National Australia Bank

PILLAR 3 REPORT

as at 30 September 2019

Incorporating the requirements of APS 330

National Australia Bank Limited ABN 12 004 044 937

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Section 1

Introduction

National Australia Bank Limited (NAB) is an Authorised Deposit-taking Institution (ADI) subject to regulation by the Australian Prudential Regulation Authority (APRA) under the authority of the *Banking Act 1959* (Cth). This document has been prepared in accordance with APRA Prudential Standard APS 330 *Public Disclosure*, which requires disclosure of information to the market relating to capital adequacy and risk management practices. APS 330 was established to implement the third pillar of the Basel Committee on Banking Supervision's (BCBS) framework for bank capital adequacy. In simple terms, the framework consists of three mutually reinforcing pillars.

Pillar 1 Minimum capital requirement	Pillar 2 Supervisory review process	Pillar 3 Market discipline
Minimum requirements for the level and quality of capital	Management's responsibility for capital adequacy to support risks beyond the minimum requirements, including an Internal Capital Adequacy Assessment Process (ICAAP)	Disclosure to the market of qualitative and quantitative aspects of risk management, capital adequacy and various risk metrics

This document describes the approach the Group, being NAB and its controlled entities, takes to manage risk, and provides detailed information about risk exposures, capital adequacy and liquidity.

Amounts are presented in Australian dollars unless otherwise stated, and have been rounded to the nearest million dollars ($m) except where indicated.

Capital Adequacy Methodologies

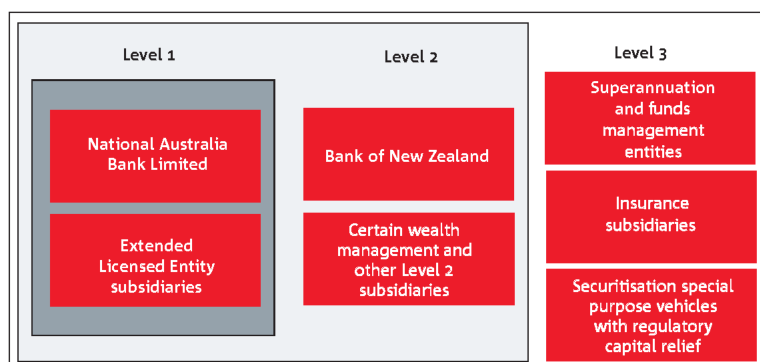
The Group uses the following approaches to measure capital adequacy as at 30 September 2019.

Credit Risk	Operational Risk	Non-traded Market Risk	Traded Market Risk
Advanced Internal Ratings-Based Approach (IRB)	Advanced Measurement Approach (AMA)	Internal Model Approach (IMA)	Standardised and Internal Model Approach (IMA)

Bank of New Zealand (BNZ) is a wholly owned subsidiary of the Group and is a registered bank under the *Reserve Bank of New Zealand Act 1989*. BNZ is subject to capital adequacy requirements mandated by the Reserve Bank of New Zealand (RBNZ), under which BNZ applies the internal ratings-based approach. BNZ credit risk exposures consolidated in the Group exposures are calculated under RBNZ requirements.

Scope of Application

APRA's measurement of financial strength, including capital adequacy, occurs at three levels of consolidation as illustrated below.



Level 1 comprises NAB and its subsidiary entities approved by APRA as part of the Extended Licensed Entity.

Level 2 comprises NAB and the entities it controls, excluding superannuation and funds management entities, insurance subsidiaries and securitisation special purpose vehicles to which assets have been transferred in accordance with the requirements for regulatory capital relief in APS 120 *Securitisation*. Level 2 controlled entities include BNZ and other financial entities such as broking, wealth advisory and leasing companies.

Level 3 comprises the consolidation of NAB and all of its subsidiaries.

This report applies to the Level 2 Group, headed by NAB, unless otherwise stated.

Section 2

Regulatory Reform

The Group remains focused on areas of regulatory change. Key reforms that may affect its capital and funding include:

'Unquestionably Strong' and Basel III Revisions

- In December 2017, the BCBS finalised the Basel III capital framework. APRA subsequently commenced consultation on revisions to the domestic capital framework in February 2018 and reaffirmed its intention to strengthen capital requirements for major Australian banks by 150 basis points, such that they are considered 'unquestionably strong'.
- APRA's consultation on revisions to the capital framework includes consideration of 'benchmarks for capital strength', 'risk sensitivity of the capital framework' and 'transparency, comparability and flexibility of the capital framework'.
- Final revised prudential standards in relation to the risk-weighting framework and other capital requirements are expected to be released in 2020, for proposed implementation by 1 January 2022.
- In October 2019, APRA proposed changes to the treatment of equity investments in subsidiaries for calculating Level 1 regulatory capital. APRA intends to finalise these changes in early 2020, for implementation by 1 January 2021.
- APRA has also proposed a minimum leverage ratio requirement of 3.5% for IRB ADIs and a revised leverage ratio exposure measurement methodology from 1 January 2022. The Group's leverage ratio as at 30 September 2019 of 5.55% (under current methodology) is disclosed in further detail in Table 4.1B *Capital and Leverage Ratios*.

Increased Loss-absorbing Capacity for ADIs

In July 2019, APRA released their framework for the implementation of an Australian loss-absorbing capacity regime, requiring an increase in Total capital of 3% of risk-weighted assets (RWA) for Domestic Systemically Important Banks (D-SIBs) by 1 January 2024. APRA has maintained its overall target calibration of 4% to 5% of RWA, and will consult on alternative methods for raising the additional loss-absorbing capacity equal to 1% to 2% of RWA over the next four years.

RBNZ Capital Review

The RBNZ is undertaking a review of the capital adequacy framework applied to registered banks incorporated in New Zealand. In December 2018, the RBNZ proposed amendments to the amount of regulatory capital required of locally incorporated banks, including:

- increases in RWA for banks that use the internal ratings-based approach, increased scalars and the introduction of standardised output floors
- an increase in the Tier 1 capital requirement to 16% of RWA.

The RBNZ is proposing various dates for implementation of the proposed changes, including increases in the Tier 1 capital requirement over a five-year period to 2024. RBNZ expect to publish final rules in December 2019.

Other regulatory changes of note include:

- The BCBS announced its revised market risk and Credit Value Adjustment (CVA) frameworks, which is due to come into effect from 1 January 2022 globally. In February 2018, APRA released its discussion paper on revisions to the capital framework, including market risk and CVA.
- APRA's standards on the non-capital components of the supervision of conglomerate groups (Level 3 framework) took effect on 1 July 2017. Level 3 capital requirements are expected to be determined following the finalisation of other domestic and international policy initiatives.
- The revised APS 222 Related Entity framework will take effect from 1 January 2021.
- The final stage of APS 221 Large Exposures framework will come into effect on 1 January 2020.
- The new Australian Accounting Standard AASB 16 *Leases* is applicable from 1 October 2019. AASB 16 requires lessees to recognise leases (subject to certain exceptions) on-balance sheet in a manner comparable to the current accounting for finance leases, which will be risk-weighted as non-lending asset exposures.

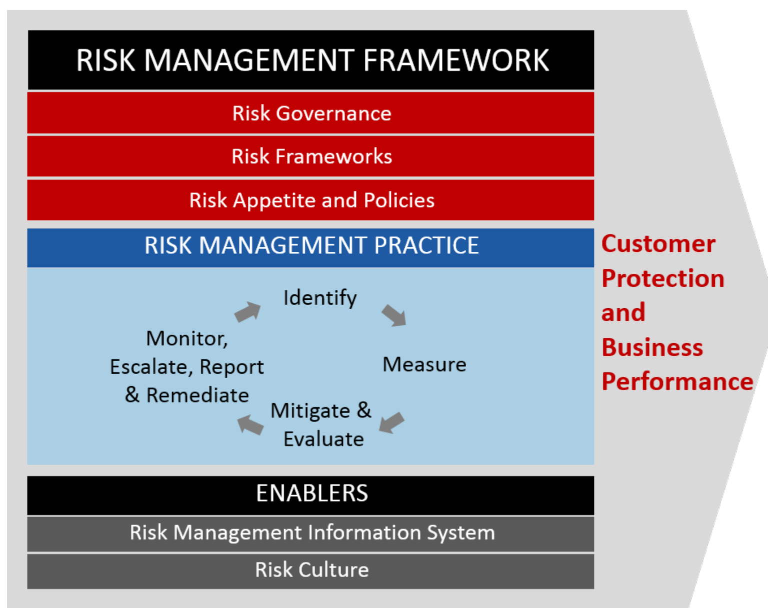
Section 3

Risk Governance and Management

Risk Management

Effective risk management, including having a Risk Management Strategy and sound culture, is essential to achieving NAB's vision to be Australia's leading bank, trusted by customers for exceptional service. Risk exists in all the Group's businesses and the environment in which it operates. The Risk Management Strategy describes the strategy for managing risk and the Group's Risk Management Framework. It is reviewed annually or more frequently if there is a material change to the Group's size, business mix and complexity or risk profile. It is approved by the Board and submitted to APRA.

The Group's Risk Management Framework is illustrated below. It consists of systems, structures, policies, processes and people within the Group that identify, measure, evaluate, mitigate, monitor and report on all internal and external sources of material risks.



The Group applies a Three Lines of Defence operating model in relation to the management of risk. The overarching principle of the model is that risk management capability must be embedded within the business to be effective. The role of each line of defence is as follows:

- 1st Line of Defence - Businesses own risks and obligations, and the controls and mitigation strategies that help manage them
- 2nd Line of Defence - A functionally segregated Risk function develops risk management frameworks, defines risk boundaries, provides objective review and challenge regarding the effectiveness of risk management within the first line businesses and executes specific risk management activities where a functional segregation of duties and/or specific risk capability is required
- 3rd Line of Defence - An independent Internal Audit function, reporting to the Board, monitors the end-to-end effectiveness of risk management and compliance with the Risk Management Framework.

The Group undertakes annual strategic planning to maintain alignment of the Group’s risk appetite and its business strategy. Specific performance targets and risk boundaries are established for the Group, legal entities, and individual businesses. Stress testing and scenario analysis are used to inform risk appetite.

Key outputs of the strategic planning process are the Strategic Plan, Financial Plan, Funding Strategy, Capital Management Strategy and Risk Appetite Statement. These documents collectively form the Group’s Business Plan, which is endorsed by management and approved by the Board.

The Board approves the ICAAP that seeks to ensure the Group holds sufficient capital resources to meet the requirements of its strategy, risk profile and risk appetite. The Board also approves the Internal Liquidity Adequacy Assessment Process (ILAAP) that outlines the Group’s funding and liquidity risks and describes how the Risk Management Framework and controls act to mitigate these risks.

Risk Governance

The Board has established a number of committees, including the Board Risk Committee and Board Customer Committee, to assist it in carrying out its responsibilities as specified through respective governance charters, which are available online at www.nab.com.au/about-us/corporate-governance. The Board, through the Board Risk Committee, Board Customer Committee and executives, promotes awareness of a risk based culture and supports the establishment by management of an acceptable balance between risk and return.

The Board delegates responsibility for day-to-day management of the Group's operations to the Group Chief Executive Officer (CEO), who in turn delegates authority to members of the Executive Leadership Team, consistent with their accountabilities under the Banking Executive Accountability Regime (BEAR). The Group CEO oversees enterprise-wide risk management through the Executive Risk Committee and its supporting sub-committees.

The following committees or sub-committees each focus on specific material risks:
- Executive Risk Committee - all risk management, with a focus on strategic, regulatory and financial crime risks
- Executive Customer Committee - outcomes resulting from conduct risks
- Group Asset and Liability Committee - balance sheet and liquidity risks
- Group Credit and Market Risk Committee - credit and market risks
- Group Non-Financial Risk Committee - operational and compliance risks

The following sub-committees focus on customer-orientated oversight of risk across the end-to-end value chains:
- Business & Private Banking Risk Management Committee
- Consumer Banking Risk Management Committee
- Corporate & Institutional Banking Risk Management Committee

In addition, an Enterprise Product Committee evaluates new and existing product offerings, including the risk profile of products and their appropriateness for customers. Part of its governance role is to make product related decisions with reference to the Group's Risk Management Strategy and risk appetite.

Material Risks

A number of measures exist across each of the Group's material risks, including but not limited to those outlined in the table below. Further disclosure on risk factors is included in the 2019 Annual Financial Report.

Material risk category	Definition	Key measures	Governing policies and key committees
Strategic	The risk associated with the pursuit of the Group's strategic objectives including the risk that the Group fails to execute its chosen strategy effectively or in a timely manner.	- Measures as outlined in the One NAB Plan	**Governing Policies** - Group Investment Policy - Group Project (Change) Policy **Key Committees** - Executive Risk Committee
Financial risk categories			
Credit	The risk that a customer will fail to meet its obligations to the Group in accordance with agreed terms. Credit risk arises from both the Group's lending activities and markets and trading activities.	- Economic capital limits - Credit concentration limits, for example, single large exposures, industries, and countries - Portfolio limits, settings and indicators in respect to credit quality having regard to Probability of Default (PD), Loss Given Default (LGD), Exposure at Default (EaD), RWA, and a range of more granular measures applicable to the nature of the credit risk (for example, Loan to Value Ratios, days past due, impairments and write-offs)	**Governing Policies** - Group Credit Policy - Group Model Risk Policy **Key Committees** - Board Risk Committee - Executive Risk Committee - Group Credit and Market Risk Committee - Group Model Risk Committee
Market	The risk of loss from the Group's trading activities. The Group may suffer losses as a result of a change in the value of the Group's positions in financial instruments or their hedges due to adverse movements in market prices. Adverse price movements impacting the Group may occur in credit spreads, interest rates, foreign exchange rates, and commodity and equity prices, in particular during periods of heightened market volatility or reduced liquidity.	- Economic capital limits - Trading desk limits and settings (for example, stop loss limits) - Globally diversified Value at Risk (VaR), stressed VaR and inner stress limits	**Governing Policies** - Group Traded Market Risk Policy - Group Model Risk Policy **Key Committees** - Board Risk Committee - Executive Risk Committee - Group Credit and Market Risk Committee - Group Model Risk Committee

Material risk category	Definition	Key measures	Governing policies and key committees
Balance Sheet and Liquidity	Comprises key banking book structural risks of the Group, such as liquidity risk, funding risk, interest rate risk, capital risk and foreign exchange risk.	- Economic capital limits - Earnings at risk limits - Liquidity Coverage Ratio (LCR) - Net Stable Funding Ratio (NSFR) - Equity risk - Common Equity Tier 1 (CET1) capital ratio	**Governing Policies** - Group Capital Risk Policy - Group Liquidity Risk Policy - Interest Rate Risk in the Banking Book Policy - Group Foreign Exchange Risk in the Banking Book Policy - Group Equity Risk in the Banking Book Policy - Funds Transfer Pricing Policy - Third Party Securitisation Policy - Group Model Risk Policy **Key Committees** - Board Risk Committee - Executive Risk Committee - Group Asset and Liability Committee - Group Model Risk Committee - Group Credit and Market Risk Committee
Non-financial risk categories			
Operational	The risk of loss resulting from inadequate or failed internal processes, people and systems or external events. This includes legal risk, but excludes strategic and reputation risk.	- Economic capital limits - Operational risk limits which ensure the Group operates within Board defined limits which can include limits, settings and indicators applicable to the management of operational risk such as actual financial losses, customer complaints, control environment and technology incidents.	**Governing Policies** - Operational Risk Management Framework - Group Operational Risk Management Policy - Information Risk Policy - Anti-Fraud Policy - Business Continuity Management Policy - Travel Security Policy - Physical Security Policy - Group Executive Protection Policy - Outsourcing and Offshoring Policy - Group Model Risk Policy **Key Committees** - Board Risk Committee - Executive Risk Committee - Group Non-Financial Risk Committee
Compliance	The risk of failing to understand and comply with relevant laws, regulations, licence conditions, supervisory requirements, self-regulatory industry codes of conduct and voluntary initiatives.	- Compliance breach determination timeliness - Compliance breach reporting timeliness - Timeliness of customer exits in managing financial crime risk exposure	**Governing Policies** - Compliance Obligation Management Policy - Conflicts of Interest Policy - Cross Border Policy - Customer Complaints Handling Policy - G20 Risk Mitigation Policy - Dodd Frank Act Policies - Group External Reporting Policy - Physical Security Policy - Group Executive Protection Policy - Group Anti-Bribery and Corruption Policy - Anti-Money Laundering & Counter-Terrorism Financing Policy - Economic and Trade Sanctions Policy - Group Environmental Management Policy - Group Environmental Reporting and Offset Management Policy - Group Human Rights Policy **Key Committees** - Board Risk Committee - Executive Risk Committee - Group Non-Financial Risk Committee
Conduct	The risk that any action of the Group, or those acting on behalf of the Group, will result in unfair outcomes for any of the Group's customers.	- Measures through risk appetite settings and key risk indicators	**Governing Policies** - Conduct Risk Framework - Code of Conduct **Key Committees** - Board Customer Committee - Executive Customer Committee
Regulatory	The risk of failing to identify or appropriately respond to changes in the regulatory environment or of damaging the Group's standing with its regulators as a result of the Group not meeting regulatory expectations.	- Risk limits set to align with the expectations of the Group's key regulators	**Governing Policies** - Regulatory Engagement Procedure - Regulatory Change Procedure **Key Committees** - Executive Risk Committee - Group Non-Financial Risk Committee

Section 4

Capital

4.1 Capital Adequacy

Capital Management Strategy

The Capital Management Strategy is focused on adequacy, efficiency and flexibility. The amount of capital that is held is informed by the ICAAP to assess required levels of capital, including regulatory requirements. This approach is consistent across the Group's subsidiaries.

The Capital Management Strategy covers the Group capital outlook, potential risks, initiatives and distributions. The Capital Management Strategy also considers stressed scenarios and sensitivities to ensure the Group maintains capital adequacy in these situations and can adjust plans accordingly if required.

The Board sets capital targets above the internal risk-based assessment of capital. Target ranges take into account market, regulatory and rating agency expectations. The operating targets are regularly reviewed in the context of the external economic and regulatory outlook with the objective of maintaining balance sheet strength.

Risk Identification and Assessment

The process of assessing capital adequacy begins with the Group measuring all material risks and where appropriate, generating a capital adequacy requirement. In managing the business, the Group considers both regulatory and economic capital requirements, as summarised in the following table.

	Regulatory capital	Economic capital
Nature	Regulatory view of the capital required to be held to protect against risks associated with business activities.	Management's view of the capital required to be held to support the specific risk characteristics of the business and its portfolio.
Calculation	Calculated under regulatory requirements and expressed as a percentage of RWA.	Internal risk-based models.
Risk types	Credit risk, market risk, operational risk and interest rate risk in the banking book.	As per regulatory capital requirements, plus other material risks, including business/strategic risk, equity risk and foreign exchange risk in the banking book.

The ICAAP describes capital adequacy for the Group on both a Level 1 and Level 2 basis. The process is designed to assess the Group's ability to withstand unexpected losses and continue to support customers and protect depositors through a range of adverse scenarios. Key features include:

- identification of risks arising from the Group's activities for which capital is a mitigant
- calibration of capital limits commensurate with the Group's risk profile and appetite and appropriate triggers to mitigate potential limit breaches
- assessment of capital adequacy on a current and forward looking basis, including scenario planning and stress testing
- detail on capital management actions available to provide additional capital as required
- processes for reporting on the ICAAP and its outcomes to the Board and senior management and ensuring that the ICAAP is taken into account in making business decisions.

Governance, Reporting and Oversight

The ICAAP document, Capital Management Strategy, Risk Appetite Statement, the Group Strategic and Financial Plans together detail the governance, management, and reporting of the Group's capital adequacy. These documents are reviewed and endorsed by key management committees, including the Group Asset and Liability Committee and the Executive Risk Committee, and are approved by the Board.

The ICAAP is supported by the Group Capital Risk Policy, which defines the framework for the management, monitoring and governance of the Group's capital position.

Group Treasury is responsible for managing capital risk. The Group and subsidiary treasuries each prepare an annual capital management strategy (incorporating capital targets) and execute the Board-approved strategies.

Group Balance Sheet and Liquidity Risk is independent of Group Treasury and is responsible for capital oversight. Group Balance Sheet and Liquidity Risk maintains a risk framework to provide oversight and monitoring of stress testing of the Group's capital position, capital planning and forecasting, and capital activities to ensure compliance with regulatory capital standards.

Group Treasury, along with Group Balance Sheet and Liquidity Risk monitor the Group's capital position on a monthly basis and report to management and Board committees.

4.1 Capital Adequacy (continued)

Embedding Capital Requirements in Business Decisions

Capital requirements are taken into consideration in:
- product and facility pricing decisions
- business development, including acquisitions and divestments
- strategic planning
- performance measurement and management, including incentive determination
- setting of risk appetite and risk limits, including large exposure limits, industry limits and country limits.

Table 4.1A: Risk-weighted Assets

The following table provides RWA for each risk type. A description of the credit risk asset classes is contained in Section 5.3 *Internal Ratings-Based Portfolios*.

