MACQUARIE BANK

Pillar 3 disclosures

Macquarie Bank
September 2018

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MACQUARIE BANK

ASX Release

MACQUARIE BANK RELEASES SEPTEMBER PILLAR 3 DISCLOSURE DOCUMENT

23 November 2018 - The Macquarie Bank Limited September 2018 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). These reforms are designed to strengthen global capital rules with the goal of promoting a more resilient banking sector. The objective of the reforms is to improve the banking sector's ability to absorb shocks arising from financial stress, whatever the source, thus reducing the risk of spillover from the financial sector to the real economy.

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 30 September 2018 together with the 31 March 2018 comparatives where appropriate.

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.

The current 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 30 September 2018	As at 31 March 2018
Macquarie Level 2 regulatory group Common Equity Tier 1 capital ratio[1]	**10.4%**	11.0%
Macquarie Level 2 regulatory group Total Tier 1 capital ratio[1]	**12.1%**	12.8%
Macquarie Level 2 regulatory group Total capital ratio[1]	**13.9%**	14.6%
Macquarie Level 2 regulatory group Leverage ratio	**5.6%**	6.0%
Macquarie Level 2 regulatory group Liquidity coverage ratio[1,2,3]	**159.0%**	161.8%
Macquarie Level 2 regulatory group Net stable funding ratio[1,2]	**110.3%**	112.4%

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

2 For liquidity ratios, Macquarie Level 2 regulatory group includes Special Purpose Vehicles (SPVs), which are deconsolidated for Capital adequacy purposes.

3 The LCR for the 3 months to 30 September 2018 is calculated from 65 daily LCR observations (31 March 2018 is calculated from 62 daily LCR observations).

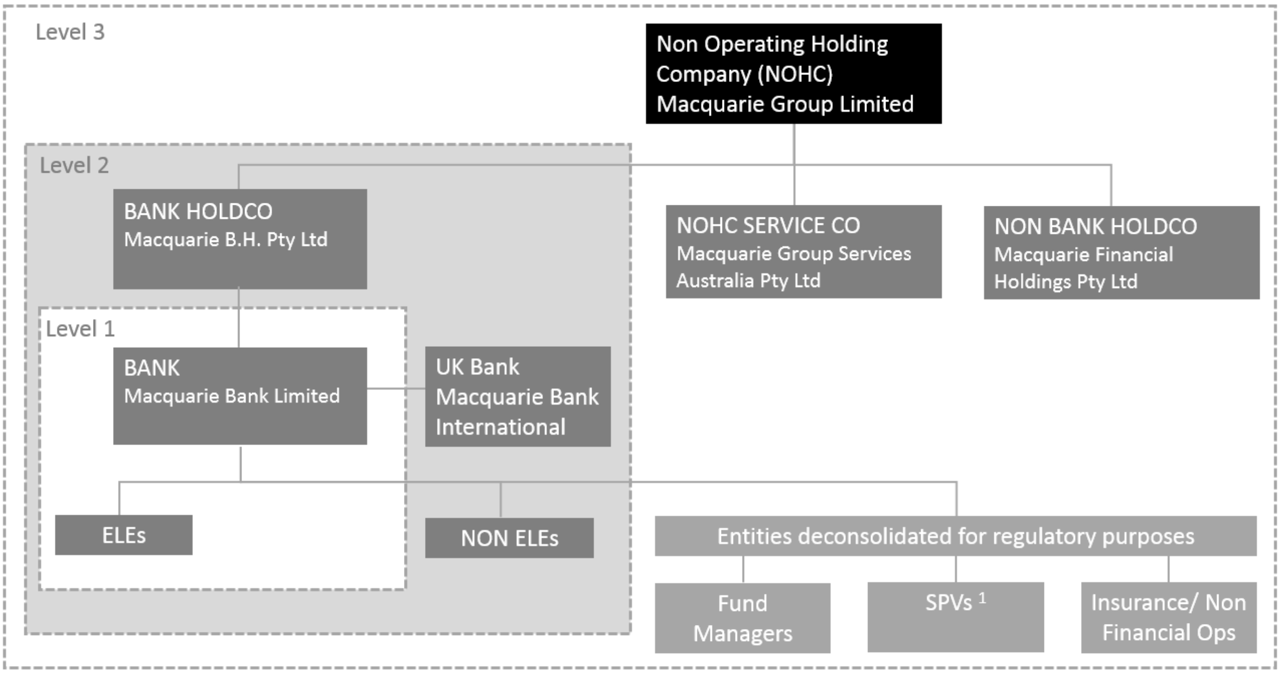
1.0 Overview

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 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. 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 30 September 2018 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.

MBL has adopted Australian Accounting Standards AASB 9: Financial Instruments (AASB 9) from 1 April 2018. The September 2018 disclosures reflect the adoption of AASB 9. The comparative period has not been restated, refer to March 2018 Pillar 3 for disclosures. Refer to Note 1 of the MBL Group's 2019 Interim Financial Report for the impact of adoption of AASB 9.

Where necessary other comparative information has been restated to conform with changes in presentation in the current year.

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, and RWA. 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

The primary role of the Board is to promote Macquarie's long-term health and prosperity. The Board is ultimately responsible for Macquarie's risk management framework including oversight of its operation by management. Macquarie's robust risk management framework supports the Board in its role and oversight of the framework is a key priority.

Macquarie recognises that a sound risk culture is a fundamental requirement of an effective risk management framework. The long-held foundations of Macquarie's risk culture are the principles of *What We Stand For* – Opportunity, Accountability and Integrity. Staff are made aware that these principles are expected to form the basis of all day-to-day behaviours and actions.

Board Committees, Management Committees and ultimately individuals support the Board in its oversight; for further detail refer to Macquarie's Corporate Governance Statement available at macquarie.com/leadership-corporate-governance.

2.2 Macquarie's Risk Management Framework

Macquarie's risk management framework consists of its systems, structures, policies and processes. Under the framework staff are responsible for identifying, measuring, evaluating, monitoring, reporting and managing material risks.

Details about the risks we manage at Macquarie are available on macquarie.com/au/about/company/risk-management-group.

The risk management framework incorporates active management and monitoring of regulatory, compliance, reputation, credit, market, equity, operational, liquidity, legal, tax, model, cyber, and environmental and social – including climate change – risks. It also includes risk culture and conduct risk management frameworks. The risk management framework applies to all business activities across Operating and Central Service Groups. 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':

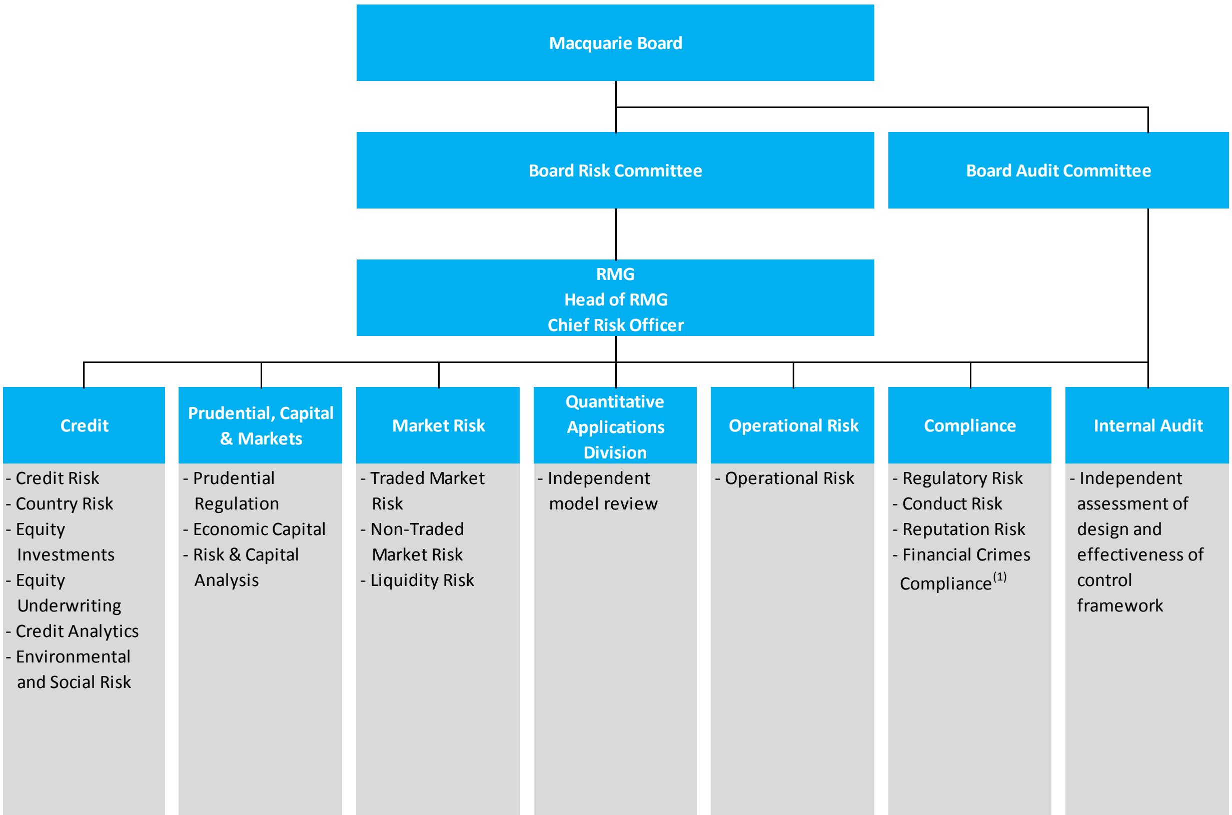
- primary responsibility for risk management lies at the business level. This is the first line of defence. Part of the role of all business managers throughout Macquarie is to ensure they manage risks appropriately.
- the risk management function forms the second line of defence and independently assesses all material risks
- the third line, which includes Internal Audit, independently reviews and challenges the Group's risk management controls, processes and systems.

2.0 Risk Management Governance and Framework continued

2.3 Risk Management Group Structure

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. Conversely, Operating and Central Service Groups also source talent from RMG.

While RMG is structured into specialist teams as detailed below, it 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 teams to ensure that a detailed analysis takes place both at the individual and aggregate risk level.



[1] Financial Crimes Compliance includes anti-money laundering, anti-bribery & corruption and sanctions.

2.3.1 Internal Audit

Internal Audit provides independent assurance to senior management and the Board on the adequacy and operational effectiveness of Macquarie's internal controls, risk management, and governance systems and processes. Internal Audit provides an objective assessment on whether risks have been adequately identified, appropriate internal controls are in place to manage those risks and whether those controls are working effectively.

A specialist Risk Mindset and Behaviours team, composed of risk culture specialists, performs reviews across Macquarie using a well-established assessment methodology.

The prevailing risk management attitudes and behaviours of selected functions in Operating and Central Service Groups are assessed. Areas of relative strengths are highlighted. Areas for improvement and required actions are identified.

Findings from all Internal Audit work are followed up to ensure remediation.

Internal Audit is independent of both business management and the activities it reviews. The Head of Internal Audit is jointly accountable to the Board Audit Committee (BAC) and the Chief Risk Officer (CRO). The BAC approves the appointment and removal of the Head of Internal Audit who has unlimited access to the BAC.

