudential Standard APS 111 Capital Adequacy: Measurement of Capital.
Total Capital	Tier 1 Capital plus Tier 2 Capital less Total Capital Deductions.
Total Capital Ratio	Total Capital expressed as a percentage of RWA.
TSR	Total Shareholder Return
VaR	Value-at-Risk

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