	As at	
	30 Sep 19	**31 Mar 19**
	$m	**$m**
Credit risk[1]		
Subject to IRB approach		
Corporate (including Small and Medium Enterprises (SME))	127,049	124,352
Sovereign	1,407	1,351
Bank	10,430	10,444
Residential mortgage	106,209	105,979
Qualifying revolving retail	3,494	3,822
Retail SME	6,467	6,575
Other retail	3,104	3,334
Total IRB approach	**258,160**	**255,857**
Specialised lending	**58,320**	**59,506**
Subject to standardised approach		
Residential mortgage	1,560	1,645
Corporate	4,798	4,733
Other	472	483
Total standardised approach	**6,830**	**6,861**
Other		
Securitisation exposures	4,865	4,739
Credit value adjustment	15,006	9,061
Central counterparty default fund contribution guarantee	306	823
Other[2]	8,159	8,550
Total other	**28,336**	**23,173**
Total credit risk[3]	**351,646**	**345,397**
Market risk	10,023	9,190
Operational risk[4]	47,698	40,945
Interest rate risk in the banking book	6,404	7,673
Total RWA	**415,771**	**403,205**

(1) *Assets that are not subject to specific risk-weights incorporate a scaling factor of 1.06 in accordance with APS 113 Capital Adequacy: Internal Ratings-based Approach to Credit Risk.*

(2) *Other includes non-lending assets and RWA overlay adjustments for regulatory prescribed methodology requirements.*

(3) *Approximately $6.9 billion of the increase in total credit risk RWA is attributable to the introduction of the standardised approach for measuring counterparty credit risk exposures (SA-CCR). The change mainly impacted RWA for corporate and bank exposures, credit value adjustment and the central counterparty default fund contribution guarantee.*

(4) *$6.25 billion of the increase in operational risk RWA is attributable to the operational risk regulatory capital add-on announced by APRA effective from 30 September 2019.*

4.1 Capital Adequacy (continued)

Table 4.1B: Capital and Leverage Ratios

The following tables provide:
- the key capital ratios for the Level 1 and Level 2 Group and for the Group's significant overseas bank subsidiary
- the leverage ratio for the Level 2 Group as at 30 September 2019 and for the three previous quarters

	As at	
	30 Sep 19	**31 Mar 19**
Capital ratios	**%**	**%**
Level 2 Common Equity Tier 1 capital ratio	10.38	10.40
Level 2 Tier 1 capital ratio	12.36	12.45
Level 2 Total capital ratio	14.68	14.00
Level 1 Common Equity Tier 1 capital ratio	10.52	10.64
Level 1 Tier 1 capital ratio	12.67	12.86
Level 1 Total capital ratio	15.14	14.50
Significant bank subsidiary[(1)]		
BNZ Common Equity Tier 1 capital ratio	10.97	10.60
BNZ Tier 1 capital ratio	12.32	11.96
BNZ Total capital ratio	13.93	13.57

(1) *BNZ's capital ratios have been derived under the RBNZ's capital adequacy framework.*

Leverage ratio	As at			
	30 Sep 19	**30 Jun 19**	**31 Mar 19**	**31 Dec 18**
	$m	**$m**	**$m**	**$m**
Tier 1 capital	51,388	50,409	50,185	48,408
Total exposures	925,973	927,846	915,138	930,879
Leverage ratio (%)	**5.55%**	**5.43%**	**5.48%**	**5.20%**

4.2 Capital Structure

Regulatory capital is calculated in accordance with APS 111 *Capital Adequacy: Measurement of Capital*. The Group's capital structure comprises various forms of capital which are summarised in the table below.

Common Equity Tier 1 (CET1) capital	Tier 1 capital	Total capital
CET1 capital consists of the sum of paid-up ordinary share capital, retained profits plus certain other items as defined in APS 111.	CET1 capital plus certain securities with complying loss absorbing characteristics known as Additional Tier 1 capital.	Tier 1 capital plus subordinated debt instruments with complying loss absorbing characteristics known as Tier 2 capital.

CET1 capital contains the highest quality and most effective loss absorbent components of capital, followed by Additional Tier 1 capital and then Tier 2 capital. Further details of Additional Tier 1 and Tier 2 securities are available online in the capital instruments section of the Group's website at https://capital.nab.com.au/disclaimer-area/capital-instruments.phps.

Restrictions on the Transfer of Funds or Regulatory Capital within the Group

Limits are placed on the level of exposure (debt and equity) that NAB may have to a related entity. The Conglomerate Group Aggregate Risk Exposure Policy requires consideration of excessive risk when setting risk limits between Group entities. Policy on lending between NAB Group entities requires intercompany transactions to be adequately controlled and comply with legal and regulatory requirements.

As the Group's significant overseas bank subsidiary, BNZ works with the Group to manage capital to target capital ranges approved by its board of directors. Any capital transfer is subject to maintaining adequate subsidiary and parent company capitalisation.

Table 4.2A: Regulatory Capital Structure

The table below provides the structure of regulatory capital for the Level 2 Group. A detailed breakdown as at 30 September 2019 is shown in Table 4.3A *Regulatory Capital Disclosure Template*.

	As at	
	30 Sep 19	31 Mar 19
	$m	$m
Common Equity Tier 1 capital before regulatory adjustments	53,406	51,896
Regulatory adjustments to Common Equity Tier 1 capital	(10,268)	(9,961)
Common Equity Tier 1 capital (CET1)	**43,138**	**41,935**
Additional Tier 1 capital before regulatory adjustments	8,250	8,250
Regulatory adjustments to Additional Tier 1 capital	-	-
Additional Tier 1 capital (AT1)	**8,250**	**8,250**
Tier 1 capital (T1 = CET1 + AT1)	**51,388**	**50,185**
Tier 2 capital before regulatory adjustments	9,748	6,354
Regulatory adjustments to Tier 2 capital	(90)	(94)
Tier 2 capital (T2)	**9,658**	**6,260**
Total capital (TC = T1 + T2)	**61,046**	**56,445**

4.3 Detailed Capital Disclosures

Table 4.3A: Regulatory Capital Disclosure Template

The capital ratios for the Level 2 Group and other regulatory capital information are presented in the following regulatory capital disclosure template. The capital disclosure template is based on the post 1 January 2018 Basel III requirements as the Group is applying the regulatory adjustments under Basel III in full as implemented by APRA.

Explanation of how amounts in the template reconcile to the Level 2 Group balance sheet is contained in Table 4.3B *Reconciliation between the Group and Level 2 Group Balance Sheet* and Table 4.3C *Reconciliation between the Level 2 Group Balance Sheet and Regulatory Capital Disclosure Template*.

		As at 30 Sep 19 $m
Common Equity Tier 1 capital: instruments and reserves		
1	Directly issued qualifying ordinary shares (and equivalent for mutually-owned entities) capital	36,762
2	Retained earnings	16,345
3	Accumulated other comprehensive income (and other reserves)	299
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**	**53,406**
Common Equity Tier 1 capital: regulatory adjustments		
7	Prudential valuation adjustments	1
8	Goodwill	2,864
9	Other intangibles other than mortgage-servicing rights (net of related tax)	2,890
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	67
11	Cash flow hedge reserve	201
12	Shortfall of provisions to expected losses	74
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 (net of related tax)	19
15	Defined benefit superannuation plan assets (net of related tax liability)	34
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)	-
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)	-
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)	-
22	Amount exceeding the 15% threshold	-
23	of which: significant investments in the ordinary shares of financial entities	-
24	of which: mortgage servicing rights	-
25	of which: deferred tax assets arising from temporary differences	-
APRA specific regulatory adjustments		
26	National specific regulatory adjustments (sum of rows 26a, 26b, 26c, 26d, 26e, 26f, 26g, 26h, 26i and 26j)	4,118
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 net fee income	568
26d	of which: equity investments in financial institutions not reported in rows 18, 19 and 23 (adjusted for intangible assets held by those entities)	1,051
26e	of which: deferred tax assets not reported in rows 10, 21 and 25	2,229
26f	of which: capitalised expenses	130
26g	of which: investments in commercial (non-financial) entities that are deducted under APRA prudential requirements	35
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	105
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**	**10,268**
29	**Common Equity Tier 1 capital (CET1)**	**43,138**

4.3 Detailed Capital Disclosures (continued)

		As at 30 Sep 19 $m
Additional Tier 1 capital: instruments		
30	Directly issued qualifying Additional Tier 1 instruments	6,433
31	of which: classified as equity under applicable accounting standards	-
32	of which: classified as liabilities under applicable accounting standards	6,433
33	Directly issued capital instruments subject to phase out from Additional Tier 1	1,817
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 Additional Tier 1)	-
35	of which: instruments issued by subsidiaries subject to phase out	-
36	**Additional Tier 1 capital before regulatory adjustments**	**8,250**
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)**	**8,250**
45	**Tier 1 capital (T1 = CET1 + AT1)**	**51,388**
Tier 2 capital: instruments and provisions		
46	Directly issued qualifying Tier 2 instruments	8,527
47	Directly issued capital instruments subject to phase out from Tier 2	472
48	Tier 2 instruments (and CET1 and Additional Tier 1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties (amount allowed in group Tier 2)	422
49	of which: instruments issued by subsidiaries subject to phase out	-
50	Provisions[(1)]	327
51	**Tier 2 capital before regulatory adjustments**	**9,748**
Tier 2 capital: regulatory adjustments		
52	Investments in own Tier 2 instruments	75
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 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)	15
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	15
56c	of which: other national specific regulatory adjustments not reported in rows 56a and 56b	-
57	**Total regulatory adjustments to Tier 2 capital**	**90**
58	**Tier 2 capital (T2)**	**9,658**
59	**Total capital (TC = T1 + T2)**	**61,046**
60	**Total RWA based on APRA standards**	**415,771**

(1) *Provisions consists of surplus provisions on non-defaulted exposures subject to the IRB approach ($281m) and the General Reserve for Credit Losses (GRCL) for exposures subject to the standardised approach ($46m).*

4.3 Detailed Capital Disclosures (continued)

		As at 30 Sep 19 $m
Capital ratios and buffers		
61	Common Equity Tier 1 (as a percentage of RWA)	10.38%
62	Tier 1 (as a percentage of RWA)	12.36%
63	Total capital (as a percentage of RWA)	14.68%
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 RWA)[1]	8.06%
65	of which: capital conservation buffer requirement[1]	3.50%
66	of which: ADI-specific countercyclical buffer requirements	0.06%
67	of which: Global Systemically Importable Bank (G-SIB) buffer requirement	n/a
68	Common Equity Tier 1 available to meet buffers (as a percentage of RWA)	10.38%
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
Amounts below the thresholds for deduction (not risk-weighted)[2]		
72	Non-significant investments in the capital of other financial entities	635
73	Significant investments in the ordinary shares of financial entities (adjusted for intangible assets held by those entities)	416
74	Mortgage servicing rights (net of related tax liability)	-
75	Deferred tax assets arising from temporary differences (net of related tax liability)	2,229
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)	46
77	Cap on inclusion of provisions in Tier 2 under standardised approach	333
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	281
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	1,950
Capital instruments subject to phase-out arrangements (applicable between 1 January 2018 and 1 January 2022)		
80	Current cap on CET1 instruments subject to phase out arrangements	-
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-
82	Current cap on Additional Tier 1 instruments subject to phase out arrangements	1,817
83	Amount excluded from Additional Tier 1 due to cap (excess over cap after redemptions and maturities)	128
84	Current cap on Tier 2 instruments subject to phase out arrangements	1,687
85	Amount excluded from Tier 2 due to cap (excess over cap after redemptions and maturities)	-

(1) *The buffer requirement includes a 1.0% D-SIB capital buffer.*

(2) *Amounts below the thresholds for deduction under Basel III requirements are an APRA specific regulatory adjustment.*

4.3 Detailed Capital Disclosures (continued)

Table 4.3B: Reconciliation between the Group and Level 2 Group Balance Sheet

The following table shows the Group's balance sheet and adjustments to derive the Level 2 Group balance sheet as at 30 September 2019. The adjustments remove the assets, liabilities and equity balances of Level 3 entities deconsolidated for regulatory purposes, and reinstates any intragroup assets and liabilities, treating them as external to the Level 2 Group.

The template and reconciliation references are either directly to rows in Table 4.3A *Regulatory Capital Disclosure Template* or to reconciliations to the disclosure template in Table 4.3C *Reconciliation between the Level 2 Group Balance Sheet and Regulatory Disclosure Template*.

	Group balance sheet	Adjustments	Level 2 Group balance sheet	Template row or reconciliation table reference
	$m	$m	$m	
Assets				
Cash and liquid assets	55,457	(114)	55,343	
Due from other banks	32,130	-	32,130	
Trading instruments	96,828	-	96,828	
Debt instruments	40,205	-	40,205	
Other financial assets	7,110	(248)	6,862	
Hedging derivatives	4,689	-	4,689	
Loans and advances	587,749	(2,728)	585,021	
of which: deferred net fee income	568	-	568	Row 26c
Due from customers on acceptances	2,490	-	2,490	
Property, plant and equipment	1,117	-	1,117	
Due from controlled entities	-	124	124	
Investment in non-consolidated controlled entities	-	416	416	
Goodwill and other intangible assets	5,576	(7)	5,569	Table A
Deferred tax assets	2,670	(6)	2,664	Table C
Other assets	11,103	(315)	10,788	
Total assets	**847,124**	**(2,878)**	**844,246**	
Liabilities				
Due to other banks	34,273	-	34,273	
Trading instruments	34,318	-	34,318	
Other financial liabilities	33,283	-	33,283	
Hedging derivatives	4,037	-	4,037	
Deposits and other borrowings	522,085	-	522,085	
Current tax liabilities	468	(9)	459	
Provisions	3,507	(11)	3,496	
Due to controlled entities	-	223	223	
Bonds, notes and subordinated debt	143,258	(2,721)	140,537	
Other debt issues	6,482	-	6,482	
Other liabilities	9,809	(107)	9,702	
Total liabilities	**791,520**	**(2,625)**	**788,895**	
Net assets	**55,604**	**(253)**	**55,351**	
Equity				
Issued and paid-up ordinary share capital	36,762	-	36,762	Row 1
Other contributed equity	1,945	-	1,945	Table D
Contributed equity	**38,707**	**-**	**38,707**	
Foreign currency translation reserve	20	(7)	13	
Asset revaluation reserve	80	-	80	
Cost of hedging reserve	(235)	-	(235)	
Cash flow hedge reserve	201	-	201	Row 11
Equity-based compensation reserve	190	-	190	
Debt instruments at fair value through other comprehensive income reserve	46	-	46	
Equity instruments at fair value through other comprehensive income reserve	4	-	4	
Reserves	**306**	**(7)**	**299**	Row 3
Retained profits	16,583	(238)	16,345	Row 2
Total equity (parent entity interest)	**55,596**	**(245)**	**55,351**	
Non-controlling interest in controlled entities	8	(8)	-	
Total equity	**55,604**	**(253)**	**55,351**	

4.3 Detailed Capital Disclosures (continued)

Table 4.3C: Reconciliation between the Level 2 Group Balance Sheet and Regulatory Capital Disclosure Template

Table A	**As at 30 Sep 19 $m**	**Disclosure template row**
Goodwill and other intangible assets	5,569	
Associated net deferred tax assets	185	
Total	**5,754**	
which comprises:		
Goodwill	2,864	Row 8
Other intangibles other than mortgage-servicing rights (net of related tax)	2,890	Row 9

Table B	**As at 30 Sep 19 $m**	**Disclosure template row**
Non-defaulted expected loss	2,543	
Less		
Collective provision for credit impairment	2,870	
Add		
Standardised approach general reserve for credit losses	46	Row 50, 76
IRB approach surplus provisions on non-defaulted exposures	281	Row 50, 78
Non-defaulted: shortfall of provisions to expected losses	-	
Defaulted expected loss	1,548	
Less		
Individual provision for credit impairment	772	
Partial write-offs	213	
Collective provision for credit impairment for defaulted exposures subject to the IRB approach	489	
Defaulted: shortfall of provisions to expected loss	**74**	
Shortfall of provisions to expected losses	**74**	Row 12

Table C	**As at 30 Sep 19 $m**	**Disclosure template row**
Deferred tax assets	2,664	
Less		
Deferred tax assets that rely on future profitability	67	Row 10
Unrealised revaluation on funding vehicles	316	
Net deferred tax assets included in other regulatory adjustments or associated with reserves ineligible for inclusion in regulatory capital	53	
Add		
Impact of limitations of netting of balances on a jurisdictional basis	1	
Deferred tax assets APRA specific regulatory adjustment	**2,229**	Row 26e, 75

Table D	**As at 30 Sep 19 $m**	**Disclosure template row**
Face value of NAB Convertible Preference Shares II	1,717	
Face value of NAB Capital Notes	1,343	
Face value of NAB Capital Notes II	1,499	
Face value of NAB Capital Notes III	1,874	
Directly issued qualifying Additional Tier 1 instruments classified as liabilities	**6,433**	Row 32
Other contributed equity (National Income Securities)	1,945	
Directly issued Additional Tier 1 instruments subject to phase out	**1,945**	
which comprises:		
Amount excluded from Additional Tier 1 due to cap (excess over cap after redemptions and maturities)	128	Row 83
Current cap on Additional Tier 1 instruments subject to phase out	1,817	Row 33, 82

4.3 Detailed Capital Disclosures (continued)

Table E	**As at 30 Sep 19 $m**	**Disclosure template row**
Subordinated medium term notes	8,527	
Directly issued qualifying Tier 2 instruments	**8,527**	Row 46
Subordinated medium term notes	40	
Perpetual floating rate notes	50	
Global medium term notes	254	
Additional Tier 1 in excess of transitional cap transferred to Tier 2	128	Row 83
Directly issued Tier 2 instruments subject to phase out	**472**	Row 47

Table F	**As at 30 Sep 19 $m**	**Disclosure template row**
Subordinated notes issued by BNZ	422	
Tier 2 instruments issued by subsidiaries and held by third parties (amount allowed in Tier 2 capital)	**422**	Row 48

Table 4.3D: Entities Excluded from Level 2 Group Balance Sheet

The following table provides details of entities included in the accounting scope of consolidation and excluded from the regulatory scope of consolidation.

		As at 30 Sep 19	
Entity name	**Principal activity**	**Total assets $m**	**Total liabilities $m**
Antares Capital Partners Limited	Investment	25	1
BNZ Life Insurance Limited	Insurance	123	27
MLC Investments Limited	Investment	154	71
MLC Asset Management Services Limited	Investment	17	-
NAB Trust Services Limited	Trustee	12	2
MLC Asset Management Proprietary Limited	Funds Manager	31	9
National Asset Management Limited	Investment	1	-
National Australia Managers Limited	Funds Manager	2	-
National RMBS Trust 2018-1	Securitisation	1,339	1,340
National RMBS Trust 2018-2	Securitisation	1,390	1,391
Navigator Australia Limited	Investment	44	13
NULIS Nominees (Australia) Limited	Superannuation	403	38
Orchard Street Investment Management LLP	Funds Manager	8	1
Presima Inc.	Funds Manager	9	3

4.3 Detailed Capital Disclosures (continued)

Table 4.3E: Countercyclical Capital Buffer

The countercyclical capital buffer represents an extension to the capital conservation buffer and may require an ADI to hold additional CET1 capital of up to 2.5% of RWA. It is calculated in accordance with APS 110 *Capital Adequacy* (Attachment C). Its primary objective is to use a buffer of capital to achieve the broader macroprudential goal of protecting the banking sector from periods of excess aggregate credit growth that have often been associated with the build-up of system-wide risk. The Level 2 Group's capital ratios remain above buffer requirements as shown in Table 4.3A *Regulatory Capital Disclosure Template* rows 61 to 68.

The following table provides the geographic breakdown of private sector credit exposures (gross of eligible financial collateral) and associated RWA that are used to calculate the Level 2 Group's countercyclical capital buffer ratio. The geographic breakdown is at a country level based on the country of ultimate risk.

	As at 30 Sep 19			
	Countercyclical capital buffer	**Private sector credit exposure**	**RWA**	**ADI-specific buffer**
Country	**%**	**$m**	**$m**	**%**
Hong Kong	2.50	3,835	1,411	0.011
Norway	2.00	333	167	0.001
Sweden	2.50	368	176	0.001
United Kingdom	1.00	72,761	14,013	0.043
Ireland	1.00	6,177	690	0.002
Other	-	819,990	312,273	0.000
Total	**n/a**	**903,464**	**328,730**	**0.058**

	As at 31 Mar 19			
	Countercyclical capital buffer	**Private sector credit exposure**	**RWA**	**ADI-specific buffer**
Country	**%**	**$m**	**$m**	**%**
Hong Kong	2.50	3,907	1,522	0.012
Norway	2.00	275	183	0.001
Sweden	2.00	378	203	0.001
United Kingdom	1.00	76,080	11,106	0.035
Other	-	820,153	309,405	0.000
Total	**n/a**	**900,793**	**322,419**	**0.049**

4.4 Leverage Ratio

The leverage ratio is a non-risk based measure that uses exposures to supplement the RWA based capital requirements. It is calculated in accordance with APS 110 (Attachment D). In summary, the leverage ratio is intended to:

- restrict the build-up of leverage in the banking sector to avoid destabilising deleveraging processes that can damage the broader financial system and the economy
- reinforce the risk-based requirements with a simple, transparent, non-risk based supplementary measure.

The leverage ratio calculation is presented in the following disclosure template. The leverage ratio at 30 September 2019 has increased by 7 basis points to 5.55% compared to 31 March 2019. The increase was due to an increase in Tier 1 capital of $1.2 billion or 2.4%, which was greater than the increase in total exposures of $10.8 billion or 1.2%. The underwrite for $1 billion of the dividend reinvestment plan in respect of the interim dividend contributed to the increase in Tier 1 capital. The increase in total exposures was driven by:

- an increase in securities financing transaction exposures of $6.5 billion
- an increase in derivative exposures of $3.0 billion, partly due to mark-to-market movements, and
- an increase in other on-balance sheet exposures of $2.1 billion.