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 30 September 2018 $m	As at 31 March 2018 $m
Common Equity Tier 1 capital		
Paid-up ordinary share capital	9,545	9,537
Retained earnings	2,341	2,647
Reserves	758	478
Gross Common Equity Tier 1 capital	12,644	12,662
Regulatory adjustments to Common Equity Tier 1 capital:		
Goodwill	41	40
Deferred tax assets	198	142
Net other fair value adjustments	32	12
Intangible component of investments in subsidiaries and other entities	59	63
Loan and lease origination fees and commissions paid to mortgage originators and brokers	429	397
Shortfall in provisions for credit losses	376	428
Equity exposures	1,279	1,201
Other Common Equity Tier 1 capital deductions	251	251
Total Common Equity Tier 1 capital deductions	2,665	2,534
Net Common Equity Tier 1 capital	9,979	10,128
Additional Tier 1 capital		
Additional Tier 1 capital instruments	1,654	1,592
Gross Additional Tier 1 capital	1,654	1,592
Deductions from Additional Tier 1 capital	-	-
Net Additional Tier 1 capital	1,654	1,592
Total Net Tier 1 capital	11,633	11,720
Tier 2 capital		
Tier 2 capital instruments and other	1,740	1,697
Total capital base	13,373	13,417

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.

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), Macquarie Bank Capital Notes (BCN) and Macquarie Additional Capital Securities (MACS).

MIS are a perpetual instrument with no 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 eligible for transitional arrangements under Basel III rules.

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). APRA has confirmed that BCN are eligible for inclusion as Additional Tier 1 capital.

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). APRA has confirmed that MACS are eligible for inclusion as Additional Tier 1 capital.

3.3 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 US$750m 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.

3.4 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 which appears on the following page 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 Level 2 regulatory 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

4.0 Capital Adequacy
continued

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	100% Common Equity Tier 1 deduction	Extension of Basel III credit model to cover equity exposures. Capital requirement between 36% and 82% 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 and interest rate risk and the risk on assets held as part of business operations, including: fixed assets, goodwill, intangible assets, capitalised expenses.

Macquarie Level 3 regulatory group is currently well capitalised. The remaining capital surplus is available to support growth, provide strategic flexibility and accommodate 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.

4.2 Risk Appetite Setting

The Board reviews and endorses Macquarie's risk appetite as part of the annual corporate strategy review process. Risk appetite is the nature and amount of risk the Group is willing to accept as outlined in the Board-approved *Risk Appetite Statement (RAS)*.

The *RAS* sets out the degree of risk Macquarie is willing to take overall and for each material risk type. It also conveys the process for ensuring that risk limits (tolerances) are set at an appropriate level, monitored and reviewed.

The principles of the *RAS* are implemented primarily through the following four mechanisms:

4.2.1 New Product and Business Approval Process

All new businesses and significant changes to existing products or processes are subject to a rigorous and 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 unknown or 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, Finance Division, Taxation Division, Legal and Governance and other relevant stakeholders within Macquarie are obtained. RMG also checks that all necessary internal approvals are obtained prior to commencement.

For all material transactions, independent input from RMG on the risk and return of the transaction is included in the approval document submitted to senior management.

The Operational Risk function within RMG oversees the New Product and Business Approval process.

RMG Internal Audit performs an audit of the operations of any significant new businesses based on an assessment of the associated risk faced by Macquarie. The audit typically takes place within six months of an acquisition or launch. It includes confirmation that operations are in line with the new product approval document.

4.2.2 Limits

In many cases, limits translate risk appetite principles into hard constraints on individual businesses.

These consist of specific risk limits given to various businesses and products or industry sectors 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 Macquarie’s earnings and surplus capital cover losses and market confidence in Macquarie is maintained.

Under Macquarie’s ‘no limits, no dealing’ approach, individual credit and equity exposures must fit within approved counterparty limits. Market risk exposures are also governed by a suite of individual and portfolio limits.

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.

4.2.3 Relevant Policies

Policies expand on the principles found in the *RAS* and often translate them into operational requirements for individuals and business activities.

Formalising practices and principles into policies assists in providing a framework for the consistent management of risks. It also promotes sharing of experience and expertise gained from managing risks in various business activities.

4.2.4 Communication and Training

The *RAS* is accessible to all staff and is referred to in the *Code of Conduct.* In addition, the principles in the *RAS* are communicated to relevant staff through formal and informal training programs. These include regular communication of policies to key staff, training programs for specific policies and mandatory Director-level staff training on the risk management framework.

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 three-year 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 three-year 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.

4.0 Capital Adequacy
continued

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 30 September 2018 $m	As at 31 March 2018 $m
Credit risk		
Subject to IRB approach		
Corporate	26,313	27,136
SME Corporate	3,315	3,234
Sovereign	186	182
Bank	1,538	1,576
Residential Mortgages	13,160	12,654
Other Retail	4,307	4,466
Retail SME	3,497	3,101
Total RWA subject to IRB approach[1]	52,316	52,349
Specialised lending exposures subject to slotting criteria[2]	5,827	5,392
Subject to Standardised approach		
Corporate	747	701
Residential Mortgages	1,598	1,630
Other Retail	3,131	3,771
Total RWA subject to Standardised approach[1]	5,476	6,102
Credit risk RWA for securitisation exposures	755	609
Credit Valuation Adjustment RWA	4,002	3,712
Exposures to Central Counterparties RWA	1,541	1,274
RWA for Other Assets	8,852	8,276
Total Credit risk RWA	78,769	77,714
Market risk RWA	5,886	3,303
Operational risk RWA	10,157	9,960
Interest rate risk in the banking book RWA	1,188	753
Total RWA	96,000	91,730

[1] Refer to 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.

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 30 September 2018**	As at 31 March 2018
Macquarie Level 2 regulatory group Common Equity Tier 1 capital ratio	**10.4%**	11.0%
Macquarie Level 2 regulatory group Total Tier 1 capital ratio	**12.1%**	12.8%
Macquarie Level 2 regulatory group Total capital ratio	**13.9%**	14.6%
Macquarie Level 1 regulatory group Common Equity Tier 1 capital ratio	**10.4%**	11.2%
Macquarie Level 1 regulatory group Total Tier 1 capital ratio	**12.4%**	13.0%
Macquarie Level 1 regulatory group Total capital ratio	**14.4%**	14.9%

APRA requires Authorised Deposit-taking Institutions (ADIs) to have a minimum ratio of total capital to risk weighted assets (RWA) of 8% at both Level 1 and Level 2, with at least 6% of this capital in the form of Tier 1 capital and at least 4.5% of this minimum capital in the form of Common Equity Tier 1 capital. In addition, APRA imposes ADI specific minimum capital ratios which may be higher than these levels. From 1 January 2016, APRA further imposes ADI capital buffer requirements which include a 2.5% capital conservation buffer above the minimum Common Equity Tier 1 capital.

At 30 September 2018, the countercyclical capital buffer requirement for Macquarie Level 2 regulatory group is approximately 0.06%.

5.0 Credit Risk Measurement

5.1 Credit Risk Overview

Credit risk is defined as the risk of a counterparty failing to complete its contractual obligations when they fall due. The consequent loss is either the amount of the loan not repaid, 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 or Moody'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.

5.2.2 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

5.0 Credit Risk Measurement
continued

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.

For regulatory purposes, CEA (Credit Equivalent Amount) is calculated according to the methodology outlined in the APRA Prudential Standards (APS) which combines the positive mark-to-market value (Current Credit Exposure) with a percentage of the face value based on the type of contract and the contractual maturity (Potential Credit Exposure). CEA exposures are used in daily calculations of large exposures in accordance with APS 221 Large Exposures.

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.

Both the internal and regulatory calculations of 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) and Corporate and Asset Finance Group (CAF).

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.

5.0 Credit Risk Measurement
continued

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 Macquarie Bank Limited Consolidated 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 30 September 2018 $m	As at 31 March 2018 $m
Corporate[1]	**49,641**	44,987
SME Corporate[2]	**4,465**	4,365
Sovereign	**3,420**	2,583
Bank	**9,670**	8,821
Residential Mortgages	**47,121**	43,565
Other Retail	**11,194**	11,786
Retail SME	**5,140**	4,609
Other Assets[3]	**17,189**	12,729
Total Gross Credit Exposure	**147,840**	133,445

1 Corporate includes specialised lending exposure of $5,551 million as at 30 September 2018 (31 March 2018: $5,142 million).
2 SME Corporate includes specialised lending exposure of $589 million as at 30 September 2018 (31 March 2018: $587 million).
3 The major components of Other Assets are operating lease residuals, other debtors and unsettled trades.

APS 330 Table 7(b) (continued)

	As at 30 September 2018				For the 6 months to 30 September 2018
		Off Balance sheet			
	On Balance Sheet $m	Non-market related $m	Market related $m	Total $m	Average Exposures $m
Subject to IRB approach					
Corporate	20,632	3,191	19,520	43,343	41,243
SME Corporate	3,293	583	-	3,876	3,827
Sovereign	1,861	-	1,559	3,420	3,002
Bank	3,356	70	6,244	9,670	9,246
Residential Mortgages	37,023	7,834	-	44,857	43,060
Other Retail	7,922	-	-	7,922	7,947
Retail SME	5,118	22	-	5,140	4,875
Total IRB approach	79,205	11,700	27,323	118,228	113,200
Specialised Lending	4,395	805	940	6,140	5,934
Subject to Standardised approach					
Corporate	-	747	-	747	724
Residential Mortgages	2,264	-	-	2,264	2,284
Other Retail	3,272	-	-	3,272	3,542
Total Standardised approach	5,536	747	-	6,283	6,550
Other Assets	13,324	3,415	450	17,189	14,959
Total Gross Credit Exposures	102,460	16,667	28,713	147,840	140,643

5.0 Credit Risk Measurement
continued

APS 330 Table 7(b) (continued)

	As at 31 March 2018				For the 6 months to 31 March 2018
		Off Balance sheet			
	On Balance Sheet $m	Non-market related $m	Market related $m	Total $m	Average Exposures $m
Subject to IRB approach					
Corporate	21,382	3,694	14,068	39,144	38,311
SME Corporate	3,201	577	-	3,778	3,628
Sovereign	1,633	-	950	2,583	2,332
Bank	3,543	46	5,232	8,821	8,397
Residential Mortgages	33,437	7,825	-	41,262	39,110
Other Retail	7,973	-	-	7,973	7,718
Retail SME	4,590	19	-	4,609	4,624
Total IRB approach	75,759	12,161	20,250	108,170	104,120
Specialised Lending	4,320	829	580	5,729	5,541
Subject to Standardised approach					
Corporate	-	701	-	701	820
Residential Mortgages	2,303	-	-	2,303	2,305
Other Retail	3,813	-	-	3,813	4,354
Total Standardised approach	6,116	701	-	6,817	7,479
Other Assets	12,169	213	347	12,729	13,315
Total Gross Credit Exposures	98,364	13,904	21,177	133,445	130,455

APS 330 Table 7(f) & (i)

	As at 30 September 2018				For the 6 months to 30 September 2018	
	Gross Credit Exposure $m	Impaired Facilities $m	Past Due > 90 days[1] $m	Specific Provisions $m	Charges for Specific Provisions $m	Write-offs[5] $m
Subject to IRB approach						
Corporate[2]	48,894	373	46	(39)	(28)	-
SME Corporate[2]	4,465	68	66	(25)	(6)	-
Sovereign	3,420	-	-	-	-	-
Bank	9,670	-	-	-	-	-
Residential Mortgages	44,857	223	101	(5)	(1)	-
Other Retail	7,922	95	-	(28)	(14)	-
Retail SME	5,140	43	-	(12)	(8)	-
Total IRB approach	124,368	802	213	(109)	(57)	-
Subject to Standardised approach						
Corporate	747	-	-	-	-	-
Residential Mortgages[3]	2,264	-	192	-	-	-
Other Retail	3,272	78	-	(34)	(17)	-
Total Standardised approach	6,283	78	192	(34)	(17)	-
Other Assets	17,189	153[4]	-	-	-	-
Total	147,840	1,033	405	(143)	(74)	-

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 Past due > 90 days predominantly relates to defaulted exposures acquired at a discount in the CAF Lending business.