Table 4.4A: Leverage Ratio Disclosure Template

		As at	
		30 Sep 19	31 Mar 19
		$m	$m
On-balance sheet exposures			
1	On-balance sheet items (excluding derivatives and securities financing transactions (SFTs), but including collateral)	737,005	734,898
2	(Asset amounts deducted in determining Tier 1 capital)	(9,918)	(9,905)
3	**Total on-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 and 2)**	**727,087**	**724,993**
Derivative exposures[1]			
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	10,596	8,632
5	Add-on amounts for potential future credit exposure (PFCE) associated with all derivatives transactions	18,832	18,167
6	Gross-up for derivatives collateral provided where not included in on-balance sheet items	2,461	-
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(3,800)	(1,233)
8	(Exempted central counterparty (CCP) leg of client-cleared trade exposures)	-	-
9	Adjusted effective notional amount of written credit derivatives	3,381	3,324
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(2,937)	(3,324)
11	**Total derivative exposures (sum of rows 4 to 10)**	**28,533**	**25,566**
Securities financing transaction exposures			
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	79,360	76,196
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(12,353)	(15,129)
14	Counterparty Credit Risk (CCR) exposure for SFT assets	3,192	2,628
15	Agent transaction exposures	-	-
16	**Total securities financing transaction exposures (sum of rows 12 to 15)**	**70,199**	**63,695**
Other off-balance sheet exposures			
17	Off-balance sheet exposure at gross notional amount	187,753	187,785
18	(Adjustments for conversion to credit equivalent amounts)	(87,599)	(86,901)
19	**Other off-balance sheet exposures (sum of rows 17 and 18)**	**100,154**	**100,884**
Capital and total exposures			
20	**Tier 1 capital**	**51,388**	**50,185**
21	**Total exposures (sum of rows 3, 11, 16 and 19)**	**925,973**	**915,138**
Leverage ratio			
22	**Leverage ratio**	**5.55%**	**5.48%**

(1) *Derivative exposures under the current exposure method.*

4.4 Leverage Ratio (continued)

Table 4.4B: Summary Comparison of Accounting Assets vs Leverage Ratio Exposure Measure

		As at	
		30 Sep 19	31 Mar 19
		$m	$m
Items			
1	Total consolidated assets as per published financial statements	847,124	826,943
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(2,878)	(3,133)
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	(11,701)	(2,279)
5	Adjustment for SFTs (i.e. repos and similar secured lending)	3,192	2,628
6	Adjustment for off-balance sheet exposures (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	100,154	100,884
7	Other adjustments	(9,918)	(9,905)
8	**Leverage ratio exposure**	**925,973**	**915,138**

Section 5

Credit Risk

5.1 General Disclosures

Credit risk is the potential that a customer will fail to meet its obligations to the Group in accordance with agreed terms.

The Group's approach to credit risk management is designed to:
- shape and inform the future credit risk portfolio and Group's broader strategic priorities
- maintain exposure to credit risk within acceptable parameters while maximising the Group's risk-adjusted rate of return and ensure alignment to risk appetite
- be embedded within the Group's day-to-day business.

Governance

The Board delegates credit decision-making authority to the Board Risk Committee and then through the organisation via the Group Chief Executive Officer and Group Chief Risk Officer, who set the Delegated Commitment Authority (DCA) for the Group Chief Credit Officer. The Group Chief Credit Officer sub-delegates the decision-making authority to the Group's divisions and individuals.

The Executive Risk Committee and its subcommittees oversee the Group's credit risk appetite, principles, policies, models and systems for the management of credit risk. Value chains risk management committees are responsible for implementing these disciplines at a divisional level.

The Board Risk Committee or its delegates are able to set limits on the amount of risk accepted at single counterparty, counterparty group, geographic or industry levels. These limits are consistent with the Group's risk appetite. Such risks are monitored on a regular basis and are subject to annual or more frequent reviews.

Management

Exposure to credit risk is managed by regularly analysing the ability of current and potential future counterparties to meet principal and interest repayment obligations, and by changing lending limits and lending conditions where appropriate.

Group Credit Policy encompasses the Group's:
- credit risk appetite and principles
- credit underwriting standards
- approach to ensure compliance with regulatory standards.

Senior management and line management within each division have primary responsibility for ensuring their respective areas follow the Group's credit policies, processes and standards.

The credit risk functions are charged with implementing a sound risk framework to maintain appropriate asset quality across the Group in line with credit risk appetite, credit risk underwriting standards and policy.

Credit Risk plays a key role in managing risk appetite, credit risk oversight, portfolio measurement, assisting businesses with portfolio management, and measuring compliance with strategic targets and limits. Credit Risk also:
- owns the credit risk policies and systems, concentration limits, large counterparty credit approvals and the management of large underperforming loans
- ensures that such policies and systems comply with the various regulatory and prudential requirements
- owns and monitors the performance of credit models and methodology.

A key assurance area across non-retail banking activities is the Asset Quality Assurance function. This function is responsible and accountable for independently reviewing and reporting on asset quality across transaction-managed lending portfolios. The function operates independently from the credit approval process and reports its findings to the respective divisions and risk management committees highlighting adverse trends and required remedial action.

Monitoring and Reporting

The Group has a comprehensive process for reporting credit and asset quality. The Group Chief Risk Officer receives regular reports covering credit risk, credit quality, asset concentrations, asset quality, environmental and social governance risk, material exposures, defaults and assurance outcomes for retail and non-retail loans. These reports incorporate key credit risk measures including detailed analysis of concentration risk, Transactional Credit Council approvals and updates on defaulted counterparties. Key reports are provided to the internal committees, value chain risk management committees and the Board Risk Committee.

5.1 General Disclosures (continued)

Periodically, Credit Risk provides the Board Risk Committee and the Executive Risk Committee with portfolio and industry reviews.

Definitions of Default and Impairment

Default occurs when a loan obligation is 90 days or more past due, or when it is considered unlikely that the credit obligation to the Group will be paid in full without recourse to actions, such as realisation of security.

A facility is classified as impaired when the ultimate ability to collect principal and interest and other amounts (including legal, enforcement and realisation costs) in a timely manner is compromised.

Impaired facilities consist of:
- retail loans (excluding unsecured portfolio managed facilities) which are contractually 90 days past due with insufficient security to cover principal and interest
- unsecured portfolio managed facilities which are 180 days past due (if not written off)
- non-retail loans which are contractually past due and / or sufficient doubt exists about the ability to collect principal and interest in a timely manner
- off-balance sheet credit exposures where current circumstances indicate that losses may be incurred.

Creation of Specific Provisions, Collective Provisions and the General Reserve for Credit Losses

Specific provision for credit impairment
A specific provision is raised for impaired facilities for which a loss is expected and represents the estimated shortfall between the gross carrying value of the asset and the estimated future cash flows, including the estimated realisable value of securities after costs.

Collective provision for credit impairment
Collective provisions are raised for facilities that are performing or facilities in default but for which no loss is expected. This process involves grouping financial assets with similar credit risk characteristics and collectively assessing them for expected loss in accordance with the requirements of AASB 9 *Financial Instruments*.

The assessment of collective provisions for retail assets relies on the portfolio delinquency profile and risk characteristics of credit rating models, while the non-retail assessment relies on the risk characteristics of credit rating models.

Collective provisions also incorporate an estimate of the expected loss using management's forward looking assessment of macroeconomic and industry specific factors. This process includes the Group's judgements and reasonable estimates in line with the requirements of AASB 9.

Provisions for facilities in default but for which no loss is expected are reported as additional regulatory specific provisions within this report.

General Reserve for Credit Losses (GRCL)
APS 220 *Credit Quality* requires a reserve to be held to cover credit losses estimated but not certain to arise in the future over the full life of all individual facilities. The GRCL represents an appropriation of retained profits to non-distributable reserves when the regulatory reserve is greater than the accounting provision. The GRCL is calculated as a collective provision for credit impairment, excluding provisions for facilities in default but for which no loss is expected.

Write-offs
When an asset is considered uncollectible, it is written off against the related provision. Such assets are written off after all the necessary recovery procedures have been completed and the amount of the loss has been determined. Recoveries of amounts post write-off are offset against the credit impairment charge in the income statement.

Presentation of Credit Risk Information

Information presented in this section excludes credit risk information in respect of non-lending assets and certain securitisation exposures, including third party securitisation exposures and own asset securitisations with capital relief which have separate disclosures in Section 6 *Securitisation*.

On 1 July 2019 SA-CCR became effective and has resulted in approximately $10.7 billion of the increase in EaD from 31 March 2019 to 30 September 2019. The change mainly impacts EaD for corporate, sovereign and bank exposures, and the disclosures in Section 5.5 *Counterparty Credit Risk*.

5.1 General Disclosures (continued)

Table 5.1A: Credit Risk Exposures Summary

The following table provides information on credit exposures and asset quality.

	As at 30 Sep 19					6 months ended 30 Sep 19
	Total exposure (EaD)	Risk-[1] weighted assets (RWA)	Regulatory expected loss	Impaired facilities	Specific provision for credit impairment	Net write-offs
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach						
Corporate (including SME)	261,988	127,049	1,563	1,389	562	87
Sovereign	60,665	1,407	2	-	-	-
Bank	39,333	10,430	13	-	-	-
Residential mortgage	386,018	106,209	1,067	333	99	30
Qualifying revolving retail	10,540	3,494	210	-	-	81
Retail SME	17,581	6,467	181	81	49	24
Other retail	4,053	3,104	140	5	3	55
Total IRB approach	**780,178**	**258,160**	**3,176**	**1,808**	**713**	**277**
Specialised lending	**66,510**	**58,320**	**915**	**156**	**59**	**7**
Subject to standardised approach						
Residential mortgage	2,050	1,560	-	7	4	-
Corporate	12,846	4,798	-	1	6	1
Other	1,121	472	-	-	-	-
Total standardised approach	**16,017**	**6,830**	**-**	**8**	**10**	**1**
Total	**862,705**	**323,310**	**4,091**	**1,972**	**782**	**285**

[1] *Assets that are not subject to specific risk-weights incorporate a scaling factor of 1.06 in accordance with APS 113.*

	As at 31 Mar 19					6 months ended 31 Mar 19
	Total exposure (EaD)	Risk-weighted assets (RWA)	Regulatory expected loss	Impaired facilities	Specific provision for credit impairment	Net write-offs
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach						
Corporate (including SME)	252,716	124,352	1,674	1,008	511	40
Sovereign	59,900	1,351	1	-	-	-
Bank	38,861	10,444	12	-	-	-
Residential mortgage	388,444	105,979	1,048	306	85	48
Qualifying revolving retail	11,003	3,822	245	-	-	83
Retail SME	17,885	6,575	191	75	45	23
Other retail	4,297	3,334	155	5	4	56
Total IRB approach	**773,106**	**255,857**	**3,326**	**1,394**	**645**	**250**
Specialised lending	**67,780**	**59,506**	**1,009**	**161**	**63**	**5**
Subject to standardised approach						
Residential mortgage	2,190	1,645	-	8	3	1
Corporate	11,540	4,733	-	1	6	2
Other	1,116	483	-	-	-	-
Total standardised approach	**14,846**	**6,861**	**-**	**9**	**9**	**3**
Total	**855,732**	**322,224**	**4,335**	**1,564**	**717**	**258**

5.1 General Disclosures (continued)

Table 5.1B: Total and Average Credit Risk Exposures

The following table provides a breakdown of credit risk exposures between on and off-balance sheet. The table also includes average credit risk exposure, which is the simple average of the credit risk exposure at the beginning and end of the reporting period.

	As at 30 Sep 19				6 months ended 30 Sep 19
	On-balance sheet exposure	Non-market related off-balance sheet	Market related off-balance sheet	Total exposure	Average total exposure
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach					
Corporate (including SME)	160,879	76,500	24,609	**261,988**	257,352
Sovereign	55,072	394	5,199	**60,665**	60,283
Bank	24,600	3,743	10,990	**39,333**	39,097
Residential mortgage	338,277	47,741	-	**386,018**	387,231
Qualifying revolving retail	5,170	5,370	-	**10,540**	10,771
Retail SME	13,385	4,196	-	**17,581**	17,733
Other retail	2,924	1,129	-	**4,053**	4,175
Total IRB approach	**600,307**	**139,073**	**40,798**	**780,178**	**776,642**
Specialised lending	**57,027**	**7,840**	**1,643**	**66,510**	**67,145**
Subject to standardised approach					
Residential mortgage	1,917	133	-	**2,050**	2,120
Corporate	5,028	532	7,286	**12,846**	12,193
Other	1,120	1	-	**1,121**	1,118
Total standardised approach	**8,065**	**666**	**7,286**	**16,017**	**15,431**
Total exposure (EaD)	**665,399**	**147,579**	**49,727**	**862,705**	**859,218**

	As at 31 Mar 19				6 months ended 31 Mar 19
	On-balance sheet exposure	Non-market related off-balance sheet	Market related off-balance sheet	Total exposure	Average total exposure
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach					
Corporate (including SME)	158,729	76,663	17,324	**252,716**	243,721
Sovereign	55,424	472	4,004	**59,900**	61,532
Bank	26,365	3,346	9,150	**38,861**	37,632
Residential mortgage	340,230	48,214	-	**388,444**	386,588
Qualifying revolving retail	5,512	5,491	-	**11,003**	11,171
Retail SME	13,534	4,351	-	**17,885**	17,910
Other retail	3,106	1,191	-	**4,297**	4,316
Total IRB approach	**602,900**	**139,728**	**30,478**	**773,106**	**762,870**
Specialised lending	**57,780**	**9,137**	**863**	**67,780**	**67,910**
Subject to standardised approach					
Residential mortgage	2,043	147	-	**2,190**	2,164
Corporate	7,374	597	3,569	**11,540**	12,400
Other	1,115	1	-	**1,116**	1,125
Total standardised approach	**10,532**	**745**	**3,569**	**14,846**	**15,689**
Total exposures (EaD)	**671,212**	**149,610**	**34,910**	**855,732**	**846,469**

5.1 General Disclosures (continued)

Table 5.1C: Credit Risk Exposures by Geography

The following table provides the credit risk exposures by major geographical area, derived from the booking office where the exposure was transacted.

	As at 30 Sep 19			
	Australia	New Zealand	Asia, Europe and Americas	Total exposure
Exposure type	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach				
Corporate (including SME)	173,047	43,033	45,908	**261,988**
Sovereign	48,961	4,923	6,781	**60,665**
Bank	21,799	5,414	12,120	**39,333**
Residential mortgage	342,917	43,101	-	**386,018**
Qualifying revolving retail	10,540	-	-	**10,540**
Retail SME	15,710	1,871	-	**17,581**
Other retail	1,927	2,126	-	**4,053**
Total IRB approach	**614,901**	**100,468**	**64,809**	**780,178**
Specialised lending	**56,620**	**8,187**	**1,703**	**66,510**
Subject to standardised approach				
Residential mortgage	1,967	15	68	**2,050**
Corporate	10,549	992	1,305	**12,846**
Other	1,120	-	1	**1,121**
Total standardised approach	**13,636**	**1,007**	**1,374**	**16,017**
Total exposure (EaD)	**685,157**	**109,662**	**67,886**	**862,705**

	As at 31 Mar 19			
	Australia	New Zealand	Asia, Europe and Americas	Total exposure
Exposure type	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach				
Corporate (including SME)	168,060	43,017	41,639	**252,716**
Sovereign	47,507	3,699	8,694	**59,900**
Bank	21,504	5,457	11,900	**38,861**
Residential mortgage	345,834	42,610	-	**388,444**
Qualifying revolving retail	11,003	-	-	**11,003**
Retail SME	15,872	2,013	-	**17,885**
Other retail	2,111	2,186	-	**4,297**
Total IRB approach	**611,891**	**98,982**	**62,233**	**773,106**
Specialised lending	**57,626**	**8,326**	**1,828**	**67,780**
Subject to standardised approach			0	
Residential mortgage	2,063	21	106	**2,190**
Corporate	8,836	1,055	1,649	**11,540**
Other	1,113	-	3	**1,116**
Total standardised approach	**12,012**	**1,076**	**1,758**	**14,846**
Total exposures (EaD)	**681,529**	**108,384**	**65,819**	**855,732**

5.1 General Disclosures (continued)

Table 5.1D: Credit Risk Exposures by Industry

The following table provides credit risk exposures by major industry type. Industry classifications follow ANZSIC Level 1 classifications. Exposures are disclosed based on the counterparty to which the Group is exposed to credit risk, including guarantors and derivative counterparties.

	As at 30 Sep 19													
	Accommodation and hospitality	**Agriculture, forestry, fishing and mining**	**Business services and property services**	**Commercial property**	**Construction**	**Finance and insurance**	**Government and public authorities**	**Manufacturing**	**Personal**	**Residential mortgages**	**Retail and wholesale trade**	**Transport and storage**	**Utilities**	**Other[1]**	**Total**
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach															
Corporate (including SME)	9,454	51,052	21,158	13,320	8,767	56,379	-	19,201	86	-	28,523	22,497	11,693	19,858	**261,988**
Sovereign	-	-	-	-	-	9,788	50,714	-	-	-	-	-	-	163	**60,665**
Bank	-	-	-	-	-	36,086	3,247	-	-	-	-	-	-	-	**39,333**
Residential mortgage	-	-	-	-	-	-	-	-	-	386,018	-	-	-	-	**386,018**
Qualifying revolving retail	-	-	-	-	-	-	-	-	10,540	-	-	-	-	-	**10,540**
Retail SME	865	4,011	2,452	403	2,098	1,184	-	1,099	21	-	2,753	931	37	1,727	**17,581**
Other retail	-	-	-	-	-	-	-	-	4,053	-	-	-	-	-	**4,053**
Total IRB approach	**10,319**	**55,063**	**23,610**	**13,723**	**10,865**	**103,437**	**53,961**	**20,300**	**14,700**	**386,018**	**31,276**	**23,428**	**11,730**	**21,748**	**780,178**
Specialised lending	**183**	**1,162**	**104**	**60,123**	**684**	**22**	**-**	**-**	**4**	**-**	**-**	**1,288**	**2,644**	**296**	**66,510**
Subject to standardised approach															
Residential mortgage	-	-	-	-	-	-	-	-	-	2,050	-	-	-	-	**2,050**
Corporate	2	85	458	25	51	8,190	-	324	23	230	805	165	6	2,482	**12,846**
Other	-	-	-	-	-	-	-	-	1,051	17	-	-	-	53	**1,121**
Total standardised approach	**2**	**85**	**458**	**25**	**51**	**8,190**	**-**	**324**	**1,074**	**2,297**	**805**	**165**	**6**	**2,535**	**16,017**
Total exposure (EaD)	**10,504**	**56,310**	**24,172**	**73,871**	**11,600**	**111,649**	**53,961**	**20,624**	**15,778**	**388,315**	**32,081**	**24,881**	**14,380**	**24,579**	**862,705**

(1) *Other includes health and community services, and education.*

5.1 General Disclosures (continued)

	As at 31 Mar 19														
	Accommodation and hospitality	**Agriculture, forestry, fishing and mining**	**Business services and property services**	**Commercial property**	**Construction**	**Finance and insurance**	**Government and public authorities**	**Manufacturing**	**Personal**	**Residential mortgages**	**Retail and wholesale trade**	**Transport and storage**	**Utilities**	**Other**	**Total**
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach															
Corporate (including SME)	8,670	50,401	20,360	14,229	8,985	51,502	-	18,520	109	-	28,323	20,870	10,818	19,929	**252,716**
Sovereign	-	-	-	-	-	8,688	50,991	-	-	-	-	-	-	222	**59,900**
Bank	-	-	-	-	-	36,199	2,662	-	-	-	-	-	-	-	**38,861**
Residential mortgage	-	-	-	-	-	-	-	-	-	388,444	-	-	-	-	**388,444**
Qualifying revolving retail	-	-	-	-	-	-	-	-	11,003	-	-	-	-	-	**11,003**
Retail SME	899	4,066	2,417	424	2,142	1,202	-	1,098	89	-	2,793	940	39	1,776	**17,885**
Other retail	-	-	-	-	-	-	-	-	4,297	-	-	-	-	-	**4,297**
Total IRB approach	**9,569**	**54,467**	**22,777**	**14,653**	**11,127**	**97,591**	**53,653**	**19,618**	**15,498**	**388,444**	**31,116**	**21,810**	**10,858**	**21,925**	**773,106**
Specialised lending	**126**	**1,125**	**299**	**61,005**	**600**	**3**	**-**	**-**	**4**	**-**	**-**	**1,442**	**2,758**	**417**	**67,780**
Subject to standardised approach															
Residential mortgage	-	-	-	-	-	-	-	-	-	2,190	-	-	-	-	**2,190**
Corporate	6	94	454	24	61	6,922	-	364	43	205	805	143	4	2,415	**11,540**
Other	-	-	-	-	-	-	-	-	1,065	14	-	-	-	37	**1,116**
Total standardised approach	**6**	**94**	**454**	**24**	**61**	**6,922**	**-**	**364**	**1,108**	**2,409**	**805**	**143**	**4**	**2,452**	**14,846**
Total exposure (EaD)	**9,701**	**55,686**	**23,530**	**75,682**	**11,788**	**104,516**	**53,653**	**19,982**	**16,610**	**390,853**	**31,921**	**23,395**	**13,620**	**24,795**	**855,732**

5.1 General Disclosures (continued)

Table 5.1E: Credit Risk Exposures by Maturity

The following table provides a breakdown of credit risk exposures by residual contractual maturity.

The allocation of credit risk exposures to maturity buckets is undertaken on the following basis:
- Overdraft and other similar revolving facilities are allocated to the maturity bucket that most appropriately captures the maturity characteristics of the product.
- Residual contractual maturity for net derivatives credit exposure subject to an ISDA netting agreement are allocated to the maturity bucket of the longest dated derivative within the netting group.
- No specified maturity includes exposures related to credit cards, on demand facilities and guarantees with no fixed maturity date.

	As at 30 Sep 19				
	<12 months	1 – 5 years	>5 years	No specified maturity	Total exposure
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach					
Corporate (including SME)	86,353	132,608	34,965	8,062	261,988
Sovereign	14,116	11,032	35,441	76	60,665
Bank	15,683	15,808	7,566	276	39,333
Residential mortgage	29,427	6,180	350,411	-	386,018
Qualifying revolving retail	-	-	-	10,540	10,540
Retail SME	6,940	7,262	2,743	636	17,581
Other retail	275	1,152	540	2,086	4,053
Total IRB approach	**152,794**	**174,042**	**431,666**	**21,676**	**780,178**
Specialised lending	**29,085**	**32,977**	**4,159**	**289**	**66,510**
Subject to standardised approach					
Residential mortgage	154	64	1,832	-	2,050
Corporate	3,216	3,065	6,345	220	12,846
Other	959	159	3	-	1,121
Total standardised approach	**4,329**	**3,288**	**8,180**	**220**	**16,017**
Total exposure (EaD)	**186,208**	**210,307**	**444,005**	**22,185**	**862,705**

	As at 31 Mar 19				
	<12 months	1 – 5 years	>5 years	No specified maturity	Total exposure
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach					
Corporate (including SME)	79,877	133,990	30,357	8,492	252,716
Sovereign	15,485	9,314	35,005	96	59,900
Bank	16,677	14,047	7,404	733	38,861
Residential mortgage	30,670	6,522	351,252	-	388,444
Qualifying revolving retail	-	-	-	11,003	11,003
Retail SME	6,553	7,856	2,827	649	17,885
Other retail	262	1,169	656	2,210	4,297
Total IRB approach	**149,524**	**172,898**	**427,501**	**23,183**	**773,106**
Specialised lending	**28,956**	**34,356**	**3,990**	**478**	**67,780**
Subject to standardised approach					
Residential mortgage	212	86	1,892	-	2,190
Corporate	5,505	1,834	3,918	283	11,540
Other	987	126	1	2	1,116
Total standardised approach	**6,704**	**2,046**	**5,811**	**285**	**14,846**
Total exposures (EaD)	**185,184**	**209,300**	**437,302**	**23,946**	**855,732**

5.1 General Disclosures (continued)

Credit Provisions and Losses

Table 5.1F: Provisions by Asset Class

The following table provides information on asset quality.

	As at 30 Sep 19			6 months ended 30 Sep 19	
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write-offs
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach					
Corporate (including SME)	1,389	247	562	140	87
Residential mortgage	333	2,981	99	40	30
Qualifying revolving retail	-	42	-	98	81
Retail SME	81	185	49	24	24
Other retail	5	58	3	50	55
Total IRB approach	**1,808**	**3,513**	**713**	**352**	**277**
Specialised lending	**156**	**59**	**59**	**4**	**7**
Subject to standardised approach					
Residential mortgage	7	29	4	-	-
Corporate	1	2	6	1	1
Total standardised approach	**8**	**31**	**10**	**1**	**1**
Total	**1,972**	**3,603**	**782**	**357**	**285**
Additional regulatory specific provisions			1,256		
Total regulatory specific provisions			**2,038**		
General reserve for credit losses			**2,104**		

	As at 31 Mar 19			6 months ended 31 Mar 19	
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write-offs
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to IRB approach					
Corporate (including SME)	1,008	173	511	86	40
Residential mortgage	306	2,656	85	36	48
Qualifying revolving retail	-	52	-	95	83
Retail SME	75	158	45	17	23
Other retail	5	60	4	55	56
Total IRB approach	**1,394**	**3,099**	**645**	**289**	**250**
Specialised lending	**161**	**79**	**63**	**8**	**5**
Subject to standardised approach					
Residential mortgage	8	27	3	-	1
Corporate	1	1	6	-	2
Total standardised approach	**9**	**28**	**9**	**-**	**3**
Total	**1,564**	**3,206**	**717**	**297**	**258**
Additional regulatory specific provisions			1,212		
Total regulatory specific provisions			**1,929**		
General reserve for credit losses			**2,037**		

5.1 General Disclosures (continued)

Table 5.1G: Provisions by Industry

The following table provides asset quality information by industry. Industry classifications follow ANZSIC Level 1 classifications.

	As at 30 Sep 19			6 months ended 30 Sep 19	
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write-offs
	$m	$m	$m	$m	$m
Industry sector					
Accommodation and hospitality	100	29	46	25	7
Agriculture, forestry, fishing and mining	694	93	184	57	6
Business services and property services	131	49	63	10	8
Commercial property	177	73	64	7	7
Construction	71	49	44	12	5
Finance and insurance	43	15	41	6	18
Government Administration and Defence	-	-	-	-	-
Manufacturing	61	36	47	(6)	21
Personal	8	104	3	148	137
Residential mortgages	340	3,011	103	41	31
Retail and wholesale trade	268	90	128	41	37
Transport and storage	58	23	34	6	3
Utilities	1	1	1	-	-
Other[1]	20	30	24	10	5
Total	**1,972**	**3,603**	**782**	**357**	**285**

Additional regulatory specific provisions	**1,256**

[1] *Other includes health services, cultural recreational service and education.*

	As at 31 Mar 19			6 months ended 31 Mar 19	
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write-offs
	$m	$m	$m	$m	$m
Industry sector					
Accommodation and hospitality	90	25	28	3	6
Agriculture, forestry, fishing and mining	335	56	137	5	12
Business services and property services	130	41	61	16	8
Commercial property	169	90	65	8	7
Construction	54	42	36	10	11
Finance and insurance	38	9	53	27	-
Government Administration and Defence	-	-	-	-	-
Manufacturing	97	29	71	(27)	4
Personal	6	117	5	153	140
Residential mortgages	314	2,683	88	36	49
Retail and wholesale trade	269	72	122	61	16
Transport and storage	45	24	31	4	2
Utilities	1	1	1	-	-
Other	16	17	19	1	3
Total	**1,564**	**3,206**	**717**	**297**	**258**

Additional regulatory specific provisions	**1,212**

5.1 General Disclosures (continued)

Table 5.1H: Provisions by Geography

The following table provides asset quality information by major geographical area, derived from the booking office where the exposure was transacted.

	As at 30 Sep 19			
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	General reserve for credit losses
	$m	$m	$m	$m
Geographic region				
Australia	1,330	3,457	624	2,840
New Zealand	608	136	146	482
Asia, Europe and Americas	34	10	12	38
Total	**1,972**	**3,603**	**782**	**3,360**
Additional regulatory specific provisions			1,256	(1,256)
Plus reserve created through retained profits				-
General reserve for credit losses (GRCL)[(1)]				**2,104**

[(1)] The GRCL balance allocated across geographic regions of $3,360 million (March 2019: $3,249 million) includes $3,118 million (March 2019: $3,015 million) of provisions on loans at amortised cost and $242 million (March 2019: $234 million) provisions on loans and derivatives at fair value.

	As at 31 Mar 19			
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	General reserve for credit losses
		$m	$m	$m
Geographic region				
Australia	1,227	3,062	600	2,707
New Zealand	300	125	103	508
Asia, Europe and Americas	37	19	14	34
Total	**1,564**	**3,206**	**717**	**3,249**
Regulatory specific provisions			1,212	(1,212)
Plus reserve created through retained profits				-
General reserve for credit losses (GRCL)				**2,037**

5.1 General Disclosures (continued)

Table 5.1I: Movement in Provisions

The following table provides the movements in the balance of provisions over the reporting period for both specific provisions and the GRCL.

	6 months ended 30 Sep 19 $m	6 months ended 31 Mar 19 $m
General reserve for credit losses		
Collective provision balance at beginning of period	3,015	2,840
Net transfer to specific provision	(134)	(142)
New and increased provision (net of releases)	251	296
Foreign currency translation and other adjustments	(14)	21
Collective provision on loans and advances at amortised cost	3,118	3,015
Plus provisions on loans and derivatives at fair value	242	234
Less additional regulatory specific provisions	(1,256)	(1,212)
General reserve for credit losses	**2,104**	**2,037**
Specific provisions		
Balance at beginning of period	716	673
Net transfer from collective provision	134	142
New and increased provisions (net of releases)	337	270
Write-backs of specific provisions	(81)	(89)
Write-offs from specific provisions	(319)	(281)
Foreign currency translation and other adjustments	(5)	1
Specific provisions excluding provisions for assets at fair value	782	716
Specific provisions held on assets at fair value	-	1
Additional regulatory specific provisions	1,256	1,212
Total regulatory specific provisions	**2,038**	**1,929**
Total provisions	**4,142**	**3,966**

Factors Impacting Loss Experience in the Preceding Period

90+ days past due loans
90+ days past due facilities at 30 September 2019 increased compared to 31 March 2019 due to increase in delinquencies across the Australian residential mortgages portfolio.

Impaired facilities
Impaired facilities as at September 2019 increased compared to 31 March 2019 due to impairment of a small number of large exposures in the New Zealand dairy portfolio and an increase in the level of impairment activity within Business & Private Banking within the IRB Corporate (including corporate SME) portfolio.

Specific provision for credit impairment
Specific provisions for credit impairment at 30 September 2019 increased compared to 31 March 2019, due to new and increased specific provisions raised within the IRB corporate (including corporate SME) portfolio combined with a low level of write-offs.

Specific credit impairment charge
The specific credit impairment charge for the six months ended 30 September 2019 was $357 million, $60 million higher than the six months ended 31 March 2019. This increase was largely a result of the IRB corporate (including corporate SME) in Business & Private Banking due to new and increased charges for individually impaired exposures, combined with the non-repeat of write-backs for a small number of larger exposures in the prior period and higher charges in New Zealand Banking for the impairment of a small number of larger exposures in the dairy portfolio. This was partially offset by lower charges in Corporate & Institutional Banking.

Net write-offs
Net write-offs increased from $258 million for the six months ended 31 March 2019 to $285 million for the six months ended 30 September 2019, due to a modest increase in the level of write-offs from a low base.

5.1 General Disclosures (continued)

Table 5.1J (i): Loss Experience

The following table provides the regulatory expected loss (which are through the cycle loss estimates) compared to the realised actual losses calculated as an exposure weighted average (before credit risk mitigation).

Actual losses (net write-offs) measured over the short-term will differ to regulatory expected loss estimates as actual losses are a lag indicator of the quality of the assets in prior periods. Other differences between these measures are:

- actual losses do not take into account modelled economic costs such as internal workout costs factored into estimates of loss
- regulatory expected loss is based on the quality of exposures at a point in time using long-run PDs and stressed LGDs. In most years actual losses would be below the regulatory expected loss estimate
- regulatory expected loss includes expected losses on non-defaulted assets which is a function of long-run PDs and downturn stressed LGDs. For defaulted exposures, regulatory expected loss is based on the Group's best estimate of expected loss.

	As at 30 Sep 19	
	Exposure weighted average actual loss[(1)] (net write-offs)	**Exposure weighted average regulatory[(1)] expected loss**
Exposure type	**$m**	**$m**
Subject to IRB approach		
Corporate (including SME)	444	2,141
Sovereign	-	5
Bank	5	42
Residential mortgage	89	888
Qualifying revolving retail	174	215
Retail SME	67	233
Other retail	99	145
Total IRB approach	**878**	**3,669**

[(1)] *These values provide a comparison of actual losses (net write-offs) averaged over a period of ten years to 30 September 2019 with regulatory expected loss averaged over a period of ten years to 30 September 2018.*

	As at 31 Mar 19	
	Exposure weighted average actual loss[(1)] (net write-offs)	**Exposure weighted average regulatory[(1)] expected loss**
Exposure type	**$m**	**$m**
Subject to IRB approach		
Corporate (including SME)	442	2,316
Sovereign	-	2
Bank	2	45
Residential mortgage	91	914
Qualifying revolving retail	174	218
Retail SME	68	238
Other retail	98	151
Total IRB approach	**875**	**3,884**

[(1)] *These values provide a comparison of actual losses (net write-offs) averaged over a period of nine years to 31 March 2019 with regulatory expected loss averaged over a period of nine years to 31 March 2018.*

	As at 30 Sep 18	
	Exposure weighted average actual loss[(1)] (net write-offs)	**Exposure weighted average regulatory[(1)] expected loss**
Exposure type	**$m**	**$m**
Subject to IRB approach		
Corporate (including SME)	476	2,301
Sovereign	-	5
Bank	5	45
Residential mortgage	83	877
Qualifying revolving retail	155	211
Retail SME	65	242
Other retail	86	145
Total IRB approach	**870**	**3,826**

[(1)] *These values provide a comparison of actual losses (net write-offs) averaged over a period of nine years to 30 September 2018 with regulatory expected loss averaged over a period of nine years to 30 September 2017.*

5.1 General Disclosures (continued)

Accuracy of Risk Estimates

The following tables have been provided to compare the estimates of credit risk factors used within the calculation of regulatory capital with actual outcomes across asset classes. Estimates for specialised lending have not been included as these exposures are subject to the supervisory slotting criteria approach, which relies upon the application of supervisory risk-weights.

An explanation of the internal ratings process and the application of credit risk models to calculate PD, EaD and LGD is provided within Section 5.3 *Internal Ratings-Based Portfolios*.

Table 5.1J (ii): Accuracy of Risk Estimates for PD and EaD

The following table compares internal estimates of long-run PD with actual default rates. Averages of actual and estimated PD are calculated using the cohort that is not in default at the beginning of the financial year and averaged out over the observation period since 2010. The EaD ratio compares the estimated downturn EaD at the beginning of the financial year against the actual default amount.

	As at 30 Sep 19		
	Average estimated PD[(1)]	Average actual PD[(1)]	Ratio of estimated to actual EAD
Exposure type	%	%	
Subject to IRB approach			
Corporate (including SME)	1.72	1.72	1.1
Sovereign[(2)]	0.43	0.11	1.1
Bank[(2)]	0.37	0.12	1.1
Residential mortgage[(3)]	0.92	0.89	1.0
Qualifying revolving retail	1.51	1.51	1.1
Retail SME	2.19	2.12	1.1
Other retail	2.71	2.89	1.1

(1) *These values provide a comparison of internal estimates of long-run PD with actual default rates averaged over a period of ten years to 30 September 2019.*
(2) *Average actual PDs for sovereign and bank exposures are based on a low number of observed defaults.*
(3) *Estimated PDs includes BNZ assets subject to RBNZ calibration overlay.*

	As at 31 Mar 19		
	Average estimated PD[(1)]	Average actual PD[(1)]	Ratio of estimated to actual EAD
Exposure type	%	%	
Subject to IRB approach			
Corporate (including SME)	1.70	1.67	1.1
Sovereign	0.45	0.08	1.1
Bank	0.39	0.17	1.0
Residential mortgage	0.95	0.88	1.0
Qualifying revolving retail	1.56	1.51	1.1
Retail SME	2.18	2.07	1.1
Other retail	2.74	2.89	1.1

(1) *These values provide a comparison of internal estimates of long-run PD with actual default rates averaged over a period of nine years to 31 March 2019.*

	As at 30 Sep 18		
	Average Estimated PD[(1)]	Average Actual PD[(1)]	Ratio of estimated to actual EAD
Exposure type	%	%	
Subject to IRB approach			
Corporate (including SME)	1.74	1.77	1.1
Sovereign	0.43	0.12	1.1
Bank	0.36	0.13	1.1
Residential mortgage	0.92	0.88	1.0
Qualifying revolving retail	1.49	1.52	1.1
Retail SME	2.14	2.15	1.1
Other retail	2.69	2.90	1.1

(1) *These values provide a comparison of internal estimates of long-run PD with actual default rates averaged over a period of nine years to 30 September 2018.*

5.1 General Disclosures (continued)

Table 5.1J (iii): Accuracy of Risk Estimates for LGD

The following table compares internal estimates of downturn LGD at the beginning of the year with actual losses.

Actual LGD has been calculated using net write-offs from defaults during the observation period since 2010. Recent defaults have been excluded to allow sufficient time to complete the workout of the asset and recognition of any losses. For defaults relating to qualifying revolving retail and other retail, this period is the most recent 12 months and for all other asset classes this period is the most recent two years.

	As at 30 Sep 19	
	Average estimated[(1)] downturn LGD	**Average actual[(1)] LGD**
Exposure type	**%**	**%**
Subject to IRB approach		
Corporate (including SME)[(2)]	38.5	23.2
Sovereign	45.0	-
Bank	51.1	1.3
Residential mortgage[(2)]	20.5	4.9
Qualifying revolving retail	86.1	54.5
Retail SME	35.5	18.2
Other retail	76.3	45.2

(1) *These values provide a comparison of internal estimates of downturn LGD with actual losses which were evidenced during the ten years to 30 September 2019.*

(2) *Estimated downturn LGD subject to APRA and RBNZ imposed regulatory floors.*

	As at 31 Mar 19	
	Average estimated[(1)] downturn LGD	**Average actual[(1)] LGD**
Exposure type	**%**	**%**
Subject to IRB approach		
Corporate (including SME)	38.6	23.0
Sovereign	45.0	-
Bank	52.9	1.0
Residential mortgage	20.5	4.7
Qualifying revolving retail	87.2	54.0
Retail SME	35.8	18.0
Other retail	76.8	45.7

(1) *These values provide a comparison of internal estimates of downturn LGD with actual losses which were evidenced during the nine years to 31 March 2019.*

	As at 30 Sep 18	
	Average estimated[(1)] downturn LGD	**Average actual[(1)] LGD**
Exposure type	**%**	**%**
Subject to IRB approach		
Corporate (including SME)	38.4	24.1
Sovereign	45.0	-
Bank	51.1	1.3
Residential mortgage	20.6	5.1
Qualifying revolving retail	87.2	54.4
Retail SME	35.8	18.5
Other retail	76.7	44.5

(1) *These values provide a comparison of internal estimates of downturn LGD with actual losses which were evidenced during the nine years to 30 September 2018.*

5.2 Standardised and Supervisory Slotting Portfolios

Standardised Credit Risk Portfolios

There are several regulatory prescribed portfolios (such as qualifying central clearing counterparties, self-managed superannuation funds and margin lending), plus some other small portfolios where the standardised approach to credit risk is applied by the Group.

Fitch Ratings, Moody's Investor Services and Standard & Poor's credit ratings are used to determine the risk-weights within the APRA standardised approach, as presented in the table below. APRA's external rating grades table is used to map external ratings into an external rating grade or credit rating grade that defines the appropriate risk-weight as outlined in APS 112 *Capital Adequacy: Standardised Approach to Credit Risk.*

External rating grade classification

External rating grade	Standard & Poor's	Moody's	Fitch
1	AAA, AA+, AA, AA-	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-
2	A+, A, A-	A1, A2, A3	A+, A, A-
3	BBB+, BBB, BBB-	Baa1, Baa2, Baa3	BBB+, BBB, BBB-
4	BB+, BB, BB-	Ba1, Ba2, Ba3	BB+, BB, BB-
5	B+, B, B-	B1, B2, B3	B+, B, B-
6	CCC+, CCC, CCC-, CC, C, D	Caa1, Caa2, Caa3, Ca, C	CCC+, CCC, CCC-, CC, C, D

Table 5.2A: Standardised Exposures by Risk-weight

The following table provides the credit risk exposures subject to the standardised approach by risk-weight.

	As at	
	30 Sep 19	31 Mar 19
	Total exposure	Total exposure
Standardised approach risk-weights	$m	$m
2%	5,320	4,526
4%	1,981	1,524
20%	1,777	1,744
35%	160	174
50%	405	444
75%	733	824
100%	5,423	5,417
150%	29	17
Central counterparty default fund contribution guarantee(1)	189	176
Total exposure subject to the standardised approach	**16,017**	**14,846**

(1) *Default fund contributions to qualifying central clearing counterparties are shown separately as they do not align to the risk-weights above.*

Table 5.2B: Standardised Exposures by Risk Grade

	As at	
	30 Sep 19	31 Mar 19
	Total exposure	Total exposure
Asset class by rating grade	$m	$m
Residential mortgage		
Unrated	2,050	2,190
Corporate		
External rating grade 1	7,310	277
External rating grade 2	-	802
Unrated	5,536	10,461
Sub-total	12,846	11,540
Other		
Unrated	1,121	1,116
Total exposure subject to the standardised approach	**16,017**	**14,846**

5.2 Standardised and Supervisory Slotting Portfolios (continued)

Portfolios Subject to Supervisory Risk-weights in the IRB Approach

Specialised lending is represented by the following four sub-asset classes:

- project finance exposures
- income-producing real estate exposures
- object finance exposures
- commodities finance exposures.

The Group maps its internal rating grades for specialised lending to the five supervisory slotting categories of strong, good, satisfactory, weak and default. The criteria to map these exposures are outlined in APS 113 (Attachment F). For income-producing real estate, the Group maps a combination of internal rating grade and LGD to the supervisory slotting categories. Each slotting category is associated with a specific risk-weight for unexpected loss that broadly corresponds to a range of external credit assessments as detailed below.

Supervisory category	Risk-weight	External rating equivalent
Strong	70%	BBB- or better
Good	90%	BB+ or BB
Satisfactory	115%	BB- or B+
Weak	250%	B to C
Default	0%	N/A

Table 5.2C: Supervisory Slotting by Risk-weight

The following table provides the credit exposures for specialised lending products subject to supervisory slotting by risk-weight.