4 Includes other real estate owned and other assets acquired through security enforcement subsequent to facility foreclosure.

5 Under AASB 9, no more direct Profit & Loss write-offs.

5.0 Credit Risk Measurement
continued

APS 330 Table 7(f) & (i)

	As at 31 March 2018				For the 6 months to 31 March 2018	
	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 $m
Subject to IRB approach						
Corporate[2]	44,286	255	43	(58)	(33)	(7)
SME Corporate[2]	4,365	40	42	(24)	(4)	-
Sovereign	2,583	-	-	-	-	-
Bank	8,821	-	-	-	-	-
Residential Mortgages	41,262	190	97	(4)	-	-
Other Retail	7,973	89	-	(17)	(3)	(19)
Retail SME	4,609	40	-	(8)	(2)	(9)
Total IRB approach	113,899	614	182	(111)	(42)	(35)
Subject to Standardised approach						
Corporate	701	-	-	-	-	-
Residential Mortgages[3]	2,303	-	223	-	-	-
Other Retail	3,813	62	7	(12)	-	(32)
Total Standardised approach	6,817	62	230	(12)	-	(32)
Other Assets[4]	12,729	120[4]	-	-	-	-
Total	133,445	796	412	(123)	(42)	(67)

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 Past due > 90 days predominantly relates to defaulted exposures acquired at a discount in the CAF Lending business.
4 Other assets impaired facilities include other real estate owned subsequent to facility foreclosure.

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 30 September 2018				
Portfolio Type	**Asia Pacific $m**	**Australia $m**	**EMEA* $m**	**Americas $m**	**Total $m**
Corporate	**5,180**	**8,241**	**19,065**	**17,155**	**49,641**
SME Corporate	**-**	**4,465**	**-**	**-**	**4,465**
Sovereign	**253**	**1,070**	**1,290**	**807**	**3,420**
Bank	**1,009**	**2,182**	**4,641**	**1,838**	**9,670**
Residential Mortgages	**126**	**46,022**	**940**	**33**	**47,121**
Other Retail	**-**	**10,472**	**618**	**104**	**11,194**
Retail SME	**-**	**5,140**	**-**	**-**	**5,140**
Other Assets	**1,403**	**5,360**	**8,541**	**1,885**	**17,189**
Total Gross Credit Exposure	**7,971**	**82,952**	**35,095**	**21,822**	**147,840**

*EMEA represents Europe, Middle East and Africa

	As at 31 March 2018				
Portfolio Type	Asia Pacific $m	Australia $m	EMEA* $m	Americas $m	Total $m
Corporate	4,185	7,700	16,331	16,771	44,987
SME Corporate	-	4,365	-	-	4,365
Sovereign	187	1,128	825	443	2,583
Bank	722	2,167	4,445	1,487	8,821
Residential Mortgages	102	42,454	981	28	43,565
Other Retail	-	11,127	566	93	11,786
Retail SME	-	4,609	-	-	4,609
Other Assets	1,637	1,970	7,586	1,536	12,729
Total Gross Credit Exposure	6,833	75,520	30,734	20,358	133,445

*EMEA represents Europe, Middle East and Africa

5.0 Credit Risk Measurement
continued

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 30 September 2018				
Portfolio Type	**Financial Institution $m**	**Government $m**	**Corporate $m**	**Retail $m**	**Total $m**
Corporate	**15,861**	**271**	**33,123**	**386**	**49,641**
SME Corporate	**224**	**-**	**3,721**	**520**	**4,465**
Sovereign	**1,898**	**1,503**	**19**	**-**	**3,420**
Bank	**9,670**	**-**	**-**	**-**	**9,670**
Residential Mortgages	**1,498**	**-**	**1,403**	**44,220**	**47,121**
Other Retail	**34**	**-**	**1,135**	**10,025**	**11,194**
Retail SME	**5**	**-**	**3,362**	**1,773**	**5,140**
Other Assets	**7,313**	**252**	**9,600**	**24**	**17,189**
Total Gross Credit Exposure	**36,503**	**2,026**	**52,363**	**56,948**	**147,840**

	As at 31 March 2018				
Portfolio Type	Financial Institution $m	Government $m	Corporate $m	Retail $m	Total $m
Corporate	12,583	374	31,387	643	44,987
SME Corporate	249	-	3,593	523	4,365
Sovereign	1,521	1,056	6	-	2,583
Bank	8,794	-	27	-	8,821
Residential Mortgages	1,431	-	1,304	40,830	43,565
Other Retail	47	-	1,227	10,512	11,786
Retail SME	5	-	2,990	1,614	4,609
Other Assets	3,352	259	9,109	9	12,729
Total Gross Credit Exposure	27,982	1,689	49,643	54,131	133,445

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 30 September 2018			
Portfolio Type	**≤1 year $m**	**1 ≤ 5 years $m**	**> 5 years $m**	**Total $m**
Corporate	**28,157**	**16,571**	**4,913**	**49,641**
SME Corporate	**916**	**2,942**	**607**	**4,465**
Sovereign	**3,024**	**381**	**15**	**3,420**
Bank	**7,284**	**1,667**	**719**	**9,670**
Residential Mortgages	**124**	**347**	**46,650**	**47,121**
Other Retail	**1,571**	**8,424**	**1,199**	**11,194**
Retail SME	**658**	**4,410**	**72**	**5,140**
Other Assets	**6,440**	**8,164**	**2,585**	**17,189**
Total Gross Credit Exposure	**48,174**	**42,906**	**56,760**	**147,840**

	As at 31 March 2018			
Portfolio Type	≤1 year $m	1 ≤ 5 years $m	> 5 years $m	Total $m
Corporate	23,811	15,362	5,814	44,987
SME Corporate	737	2,985	643	4,365
Sovereign	2,240	304	39	2,583
Bank	6,335	1,803	683	8,821
Residential Mortgages	113	375	43,077	43,565
Other Retail	1,594	8,864	1,328	11,786
Retail SME	534	4,011	64	4,609
Other Assets	5,876	5,081	1,772	12,729
Total Gross Credit Exposure	41,240	38,785	53,420	133,445

5.0 Credit Risk Measurement
continued

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 or Moody's 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

[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 30 September 2018 $m	As at 31 March 2018 $m
Subject to IRB approach		
Corporate	48,894	44,286
SME Corporate	4,465	4,365
Sovereign	3,420	2,583
Bank	9,670	8,821
Residential Mortgages	44,857	41,262
Other Retail	7,922	7,973
Retail SME	5,140	4,609
Total IRB approach	124,368	113,899
Subject to Standardised approach		
Corporate	747	701
Residential Mortgages	2,264	2,303
Other Retail	3,272	3,813
Total Standardised approach	6,283	6,817
Other Assets[1]	17,189	12,729
Total Gross Credit Exposure	147,840	133,445

1 The major components of Other Assets are operating lease residuals, other debtors and unsettled trades.

6.0 Calculation of Credit Risk Exposures
continued

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 30 September 2018		As at 31 March 2018	
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%	**54**	**-**	29	-
> 0% ≤ 20%	**-**	**-**	-	-
> 20% ≤ 35%	**70**	**70**	75	75
> 35% ≤ 50%	**929**	**929**	954	954
> 50% ≤ 75%	**625**	**625**	592	592
> 75% ≤ 100%	**4,605**	**4,605**	5,167	5,167
> 100% ≤ 150%	**-**	**-**	-	-
> 150%	**-**	**-**	-	-
Total	**6,283**	**6,229**	6,817	6,788

IRB Approach Exposures

Specialised lending exposures subject to supervisory slotting	**Gross Credit Exposure**	
Risk Weight	**As at 30 September 2018 $m**	As at 31 March 2018 $m
70%	**413**	442
90%	**1,658**	2,036
115%	**3,406**	2,709
250%	**51**	54
Default[1]	**612**	488
Total	**6,140**	5,729

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

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 30 September 2018 PD Grade							
Non-Retail	**0 < 0.03% $m**	**0.03% < 0.15% $m**	**0.15% < 0.5% $m**	**0.5% < 3% $m**	**3% < 10% $m**	**10% < 100% $m**	**Default $m**	**Total Gross Credit Exposure $m**
Corporate	**642**	**15,209**	**9,076**	**13,041**	**7,115**	**2,520**	**1,291**	**48,894**
SME Corporate	**-**	**-**	**3**	**3,000**	**1,160**	**169**	**133**	**4,465**
Sovereign	**2,626**	**790**	**1**	**3**	**-**	**-**	**-**	**3,420**
Bank	**2,956**	**6,394**	**181**	**103**	**36**	**-**	**-**	**9,670**
Total Gross Credit Exposure	**6,224**	**22,393**	**9,261**	**16,147**	**8,311**	**2,689**	**1,424**	**66,449**

	As at 31 March 2018 PD Grade							
Non-Retail	0 < 0.03% $m	0.03% < 0.15% $m	0.15% < 0.5% $m	0.5% < 3% $m	3% < 10% $m	10% < 100% $m	Default $m	Total Gross Credit Exposure $m
Corporate	972	11,764	8,212	13,265	6,214	2,836	1,023	44,286
SME Corporate	-	6	32	2,946	1,024	280	77	4,365
Sovereign	2,089	406	52	36	-	-	-	2,583
Bank	2,971	5,261	474	67	48	-	-	8,821
Total Gross Credit Exposure	6,032	17,437	8,770	16,314	7,286	3,116	1,100	60,055

6.0 Calculation of Credit Risk Exposures
continued

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 30 September 2018 PD Grade							
Undrawn Commitments	**0 < 0.03% $m**	**0.03% < 0.15% $m**	**0.15% < 0.5% $m**	**0.5% < 3% $m**	**3% < 10% $m**	**10% < 100% $m**	**Default $m**	**Total $m**
Corporate	**17**	**651**	**528**	**976**	**528**	**32**	**12**	**2,744**
SME Corporate	**-**	**-**	**2**	**377**	**109**	**7**	**4**	**499**
Bank	**-**	**-**	**5**	**11**	**-**	**-**	**-**	**16**
Total Undrawn Commitments	**17**	**651**	**535**	**1,364**	**637**	**39**	**16**	**3,259**

	As at 31 March 2018 PD Grade							
Undrawn Commitments	0 < 0.03% $m	0.03% < 0.15% $m	0.15% < 0.5% $m	0.5% < 3% $m	3% < 10% $m	10% < 100% $m	Default $m	Total $m
Corporate	31	906	896	1,030	400	105	2	3,370
SME Corporate	-	-	5	365	106	15	-	491
Bank	-	-	-	10	-	-	-	10
Total Undrawn Commitments	31	906	901	1,405	506	120	2	3,871

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 30 September 2018 Expected Loss Categories					
Retail	**0 < 0.1% $m**	**0.1% < 0.3% $m**	**0.3% < 3% $m**	**3% < 10% $m**	**10% < 100% $m[1]**	**Total Gross Credit Exposure $m**
Residential Mortgages	**18,501**	**21,435**	**4,102**	**499**	**320**	**44,857**
Other Retail	**-**	**3,452**	**3,562**	**804**	**104**	**7,922**
Retail SME	**230**	**237**	**3,710**	**893**	**70**	**5,140**
Total Gross Credit Exposure	**18,731**	**25,124**	**11,374**	**2,196**	**494**	**57,919**

[1] Includes best estimates expected loss for retail IRB defaulted exposures.

	As at 31 March 2018 Expected Loss Categories					
Retail	0 < 0.1% $m	0.1% < 0.3% $m	0.3% < 3% $m	3% < 10% $m	10% < 100% $m[1]	Total Gross Credit Exposure $m
Residential Mortgages	16,239	19,826	4,440	475	282	41,262
Other Retail	-	3,330	3,680	874	89	7,973
Retail SME	190	205	3,437	723	54	4,609
Total Gross Credit Exposure	16,429	23,361	11,557	2,072	425	53,844

[1] Includes best estimates expected loss for retail IRB defaulted exposures.

6.0 Calculation of Credit Risk Exposures
continued

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 30 September 2018 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	**6,098**	**1,446**	**258**	**28**	**2**	**7,832**
Retail SME	**19**	**1**	**-**	**-**	**-**	**20**
Total Undrawn Commitments	**6,117**	**1,447**	**258**	**28**	**2**	**7,852**

	As at 31 March 2018 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	5,927	1,625	244	27	-	7,823
Retail SME	18	-	-	-	-	18
Total Undrawn Commitments	5,945	1,625	244	27	-	7,841

7.0 Provisioning

7.1 Impaired Facilities and Past Due

Facility 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.

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 as per AASB 9), are allocated to GRCL as they are held against future, presently unidentified losses. ECL provisions are determined based on the probability of default (PD) over the next 12 months and the life time 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 as per AASB 9) deemed ineligible to be included in the GRCL, are considered regulatory specific provisions.

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 30 September 2018, the total REL was $1,297 million (31 March 2018: $1,153 million), with the excess of REL over eligible provisions resulting in a Common Equity Tier 1 deduction of $376 million (31 March 2018: $428 million).

7.0 Provisioning
continued

7.4 Provisions by Counterparty Type

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

APS 330 Table 7(f)

	As at 30 September 2018			As at 31 March 2018		
	Impaired Facilities $m	**Past Due >90 days $m**	**Specific Provisions $m**	Impaired Facilities $m	Past Due >90 days $m	Individually Assessed Provisions $m
Subject to IRB approach						
Corporate	**373**	**46**	**(39)**	255	43	(58)
SME Corporate	**68**	**66**	**(25)**	40	42	(24)
Residential Mortgages	**223**	**101**	**(5)**	190	97	(4)
Other Retail	**95**	**-**	**(28)**	89	-	(17)
Retail SME	**43**	**-**	**(12)**	40	-	(8)
Total IRB approach	**802**	**213**	**(109)**	614	182	(111)
Subject to Standardised approach						
Residential Mortgages[1]	**-**	**192**	**-**	-	223	-
Other Retail	**78**	**-**	**(34)**	62	7	(12)
Total Standardised approach	**78**	**192**	**(34)**	62	230	(12)
Other Assets	**153[2]**	**-**	**-**	120[2]	-	-
Total	**1,033**	**405**	**(143)**	796	412	(123)

Additional regulatory specific provisions[3]	**(243)**

1 Past due > 90 days predominantly relates to defaulted exposures acquired at a discount in the CAF Lending business.

2 Includes other real estate owned and other assets acquired through security enforcement subsequent to facility foreclosure.

3 Includes stage 2 provisions deemed ineligible for GRCL. Combined with $45 million of stage 3 provisions (which are not specific provisions on impaired facilities) primarily related to IRB Corporate and Standardised Other Retail.

APS 330 Table 9(e)

	For the 6 months to 30 September 2018		For the 6 months to 31 March 2018	
	Charges for Specific provisions $m	**Write-offs[1] $m**	Charges for Individually Assessed provisions $m	Write-offs $m
Subject to IRB approach				
Corporate	**(28)**	**-**	(33)	(7)
SME Corporate	**(6)**	**-**	(4)	-
Residential Mortgages	**(1)**	**-**	-	-
Other Retail	**(14)**	**-**	(3)	(19)
Retail SME	**(8)**	**-**	(2)	(9)
Total IRB approach	**(57)**	**-**	(42)	(35)
Subject to Standardised approach				
Other Retail	**(17)**	**-**	-	(32)
Total Standardised approach	**(17)**	**-**	-	(32)
Total	**(74)**	**-**	(42)	(67)

1 Under AASB 9, no more direct Profit & Loss write-offs.

7.0 Provisioning
continued

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 30 September 2018			
Geographic Region	**Impaired Facilities $m**	**Past due > 90 days $m**	**Specific Provisions $m**	**GRCL $m**
Australia	**555**	**173**	**(111)**	**(105)**
EMEA	**30**	**205**	**(1)**	**(20)**
Americas	**446**	**26**	**(31)**	**(34)**
Asia Pacific	**2**	**1**	**-**	**(1)**
Total	**1,033**	**405**	**(143)**	**(160)**
Additional regulatory specific provisions			**(243)**	

	As at 31 March 2018			
Geographic Region	Impaired Facilities $m	Past due > 90 days $m	Individually Assessed Provisions $m	Collective Provisions $m
Australia	455	146	(77)	(169)
EMEA	16	229	(1)	(41)
Americas	321	35	(44)	(49)
Asia Pacific	4	2	(1)	(1)
Total	796	412	(123)	(260)

7.6 General Reserve for Credit Losses

APS 330 Table 7(j)

	As at 30 September 2018 $m	As at 31 March 2018 $m
General reserve for credit losses before tax	**160**	249
Tax effect	**(41)**	(58)
General reserve for credit losses	**119**	191

7.0 Provisioning
continued

7.7 Movement in Provisions

The table below shows the movement of provisions over the 6 months to 30 September 2018.

APS 330 Table 7(h)

	$m
Total Provisions as at 31 March 2018	**383[1]**
General Reserve for Credit Losses	
Balance at start of the period	249
Change on initial application of AASB 9	(84)
Reversed during the period	(28)
(Sale)/Acquisitions during the period	-
Net transfer (to)/from other provisions	23[2]
Adjustments for foreign exchange fluctuations	-
Total General Reserve for Credit Losses	**160**
Specific Provisions	
Balance at start of the period	123
Change on initial application of AASB 9	6
Charge to income statement	74
Assets written off or sold, previously provided for	(45)
Recovery of loans previously provided for	(15)
Net transfer (to)/from other provisions	-
Adjustments for foreign exchange fluctuations	-
Total Specific Provisions	**143**
Additional regulatory specific provisions	243[3]
Total Regulatory Specific Provisions	**386**
Total Provisions as at 30 September 2018	**546**

1 Includes opening balance of $11 million of regulatory specific provisions.

2 Transfer to additional regulatory specific provisions.

3 Includes stage 2 provisions deemed ineligible for GRCL. Combined with $45 million of stage 3 provisions (which are not specific provisions on impaired facilities) primarily related to IRB Corporate and Standardised Other Retail.

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 September 2018 period.

APS 330 Table 9(f)

	PD		Exposure at default	LGD	
Portfolio Type	**Estimated %**	**Actual %**	**Estimate to Actual Ratio**	**Estimated %**	**Actual %**
Corporate	1.71%	0.81%	N/A[1]	N/A[1]	N/A[1]
SME Corporate	2.42%	1.88%	N/A[1]	N/A[1]	N/A[1]
Sovereign	0.13%	0.00%	N/A[1]	N/A[1]	N/A[1]
Bank	0.12%	0.00%	N/A[1]	N/A[1]	N/A[1]
Residential Mortgages[2]	1.16%	1.16%	100%	20.24%	4.41%
Other Retail[2]	1.73%	1.67%	111%	47.86%	26.85%

[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. 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.

8.2 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 30 September 2018			
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	**48,894**	**2,467**	**76**	**2,394**
SME Corporate	**4,465**	**61**	**805**	**-**
Sovereign	**3,420**	**-**	**-**	**-**
Bank	**9,670**	**1,705**	**-**	**5**
Residential Mortgages	**44,857**	**N/A**	**N/A**	**-**
Other Retail	**7,922**	**N/A**	**N/A**	**-**
Retail SME	**5,140**	**N/A**	**N/A**	**220**
Total IRB approach	**124,368**	**4,233**	**881**	**2,619**

	As at 31 March 2018			
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	44,286	1,862	50	1,942
SME Corporate	4,365	80	806	-
Sovereign	2,583	-	-	-
Bank	8,821	1,044	-	26
Residential Mortgages	41,262	N/A	N/A	-
Other Retail	7,973	N/A	N/A	-
Retail SME	4,609	N/A	N/A	170
Total IRB approach	113,899	2,986	856	2,138

8.0 Credit Risk Mitigation
continued

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 current exposure method, which reflects expected exposure to the counterparty and its risk-rating. Economic capital also reflects correlations and diversification impacts across risk types.

As at 30 September 2018, a unilateral one-notch and two-notch downgrade in the MBL's rating would have resulted in a further $371 million and $433 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)

Credit equivalent amounts for counterparty exposures	As at 30 September 2018 $m	As at 31 March 2018 $m
Replacement cost	15,607	11,253
Potential future exposure	18,682	14,382
Gross credit equivalent amount	34,289	25,635
Comprising:		
Interest rate contracts	2,299	2,312
Credit derivative contracts	191	206
Equity contracts	1,862	1,932
Foreign exchange and gold contracts	9,679	8,249
Commodities and precious metals contracts	20,258	12,936
Gross credit equivalent amount	34,289	25,635
Less: Effect of netting arrangements	15,675	11,606
Credit equivalent amount after netting	18,614	14,029
Less: Collateral amount		
Eligible financial collateral	3,428	2,139
Other eligible collateral	-	-
Net credit equivalent amount	15,186	11,890

APS 330 Table 11(c)

	As at 30 September 2018		As at 31 March 2018	
Notional amount of credit derivatives	Protection Bought $m	Protection Sold $m	Protection Bought $m	Protection Sold $m
Own credit portfolio	1,309	2,165	1,670	2,421
Client intermediation activities	-	-	-	-
Total	1,309	2,165	1,670	2,421
Credit default swaps (CDS)	1,226	1,646	1,559	1,966
Total return swaps	83	519	111	455
Total	1,309	2,165	1,670	2,421

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 Australian Diversified Income (High Grade) Fund
- Macquarie Australian Diversified Income Fund
- Macquarie Core Australian Fixed Interest Fund
- Macquarie Dynamic Bond Fund
- Macquarie Enhanced Australian Fixed Interest Fund
- Macquarie Enhanced Global Bond Fund
- Macquarie Global Income Opportunities Fund
- Macquarie Life Superannuation Approved Deposit Fund
- Macquarie True Index Sovereign Bond Fund
- Macquarie True Index Cash Fund
- Macquarie Debt Market Opportunity 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 Prudential, Capital & Markets (PCM) 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.