	As at	
	30 Sep 19	31 Mar 19
Unexpected loss risk-weights	Total exposure $m	Total exposure $m
70%	22,964	23,535
90%	34,311	33,843
115%	8,001	9,036
250%	696	695
Default	538	671
Total specialised lending exposure subject to supervisory slotting	**66,510**	**67,780**

5.3 Internal Ratings-Based Portfolios

General Disclosure on the Internal Ratings-Based Approach (IRB)

The Group has been accredited by APRA and RBNZ to use its internal credit models and processes in determining RWA for its retail and non-retail credit portfolios across its NAB and BNZ banking operations.

The Group's internal ratings system measures credit risk using PD, EaD and LGD. Distinct PD, EaD and LGD models exist for the retail and non-retail credit portfolios, based on asset classes and customer segments.

Non-retail customers are assessed individually using a combination of expert judgement and statistical risk rating tools. For retail customers, operational scorecards are the primary method of risk rating. Rating approaches for each asset class are summarised in the table below.

Exposure type	Description	Rating approach
Non-retail exposures		
Corporate (including SME)	Companies, partnerships or proprietorships not classified elsewhere, including non-banking entities held by banks.	Statistical risk model, external credit rating and expert judgement
Sovereign	Sovereign and Australian dollar claims on the Reserve Bank of Australia. Sovereign includes government guaranteed exposures.	Statistical risk model, external credit rating and expert judgement
Bank	ADIs and overseas banks.	Statistical risk model, external credit rating and expert judgement
Specialised lending	Exposures associated with the financing of individual projects where the repayment is highly dependent on the performance of the underlying pool or collateral, rather than the obligor's creditworthiness. Specialised lending includes project finance, income-producing real estate, object finance and commodities finance.	Statistical risk model, expert judgement, supervisory slotting
Retail exposures		
Residential mortgage	Exposures partly or fully secured by residential properties.	Statistical risk model
Qualifying revolving retail	Consumer credit card exposures less than $100,000, excluding BNZ credit cards (which are classified as other retail under RBNZ rules).	Statistical risk model
Retail SME	Small business and agriculture exposures where the total aggregated business related exposures of the obligor and its related entities are less than $1 million.	Statistical risk model
Other retail	Retail exposures other than residential mortgage, qualifying revolving retail and retail SME. Other retail includes personal loan products, overdrafts, transaction account exposures and BNZ credit cards.	Statistical risk model

Internal Risk Rating and External Ratings

The structure of the internal risk rating system and its relationship with external ratings is outlined below.

Description	Internal rating	Probability of default (%)	S&P rating	Moody's rating
Super senior investment grade	1, 2	0<0.03	AAA, AA+, AA, AA-	Aaa, Aa1, Aa2, Aa3
Senior investment grade	3, 4, 5	0.03<0.11	A+, A, A-	A1, A2, A3
Investment grade	6, 7, 8, 9, 10, 11	0.11<0.55	BBB+, BBB, BBB-	Baa1, Baa2, Baa3
Acceptable	12, 13, 14, 15, 16, 17, 18, 19	0.55<5.01	BB+, BB, BB-, B+	Ba1, Ba2, Ba3, B1
Weak/doubtful	20, 21, 22, 23	5.01<99.99	B, B-, CCC+, CCC, CCC-	B2, B3, Caa,Ca
Default	98, 99	100	D	C

Internal Ratings-Based Approach Overview

Probability of Default (PD)

PD measures the likelihood that an obligor will default within a 12 month period. The Group uses two types of PD estimates:

- Point in Time, which estimates the likelihood of default in the next 12 months taking account of the current economic conditions. Point in Time PDs are used for management of the portfolio and the collective provision calculation.
- Through the Cycle, which estimates the likelihood of default through a full credit cycle. Through the Cycle PDs are used for regulatory and economic capital calculations.

The Group has a common masterscale across all counterparties (non-retail and retail) for PD.

Loss Given Default (LGD)

LGD measures the portion of the exposure owed to the Group that would be lost in the event of the customer defaulting. LGD is calculated by using a set of estimated parameters including loss given realisation, post-default path rates and bank value of collateral.

The Group applies stresses to the model factors to obtain downturn LGD estimates using internal data, external reference data and benchmarks, and by applying expert judgement or utilises regulatory imposed floors.

5.3 Internal Ratings-Based Portfolios (continued)

Exposure at Default (EaD)
EaD is calculated according to the facility type. The Group's EaD models predict the amount that is outstanding if the obligor defaults. This amount includes principal, fees and interest owed at the time of default.

The Group applies stresses to the model factors to obtain downturn EaD estimates using internal data, benchmark studies and expert judgement.

Use of PD, LGD and EaD
PD, LGD and EaD estimates are used for various regulatory and internal credit risk calculations, such as regulatory expected loss, RWA, economic capital and provisioning.

Credit rating system control
In addition to monthly performance reporting, credit models are reviewed at least annually in accordance with Group Model Risk Policy. Regular independent reviews are also conducted.

The outcomes of the model validation process, including proposed actions, are presented to the authorised risk committees for review and endorsement of any actions for implementation.

Internal Ratings-Based Approach for Non-Retail Credit

PD models
The Group has a number of PD models that differ by industry or segment, counterparty size and incorporate regional variances. The rating model used is dependent on:
- industry, based on ANZSIC classification
- financial information available
- qualitative information
- exposure and product.

The quantitative factors consist of financial ratios and indicators, such as profitability, leverage and debt service coverage. The qualitative factors are based on qualitative data using the expert judgement of the lender and credit officer, such as management ability and industry outlook.

While factors predictive of default have broad similarities across segments (e.g. debt service capability and management quality) and are inherently correlated, the modelling process establishes those factors that are most robustly predictive for each segment, along with their relative weightings. External benchmarking is used for certain segments that have insufficient internal data, a small population and/or low defaults. This is the case for externally rated banks and sovereigns, where external rating agency data is used. The resulting rating is updated at least annually.

EaD models
EaD is calculated according to the facility type. Conversion factors are used for estimating off-balance sheet exposures into an equivalent on-balance sheet amount, based on internal data.

Eligible collateral is determined in accordance with APS 112 (Attachment G).

LGD models
LGD for the non-retail portfolio is calculated by using a set of estimated parameters including post default path relativities, secured and unsecured loss experience as well as bank value of collateral. LGD is segmented by customer type, customer size and nature of facility.

As the market value of the collateral and unsecured recoveries is affected by credit cycle changes, the impact of a credit cycle downturn on LGD has been incorporated.

The Group also uses the following factors for non-retail credit LGD models:
- relevant external benchmarks
- secured and unsecured recovery rates
- time value of money
- principal and interest write-offs.

Where limited internal default data exists, data is supplemented by external benchmarks, market data and expert judgement.

5.3 Internal Ratings-Based Portfolios (continued)

Internal Ratings-Based Approach for Retail Credit

PD models
Retail PD models are developed using:
- application data including external credit bureau data
- customer and account level behavioural data (for example, delinquency or limit utilisation).

Each account is scored to assign a PD. This process allows groups of accounts with similar scores to be pooled together and mapped to the PD masterscale.

Appropriate long run adjustments have been made to the models to account for performance over an economic cycle.

EaD models
Retail EaD models use a combination of credit conversion factors similar to those used in non-retail, and scaling factors.

For retail products, credit conversion factors have been developed mainly for revolving credit products, such as credit cards and overdrafts and estimate the amount of unutilised credit a customer may draw in the lead up to default.

Scaling factors are applied mainly to term lending products, where the customer has less availability of unutilised credit from which to draw in the lead up to default.

LGD models
Key account variables, such as months exposure held and balance, are identified and modelled to provide an estimate of the probability that a loan that has defaulted would return to full performance (i.e. cure).

For accounts that do not cure and are written off, internal recovery data is used to assess the ultimate loss (i.e. initial loss less recoveries achieved plus costs of recovery).

Adjustments based on external data and expert judgement are made to the LGD to account for a downturn in the economic cycle, and are applied by varying the cure and recovery rates.

In Australia, lenders mortgage insurance is generally required for borrowing where the Loan to Value Ratio is above 80% at origination, however such insurance does not currently influence the retail LGD metrics used. For loans secured by residential property, APRA has mandated the use of a supervisory floor of 20% for RWA purposes.

5.3 Internal Ratings-Based Portfolios (continued)

Portfolios Subject to IRB Approach

Table 5.3A: Non-Retail Exposures by Risk Grade

The following table provides a breakdown of non-retail credit exposures by PD risk grade, categorised into bands that broadly correspond to externally recognised risk grades. Moody's Investor Services risk grades have been included as a reference point. Exposures have been categorised into PD grades as assessed by the Group's own internal ratings system.

	As at 30 Sep 19						
	PD risk grade mapping						
External credit rating equivalent	**Aa3 and above**	**A1, A2, A3**	**Baa1, Baa2, Baa3**	**Ba1, Ba2**	**Ba3, B1**	**B2 and below**	**Default**
	0<0.03%	**0.03<0.11%**	**0.11<0.55%**	**0.55<2.00%**	**2.00<5.01%**	**5.01<99.99%**	**100%**
Subject to IRB approach	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Total exposure							
Corporate (including SME)	39	61,480	98,157	76,072	19,396	4,230	2,614
Sovereign	55,120	5,218	322	3	2	-	-
Bank	-	34,854	4,404	69	5	1	-
Total exposure (EaD)	**55,159**	**101,552**	**102,883**	**76,144**	**19,403**	**4,231**	**2,614**
Undrawn commitments[(1)]							
Corporate (including SME)	-	22,289	26,164	12,123	2,193	306	80
Sovereign	109	246	7	1	2	-	-
Bank	-	852	114	11	-	-	-
Total undrawn commitments	**109**	**23,387**	**26,285**	**12,135**	**2,195**	**306**	**80**
Subject to IRB approach							
Average EaD ($m)[(2)]							
Corporate (including SME)	9.56	1.63	0.58	0.31	0.20	0.14	0.38
Sovereign	16.61	2.44	1.08	0.01	0.03	0.01	-
Bank	-	2.67	0.95	0.51	0.11	0.05	-
Exposure-weighted average LGD (%)							
Corporate (including SME)	59.0%	50.1%	36.6%	31.5%	30.8%	34.0%	39.9%
Sovereign	4.4%	36.9%	40.3%	43.2%	45.0%	45.0%	-
Bank	-	50.9%	55.4%	59.6%	59.6%	59.6%	-
Exposure-weighted average risk-weight (%)							
Corporate (including SME)	21.8%	26.7%	41.6%	58.9%	74.9%	123.8%	199.6%
Sovereign	1.2%	12.1%	34.7%	71.3%	120.2%	151.1%	-
Bank	-	21.9%	61.8%	112.9%	184.1%	199.1%	-

(1) *Undrawn commitments are included in total exposure shown above.*

(2) *Simple average of exposure by number of arrangements.*

5.3 Internal Ratings-Based Portfolios (continued)

	As at 31 Mar 19						
	PD risk grade mapping						
External credit rating equivalent	Aa3 and above	A1, A2, A3	Baa1, Baa2, Baa3	Ba1, Ba2	Ba3, B1	B2 and below	Default
	0<0.03%	0.03<0.11%	0.11<0.55%	0.55<2.00%	2.00<5.01%	5.01<99.99%	100%
Subject to IRB approach	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Total exposure							
Corporate (including SME)	39	54,089	97,859	73,929	19,740	4,795	2,265
Sovereign	55,488	4,066	280	53	13	-	-
Bank	-	35,256	3,517	85	3	-	-
Total exposure (EaD)	**55,527**	**93,411**	**101,656**	**74,067**	**19,756**	**4,795**	**2,265**
Undrawn commitments							
Corporate (including SME)	19	20,182	27,969	12,556	2,341	366	49
Sovereign	170	237	8	23	7	-	-
Bank	-	898	241	12	-	-	-
Total undrawn commitments	**189**	**21,317**	**28,218**	**12,591**	**2,348**	**366**	**49**
Subject to IRB approach							
Average EaD ($m)							
Corporate (including SME)	24.72	1.44	0.59	0.30	0.20	0.16	0.35
Sovereign	16.02	1.84	0.87	0.21	0.07	0.01	-
Bank	-	2.32	0.79	0.82	0.05	0.05	-
Exposure-weighted average LGD (%)							
Corporate (including SME)	59.0%	48.7%	37.2%	31.6%	30.7%	34.1%	42.5%
Sovereign	4.2%	32.9%	39.0%	46.2%	45.0%	45.0%	-
Bank	-	54.6%	58.4%	59.6%	59.6%	59.6%	-
Exposure-weighted average risk-weight (%)							
Corporate (including SME)	21.7%	25.8%	42.4%	58.7%	75.8%	129.3%	189.2%
Sovereign	1.2%	12.9%	40.7%	72.0%	108.7%	147.6%	-
Bank	-	22.7%	66.9%	96.2%	175.4%	200.2%	-

5.3 Internal Ratings-Based Portfolios (continued)

Table 5.3B: Retail Exposures by Risk Grade

The following table provides a breakdown of the retail credit exposures by PD risk grade, categorised into bands that broadly correspond to externally recognised risk grades, ranging from super senior investment grade to defaulted exposures.

	As at 30 Sep 19					
	PD risk grade					
	0<0.1%	0.1<0.5%	0.5<2.0%	2.0<5.0%	5.0<99.9%	100%
Subject to IRB approach	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Total exposure						
Residential mortgage	80,902	157,837	114,460	17,271	11,851	3,697
Qualifying revolving retail	2,551	3,421	2,424	1,407	691	46
Retail SME	1,474	5,382	6,632	2,657	984	452
Other retail	876	605	1,039	938	526	69
Total exposure (EaD)	**85,803**	**167,245**	**124,555**	**22,273**	**14,052**	**4,264**
Undrawn commitments[1]						
Residential mortgage	28,288	13,500	5,363	478	88	23
Qualifying revolving retail	2,246	2,240	691	139	50	3
Retail SME	845	1,479	930	281	71	23
Other retail	586	252	200	69	22	1
Total undrawn commitments	**31,965**	**17,471**	**7,184**	**967**	**231**	**50**
Subject to IRB approach						
Average EaD ($m)[2]						
Residential mortgage	0.06	0.27	0.23	0.29	0.33	0.25
Qualifying revolving retail	0.01	0.01	0.01	0.01	0.01	0.01
Retail SME	0.02	0.03	0.03	0.03	0.01	0.02
Other retail	small	small	small	0.01	small	small
Exposure-weighted average LGD (%)						
Residential mortgage	20.0%	20.0%	20.1%	19.9%	20.0%	20.1%
Qualifying revolving retail	73.3%	74.4%	76.5%	77.5%	77.2%	76.3%
Retail SME	24.6%	25.4%	28.3%	29.3%	30.4%	34.6%
Other retail	84.0%	80.8%	76.1%	72.9%	71.7%	68.6%
Exposure-weighted average risk-weight (%)						
Residential mortgage	5.7%	17.2%	34.2%	77.4%	123.2%	198.0%
Qualifying revolving retail	3.4%	10.1%	33.6%	71.8%	169.3%	150.8%
Retail SME	6.1%	14.7%	33.4%	53.5%	90.0%	235.3%
Other retail	13.8%	43.3%	85.5%	107.6%	137.9%	141.3%

(1) *Undrawn commitments are included in total exposures shown above.*

(2) *Simple average of exposure by number of arrangements.*

5.3 Internal Ratings-Based Portfolios (continued)

	As at 31 Mar 19					
	PD risk grade					
	0<0.1%	0.1<0.5%	0.5<2.0%	2.0<5.0%	5.0<99.9%	100%
Subject to IRB approach	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Total exposure						
Residential mortgage	82,507	159,202	114,145	17,597	11,620	3,373
Qualifying revolving retail	2,537	3,515	2,580	1,532	782	57
Retail SME	1,624	5,409	6,491	2,836	1,107	418
Other retail	894	632	1,128	1,033	537	73
Total exposure (EaD)	**87,562**	**168,758**	**124,344**	**22,998**	**14,046**	**3,921**
Undrawn commitments						
Residential mortgage	28,605	13,650	5,351	509	79	20
Qualifying revolving retail	2,234	2,297	741	162	53	3
Retail SME	941	1,497	927	331	76	19
Other retail	606	268	216	79	21	1
Total undrawn commitments	**32,386**	**17,712**	**7,235**	**1,081**	**229**	**43**

Subject to IRB approach						
Average EaD ($m)						
Residential mortgage	0.07	0.27	0.23	0.29	0.33	0.24
Qualifying revolving retail	0.01	0.01	0.01	0.01	0.01	0.01
Retail SME	0.02	0.03	0.03	0.03	0.02	0.02
Other retail	small	small	0.01	0.01	small	small
Exposure-weighted average LGD (%)						
Residential mortgage	20.0%	20.0%	20.1%	19.9%	20.0%	20.1%
Qualifying revolving retail	73.3%	74.5%	76.6%	77.6%	77.3%	76.4%
Retail SME	24.2%	25.2%	28.2%	29.6%	32.7%	34.7%
Other retail	83.9%	80.9%	76.2%	73.8%	71.2%	69.3%
Exposure-weighted average risk-weight (%)						
Residential mortgage	5.7%	17.1%	34.3%	77.6%	123.3%	205.1%
Qualifying revolving retail	3.4%	10.2%	33.7%	72.3%	169.9%	131.6%
Retail SME	6.0%	14.5%	33.4%	54.5%	93.0%	227.3%
Other retail	13.7%	43.4%	85.8%	109.0%	138.9%	132.7%

5.4 Credit Risk Mitigation

The Group employs a range of techniques to reduce risk in its credit portfolio. Credit risk mitigation commences with an objective credit evaluation of the counterparty. This includes an assessment of the counterparty's character, industry, business model and capacity to meet its commitments without distress. Other methods to mitigate credit risk include a prudent approach to facility structure, collateral, lending covenants and terms and conditions.

Collateral Management

Collateral provides a secondary source of repayment for funds being advanced in the event that counterparty cannot meet its contractual repayment obligations.

Collateral commonly includes:
- fixed and floating charges over business assets
- residential, commercial and rural property
- cash deposits
- fixed income products
- listed shares, bonds or securities
- guarantees, letters of credit and pledges.

To ensure that collateral held is sufficiently liquid, legally valid, enforceable and regularly valued, credit risk policy provides a framework to:
- establish the amount and quality of collateral required to support an exposure
- determine acceptable valuation type and revaluation requirements for each collateral class
- record market value and bank value, being a conservative assessment of value in the event the collateral is realised.

Guarantees from financially sound parties are sometimes required to support funds advanced to a counterparty. This can reduce the risk of default on their obligations. Where allowed in credit risk policy, guarantors that are risk rated may enhance the counterparty customer rating.

Credit Hedging

Credit hedging is utilised in the banking book to avoid counterparty concentrations and achieve portfolio diversification.

Credit risk to individual hedge counterparties is mitigated through careful selection of either counterparties with strong credit quality (either investment grade or supported by appropriate credit support) and/or use of collateral agreements to manage net exposures.

Credit Exposure Netting

Credit exposure netting may be adopted to calculate counterparty credit exposures on a net basis. This recognises that the change in value for different products over time is not perfectly correlated. Transactions with positive value when netted may offset those with negative value.

Credit exposure netting is subject to execution of supporting legal documentation. A credit exposure measurement and reporting system manages the netting pools in accordance with that documentation.

Portfolio Management

Credit Risk, together with division risk functions, manage the overall risk of the corporate, sovereign and bank credit portfolios. Where credit risks are identified, a variety of techniques are used to mitigate the risk, including credit derivatives and, on occasion, the sale of loan assets (in consultation with the counterparties).

Internal reporting systems are utilised to record all:
- approved derivative, money market, credit line and/or credit trading facility limits
- credit exposure arising from securities sales and purchases, money market lines, commodities, trade, derivative and foreign exchange transactions
- country risk exposures for country economic capital limit purposes.

Limits may be established at a facility, product group or individual product level. A specialist administration unit operating independently from relationship managers, dealers and credit approvers record and maintain the limits.

5.4 Credit Risk Mitigation (continued)

Table 5.4A: Mitigation by Eligible Financial Collateral

The following table provides details of eligible financial collateral applied in determining the credit risk exposures. Eligible financial collateral, when used to reduce levels of exposure, refers to cash and cash equivalents as defined in APS 112. Exposures covered by eligible financial collateral are measured after the application of regulatory haircuts.

	As at 30 Sep 19	
	Total exposure	**Eligible financial collateral applied**
Exposure type	**$m**	**$m**
Subject to IRB approach		
Corporate (including SME)	261,988	64,110
Sovereign	60,665	8,653
Bank	39,333	28,373
Residential mortgage	386,018	-
Qualifying revolving retail	10,540	-
Retail SME	17,581	5
Other retail	4,053	-
Total IRB approach	**780,178**	**101,141**
Specialised lending	**66,510**	**454**
Subject to standardised approach		
Residential mortgage	2,050	1
Corporate	12,846	50,786
Other	1,121	29
Total standardised approach	**16,017**	**50,816**
Total	**862,705**	**152,411**

	As at 31 Mar 19	
	Total exposure	**Eligible financial collateral applied**
Exposure type	**$m**	**$m**
Subject to IRB approach		
Corporate (including SME)	252,716	76,307
Sovereign	59,900	10,834
Bank	38,861	23,222
Residential mortgage	388,444	-
Qualifying revolving retail	11,003	-
Retail SME	17,885	5
Other retail	4,297	-
Total IRB approach	**773,106**	**110,368**
Specialised lending	**67,780**	**490**
Subject to standardised approach		
Residential mortgage	2,190	2
Corporate	11,540	40,422
Other	1,116	25
Total standardised approach	**14,846**	**40,449**
Total	**855,732**	**151,307**

5.4 Credit Risk Mitigation (continued)

Table 5.4B: Mitigation by Guarantees and Credit Derivatives

The following table provides details of guarantees and credit derivatives.