9.0 Securitisation
continued

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.

In Macquarie's case, it has been determined that under Australian Accounting Standards, Macquarie should consolidate 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. 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.

Banking book securitised assets consolidated by Macquarie are held on the balance sheet at amortised cost. Securitised exposures consolidated by Macquarie 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, the likelihood of an outflow of resources is assessed and a contingent liability disclosed as required. 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.

9.2 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 30 September 2018		
	Total outstanding exposures securitised		
Exposure Type	**ADI originated assets[1] $m**	**ADI as sponsor[2] $m**	**Other $m**
Banking Book			
Residential Mortgages	**20,430**	**156**	**-**
Credit cards and other personal loans	**-**	**-**	**-**
Auto and equipment finance	**5,672**	**-**	**-**
Total Banking Book	**26,102**	**156**	**-**
Trading Book			
Residential Mortgages	**-**	**-**	**-**
Credit cards and other personal loans	**-**	**-**	**-**
Auto and equipment finance	**-**	**-**	**-**
Other	**-**	**-**	**-**
Total Trading Book	**-**	**-**	**-**
Total	**26,102**	**156**	**-**

[1] Included in the above are assets of $26,102 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 2018		
	Total outstanding exposures securitised		
Exposure Type	ADI originated assets[1] $m	ADI as sponsor[2] $m	Other $m
Banking Book			
Residential Mortgages	20,644	173	-
Credit cards and other personal loans	-	-	-
Auto and equipment finance	5,708	-	-
Total Banking Book	26,352	173	-
Trading Book			
Residential Mortgages	-	-	-
Credit cards and other personal loans	-	-	-
Auto and equipment finance	-	-	-
Other	-	-	-
Total Trading Book	-	-	-
Total	26,352	173	-

[1] Included in the above are assets of $26,224 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.

9.0 Securitisation
continued

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 30 September 2018			
	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	20,430	167	82	-
Credit cards and other personal loans	-	-	-	-
Auto and equipment finance	5,672	76	-	-
Total	26,102	243	82	-

1 Included in the above are assets of $26,102 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 $243 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 $82 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 2018			
	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	20,644	151	82	-
Credit cards and other personal loans	-	-	-	-
Auto and equipment finance	5,708	87	-	-
Total	26,352	238	82	-

1 Included in the above are assets of $26,224 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 $233 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 $80 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in the Level 2 regulatory group.

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 30 September 2018 $m	As at 31 March 2018 $m
Banking Book		
Residential Mortgages	482[1]	-
Credit cards and other personal loans	-	-
Auto and equipment finance	-	-
Total Banking Book	482	-
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.

9.0 Securitisation
continued

9.2.4 Securitisation Activity

Over the 6 months to 30 September 2018, 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 6 months to 30 September 2018		
	Value of loans sold or originated into securitisation		
Exposure Type	**ADI originated $m**	**ADI as sponsor $m**	**Recognised gain or loss on sale $m**
Banking Book			
Residential Mortgages	**3,696**	**-**	**-**
Credit cards and other personal loans	**-**	**-**	**-**
Auto and equipment finance[1]	**1,386**	**-**	**-**
Other	**-**	**-**	**-**
Total Banking Book	**5,082**	**-**	**-**
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 6 months to 31 March 2018		
	Value of loans sold or originated into securitisation		
Exposure Type	ADI originated $m	ADI as sponsor $m	Recognised gain or loss on sale $m
Banking Book			
Residential Mortgages	1,295	-	-
Credit cards and other personal loans	-	-	-
Auto and equipment finance[1]	220	-	-
Other	-	-	-
Total Banking Book	1,515	-	-
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.

Originating ADI Securitisation Exposures
APS 330 Table 12(r) – Trading Book

	As at 30 September 2018			
	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	-	-	-	-

Originating ADI Securitisation Exposures
APS 330 Table 12(r) – Trading Book

	As at 31 March 2018			
	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	-	-	-	-

9.0 Securitisation
continued

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 30 September 2018		
	Total outstanding exposures securitised[1]		
Exposure Type	On balance sheet $m	Off balance sheet $m	Total exposures $m
Banking Book			
Residential Mortgages	22,231	302	22,533
Credit cards and other personal loans[2]	74	14	88
Auto and equipment finance	5,890	27	5,917
Other	83	152	235
Total Banking Book	28,278	495	28,773
Trading Book			
Residential Mortgages	14	-	14
Credit cards and other personal loans	-	-	-
Auto and equipment finance	22	-	22
Other	20	-	20
Total Trading Book	56	-	56

[1] Included in the above are assets of $26,102 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 2018		
	Total outstanding exposures securitised[1]		
Exposure Type	On balance sheet $m	Off balance sheet $m	Total exposures $m
Banking Book			
Residential Mortgages	22,307	22	22,329
Credit cards and other personal loans	-	-	-
Auto and equipment finance	5,784	125	5,909
Other	144	146	290
Total Banking Book	28,235	293	28,528
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 $26,224 million in securitisation entities where Macquarie continues to hold capital behind the underlying pool of securitised assets in Level 2 regulatory group.

9.3.2 Exposure by Risk Weight Band

The table below sets out the Securitisation exposures by Risk Weight Band for Macquarie.

Banking Book

APS 330 Table 12(l)

	As at 30 September 2018		As at 31 March 2018	
	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%	1,641	324	1,701	335
>20% - 50%	39	16	5	2
>50% - 100%	398	259	367	239
>100% - 140%	63	66	-	-
Total	2,141	665	2,073	576

	As at 30 September 2018		As at 31 March 2018	
	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%	301	45	125	19
>20% - 50%	222	46	69	14
>50% - 100%	-	-	-	-
>100% - 150%	-	-	-	-
>150% - 650%	-	-	-	-
>650% - <1250%	-	-	-	-
Total	523	91	194	33

	As at 30 September 2018	As at 31 March 2018
	CET1 Deduction[1]	
Exposure Type	$m	$m
Residential Mortgages	2	2
Credit cards and other personal loans	-	-
Auto and equipment finance	3	6
Other	6	33
Total	11	41

[1] Includes Resecuritisation Exposures $2 million as at 30 September 2018 (31 March 2018: $2 million)

9.0 Securitisation
continued

Trading Book

APS 330 Table 12(t) & (u)

	As at 30 September 2018		As at 31 March 2018	
	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%	36	3	-	-
>20% - 50%	-	-	-	-
>50% - 100%	-	-	-	-
>100% - 140%	-	-	-	-
Total	36	3	-	-

	As at 30 September 2018		As at 31 March 2018	
	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 30 September 2018	As at 31 March 2018
	CET1 Deduction	
Exposure Type	$m	$m
Residential Mortgages	-	-
Credit cards and other personal loans	-	-
Auto and equipment finance	-	-
Other	20	-
Total	20	-

9.3.3 Resecuritisation Exposure

APS 330 Table 12(n) and (w)

Exposure Type	As at 30 September 2018 Gross Credit Exposure[1] $m	As at 31 March 2018 Gross Credit Exposure[1] $m
Banking book		
Exposures with Credit Risk Mitigation	-	-
Exposures without Credit Risk Mitigation	2	2
Exposure to Guarantors by ratings:	-	-
Total banking book	2	2
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 112 Capital Adequacy: Standardised Approach to Credit Risk banks are subject to a capital charge for potential mark-to-market losses on OTC derivatives (i.e. credit valuation adjustments – CVA – risk) associated with a deterioration in the credit worthiness of a counterparty.

The Credit Valuation Adjustment RWA as at 30 September 2018 is $4,002 million. The CVA capital requirement is shown in the table below.

CVA capital treatment	**As at 30 September 2018 $m**	As at 31 March 2018 $m
Total CVA capital charge (standardised formula)	**320**	297
Total CVA RWA[1]	**4,002**	3,712

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

11.0 Exposures to Central Counterparties

11.1 Exposures to Central Counterparties

Under Basel III, and in accordance with APS 112 Capital Adequacy: Standardised Approach to Credit ADI's are required to hold capital against exposures arising from trades cleared by central counterparties. This includes outstanding trade exposures, collateral placed with the clearing house (which is included in the definition of trade exposures), and default fund contributions.

The RWA on exposures arising from cleared trades as at 30 September 2018 is $1,541 million. Details of the components of these exposures are shown in the tables below.

	As at 30 September 2018		
Central counterparty trade exposure	**Trade Exposure $m**	**Prefunded Default Fund Contribution $m**	**RWA $m**
Exposures to qualifying central counterparty	**4,843**	**393**	**722**
Exposures to non-qualifying central counterparty	**-**	**-**	**-**
Bilateral exposures from cleared trades[1]	**1,567**	**-**	**819**
Total central counterparty exposures	**6,410**	**393**	**1,541**

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

	As at 31 March 2018		
Central counterparty trade exposure	Trade Exposure $m	Prefunded Default Fund Contribution $m	RWA $m
Exposures to qualifying central counterparty	4,252	263	591
Exposures to non-qualifying central counterparty	-	-	-
Bilateral exposures from cleared trades[1]	1,052	-	683
Total central counterparty exposures	5,304	263	1,274

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 portfolios from changes in market prices or volatility. Macquarie is exposed to the following risks in each of the major markets in which it trades:

- **foreign exchange and bullion**: changes in spot and forward exchange rates and bullion prices and the volatility of exchange rates and bullion prices
- **interest rates and debt securities**: changes in the level, shape and volatility of yield curves, the basis between different debt securities and derivatives and credit margins
- **equities**: changes in the price and volatility of individual equities, equity baskets and equity indices
- **commodities and energy**: changes in the price and volatility of base metals, agricultural commodities and energy products.

Macquarie is also exposed to the correlation of market prices and rates within and across markets.

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
- **position limits:** volume, maturity and open position limits are set on a large number of market instruments and securities to constrain concentration risk and to avoid the accumulation of risky, illiquid positions
- **Value-at-Risk (VaR) limits:** statistical measure that determines the potential loss in trading value at both a business and aggregate level.

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 specialist Quantitative Applications Division within RMG.

12.1.2 Aggregate Measures of Market Risk

Aggregate 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.

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 5,500 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.

12.0 Market Risk
continued

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 $5,886 million as at 30 September 2018 (31 March 2018: $3,303 million).

There was one hypothetical and no actual trading losses that exceeded the 1-day 99% VaR calculated for the 6 months ended 30 September 2018. 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 6 months to 30 September 2018				For the 6 months to 31 March 2018			
	VaR over the current reporting period				VaR over the previous reporting period			
	Mean value $m	**Max value $m**	**Min value $m**	**VaR (30-Sep) $m**	Mean value $m	Max value $m	Min value $m	VaR (31-Mar) $m
Commodities	**58**	**71**	**48**	**57**	27	41	15	40
Equities[1]	**10**	**14**	**7**	**11**	9	12	7	10
Foreign Exchange	**7**	**16**	**3**	**3**	4	8	2	4
Interest Rates	**7**	**7**	**6**	**6**	7	12	6	6
Aggregate	**57**	**69**	**47**	**59**	27	42	16	41

[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 6 months to 30 September 2018				For the 6 months to 31 March 2018			
	VaR over the current reporting period				VaR over the previous reporting period			
	Mean value $m	**Max value $m**	**Min value $m**	**VaR (30-Sep) $m**	Mean value $m	Max value $m	Min value $m	VaR (31-Mar) $m
Commodities	**63**	**104**	**39**	**84**	43	61	32	38
Equities[1]	**21**	**36**	**13**	**24**	27	42	12	18
Foreign Exchange	**21**	**72**	**5**	**13**	11	28	4	5
Interest Rates	**30**	**35**	**24**	**31**	32	42	26	27
Aggregate	**63**	**106**	**31**	**93**	44	62	19	38

[1] Equities figures incorporate the Equity specific risk amount.

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 30 September 2018 $m	As at 31 March 2018 $m
Debt specific risk	**58**	43

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 market risk limits. The residual risks in the banking book are not material but are nevertheless monitored and controlled by RMG and reported to senior management monthly. Macquarie measures interest rate risk 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 & 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 30 September 2018 is $1,188 million (31 March 2018: $753 million).

12.0 Market Risk
continued

APS 330 Table 17(b)

Stress testing: interest rate shock applied	As at 30 September 2018 Change in economic value $m	As at 31 March 2018 Change in economic value $m
AUD		
200 basis point parallel increase	(16.8)	(28.0)
200 basis point parallel decrease	17.8	27.4
CAD		
200 basis point parallel increase	(0.3)	-
200 basis point parallel decrease	0.3	-
EUR		
200 basis point parallel increase	1.5	3.2
200 basis point parallel decrease	0.9	(2.6)
GBP		
200 basis point parallel increase	(1.6)	(4.3)
200 basis point parallel decrease	4.0	5.1
USD		
200 basis point parallel increase	(25.1)	(25.6)
200 basis point parallel decrease	28.1	27.8

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

	As at 30 September 2018 $m	As at 31 March 2018 $m
IRRBB regulatory capital requirement – AUD	95.0	60.2

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 & 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 and 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. Investments accounted for using equity accounting are subject to recurring review and assessment for possible impairment. At each balance date, if there is an indication that an investment in an associate may be impaired, then the entire carrying amount of the investment in associate is tested for impairment by comparing the recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount. Any impairment losses are recognised in the income statement. Impairment losses recognised in the income statement for investments in associates are subsequently reversed through the income statement if there has been a change in the estimates used to determine the recoverable amount since the impairment loss was recognised.

13.1.2 Fair value Investments through Profit & Loss

Fair value of quoted investments in active markets are based on current bid prices. If the relevant market is not considered active (or the securities are unlisted), fair value is established by valuation techniques, including recent arm's length transactions, discounted cash flow analysis and other valuation techniques commonly used by market participants.

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.

13.0 Equity Risk
continued

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 30 September 2018		As at 31 March 2018	
Equity investments	**Carrying value $m**	**Fair value $m**	Carrying value $m	Fair value $m
Value of listed (publicly traded) equities[1]	**35**	**35**	18	18
Value of unlisted (privately held) equities[1]	**941**	**941**	846	846
Total	**976**	**976**	864	864

1 At MBL accounting consolidated group.

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 30 September 2018 $m**	As at 31 March 2018 $m
Equity investments[1]	**970**	864

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 30 September 2018 $m**	As at 31 March 2018 $m
Cumulative realised gains[1]	**19**	58
Total unrealised gains/(losses)	**6**	5
Total unrealised gains/(losses) included in Tier 1	**6**	5

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 99.9^{th} 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 30 September 2018 is $10,157 million (31 March 2018: $9,960 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 February 2018, APRA released a discussion paper on the Leverage ratio which included a minimum leverage ratio requirement of 4% for IRB banks. These changes are subject to consultation and are proposed to apply from 1 July 2019.

Macquarie Bank Group's September 2018 APRA leverage ratio has decreased by 0.4% from the March 2018 APRA leverage ratio of 6%, mainly due to an increase in leverage exposures during the period.

Summary leverage ratio

Capital and total exposures	**30 September 2018**	30 June 2018	31 March 2018	31 December 2017
Tier 1 Capital	**11,633**	11,235	11,720	11,306
Total exposures	**209,494**	201,416	194,668	196,577
Leverage ratio				
Macquarie Level 2 regulatory group Leverage ratio	**5.6%**	5.6%	6.0%	5.8%

15.1 Leverage Ratio Disclosure Template

APS 330 Table 18

Item		As at 30 September 2018
On-balance sheet exposures		**$m**
1	On-balance sheet items (excluding derivatives and securities financing transactions (SFTs), but including collateral)	**135,628**
2	(Asset amounts deducted in determining Tier 1 capital)	**(2,088)**
3	**Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 and 2)**	**133,540**
Derivative exposures		
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	**10,515**
5	Add-on amounts for potential future credit exposure (PFCE) associated with all derivatives transactions	**22,321**
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)	**(1,438)**
8	(Exempted central counterparty (CCP) leg of client-cleared trade exposures)	**(7,304)**
9	Adjusted effective notional amount of written credit derivatives	**2,165**
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	**(632)**
11	**Total derivative exposures (sum of rows 4 to 10)**	**25,627**
SFT exposures		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	**31,595**
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	**(1,245)**
14	CCR exposure for SFT assets	**2,665**
15	Agent transaction exposures	**-**
16	**Total SFT exposures (sum of rows 12 to 15)**	**33,015**
Other off-balance sheet exposures		
17	Off-balance sheet exposure at gross notional amount	**20,379**
18	(Adjustments for conversion to credit equivalent amounts)	**(3,067)**
19	Other off-balance sheet exposures (sum of rows 17 and 18)	**17,312**
Capital and total exposures		
20	**Tier 1 Capital**	**11,633**
21	**Total exposures (sum of rows 3, 11, 16 and 19)**	**209,494**
Leverage ratio		
22	**Leverage ratio**	**5.6%**

15.2 Summary Comparison of Accounting Assets versus Leverage Ratio Exposure Measure

APS 330 Table 19

Item		As at 30 September 2018 $m
1	Total consolidated assets as per published financial report	184,879
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(1,036)
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	7,762
5	Adjustment for SFTs (i.e. repos and similar secured lending)	2,665
6	Adjustment for off-balance sheet exposures (i.e. Conversion to credit equivalent amounts of off-balance sheet exposures)	17,312
7	Other adjustments	(2,088)
8	**Leverage ratio exposure**	209,494

16.0 Liquidity Coverage Ratio Disclosures

Liquidity Coverage Ratio disclosure template
APS 330 Table 20

		For the 3 months to 30 September 2018		For the 3 months to 30 June 2018	
	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)	*	13,154	*	12,805
2	Alternative liquid assets (ALA)	*	7,276	*	7,276
3	Reserve Bank of New Zealand (RBNZ) securities	*	-	*	-
	Cash outflows				
4	Retail deposits and deposits from small business customers, of which:	35,484	3,319	34,671	3,252
5	Stable deposits	12,991	649	12,679	634
6	Less stable deposits	22,493	2,670	21,992	2,618
7	Unsecured wholesale funding, of which:	15,351	9,674	15,948	10,761
8	Operational deposits (all counterparties) and deposits in networks for cooperative banks	5,105	1,269	4,741	1,177
9	Non-operational deposits (all counterparties)	8,191	6,350	8,826	7,203
10	Unsecured debt	2,055	2,055	2,381	2,381
11	Secured wholesale funding	*	1,533	*	1,027
12	Additional requirements, of which:	23,488	10,981	20,809	9,754
13	Outflows related to derivatives exposures and other collateral requirements	8,684	8,684	8,062	8,062
14	Outflows related to loss of funding on debt products	292	292	321	321
15	Credit and liquidity facilities	14,512	2,005	12,426	1,371
16	Other contractual funding obligations	13,677	13,655	13,850	13,820
17	Other contingent funding obligations	5,774	320	5,975	338
18	**Total cash outflows**	*	39,482	*	38,952
	Cash Inflows				
19	Secured lending (e.g. reverse repos)	23,279	6,286	22,230	6,386
20	Inflows from fully performing exposures	4,083	3,562	3,857	3,374
21	Other cash inflows	16,785	16,785	16,253	16,253
22	**Total cash inflows**	44,147	26,633	42,340	26,013
23	**Total liquid assets**	*	20,430	*	20,081
24	**Total net cash outflows**	*	12,849	*	12,939
25	**Liquidity Coverage Ratio (%)**[1]	*	159.0%	*	155.2%

* Undisclosed

1 The LCR for the 3 months to 30 September 2018 is calculated from 65 daily LCR observations (3 months to 30 June 2018 was calculated from 62 daily LCR observations).

The Liquidity Coverage Ratio (LCR)

The LCR requires sufficient levels of unencumbered, high-quality liquid assets (HQLA) to be held to meet expected net cash outflows (NCOs) under a regulatory-defined stress scenario lasting 30 calendar days. Macquarie has been compliant with the LCR at all times since the ratio was introduced as a minimum requirement in January 2015. Macquarie's 3 month average LCR to 30 September 2018 was 159% (based on 65 daily observations).

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 all 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)

For the half year ended 30 September 2018, Macquarie's HQLA portfolio was comprised of qualifying AUD and non-AUD HQLA 1, qualifying non-AUD HQLA 2, as well as AUD CLF eligible collateral.

Macquarie's CLF allocation for calendar year 2018 is $7,700 million, which is reflected in the disclosure template under 'Alternative Liquid Assets (ALA)'. Note the disclosed balance of $7,276 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).

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 are comprised of two 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 small portion on deposit with Macquarie. Although these funds are segregated from Macquarie, the balances are recorded on a gross basis on Macquarie's balance sheet and APRA require them to be profiled as offsetting 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.

It is important to note that in both of the cases above, the profiled outflow must be viewed in conjunction with the profiled inflow and the net effect of these balances on Macquarie's LCR is negligible.