	As at 30 Sep 19		
	Total exposure	Covered by guarantees	Covered by credit derivatives
Exposure type	**$m**	**$m**	**$m**
Subject to IRB approach			
Corporate (including SME)	261,988	27,706	-
Sovereign	60,665	-	-
Bank	39,333	214	-
Residential mortgage	386,018	-	-
Qualifying revolving retail	10,540	-	-
Retail SME	17,581	-	-
Other retail	4,053	-	-
Total IRB approach	**780,178**	**27,920**	**-**
Specialised lending	**66,510**	**-**	**-**
Subject to standardised approach			
Residential mortgage	2,050	-	-
Corporate	12,846	-	-
Other	1,121	-	-
Total standardised approach	**16,017**	**-**	**-**
Total	**862,705**	**27,920**	**-**

	As at 31 Mar 19		
	Total exposure	Covered by guarantees	Covered by credit derivatives
Exposure type	**$m**	**$m**	**$m**
Subject to IRB approach			
Corporate (including SME)	252,716	25,420	-
Sovereign	59,900	-	-
Bank	38,861	155	-
Residential mortgage	388,444	-	-
Qualifying revolving retail	11,003	-	-
Retail SME	17,885	-	-
Other retail	4,297	-	-
Total IRB approach	**773,106**	**25,575**	**-**
Specialised lending	**67,780**	**-**	**-**
Subject to standardised approach			
Residential mortgage	2,190	-	-
Corporate	11,540	-	-
Other	1,116	-	-
Total standardised approach	**14,846**	**-**	**-**
Total	**855,732**	**25,575**	**-**

5.5 Counterparty Credit Risk

This section describes the Group's approach to managing credit risk relating to market-related instruments. Counterparty Credit Risk is the risk that a counterparty to a transaction may default before final settlement of the transaction's cash flows. An economic loss would occur if a transaction with a defaulting counterparty has a positive economic value to the Group.

Credit Limits

Credit limits for derivatives are approved and assigned by an appropriately authorised DCA based on the same principles (i.e. amount, tenor, PD, LGD and product type), and internal credit policies used for approving loans.

Credit exposures for each transaction are measured as the current mark-to-market value and the potential future credit exposure which is an estimate of the future replacement cost.

Credit risk economic capital is then allocated to individual counterparty exposures based on their relative risk contribution to unexpected loss.

Limit excesses, whether they are active or passive, are subject to formal approval by a DCA.

Collateral

Counterparty credit exposures may be collateralised by an approved list of eligible collateral via market standard master agreements (International Swaps and Derivatives Association (ISDA) master agreements and credit support annex). Eligible collateral may be subject to haircuts depending on asset type. Counterparties may also be subject to posting additional collateral before transacting.

Wrong Way Risk

Wrong way risk occurs when exposure to a counterparty is adversely correlated with the credit quality of that counterparty. Credit exposures and potential losses may increase under these circumstances as a result of market conditions. The Group manages these risks through the effective implementation of risk policies.

Downgrade Impact

As at 30 September 2019, the Group would need to post an estimated amount of $30 million of collateral in the event of a one notch downgrade to the Group's credit rating, and $131 million in the event of a two notch downgrade.

5.5 Counterparty Credit Risk (continued)

Table 5.5A (i): Net Derivatives Credit Exposure

The following tables provide the calculation of net derivatives credit exposure. The exposure as at 30 September 2019 represents the EaD under SA-CCR which was introduced from 1 July 2019, and the exposure as at 31 March 2019 represents EaD under the current exposure method that applied prior to 1 July 2019.

	30 Sep 19
	$m
Gross positive fair value of derivative contracts	109,607
Netting and collateral benefits	(93,787)
Replacement cost (RC)	**15,820**
Potential future credit exposure	15,180
Effective expected positive exposure	**31,000**
Impact of scaling factor of 1.4 and credit valuation adjustment[1]	12,278
Total net derivatives credit exposure	**43,278**

[1] *Credit valuation adjustment that has been recognised as an incurred write-down (i.e. expensed for accounting purposes).*

	31 Mar 19
	$m
Gross positive fair value of derivative contracts	71,356
Netting benefits	(57,985)
Netted current credit exposure (NCCE)	**13,371**
Potential future credit exposure	18,586
Collateral held:	
Cash	(4,782)
Government securities	(397)
Net derivatives credit exposure	**26,778**

Table 5.5A (ii): Distribution of Current Credit Exposure

The following table provides details of the net derivative credit exposure by type of derivative.

	30 Sep 19	31 Mar 19
	Exposure at default	Exposure at default
Exposure type	$m	$m
Interest rate contracts	14,875	7,832
Foreign exchange and gold contracts	19,563	14,662
Equity contracts	178	538
Commodity contracts other than precious metals	1,484	193
Other market related contracts	3	81
Central counterparty[1]	7,175	3,472
Total	**43,278**	**26,778**

[1] *Derivative contracts with qualifying central clearing counterparties have not been broken down by type of derivative.*

Table 5.5B: Credit Derivative Transactions

The following table provides the notional value of credit derivative transactions, segregated between use for the Group's own credit portfolio, as well as in its intermediation activities. This is broken down further by protection bought and sold within each product group.

	As at 30 Sep 19			As at 31 Mar 19[1]		
	Protection bought notional	Protection sold notional	Total notional	Protection bought notional	Protection sold notional	Total notional
	$m	$m	$m	$m	$m	$m
Credit derivatives products used for own credit portfolio						
Credit default swaps	3,959	1,968	5,927	3,550	1,671	5,221
Credit derivatives products used for intermediation						
Credit default swaps	1,005	1,413	2,418	1,710	1,653	3,363
Total return swaps	-	-	-	120	-	120
Total credit derivative notional value	**4,964**	**3,381**	**8,345**	**5,380**	**3,324**	**8,704**

[1] *The credit default swap notionals have been restated from that previously disclosed (own credit portfolio notionals nil and used for intermediation bought notional $3,589m).*

Section 6

Securitisation

Introduction

Securitisation is a financing structure where the cash flows from a pool of assets are used to service obligations to at least two different tranches or classes of creditors (typically holders of debt securities), with each class or tranche reflecting a different degree of credit risk (i.e. one class of creditors is entitled to receive payments from the pool before another class of creditors).

Objectives

The Group engages in securitisation activities in relation to third parties, as well as its own assets.

Third party securitisation activities include arranging securitisation transactions and providing facilities and funding to securitisation special purpose vehicles (SPVs). They also include investing in securities issued by third-party securitisations through primary and secondary market transactions. These activities support client and portfolio management objectives, and generate fee and interest income.

Own asset securitisation activities may be used for funding, capital and liquidity management purposes. This involves the sale of assets originated by the Group to an SPV, which then issues notes to third party investors. Where significant credit risk transfer is achieved, regulatory capital relief may be achieved. Facilities such as liquidity facilities and interest rate swaps may be provided to the SPV on an arm's length basis.

The Group also holds internal securitisation pools of residential mortgage-backed securities (RMBS). These securities have been developed as a source of contingent liquidity to support the Group's liquid asset holdings outlined in Section 9.1 *Funding and Liquidity Risk.*

Roles

The major roles undertaken by the Group in respect of securitisation are set out in the table below.

Securitisation activity	Role
Third party	Arranger, Dealer, Joint Lead Manager, Cross Currency Swap Provider, Interest Rate Swap Provider, Liquidity Facility Provider, Funding Provider, Investor
Own asset	Originator, Seller, Arranger, Lead Manager, Manager, Trust Administrator, Servicer, Cross Currency Swap Provider, Interest Rate Swap Provider, Liquidity Facility Provider

Third party securitisation activity is undertaken by Corporate & Institutional Banking, while own asset activity is conducted by Group Treasury. Both third party and own asset securitisation activity is also undertaken by BNZ.

Risk Management

Risks arising from securitisation activities include credit risk, market risk, balance sheet and liquidity risk and operational risk. These risks are managed in accordance with the Group's risk management policies and frameworks described in Section 3 *Risk Governance and Management* and the sections on these material risks in this report.

Credit risk arising from securitisation exposures is managed in line with the framework and policies outlined in Section 5.1 *Credit Risk General Disclosures*. All securitisation exposures are subject to initial credit assessment and annual review. Analysis of matters such as portfolio composition, type and level of credit enhancement, and specific structural features of the transaction are included. Future cash flows are modelled and risk factors applied as appropriate. Exposures are monitored against limits relating to overall portfolio size and other attributes such as underlying asset class and geographical split.

Balance sheet and liquidity risk includes various structural, non-traded market risks which arise from exposures held in the banking book. Debt securities held in banking book portfolios are subject to VaR limits in respect of interest rate and foreign exchange, which are set in accordance with approved risk appetite and monitored daily. An independent price validation process is conducted monthly to evaluate the holding values of portfolio exposures. Contingent liquidity and potential collateral outflows are monitored against approved limits on a monthly basis.

In conjunction with the policies and frameworks described above, third party securitisation activity is governed by the Third Party Securitisation Risk Policy. Compliance with this policy and the prudential requirements of APS 120 is monitored by a functionally independent risk oversight team.

All securitisation exposures are specifically identified and recorded in appropriate finance and risk management applications. Underlying pool exposure data is obtained monthly from both internal and external providers. This provides updated information on transaction performance and provides inputs into the regulatory capital calculation. Reporting, exposure monitoring and portfolio insights are prepared on a regular basis (typically monthly) which are reported to the relevant risk committees.

The Group has no exposures which are classified as resecuritisation exposures and does not actively target these types of exposures for investment.

Regulatory Capital and Compliance

The Group's management of the risks associated with securitisation and calculation of capital held against these exposures is governed by APS 120. The Group has policies and procedures in place to ensure compliance with the requirements of this prudential standard, which include:

- having a risk management framework in place for securitisation activities
- ensuring disclosure of the nature of obligations arising from securitisation exposures
- not providing implicit support to securitisation vehicles
- calculating regulatory capital for credit risk from securitisation exposures.

An assessment demonstrating compliance with the prudential standard is prepared for all securitisation transactions.

The Group complies with the methods prescribed by APS 120 for calculating regulatory capital, namely the External Ratings-Based Approach (ERBA) and the Supervisory Formula Approach (SFA). Under the ERBA, risk-weights are matched to external ratings provided by External Credit Assessment Institutions (ECAIs), varying according to tranche seniority and maturity. Where the use of ECAIs is relevant, the Group applies the ratings provided by Standard & Poor's, Moody's Investor Services and/or Fitch Ratings. For unrated transactions, the SFA adjusts risk-weights according to the structural characteristics of the transaction, as well as the nature and performance of the underlying exposures. In the event the exposure does not meet either of these two methods, it is deducted from CET1 capital.

Securitisation exposures held in the trading book are subject to APS 116 *Capital Adequacy: Market Risk*.

Accounting Policies

Third party securitisation - The accounting treatment for debt securities issued by, and warehouse facilities provided to, third party securitisation SPVs reflects the Group's business model for managing the asset.

Where debt securities give rise to contractual cash flows that are solely payments of principal and interest, they are measured at amortised cost provided the underlying pool of assets in the SPV contains one or more instruments that have contractual cash flows that are solely payments of principal and interest and the exposure to credit risk in the tranche is equal to or lower than the credit risk in the underlying pool of assets. Warehouse facilities are measured at amortised cost provided they meet similar contractually linked guidance.

Where debt securities are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets, they are measured at fair value through other comprehensive income.

Derivatives with third party securitisation SPVs are measured at fair value through profit or loss.

Own asset securitisation - The accounting treatment for each transaction in the Group's own asset securitisation program is assessed against the requirements of the applicable accounting standards, particularly AASB 9 *Financial Instruments* and AASB 10 *Consolidated Financial Statements*. Where the Group does not transfer substantially all risks and rewards associated with ownership, the assets are not derecognised from the balance sheet.

A funding liability measured at amortised cost is recognised in respect of the debt securities issued to third party investors.

Further information on the Group's accounting policies that are relevant to securitisation can be found in the 2019 Annual Financial Report, in particular in the financial instruments overview section, and the notes on financial asset transfers and interest in subsidiaries and other entities.

Table 6.1A: Exposures Securitised

The following table provides banking book exposures securitised by the Group and third party securitised assets where the Group is classified as a sponsor. The Group originated exposures can be broken down as follows:

- capital relief - significant risk transfer of the underlying exposure is achieved for regulatory purposes
- funding only - significant risk transfer is not achieved
- internal RMBS - securities are issued and held internally for contingent liquidity purposes (also known as self-securitisation).

	As at 30 Sep 19			
	Group originated capital relief	Group originated funding only	Group[1] originated internal RMBS	Third party originated assets
Underlying asset	**$m**	**$m**	**$m**	**$m**
Residential mortgage	2,721	1,885	85,584	-

[1] *Includes internal securitisation pools of RMBS that have been developed as a source of contingent liquidity to support the Group's liquid asset holdings. The amount of these securitised assets is $73,868 million (March 2019: $69,633 million).*

	As at 31 Mar 19			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS	Third party originated assets
Underlying asset	**$m**	**$m**	**$m**	**$m**
Residential mortgage	3,056	2,103	79,991	-

There were no exposures securitised either in the trading book or synthetically by the Group as at 30 September 2019 or 31 March 2019.

Table 6.1B: Past Due and Impaired Banking Book Exposures Securitised

The following table provides past due and impaired assets that have been originated and securitised by the Group in the banking book and any losses that have been recognised on these securitised exposures.

	As at 30 Sep 19			
	Outstanding exposure	Impaired facilities	Past due facilities ≥90 days	Losses recognised
Underlying asset	**$m**	**$m**	**$m**	**$m**
Residential mortgage	90,190	91	643	-

	As at 31 Mar 19			
	Outstanding exposure	Impaired facilities	Past due facilities ≥90 days	Losses recognised
Underlying asset	**$m**	**$m**	**$m**	**$m**
Residential mortgage	85,150	81	536	-

Table 6.1C: Recent Securitisation Activity

The following table provides the amount of assets sold by the Group to securitisation SPVs and any gain or loss on sale.

	6 months ended 30 Sep 19			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS	Recognised gain or loss on sale
Underlying asset	**$m**	**$m**	**$m**	**$m**
Residential mortgage	-	-	10,224	-

	6 months ended 31 Mar 19			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS	Recognised gain or loss on sale
Underlying asset	**$m**	**$m**	**$m**	**$m**
Residential mortgage	1,630	-	16,250	-

The Group did not have any outstanding banking or trading book exposures that are intended to be securitised as at 30 September 2019 or 31 March 2019.

Table 6.1D: Securitisation Exposures Retained or Purchased

The following table provides the amount of securitisation exposures and facilities held in the banking book, broken down between on and off-balance sheet exposures.

	As at 30 Sep 19			As at 31 Mar 19		
	On-balance sheet	Off-balance sheet	Total	On-balance sheet	Off-balance sheet	Total
Securitisation exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Liquidity facilities	113	2,183	**2,296**	72	2,236	**2,308**
Warehouse facilities	10,196	3,411	**13,607**	8,831	2,828	**11,659**
Securities	9,355	-	**9,355**	9,685	-	**9,685**
Derivatives	-	114	**114**	51	46	**97**
Total	**19,664**	**5,708**	**25,372**	**18,639**	**5,110**	**23,749**

The Group had $485 million of derivative exposures held in the trading book subject to IMA under APS 116 as at 30 September 2019 (31 March 2019: $417 million). The Group had no trading book exposures subject to APS 120 which were either risk-weighted or deducted from capital at 30 September 2019 or 31 March 2019.

The Group had no exposures subject to early amortisation in either the banking or trading book at 30 September 2019 or 31 March 2019.

Table 6.1E: Securitisation Exposures by Risk-weight

The following table provides banking book securitisation exposures and associated RWA by risk-weight bands.

	As at 30 Sep 19		As at 31 Mar 19	
	Exposure	RWA	Exposure	RWA
Risk-weight bands	**$m**	**$m**	**$m**	**$m**
15% ≤ 25%	23,699	4,120	22,429	4,022
> 25% ≤ 35%	938	245	576	153
> 35% ≤ 50%	458	172	447	167
> 50% ≤ 75%	231	137	224	141
> 75% ≤ 100%	1	1	10	9
> 100% ≤ 650%	25	47	42	90
> 650% ≤ 850%	11	81	12	91
>850% < 1250%	6	62	6	66
Deductions from CET1 capital[1]	3	-	3	-
Total	**25,372**	**4,865**	**23,749**	**4,739**

[1] *Deductions relate to subordinated exposure to residential mortgages of $3 million at 30 September 2019 (March 2019: $3 million).*

Section 7

Market Risk

Introduction

The Group makes a distinction between traded and non-traded market risks for the purpose of managing market risk. This section relates to traded market risk. Non-traded market risk is discussed in Section 9 *Balance Sheet and Liquidity Risk*.

The Group undertakes trading activities to support its clients and to profit in the short term from differences in markets, such as interest rates, credit spreads, foreign exchange rates, commodity prices and equity prices. Traded market risk is the risk of losses or gains from the Group's trading activities resulting from market price movements.

The Group's exposure to market risk arises out of its trading activities which are carried out by Corporate & Institutional Banking Markets and BNZ Markets. This exposure is quantified for regulatory capital purposes using both the APRA approved IMA and the standard method.

Management and Governance

The Group's risk appetite for market risk is determined by the Board and is expressed in the Group and NAB Limited Risk Appetite Statement, and governed by the Group Traded Market Risk Policy.

The market risk settings outlined in the NAB Limited Risk Setting Statement and the comprehensive market risk setting framework complement the Risk Appetite Statement by providing further depth on the allocation of market risk appetite to asset classes, regions and trading desks as well as detailing permitted products and markets.

The overall framework of Group Traded Market Risk Policy and the Group Risk Appetite Statement provide direction for the monitoring, oversight, escalation and governance of traded market risk including delegated authorities, risk measurement, and reporting and control standards. These policies are consistent with the prudential regulatory requirements.

The market risk profile of the Group is overseen by the Board via the Board Risk Committee, and by senior executive management via the key committees listed in Section 3 *Risk Governance and Management* and the Corporate & Institutional Banking Risk Management Committee and Corporate & Institutional Banking Markets Risk Council. These various committees and councils manage market risk with the following responsibilities:

- designing and implementing policies and procedures to ensure market risk is managed within the appetite set by the Board
- reviewing market risks for consistency with approved market risk settings and risk appetite
- overseeing the effectiveness and appropriateness of the Risk Management Framework
- reviewing and approving models
- escalating market risk issues to the higher committees as necessary.

Group Market Risk is independent and separate from the areas that carry out trading activities, and has responsibility for the daily measurement and monitoring of market risk exposures. The following key controls are in place for effective internal management, as well as compliance with prudential requirements:

- trading authorities and responsibilities are defined and monitored at all levels
- a comprehensive and controlled framework of risk reporting and limit breach management
- new product approval process and usage authority permitting desks to transact a particular product
- daily end of day and intra-day risk oversight as well as periodic desk review
- back-testing of Value at Risk (VaR) results under internal models for capital adequacy
- segregation of duties in the origination, processing, and valuation of transactions operated under clear and independent reporting lines
- regular and effective reporting of market risk to executive management and the Board
- periodic review and update of compliance with internal and regulatory policies
- independent and periodic internal audit review of compliance with policies, procedures, process and limits.

Key methodologies for compliance with prudential requirements for positions held in the trading book are:

- models that are used to determine risk and financial profit and loss are independently validated with the review outcome documented and reported to the relevant committees on a regular basis
- all trades are measured at fair value daily using independently sourced and validated rates in accordance with Finance Rates and Revaluation Policy
- use of Model Reserve Framework and Fair Value Adjustments to support compliance with prudential validations.

Measurement

VaR estimates the likelihood that a given portfolio's losses will exceed a certain amount. The Group uses VaR estimates for both regulatory capital calculations in accordance with APS 116 and for internal risk control purposes.

The Group is accredited by APRA to use a historical simulation model to simulate the daily change in market factors. VaR is calculated for all trades on an individual basis using a full revaluation approach. For capital purposes, VaR for products modelled using the IMA is calculated on a globally diversified basis and reported in Australian dollars in accordance with the following parameters:

- confidence level: 99% one tail
- holding period:10 days (1 day VaR scaled by square root of time)
- observation period: 550 days (unweighted, updated daily).

VaR limits are assigned to individual trading desks and regions or product lines in accordance with the Market Risk Appetite Statement.

Group Market Risk monitors positions daily against the relevant limits and escalates any breaches in accordance with Market Risk standards and procedures. Additionally, Group Market Risk performs back-testing analysis to assess the validity of the VaR numbers when compared to the actual and hypothetical trading outcomes and to escalate any anomalies that may arise. Results of the back-testing are overseen by relevant risk councils and committees.

Stressed VaR is calculated using the same methodology as VaR but with an observation period based on a one-year period of significant market volatility.

Stress testing is carried out daily to test the profit and loss implications of extreme but plausible scenarios, and to reveal hidden sensitivities in the portfolio that only become transparent when modelling extreme market moves.

'Stop loss limits' represent trigger points at which an overnight or accumulated loss incurred by a trading desk would lead to escalation in accordance with agreed procedures.

Sensitivity and other market risk limits are set by Group Market Risk to manage market risk at a more granular level, for example to manage concentration risk. These limits are monitored by Corporate & Institutional Banking Markets and independently by Group Market Risk.

Corporate & Institutional Banking Markets are responsible for managing risk, to deliver profits, while ensuring compliance with all limits and policies.

Capital Methodology

As detailed in the following table, the Group is accredited by APRA to use the IMA under APS 116 for all trading asset classes except for specific market risk, equities, some inflation products, and some foreign exchange risk from banking book portfolios. These asset classes are managed with regulatory capital calculated as an add-on to that from IMA. There are two types of market risk measures related to regulatory capital:

- general market risk which is related to changes in the overall market prices
- specific market risk which is related to changes for the specific issuer.

In accordance with APS 110, the RWA equivalent for traded market risk using the IMA is the capital requirement multiplied by 12.5.

	Standard Method	**Internal Model Approach**
Calculation	As per APS 116 (Attachment B)	Internally developed VaR calculation
General Market Risk	Equities, some inflation products, some banking book foreign exchange risk	Foreign exchange, commodities, credit, interest rate and inflation products
Specific Market Risk	All applicable products	

Table 7.1A: Market Risk Risk-weighted Assets

	As at 30 Sep 19 $m	As at 31 Mar 19 $m
Standard method	576	494
Internal model approach	9,447	8,696
Market risk RWA	**10,023**	**9,190**

Table 7.1B: Standard Method Risk-weighted Assets

	As at 30 Sep 19 $m	As at 31 Mar 19 $m
Interest rate risk	570	487
Equity position risk	6	7
Foreign exchange risk	-	-
Commodity risk	-	-
Standard method RWA	**576**	**494**

Table 7.1C: Internal Model Approach VaR

The following table provides information on the maximum, mean and minimum VaR over the reporting period and at period end.

	6 months ended 30 Sep 19			As at
	Mean value $m	Minimum value $m	Maximum value $m	30 Sep 19 $m
VaR at a 99% confidence level[(1)]				
Foreign exchange risk	2.0	0.2	8.9	0.9
Interest rate risk	7.3	5.8	10.7	7.7
Volatility risk	2.4	1.9	4.3	4.3
Commodities risk	0.6	0.2	2.1	0.5
Credit risk	1.5	1.2	2.0	1.8
Inflation risk	1.8	1.0	4.0	1.0
Diversification benefit	(7.6)	n/a	n/a	(6.9)
Total diversified VaR at a 99% confidence level	**8.0**	**6.3**	**14.6**	**9.3**
Other market risks[(2)]	3.0	0.4	4.2	2.7
Total VaR for physical and derivative positions[(3)]	**11.0**	**6.7**	**18.8**	**12.0**

(1) The maxima / minima by risk type is likely to occur during different days in the period. As such, the sum of these figures will not equal the total maxima / minima VaR which is the maxima / minima aggregate VaR position during the period.

(2) Other market risks include exposures to various basis risks measured individually at a portfolio level.

(3) VaR is measured individually for foreign exchange risk, interest rate risk, volatility risk, commodities risk, credit risk, and inflation risk. Risk limits are applied in these categories separately, and against the total risk position.

	6 months ended 31 Mar 19			As at
	Mean value $m	Minimum value $m	Maximum value $m	31 Mar 19 $m
VaR at a 99% confidence level				
Foreign exchange risk	7.2	4.8	11.8	6.2
Interest rate risk	8.7	6.3	12.8	8.2
Volatility risk	2.5	1.6	5.2	2.2
Commodities risk	0.7	-	1.7	0.7
Credit risk	1.3	0.8	1.8	1.2
Inflation risk	2.0	1.5	3.5	3.5
Diversification benefit	(10.3)	n/a	n/a	(10.4)
Total diversified VaR at a 99% confidence level	**12.1**	**8.7**	**16.8**	**11.6**
Other market risks	0.6	0.3	1.0	0.5
Total VaR for physical and derivative positions	**12.7**	**9.0**	**17.8**	**12.1**

Table 7.1D: Internal Model Approach Stressed VaR

The following table provides information on the maximum, mean and minimum stressed VaR over the reporting period and at period end.

	6 months ended 30 Sep 19			As at
	Mean value	**Minimum value**	**Maximum value**	**30 Sep 19**
	$m	**$m**	**$m**	**$m**
Stressed VaR at risk at a 99% confidence level[(1)]				
Foreign exchange risk	4.5	0.8	27.8	1.6
Interest rate risk	30.9	25.2	44.1	30.7
Volatility risk	10.3	7.8	15.6	14.4
Commodities risk	1.7	0.6	7.1	1.3
Credit risk	11.9	9.8	14.5	12.3
Inflation risk	4.0	2.7	8.8	2.7
Diversification benefit	(24.4)	n/a	n/a	(26.8)
Total diversified stressed VaR at a 99% confidence level	**38.9**	**31.6**	**50.8**	**36.2**
Other market risks[(2)]	15.2	1.8	19.0	14.3
Total stressed VaR for physical and derivative positions[(3)]	**54.1**	**33.4**	**69.8**	**50.5**

(1) *The maxima / minima by risk type is likely to occur during different days in the period. As such, the sum of these figures will not equal the total maxima / minima stressed VaR which is the maxima / minima aggregate stressed VaR position during the period.*

(2) *Other market risks include exposures to various basis risks measured individually at a portfolio level.*

(3) *VaR is measured individually for foreign exchange risk, interest rate risk, volatility risk, commodities risk, credit risk, and inflation risk. Risk limits are applied in these categories separately, and against the total risk position.*

	6 months ended 31 Mar 19			As at
	Mean value	**Minimum value**	**Maximum value**	**31 Mar 19**
	$m	**$m**	**$m**	**$m**
Stressed VaR at a 99% confidence level				
Foreign exchange risk	20.2	10.4	39.1	21.2
Interest rate risk	36.1	29.1	44.0	36.5
Volatility risk	7.9	5.3	15.3	9.8
Commodities risk	2.2	-	5.1	2.2
Credit risk	12.5	10.0	15.8	11.1
Inflation risk	4.5	3.6	7.5	7.5
Diversification benefit	(38.3)	n/a	n/a	(43.0)
Total diversified stressed VaR at a 99% confidence level	**45.1**	**38.4**	**56.3**	**45.3**
Other market risks	3.4	2.3	4.5	4.0
Total stressed VaR for physical and derivative positions	**48.5**	**40.7**	**60.8**	**49.3**

Back-testing

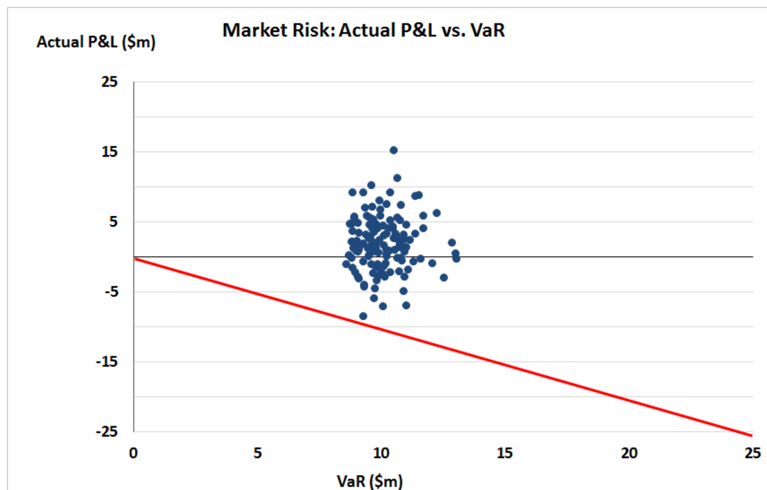
VaR estimates are back-tested regularly for reasonableness. Back-testing is a process that compares the Group's daily VaR estimates against both actual and hypothetical daily profit and loss (P&L) to ensure that model integrity is maintained.

The results of back-testing are reported to senior management, risk committees, and regulators. In addition to back-testing, the risk measurement model and all pricing models are subject to periodical reviews and independent validation at frequencies specified by the Group Model Risk Policy.

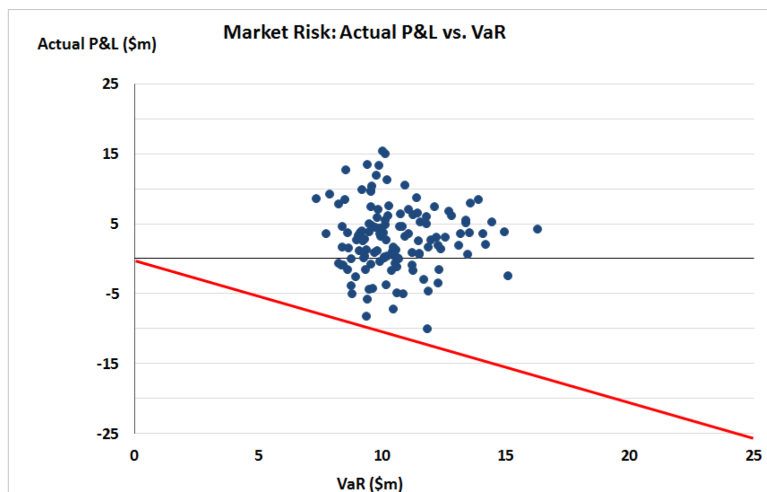
Back-testing Results

The following graphs compares the Group's daily VaR estimates against actual P&L. The red line represents a one-to-one relationship between negative actual P&L and VaR, which is an indicator of the VaR model's performance.

Results for the six months ended 30 September 2019



Results for the six months ended 31 March 2019



Back-testing, carried out by comparing the Group's daily VaR estimate against actual P&L, identified no exceptions during the six months ended 30 September 2019 or the six months ended 31 March 2019. This remains within the model parameters and indicates acceptable operation of the VaR model within APRA's guidelines.

Section 8

Operational Risk

Introduction

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or external events. This includes legal risk, but excludes strategic risk and reputational risk.

The primary objective for the management of operational risk is to ensure that where operational risk exists, it is identified, assessed and managed to acceptable levels, and at the same time, allows for the achievement of business and strategic objectives and compliance with our obligations.

Structure and Organisation

The Board Risk Committee, on the recommendation of the Executive Risk Committee, is responsible for approving and/or endorsing the Risk Management Strategy and Group Operational Risk Appetite. The Group's Risk Governance structure provides the Board and Board Risk Committee with assurance over the performance of the overall Risk Management Framework. This is primarily achieved through Group Operational Risk which provides the Board, Board Risk Committee, Executive Risk Committee, Group Non-Financial Risk Committee and the Risk Leadership Team with the information required to manage these responsibilities. This flow of information ultimately allows the Board to discharge its responsibilities for managing the Group's operational risk exposures.

Management

Group Operational Risk provides the framework, policies, standards, processes and tools (Operational Risk Management Framework) for the business to use in the identification, assessment, management, monitoring, measurement and reporting of operational risks.

Implementation of the Group Operational Risk Management Framework leads to:
- all staff taking responsibility for managing the operational risk inherent in their day-to-day activities
- promoting and embedding a risk conscious culture and behaviour throughout the Group
- consistency in the identification, assessment, management, monitoring, measurement and reporting of operational risk
- proactive identification and management of operational risks and events
- estimates of operational risk regulatory capital that reflect the operational risk profile of the Level 2 Group
- risk decisions being made on an informed basis, considering risk appetite and the capital implications, thereby enhancing awareness and/or acceptance of operational risks.

The Group creates a risk conscious environment through promoting a risk culture:
- of effective integration of operational risk management into day-to-day business decisions
- where risk-awareness and questioning are supported (including the exercise of appropriate judgement in the identification and management of risk)
- of compliance, not only within the strict parameters of the law, delegated authorities and other compliance requirements, but also extending to doing what is right.

The Operational Risk Management Framework applies to all entities within the Group, including any outsourced services undertaken on behalf of the Group.

Measurement

The capital attributed to operational risk is calculated using the Group's internal AMA operational risk models and supporting processes. From time to time additional overlays may be made by APRA to ensure the capital held is reflective of the Group's operational risk profile.

The Group's model has been subjected to review by independent external third parties and uses data captured from:
- historical internal loss data which is representative of the Group's operational loss profile
- scenario analysis data received from business and risk management professionals which considers potential extreme events faced by the Group
- relevant data from losses incurred by other financial institutions
- factors reflecting the business environment and internal controls.

Monitoring and Reporting

The success of the operational risk management processes is determined by the ability of management to articulate and consistently demonstrate behaviours that promote a strong risk awareness and risk management culture throughout the Group.

Group Operational Risk provides the following reporting:
- monthly reporting on significant loss events, emerging issues, oversight, monitoring, and review activity. This information is available to the Board Risk Committee and Executive Risk Committee as part of the Group Chief Risk Officer reporting material.
- bi-annual material risk update paper to the Board Risk Committee via the Executive Risk Committee.

At times, the Group Chief Risk Officer and risk committees may also request Group Operational Risk to report on topics of operational risk such as Business Continuity Management and physical security. Group Operational Risk may also choose or be requested to undertake a deep dive review or provide analysis on a particular emerging issue or theme. Findings are reported to the requestor and, if material, escalated through the risk governance structure.

Risk Mitigation through Insurance

A strategy to mitigate the financial impacts of operational risk exposures at the Group level is the Group's insurance program. The Group maintains and monitors the insurance program within a defined risk appetite and ensures that it aligns with the Group's current and projected operational risk exposures.

The regulatory capital measure for operational risk does not include any adjustment for insurance.

Section 9

Balance Sheet and Liquidity Risk

9.1 Funding and Liquidity Risk

Introduction

Liquidity risk is the risk of being unable to meet financial obligations as they fall due. These obligations primarily include the repayment of deposits and the repayment of borrowings and loan capital as they mature.

Funding risk is the risk which arises due to change in appetite or capacity of the market to provide adequate long-term and short-term funds to meet the Group’s strategic plans and objectives at an acceptable cost.

The objectives of the Group in managing its funding and liquidity risks are to:
- ensure that the current and future payment obligations of the Group are met as they become due
- retain adequate liquidity buffers in the Group and subsidiary balance sheets so as to withstand severe market and institutional disruptions
- meet planned business funding needs over a forward horizon
- maintain access to global short-term and long-term debt capital markets and global secured funding markets
- diversify funding sources in terms of maturity, currency, instrument, investor type and geographic region.

Liquidity and Funding Risk Management Framework

The Group’s Liquidity Risk Management Framework is approved by the Board on an annual basis. The framework comprises a Risk Appetite Statement, a Liquidity Risk Policy, a Funding Strategy, a Contingent Funding Plan and an ILAAP.

The Risk Appetite Statement includes specific metrics relating to liquidity and funding risk. These metrics are determined with reference to outcomes of liquidity stress testing, management experience, ratings agency expectations and peer alignment. Liquidity stress testing includes systemic and idiosyncratic scenarios run over a mix of short and longer timeframes and include an offshore market closure scenario and a local market disruption scenario.

The Liquidity Risk Policy requires that the Group maintains a liquid asset portfolio, comprising high-quality liquid assets (HQLA) that can be readily converted to cash and used to support intraday payments. The Group’s liquid asset portfolio is maintained by geography, currency and legal entity across NAB, BNZ and the London, New York and Asian branches. The liquidity portfolio comprises a mix of:
- cash
- Australian government and semi-government securities
- offshore central bank reserves and foreign sovereign securities
- a mix of negotiable certificates of deposit, bank bills, supranational bonds, covered bonds, RMBS and internal RMBS (all available as collateral for a Committed Liquidity Facility (CLF) with the Reserve Bank of Australia (RBA)).

The target size, diversity and tenor of the Group's funding mix is set annually in the Funding Strategy based on the risk appetite settings. The strategy is updated quarterly to reflect current market conditions and outlook. The Group’s funding is sourced from:
- customer deposits generated through transactional accounts, savings accounts and term deposits from individuals, small and medium enterprises and corporations
- wholesale funding debt programs in domestic and international markets including medium term notes, covered bonds, RMBS, commercial paper and certificates of deposits.

The Group's Contingent Funding Plan provides guidance on how the Group will respond in the event of a liquidity crisis including clear instructions on accountabilities, communication, escalation process, asset liquidation options and operational requirements. The Contingent Funding Plan is tested and updated annually. Early warning indicators provide insight into emerging periods of funding or liquidity stress and when to trigger the Contingent Funding Plan.

Measurement, Monitoring and Reporting

Liquidity risk is measured, managed and monitored daily on a cash flow basis, using scenario analysis, gap analysis and stress testing. Monthly results are reported to the Board Risk Committee, Executive Risk Committee and Group Asset and Liability Committee. The Group has clearly defined escalation procedures whereby liquidity events, both systemic and name specific, are monitored and appropriate actions outlined against triggers.

9.2 Interest Rate Risk in the Banking Book

Introduction

Interest Rate Risk in the Banking Book (IRRBB) arises from changes in market interest rates that adversely impact the Group's financial condition in terms of earnings (net interest income) or economic value of the balance sheet. This includes:
- repricing risk, arising from changes to the overall level of interest rates and inherent mismatches in the repricing term of banking book items
- yield curve risk, arising from a change in the relative level of interest rates for different tenors and changes in the slope or shape of the yield curve
- basis risk, arising from differences between the actual and expected interest margins on banking book items over the implied cost of funds of those items
- optionality risk, arising from the existence of stand-alone or embedded options in banking book items, to the extent that the potential for those losses is not included in the above risk types.

The objective of the Group's framework is to ensure that IRRBB is managed to optimise and stabilise the Group's economic value and earnings over an investment horizon.

Management

The Board approves the risk appetite for IRRBB, and sets the overall limits for economic capital and Earnings at Risk.

The key elements of the management framework for IRRBB include:
- the Interest Rate Risk in the Banking Book Policy and guidance notes define the compliance and management framework to ensure that all interest rate risk positions in the banking book are identified, measured, managed and reported, and are aligned to the requirements of APS 117 *Capital Adequacy: Interest Rate Risk in the Banking Book*
- the Group and subsidiary treasuries are responsible for managing the interest rate risk profile of the balance sheet in line with the approved risk appetite. This includes development and execution of interest rate risk management strategies
- the Funds Transfer Pricing Policy and guidance notes define the funds transfer pricing mechanism in place to transfer interest rate risk out of originating divisions and into the Group Treasury functions for the management of interest rate risk
- the Group and subsidiary balance sheet and liquidity risk teams are responsible for IRRBB monitoring and oversight and are independent of Group Treasury. They maintain a risk framework for IRRBB and have responsibility for IRRBB measurement of exposures, compliance monitoring and reporting
- periodic reporting to management and governance committees of IRRBB exposures and compliance.

Measurement

The Group has been accredited by APRA to use its internal model for the measurement of IRRBB. Interest rate risk is measured, managed and monitored using both the economic valuation approach and the earnings approach. The principal metrics used to measure and monitor IRRBB are as follows:

Measurement	Definition
VaR	The potential loss in economic value implied by the static balance sheet that arises from changes to the current yield curve based upon historical observations for a given holding period and confidence level.
Earnings at Risk	The potential loss in earnings implied by the static balance sheet over a 12-month forecast period, that arises from changes in the current yield curve based on historical observations for a given holding period and confidence level.
Market Value	The present value of all known future cash flows implied by the static balance sheet on both a spot and historically cumulative basis.
Embedded Value	The economic gain or loss implied by the static balance sheet which equates to the market value less the book value, less accrued interest.
Economic Value Sensitivity	The potential impact of a parallel decrease in interest rates on the present value of all known future cash flows implied by the static balance sheet.
Net Interest Income Sensitivity	The potential impact of a parallel decrease in interest rates on the earnings over a 12-month forecast period implied by the static balance sheet.
Stress testing	The potential loss in earnings and economic value from large parallel and non-parallel yield curve shocks.

VaR and Earnings at Risk are measured with a three month holding period and 99% confidence level for internal reporting purposes.

The Group incorporates behavioural modelling where contractual-based modelling is inappropriate for measuring IRRBB, such as for prepayments, non-bearing interest accounts, rate locks and CET1 capital. Any changes to the material assumptions require approval by subsidiary asset, liability and capital committees or Group Asset and Liability Committee.

IRRBB regulatory capital includes a value for repricing and yield curve risk, basis risk, optionality risk and embedded value. The components of IRRBB regulatory capital are calculated using a historical VaR simulation using at least six years of historical data at a 99% confidence level, one-year investment term of capital, and a 12-month holding period.

9.2 Interest Rate Risk in the Banking Book (continued)

Monitoring and Reporting

The IRRBB metrics are measured and monitored on a monthly basis as a minimum. Compliance with limits is reported to subsidiary asset, liability and capital committees and the Group Asset and Liability Committee on a monthly basis. IRRBB regulatory capital is also calculated monthly.

Table 9.2A: Impact on Economic Value from Rate Shocks

The following table provides the increase or decrease in economic value for upward and downward rate shocks broken down by currency. The Level 2 Group's major currencies are modelled on an individual basis. The remaining minor currencies are aggregated and modelled using a single yield curve. The 200 basis point (bp) interest rate shock results include earnings offset.

	As at 30 Sep 19		As at 31 Mar 19	
	200 bp parallel increase $m	200 bp parallel decrease $m	200 bp parallel increase $m	200 bp parallel decrease $m
Change in economic value				
AUD	(65)	186	(57)	169
CAD	-	-	-	-
CHF	-	-	-	-
EUR	(17)	18	(4)	5
GBP	(18)	18	(10)	10
HKD	1	(1)	2	(2)
JPY	3	(3)	7	(7)
NZD	(182)	187	(214)	221
USD	(49)	55	(36)	43
Other	-	-	3	(3)
Total change in economic value	**(327)**	**460**	**(309)**	**436**

9.3 Equity Holdings in the Banking Book

Introduction

The Group mainly holds equities in the banking book for strategic purposes. From time to time, the Group also takes an equity stake in a customer as part of debt management activities. This exposes the Group to non-traded equity risk, which refers to the potential for financial loss as a result of reduction in the value of an equity investment. For capital purposes, equity exposures are deducted from CET1 capital.