17.0 Net Stable Funding Ratio Disclosures

Net Stable Funding Ratio disclosure template
APS 330 Table 21

	Net Stable Funding Ratio disclosure template	No maturity $m	<6 months $m	>=6 months to < 1yr $m	>= 1yr $m	Weighted value $m
		As At 30 September 2018				
		Unweighted value by residual maturity				
Available Stable Funding (ASF) Item						
1	**Capital**	12,830	-	-	3,207	16,037
2	Regulatory Capital	12,643	-	-	2,531	15,174
3	Other capital instruments	187	-	-	676	863
4	**Retail deposits and deposits from small business customers**	34,019	6,889	-	-	37,569
5	Stable deposits	12,350	2,691	-	-	14,289
6	Less stable deposits	21,669	4,198	-	-	23,280
7	**Wholesale funding**	10,669	28,248	6,515	35,281	43,932
8	Operational deposits	4,806	-	-	-	2,403
9	Other wholesale funding	5,863	28,248	6,515	35,281	41,529
10	**Liabilities with matching interdependent assets**	-	-	-	-	-
11	**Other Liabilities**	6,551	16,594	12	487	492
12	NSFR derivative liabilities	*	7,751			*
13	All other liabilities and equity not included in the above categories	6,551	8,843	12	487	492
14	**Total ASF**	*	*	*	*	98,030
Required Stable Funding (RSF) Item						
15(a)	**Total NSFR (HQLA)**	*	*	*	*	2,147
15(b)	**ALA**	*	*	*	*	770
15(c)	**RBNZ securities**	*	*	*	*	-
16	**Deposits held at other financial institutions for operational purposes**	-	-	-	-	-
17	**Performing loans and securities**	15,356	30,704	7,323	67,408	72,183
18	Performing loans to financial institutions secured by Level 1 HQLA	1,868	11,759	-	-	1,363
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	6,442	10,622	1,195	4,905	8,062
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:	1,423	7,374	5,337	27,653	32,514
21	With a risk weight of less than or equal to 35% under APS 112	-	140	104	1,866	1,395
22	Performing residential mortgages	-	319	262	34,417	24,967
23	With a risk weight equal to 35%	-	283	233	28,721	20,523
24	Securities that are not in default and do not qualify as HQLA, including exchange- traded equities	5,623	630	529	433	5,277
25	**Assets with matching interdependent**	-	-	-	-	-
26	**Other assets:**	4,989	8,946	2	24,837	13,025
27	Physical traded commodities	2,830	*	*	*	2,406
28	Assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs)	*	3,295			2,801
29	NSFR derivative assets	*	8,419			668
30	NSFR derivative liabilities before deduction of variation margin	*	10,681			2,136
31	All other assets not included in the above categories	2,159	8,946	2	2,442	5,014
32	**Off-balance sheet items**	*	17,340			770
33	**Total RSF**	*	*	*	*	88,895
34	**Net Stable Funding Ratio (%)**	*	*	*	*	110.3%

* Undisclosed

Net Stable Funding Ratio disclosure template
APS 330 Table 21

		As At 30 June 2018				
		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**	12,367	-	-	3,164	15,531
2	Regulatory Capital	12,180	-	-	2,475	14,655
3	Other capital instruments	187	-	-	689	876
4	**Retail deposits and deposits from small business customers**	32,908	6,120	-	-	35,853
5	Stable deposits	11,861	2,687	-	-	13,821
6	Less stable deposits	21,047	3,433	-	-	22,032
7	**Wholesale funding**	13,074	29,509	7,499	35,654	44,309
8	Operational deposits	4,885	-	-	-	2,442
9	Other wholesale funding	8,189	29,509	7,499	35,654	41,867
10	**Liabilities with matching interdependent assets**	-	-	-	-	-
11	**Other Liabilities**	3,609	15,034	-	554	554
12	NSFR derivative liabilities	*	7,076			*
13	All other liabilities and equity not included in the above categories	3,609	7,958	-	554	554
14	**Total ASF**	*	*	*	*	96,247
Required Stable Funding (RSF) Item						
15(a)	**Total NSFR (HQLA)**	*	*	*	*	2,208
15(b)	**ALA**	*	*	*	*	770
15(c)	**RBNZ securities**	*	*	*	*	-
16	**Deposits held at other financial institutions for operational purposes**	-	-	-	-	-
17	**Performing loans and securities**	12,430	34,798	5,927	67,188	70,502
18	Performing loans to financial institutions secured by Level 1 HQLA	1,763	15,195	-	-	1,696
19	Performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	5,366	11,899	610	4,375	7,269
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:	1,465	6,808	4,682	29,941	33,418
21	With a risk weight of less than or equal to 35% under APS 112	-	110	99	2,068	1,507
22	Performing residential mortgages	-	308	251	32,681	24,272
23	With a risk weight equal to 35%	-	275	225	26,020	18,736
24	Securities that are not in default and do not qualify as HQLA, including exchange- traded equities	3,836	588	384	191	3,847
25	**Assets with matching interdependent**	-	-	-	-	-
26	**Other assets:**	4,404	8,447	167	21,689	11,733
27	Physical traded commodities	2,505	*	*	*	2,129
28	Assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs)	*	2,900			2,465
29	NSFR derivative assets	*	7,795			719
30	NSFR derivative liabilities before deduction of variation margin	*	8,933			1,787
31	All other assets not included in the above categories	1,899	8,447	167	2,061	4,633
32	**Off-balance sheet items**	*	17,179			765
33	**Total RSF**	*	*	*	*	85,978
34	**Net Stable Funding Ratio (%)**	*	*	*	*	111.9%

* Undisclosed

17.0 Net Stable Funding Ratio Disclosures
continued

The Net Stable Funding Ratio (NSFR)

The NSFR is a regulatory metric that requires that "available stable funding" (ASF) be sufficient to cover "required stable funding" (RSF). Macquarie has been compliant with the NSFR at all times since the ratio was introduced as a minimum requirement in January 2018. Macquarie's NSFR on 30 June 2018 and 30 September 2018 was 111.9% and 110.3% respectively.

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 a number of additional internal liquidity scenarios covering both market-wide and Macquarie name-specific crises. The most binding of all scenarios (NSFR, LCR and internal) determines Macquarie's absolute minimum required level of cash and liquid assets. 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), 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 page 68.

Disclaimer

- The material in this document has been prepared by Macquarie Bank Limited ABN 46 008 583 542 (MBL) purely for the purpose of explaining the basis on which MBL has prepared and disclosed certain capital requirements and information about the management of risks relating to those requirements and for no other purpose. Information in this document should not be considered as advice or a recommendation to investors or potential investors in relation to holding, purchasing or selling securities or other financial products or instruments and does not take into account your particular investment objectives, financial situation or needs. Before acting on any information you should consider the appropriateness of information having regard to the matters, any relevant offer document and in particular, you should seek independent financial advice. No representation or warranty is made as to the accuracy, completeness or reliability of the information. All securities and financial product or instrument transactions involve risks, which include (among others) the risk of adverse or unanticipated market, financial or political developments and, in international transactions, currency risk.
- This document may contain forward looking statements that is, statements related to future, not past, events or other matters – including, without limitation, statements regarding our intent, belief or current expectations with respect to MBL's businesses and operations, market conditions, results of operation and financial condition, capital adequacy, provisions for impairments and risk management practices. Readers are cautioned not to place undue reliance on these forward looking statements. Macquarie does not undertake any obligation to publicly release the result of any revisions to these forward looking statements or to otherwise update any forward looking statements, whether as a result of new information, future events or otherwise, after the date of this document. Actual results may vary in a materially positive or negative manner. Forward looking statements and hypothetical examples are subject to uncertainty and contingencies outside MBL's control. Past performance is not a reliable indication of future performance.

  Unless otherwise specified all information is at 30 September 2018.
- Although Pillar 3 disclosures are intended to provide transparent capital 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 30 September 2018 $m	Table Reference
1	Directly issued qualifying ordinary shares (and equivalent for mutually-owned entities) capital	9,545	Table f
2	Retained earnings	2,341	
3	Accumulated other comprehensive income (and other reserves)	758	
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**	12,644	
	Common Equity Tier 1 capital : regulatory adjustments		
7	Prudential valuation adjustments	-	
8	Goodwill (net of related tax liability)	41	Table b
9	Other intangibles other than mortgage servicing rights (net of related tax liability)	158	Table b
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	74	Table a
11	Cash-flow hedge reserve	5	
12	Shortfall of provisions to expected losses	346	
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	27	
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)	2,014	
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	382	Table c
26e	of which: deferred tax assets not reported in rows 10, 21 and 25	124	Table a
26f	of which: capitalised expenses	553	
26g	of which: investments in commercial (non-financial) entities that are deducted under APRA prudential requirements	897	Table c
26h	of which: covered bonds in excess of asset cover in pools	-	
26i	of which: undercapitalisation of a non-consolidated subsidiary	-	
26j	of which: other national specific regulatory adjustments not reported in rows 26a to 26i	58	

	Common Equity Tier 1 capital: instruments and reserves $m	As at 30 September 2018 $m	Table Reference
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**	2,665	
29	**Common Equity Tier 1 Capital (CET1)**	9,979	
	Additional Tier 1 Capital: instruments	-	
30	Directly issued qualifying Additional Tier 1 instruments	1,468	
31	of which: classified as equity under applicable accounting standards	-	
32	of which: classified as liabilities under applicable accounting standards	1,468	
33	Directly issued capital instruments subject to phase out from Additional Tier 1	186	
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**	1,654	**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)**	1,654	
45	**Tier 1 Capital (T1=CET1+AT1)**	11,633	
	Tier 2 Capital: instruments and provisions	-	
46	Directly issued qualifying Tier 2 instruments	1,038	Table e
47	Directly issued capital instruments subject to phase out from Tier 2	676	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	26	
51	**Tier 2 Capital before regulatory adjustments**	1,740	
	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	-	
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	-	

Appendix 1 Regulatory Capital Reconciliation
continued

		As at 30 September 2018 $m	Table Reference
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)***	1,740	
59	***Total capital (TC=T1+T2)***	13,373	
60	***Total risk-weighted assets based on APRA standards***	96,000	
	Capital ratios and buffers		
61	***Common Equity Tier 1 (as a percentage of risk-weighted assets)***	10.4%	
62	***Tier 1 (as a percentage of risk-weighted assets)***	12.1%	
63	***Total capital (as a percentage of risk-weighted assets)***	13.9%	
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*	0.1%	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)***	10.4%	
	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*	60	Table c
73	*Significant investments in the ordinary shares of financial entities*	322	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)*	124	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)*	26	
77	*Cap on inclusion of provisions in Tier 2 under standardised approach*	138	
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*	402	
	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*	186	
83	*Amount excluded from AT1 instruments due to cap (excess over cap after redemptions and maturities)*	214	
84	*Current cap on T2 instruments subject to phase out arrangements*	676	
85	*Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)*	1,191	

1.2 Regulatory Balance Sheet as at 30 September 2018

	Macquarie Bank Group Consolidated[1] $m	Adjustment[2] $m	Level 2 Regulatory Balance Sheet $m	Template/ Reconciliation Table Reference
Assets				
Receivables from financial institutions	34,941	(54)	34,887	
Trading assets	19,514	(1)	19,513	
Derivative assets	17,901	(37)	17,864	
Other assets	18,486	(1,526)	16,960	
Financial Investments	5,160	-	5,160	
Loan assets	75,365	36	75,401	
Due from related body corporate entities	1,414	354	1,768	
Property, plant and equipment	10,917	(56)	10,861	
Interests in associates and joint ventures	752	(7)	745	
Intangible assets[3]	198	1	199	Table b
Investments in regulatory non-consolidated subsidiaries	-	287	287	Table c (Footnote 2)
Deferred tax assets	231	(33)	198	Table a
Total Assets	184,879	(1,036)	183,843	
Liabilities				
Trading liabilities	7,019	-	7,019	
Derivative liabilities	18,046	(386)	17,660	
Deposits	52,576	(1)	52,575	
Other liabilities	23,699	(1,210)	22,489	
Payables to financial institutions	13,688	(20)	13,668	
Due to related body corporate entities	15,243	588	15,831	
Debt issued	36,703	(1)	36,702	
Deferred tax liabilities	492	(3)	489	
Total liabilities excluding loan capital	167,466	(1,033)	166,433	
Loan capital	4,366	-	4,366	Table d
Total liabilities	171,832	(1,033)	170,799	
Net Assets	13,047	(3)	13,044	
Equity				
Contributed equity	9,937	1	9,938	Table f
Reserves	757	1	758	Row 3
Retained earnings	2,345	(4)	2,341	Row 2
Total capital and reserves attributable to equity holders of Macquarie Bank Limited	13,039	(2)	13,037	
Non-controlling Interests	8	(1)	7	Table g
Total equity	13,047	(3)	13,044	

1 As per Macquarie Bank Limited financial report as at 30 September 2018.

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.

Appendix 1 Regulatory Capital Reconciliation
continued

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

Table a	30 September 2018 $m	Template Reference
Deferred Tax Assets		
Total Deferred Tax Assets per Level 2 Regulatory Balance Sheet	198	
Less: Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	(74)	Row 10
Less: Deferred tax assets (temporary differences) - Amounts below prescribed threshold	(124)	Row 26e, 75
Total per Common Disclosure Template – Deferred Tax Asset – amount exceed 10%/15% threshold	**-**	**Row 21 / 25**

Table b	30 September 2018 $m	Template Reference
Intangible Assets		
Total Intangible Assets as per Level 2 Regulatory Balance Sheet	199	
Less: capitalised software and other intangibles	(99)	Row 9
Less: intangible component of deconsolidated subsidiaries	(59)	Row 9
Total per Common Disclosure Template – Goodwill	**41**	**Row 8**

Table c	30 September 2018 $m	Template Reference
Equity Investments		
Significant investment in financial entities[1,2]	322	Row 73
Non-significant investment in financial entities[1]	60	Row 72
Total Investments in financial institutions	382	Row 26d
Investment in commercial entities[1,2]	897	Row 26g
Total Equity Investments before applying prescribed threshold	1,279	
Less: amounts risk weighted under Harmonised Basel III guidelines	(1,279)	
Total per Common Disclosure Template – Equity Investments	**-**	**Row 18, 19, 23**

Table d	30 September 2018 $m	Template Reference
Additional Tier 1 Capital		
Total Loan Capital per Level 2 Regulatory Balance Sheet	4,366	
Less: Accrued interest	(4)	
Add: Capitalised expenses deducted in Common Equity Tier 1 Capital[3]	12	Included in Row 26f
Less: Tier 2 capital instruments reported in Table e	(2,906)	Table e
Additional Tier 1 Capital (MACS and BCN)	1,468	
Add: Other Equity Instruments (MIS) included in contributed equity	400	Table f
Less: Basel III transitional amortisation	(214)	
Total per Common Disclosure Template – Additional Tier 1 Capital	**1,654**	**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 $166 million of equity investments in regulatory non-consolidated subsidiaries. Included in investment in commercial entities is $121 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.

Table d (continued)	30 September 2018 $m	Template Reference
Additional Tier 1 Capital Instruments		
Macquarie Income Securities	186	
Macquarie Bank Capital Notes	430	
Macquarie Additional Capital Securities	1,038	
Total per Common Disclosure Template – Additional Tier 1 Capital	**1,654**	**Row 36**

Table e	30 September 2018 $m	Template Reference
Total Tier 2 Capital per Balance Sheet		
Total Tier 2 Capital per Balance Sheet	2,906	Table d
Less: Fair value hedge adjustments[1]	52	
Less: Accrued Interest	(53)	
Less: Foreign Exchange Gain Included in Balance Sheet	(71)	
Less: Basel III transitional amortisation	(1,120)	
Total per Common Disclosure Template – Tier 2 Capital	**1,714**	**Row 46+47**

Tier 2 Capital Instruments		
Subordinated Debt - EUR600m – eligible for transition	(291)	
Subordinated Debt - USD1.0bn – eligible for transition	(385)	
Subordinated Debt - USD750m– fully qualified Tier 2 instruments	(1,038)	
Total per Common Disclosure Template – Tier 2 Capital	**(1,714)**	**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: www.macquarie.com/au/about/investors

Table f	30 September 2018 $m	Template Reference
Contributed Equity		
Total Contributed Equity as per Level 2 Regulatory Balance Sheet	9,938	
Less: Additional tier 1 instruments (MIS) included in share capital	(400)	Table d
Add: Capitalised expenses deducted in Common Equity Tier 1 Capital	7	Included in Row 26f
Total per Common Disclosure Template – Contributed Equity	**9,545**	**Row 1**

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

Appendix 1 Regulatory Capital Reconciliation
continued

Table g	30 September 2018 $m	Template Reference
Non Controlling Interests		
Total Non Controlling Interests as per Level 2 Regulatory Balance Sheet	7	
Less: other non controlling interests not included in capital	(7)	
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
United Kingdom	7,857	0.500%	0.0508%	
Hong Kong	158	1.875%	0.0038%	
Norway	180	2.000%	0.0047%	
Sweden	75	2.000%	0.0019%	
Others	69,023	0.000%	0.0000%	
Total	77,293		0.0613%	**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

30 September 2018	Total Assets[1,2,3,4]	Total Liabilities[1,2,3,4]
Funds Management		
Elise Nominees Pty Limited	-	-
Macquarie Alternative Assets Management Limited	32	(13)
Macquarie Asset Management Inc.	7	(3)
Macquarie Australia Securities Pty Limited	1	(1)
Macquarie Financial Products Management Limited	21	(3)
Macquarie Fonds GmbH	-	-
Macquarie Fondsmanagement GmbH	-	-
Macquarie Global Bond Fund	-	-
Macquarie Investment Management (NZ) Limited	-	-
Macquarie Investment Management Ltd	164	(25)
Macquarie Investment Services Limited	1	-
Macquarie Management GmbH	1	-
Macquarie Master Geared Growth Fund	-	-
Macquarie Master Small Companies Fund	4	(4)
Macquarie NRAS Trust	-	-
Macquarie Prism Pty Limited	3	-
Macquarie Private Capital Management Limited	-	-
Macquarie Private Portfolio Management Limited	-	-
Macquarie Securities Management Pty Limited	1	-
Macquarie Treuvermögen GmbH	-	-
Macquarie Vermögenstreuhand GmbH	-	-
MIDF UK1 Guernsey GP Limited	2	(2)
MIDF UK1 LLP	-	-
MIDF UK1B Guernsey GP Limited	-	-
MGIDF Guernsey GP Limited	1	(1)
MIDF UK2 Guernsey GP Limited	-	-
Macquarie Private Debt Europe Limited	3	(2)
Macquarie Professional Series Global Equity Fund	1	(1)
Southeast Apartment Holdings Inc.	12	-
Non-Financial Operations		
Advantage Funding Services LLC	-	-
Avenal Power Center, LLC	23	(11)
Arbor Village Property Owner LLC	1	(1)
Bella Holdings LLC	-	-
Bella Property Owner LLC	1	-
Capital Meters Limited	67	(50)
Cheeryble Developments Limited	37	(29)
CMC Railroad, Inc.	72	(24)
Comercializadora Energia de la Reforma S. de R.L. de C.V.	81	(76)
Corona Energy Limited	33	-
Corona Energy Retail 1 Limited	53	(34)
Corona Energy Retail 2 Limited	42	(17)
Corona Energy Retail 3 Limited	6	-
Corona Energy Retail 4 Limited	85	(74)
Corona Energy Retail 5 Limited	-	(2)

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

30 September 2018	Total Assets[1,2,3,4]	Total Liabilities[1,2,3,4]
Corona Gas Management Limited	5	(4)
East Inwood Arbor, LLC	4	(7)
Energetics Design & Build Limited	78	(75)
Energetics Electricity Limited	78	(59)
Energetics Gas Limited	66	(49)
Energetics Holdco Limited	117	(90)
Energetics Midco Limited	44	-
Energetics Topco Limited	46	(1)
Energetics Networked Energy Ltd.	60	(47)
Keba Energy LLC	-	-
Liberty Green Renewables Indiana, LLC	3	(1)
Macquarie Commodities (Singapore) Pte. Limited	2	-
Macquarie Agricultural Services Pty Limited	-	-
Macquarie Business Solutions Pty Limited	2	-
Macquarie Corona Energy Holdings Limited	21	(2)
Macquarie Farm Assets and Resources Management Pty Limited	10	-
Macquarie Rotorcraft Leasing, Inc.	1	(1)
Outplan Pty Limited	-	-
PT Macquarie Commodities Indonesia	1	(1)
PT MPM Indonesia	-	-
Resources Marine Pte. Limited	7	-
Shelby Energy Holdings, LLC	-	-
Sterling TC Holdings LLC	-	-
Sterling TC Property Owner LLC	-	-
Summerset Holdings LLC	46	(37)
Summerset Property Owner LLC	-	-
Integra Springs Property Owner LLC	3	(6)
Energetics Networks UK Limited	1	(1)
Energetics Asset Management UK Limited	3	(4)
NASU Energy Storage Limited	-	(2)
PropertyIQ Pty Limited	12	(5)
Macquarie Electronics USA Inc	27	(1)
PropertyIQ Strata Pty Limited	1	-
ADL Software Pty Ltd	-	-
Sonne Solar Limited	11	-
ION Energy Pte Limited	-	-
Northeast Property Owner Inc.	44	(2)
Alchemy Telco Solutions Limited	7	(1)
Telco Two Pty Limited	-	-
Summer Housing SDA Trust	-	-
Summerset Intermediate Holdings 2 LLC	-	-
Mitochon Limited	-	-

30 September 2018	Total Assets[1,2,3,4]	Total Liabilities[1,2,3,4]
Insurance		
Macquarie Life Limited	648	(626)
Macquarie (Bermuda) Limited	39	(37)

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 period ended 30 September 2018. 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 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
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12 (h)	Performance of Assets Securitised	9.2.2
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Appendix 4 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).
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
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.

Appendix 4 Glossary of Terms
continued

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.
ECS	On 26 March 2012, MBL, acting through its London Branch, issued $US250 million of Exchangeable Capital Securities (ECS). ECS were subordinated, unsecured notes that paid discretionary, non-cumulative, semi-annual floating rate cash distributions. ECS were bought back on 20 June 2017.
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
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.

Appendix 4 Glossary of Terms
continued

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