Management

Equity risk appetite limits are reflected in the Risk Appetite Statement and the Group Balance Sheet and Liquidity Risk Limits Schedule. The Group Equity Risk in the Banking Book Policy defines the compliance and management framework in relation to undertaking, valuation and measurement, monitoring and reporting of equity investments outside of the trading book. It applies to both direct equity investments and equity underwriting activities.

Business units are responsible for managing their approved equity investments in line with the requirements of the non-traded equity risk framework. Group Balance Sheet and Liquidity Risk are responsible for independent oversight of the non-traded equity risk framework.

Reporting of equity risk is included in reporting provided to senior management and risk committees.

Valuation and Accounting

The accounting treatment for equity investments depends on whether the Group has significant influence over the investee. Where significant influence exists, the investment is classified as an associate and is accounted for using the equity method. Under the equity method, the investment is initially recognised at cost and adjusted thereafter for the post-acquisition change in the Group's share of the associate's net assets. The Group's profit or loss includes its share of the associate's profit or loss, and the Group's other comprehensive income includes its share of the associate's other comprehensive income.

Equity investments that are not associates are classified on initial recognition as fair value through other comprehensive income or fair value through profit or loss. Fair value is defined as the price that would be received to sell an asset in an orderly transaction between market participants. When an active market exists, fair value is determined using quoted market prices. When a quoted price in an active market is not available, fair value is determined using acceptable market valuation techniques.

Table 9.3A: Equity Holdings in the Banking Book

The following table provides the carrying value of equity investments as reported on the Level 2 Group's balance sheet, as well as the estimated fair value of those investments.

	As at 30 Sep 19		As at 31 Mar 19	
	Carrying value	Fair value	Carrying value	Fair value
	$m	$m	$m	$m
Unlisted equities	670	670	765	765

Table 9.3B: Gains and Losses from Equity Holdings

The following table provides realised and unrealised gains or losses gross of any tax effect from equity instruments, where:

- realised gains or losses represent the difference between the cost of equity instruments and proceeds where there has been a sale and/or liquidation in the six months to the end of the reporting period
- cumulative unrealised gains or losses represent the difference between the cost of equity instruments and their carrying value.

	30 Sep 19	31 Mar 19
	$m	$m
Gains/(losses) on equity investments		
Realised gains/(losses)	(47)	129
Cumulative unrealised gains/(losses)[1]	(22)	(3)

[1] *As investments in equity instruments are a deduction for capital purposes, cumulative unrealised gains are not included in CET1 capital, Tier 1 capital or Tier 2 capital.*

9.4 Foreign Exchange Risk in the Banking Book

The Group's banking book has exposure to risk arising from currency movements as a result of participation in global financial markets and international operations. Foreign Exchange Risk in the Banking Book (FXRBB) arises from both operating business activities and structural foreign exchange exposures from foreign investments and capital management activities. Currency movements can impact profit and loss, cash flows and the balance sheet.

The Group's objective in relation to foreign exchange risk is to protect the Group's capital ratios from the impact of currency movements and to manage non-structural foreign exchange risk within risk appetite. The Group's main structural foreign exchange exposures are due to its investment in BNZ.

The Board approves the risk appetite for FXRBB, setting the overall VaR and economic capital limit. In addition, with guidance from the Board Risk Committee, the Board monitors and reviews the adequacy of the Group's foreign exchange risk compliance and management framework developed by management.

Key elements of the management framework for FXRBB include:

- the Group Foreign Exchange Risk in the Banking Book Policy defines the compliance and management framework to ensure all foreign exchange positions (both structural and non-structural) in the banking book are identified, measured, managed and reported
- the group and subsidiary treasuries are responsible for the development and execution of Board and Group Asset and Liability Committee approved foreign exchange risk management strategies
- the Group Balance Sheet and Liquidity Risk and subsidiary balance sheet and liquidity risk teams provide independent oversight. They are responsible for monitoring and oversight to ensure FXRBB is managed in compliance with the policy
- periodic reporting to management and governance committees of FXRBB exposures and compliance.

9.5 Liquidity Disclosures

Liquidity Coverage Ratio

The Liquidity Coverage Ratio (LCR) measures the adequacy of HQLA available to meet net cash outflows over a 30-day period during a severe liquidity stress scenario.

The Group manages its LCR position daily within a target range that reflects management's risk appetite across the legal entity structure, major currencies and jurisdictions in which business activities are undertaken. The APRA minimum LCR is 100%.

The LCR for the three months ended 30 September 2019 and 30 June 2019 is presented in Table 9.5A *Liquidity Coverage Ratio Disclosure Template*, and is based on a simple average of daily LCR outcomes excluding non-business days.

The Group maintains a diversified liquid asset portfolio to support regulatory and internal requirements in the various countries in which it operates. Average liquid assets for the three months ended 30 September 2019 and 30 June 2019 were $143 billion and $141 billion respectively, of which HQLA were $88 billion and $85 billion respectively. From 30 June 2019 to 30 September 2019 average LCR decreased to 126% with net cash outflows increasing by more than the increase in liquid asset holdings.

Alternative Liquid Assets (ALA) relate to the CLF provided by the RBA. New Zealand dollar (NZD) liquid asset holdings in excess of meeting an NZD LCR of 100%, are excluded reflecting liquidity transferability considerations. The amount excluded during the three months ended 30 September 2019 and 30 June 2019 was on average $3 billion and $2 billion respectively.

The CLF value used in the LCR calculation is the lesser of the undrawn portion of the facility granted to NAB and the value of the collateral held at any given time to support the facility and its liquidity requirements. This collateral is a combination of internal RMBS and other marketable securities eligible for repurchase by the RBA. The drawn portion of the CLF relates to accounts held with the RBA for the settlement of daily payment obligations. The available CLF during both the three months to 30 September 2019 and 30 June 2019 was on average $52 billion.

LCR net cash outflows represents the net cash flows that could potentially occur from on and off-balance sheet activities within a 30-day severe liquidity stress scenario. The cash flows are calculated by applying APRA prescribed run-off factors to maturing funding and deposits and inflow factors to assets. High run-off factors are applied to sophisticated investors and depositors including long term and short term debt holders, financial institution and corporate depositors. Lower run-off factors are applied to deposits less likely to be withdrawn in a period of severe stress. These include deposits from individuals and from small and medium enterprises. Deposits from corporate and financial institutions which are considered to be operational in nature also attract a lower run-off, such as deposits from the Group's custody business.

Cash outflows arising from business activities that create contingent funding and collateral requirements such as repurchase agreements and derivatives and the extension of credit and liquidity facilities to customers are also captured within the LCR calculation, along with an allowance for debt buyback requests.

9.5 Liquidity Disclosures (continued)

Table 9.5A: Liquidity Coverage Ratio Disclosure Template

		3 months ended			
		30 Sep 19 66 data points		30 Jun 19 61 data points	
		Total unweighted value (average) $m[1]	Total weighted value (average) $m	Total unweighted value (average) $m[1]	Total weighted value (average) $m
Liquid assets, of which:			**143,382**		**140,610**
1	High-quality liquid assets (HQLA)[2]	n/a	87,967	n/a	85,323
2	Alternative liquid assets (ALA)	n/a	52,048	n/a	51,947
3	Reserve Bank of New Zealand (RBNZ) securities[2]	n/a	3,367	n/a	3,340
Cash outflows					
4	Retail deposits and deposits from small business customers	195,686	23,394	195,270	22,992
5	of which: stable deposits	59,646	2,982	59,111	2,956
6	of which: less stable deposits	136,040	20,412	136,159	20,036
7	Unsecured wholesale funding	128,840	64,529	126,889	63,358
8	of which: operational deposits (all counterparties) and deposits in networks for cooperative banks	54,995	15,064	54,223	14,514
9	of which: non-operational deposits (all counterparties)	61,954	37,574	58,422	34,600
10	of which: unsecured debt	11,891	11,891	14,244	14,244
11	Secured wholesale funding	n/a	1,155	n/a	880
12	Additional requirements	171,033	33,457	167,609	32,219
13	of which: outflows related to derivatives exposures and other collateral requirements	18,220	18,220	16,426	16,426
14	of which: outflows related to loss of funding on debt products	-	-	-	-
15	of which: credit and liquidity facilities	152,813	15,237	151,183	15,793
16	Other contractual funding obligations	1,273	801	1,001	589
17	Other contingent funding obligations	71,438	4,849	72,085	5,036
18	**Total cash outflows**	**n/a**	**128,185**	**n/a**	**125,074**
Cash inflows					
19	Secured lending	65,162	1,342	59,942	957
20	Inflows from fully performing exposures	21,243	12,306	23,014	13,026
21	Other cash inflows	583	583	1,161	1,161
22	**Total cash inflows**	**86,988**	**14,231**	**84,117**	**15,144**
23	**Total liquid assets**		**143,382**		**140,610**
24	**Total net cash outflows**		**113,954**		**109,930**
25	**Liquidity Coverage Ratio (%)**		**126%**		**128%**

(1) *Unweighted inflow and outflow values are outstanding balances maturing or callable within 30 days.*

(2) *Weighted values are calculated after applying caps to the NZD liquid asset holdings in excess of NZD LCR of 100%.*

Net Stable Funding Ratio

The Net Stable Funding Ratio (NSFR) measures the extent to which assets are funded with stable sources of funding in order to mitigate the risk of future funding stress. The APRA minimum NSFR is 100%.

The NSFR as at 30 September 2019 and 30 June 2019 is presented in Table 9.5B *Net Stable Funding Ratio Disclosure Template*, and is based on spot balances. The NSFR was 113% as at 30 September 2019 with $520 billion of Available Stable Funding (ASF) available to meet $462 billion of Required Stable Funding (RSF). The 30 September 2019 NSFR was less than 1% lower than 30 June 2019 mainly due to lower ASF from wholesale funding partly offset by lower RSF driven by reduced lending.

ASF is calculated by applying weightings to capital and liabilities to reflect the portion that is expected to be available over a one-year time horizon. The maturity of funding is taken as being the earliest date at which the funding can be withdrawn. RSF reflects the liquidity characteristics of the assets and the expectation that these assets and off-balance sheet exposures will require funding over the next year. The maturity of assets is taken as being the latest possible date at which the asset may mature.

9.5 Liquidity Disclosures (continued)

Table 9.5B: Net Stable Funding Ratio Disclosure Template

		As at 30 Sep 2019				
		Unweighted value by residual maturity				Weighted value
		No maturity	**< 6 months**	**6 months to < 1 year**	**≥ 1 year**	
Available Stable Funding (ASF) Item						
1	Capital	53,406	1,343	-	14,085	68,834
2	of which: regulatory capital	53,406	1,343	-	14,085	68,834
3	of which: other capital instruments	-	-	-	-	-
4	Retail deposits and deposits from small business customers	172,983	82,097	509	132	233,698
5	of which: stable deposits	63,588	7,106	-	-	67,160
6	of which: less stable deposits	109,395	74,991	509	132	166,538
7	Wholesale funding	78,475	213,867	42,024	126,992	217,248
8	of which: operational deposits	54,822	-	-	-	27,411
9	of which: other wholesale funding	23,653	213,867	42,024	126,992	189,838
10	Liabilities with matching interdependent assets	-	-	-	-	-
11	Other liabilities	-	29,792	-	-	-
12	of which: NSFR derivative liabilities[1]			3,630		
13	of which: all other liabilities and equity not included in the above categories	-	26,162	-	-	-
14	**Total ASF**					**519,780**
Required Stable Funding (RSF) Item						
15a	High-quality liquid assets (HQLA) for NSFR purposes					4,095
15b	Alternative liquid assets (ALA)					5,590
15c	BNZ securities					300
16	Deposits held at other financial institutions for operational purposes	-	-	-	-	-
17	Performing loans and securities	14,496	126,549	47,980	442,882	408,326
18	of which: performing loans to financial institutions secured by Level 1 HQLA	-	51,912	1,548	-	5,965
19	of which: performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	19	24,346	6,684	23,836	30,849
20	of which: 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):	13,418	40,608	28,707	127,458	151,687
21	of which: with a risk-weight of less than or equal to 35% under APS 112	-	-	-	12,847	8,351
22	of which: performing residential mortgages:	-	6,807	6,571	290,898	214,092
23	of which: with a risk-weight equal to 35% under APS 112	-	6,807	6,571	249,889	179,235
24	of which: securities that are not in default and do not qualify as HQLA, including exchange-traded equities	1,059	2,876	4,470	690	5,733
25	Assets with matching interdependent liabilities	-	-	-	-	-
26	Other assets	19,295	4,225	166	14,425	34,988
27	of which: physical traded commodities, including gold	4				4
28	of which: assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs)[1]			2,055		1,746
29	of which: NSFR derivative assets[1]			6,390		6,390
30	of which: NSFR derivative liabilities before deduction of variation margin posted[1]			3,268		3,268
31	of which: all other assets not included in the above categories	19,291	4,225	166	2,712	23,580
32	Off-balance sheet items	-	-	-	156,891	8,303
33	**Total RSF**					**461,602**
34	**Net Stable Funding Ratio (%)**					**113%**

[1] *These amounts are not required by APS 330 to be allocated to a maturity bucket.*

9.5 Liquidity Disclosures (continued)

		As at 30 Jun 2019				
		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	
Available Stable Funding (ASF) Item						
1	Capital	52,121	-	1,343	11,731	65,195
2	of which: regulatory capital	52,121	-	1,343	11,731	65,195
3	of which: other capital instruments	-	-	-	-	-
4	Retail deposits and deposits from small business customers	167,819	86,295	428	189	232,724
5	of which: stable deposits	61,843	7,113	-	-	65,508
6	of which: less stable deposits	105,976	79,182	428	189	167,216
7	Wholesale funding	74,164	220,155	43,803	131,022	224,276
8	of which: operational deposits	54,156	-	-	-	27,078
9	of which: other wholesale funding	20,008	220,155	43,803	131,022	197,198
10	Liabilities with matching interdependent assets	-	-	-	-	-
11	Other liabilities	-	24,946	-	-	-
12	of which: NSFR derivative liabilities			4,488		
13	of which: all other liabilities and equity not included in the above categories	-	20,458	-	-	-
14	**Total ASF**					**522,195**
Required Stable Funding (RSF) Item						
15a	High-quality liquid assets (HQLA) for NSFR purposes					4,147
15b	Alternative liquid assets (ALA)					5,590
15c	BNZ securities					193
16	Deposits held at other financial institutions for operational purposes	-	-	-	-	-
17	Performing loans and securities	14,995	129,086	40,040	452,190	412,598
18	of which: performing loans to financial institutions secured by Level 1 HQLA	-	52,512	2,304	164	6,567
19	of which: performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	25	23,798	4,951	23,100	29,171
20	of which: 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):	14,092	41,768	23,476	132,608	154,428
21	of which: with a risk-weight of less than or equal to 35% under APS 112	-	-	-	13,088	8,507
22	of which: performing residential mortgages:	-	6,588	5,942	295,826	216,699
23	of which: with a risk-weight equal to 35% under APS 112	-	6,588	5,942	254,507	181,578
24	of which: securities that are not in default and do not qualify as HQLA, including exchange-traded equities	878	4,420	3,367	492	5,733
25	Assets with matching interdependent liabilities	-	-	-	-	-
26	Other assets	18,905	2,744	102	10,875	31,142
27	of which: physical traded commodities, including gold	4				3
28	of which: assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs)			1,686		1,433
29	of which: NSFR derivative assets			3,716		3,716
30	of which: NSFR derivative liabilities before deduction of variation margin posted			2,787		2,787
31	of which: all other assets not included in the above categories	18,901	2,744	102	2,686	23,203
32	Off-balance sheet items	-	-	-	157,699	8,351
33	**Total RSF**					**462,021**
34	**Net Stable Funding Ratio (%)**					**113%**

Section 10

Glossary

Term	Description
Additional regulatory specific provisions	In line with APRA's July 2017 guidance "Provisions for regulatory purposes and AASB 9 Financial Instruments", regulatory specific provisions include collective provisions for facilities in Stage 2 with identified deterioration (that do not meet the two exception clauses per the APRA guidance), and Stage 3 in default. All other facilities are classified as general reserve for credit losses.
Additional Tier 1 capital	Additional Tier 1 capital comprises 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 - provide for fully discretionary capital distributions.
ADI	Authorised Deposit-taking Institution.
Advanced Internal Ratings-Based approach (IRB)	The process used to estimate credit risk through the use of internally developed models to assess potential credit losses using the outputs from the probability of default, loss given default and exposure at default models.
Advanced Measurement Approach (AMA)	The risk estimation process used for operational risk, combining internally developed risk estimation processes with an integrated risk management process, embedded within the business with loss event management.
Alternative Liquid Assets (ALA)	Assets that qualify for inclusion in the numerator of the Liquidity Coverage Ratio in jurisdictions where there is insufficient supply of high-quality liquid assets in the domestic currency to meet the aggregate demand of banks with significant exposure in the domestic currency in the Liquidity Coverage Ratio framework. The committed liquidity facility provided by the Reserve Bank of Australia to ADIs is treated as an ALA in the Liquidity Coverage Ratio.
ANZSIC	Australian and New Zealand Standard Industrial Classification.
APRA	Australian Prudential Regulation Authority.
APS	Prudential Standards issued by APRA applicable to ADIs.
Available Stable Funding (ASF)	The portion of an ADI's capital and liabilities expected to be a reliable source of funds over a one-year time horizon.
Banking book	Exposures not contained in the trading book.
BCBS	Basel Committee on Banking Supervision.
BNZ	Bank of New Zealand.
Central Counterparty (CCP)	A clearing house which interposes itself, directly or indirectly, between counterparties to contracts traded in one or more financial markets, thereby insuring the future performance of open contracts.
CET1 capital ratio	CET1 capital divided by risk-weighted assets.
Committed Liquidity Facility (CLF)	A facility provided by the Reserve Bank of Australia to certain ADIs to assist them in meeting the Basel III liquidity requirements.
Common Equity Tier 1 (CET1) capital	The highest quality component of capital. It is subordinated to all other elements of funding, absorbs losses as and when they occur, has full flexibility of dividend payments and has no maturity date. It is predominately comprised of paid-up ordinary share capital, retained profits plus certain other items as defined in APS 111 *Capital Adequacy: Measurement of Capital*.
Credit derivatives	Credit derivatives include single-name credit default and certain total return swaps, cash funded credit linked notes and first-to-default and second-to-default credit derivative basket products. ADIs may also recognise many more complex credit derivatives that do not fall into the list above, that have been approved by APRA.
Credit Value Adjustment (CVA)	A capital charge to reflect potential mark-to-market losses due to counterparty migration risk for bilateral over-the-counter derivative contracts.
DCA	Delegated Commitment Authority.
Default fund	Clearing members' funded or unfunded contributions towards, or underwriting of, a central counterparty's mutualised loss sharing arrangements.
D-SIB	Domestic Systemically Important Bank.
Economic capital	Economic capital represents the Group's internal assessment of the amount of capital required to protect against potential unexpected future losses arising from its business activities, in line with its target credit rating.
Eligible Financial Collateral (EFC)	Under the standardised approach, EFC is the amount of cash collateral, netting and eligible bonds and equities. Under the Internal Ratings-based approach, EFC is limited to the collateral items detailed in APS 112 *Capital Adequacy*: *Standardised Approach to Credit Risk*. Recognition of EFC is subject to the minimum conditions detailed in APS 112.
Exposure at Default (EaD)	An estimate of the credit exposure amount outstanding if an obligor defaults. EaD is presented net of eligible financial collateral.
Extended Licensed Entity	The ADI and any APRA approved subsidiary entities assessed as effectively part of a single 'stand-alone' entity, as defined in APS 222 *Associations with Related Entities*.
General Reserve for Credit Losses (GRCL)	An estimate of the reasonable and prudent expected credit losses over the remaining life of the portfolio of non-defaulted assets, as set out under APS 220 *Credit Quality*. The GRCL is calculated as a collective provision for credit impairment, excluding securitisation exposures and provision on default no loss assets. Where the GRCL (regulatory reserve) is greater than the accounting provision, the difference is covered with an additional top-up, created through an appropriation of retained profits to a non-distributable reserve.
Group	NAB and its controlled entities.
High-quality Liquid Assets (HQLA)	Consists primarily of cash, deposits with central banks, Australian Commonwealth and semi-government securities and securities issued by foreign sovereigns as defined in APS 210 *Liquidity*.
ICAAP	Internal Capital Adequacy Assessment Process.
ILAAP	Internal Liquidity Adequacy Assessment Process.
Impaired facilities	Impaired facilities consist of: - retail loans (excluding unsecured portfolio managed facilities) which are contractually 90 days past due with insufficient security to cover principal and interest - unsecured portfolio managed facilities that are 180 days past due (if not written off) - non-retail loans which are contractually past due and / or sufficient doubt exists about the ability to collect principal and interest in a timely manner - off-balance sheet credit exposures where current circumstances indicate that losses may be incurred.
Internal Model Approach (IMA) - Non-traded Market Risk	The approach used in the assessment of non-traded market risk. The Group uses, under approval from APRA, the IMA to calculate interest rate risk in the banking book for all transactions in the banking book.
Internal Model Approach (IMA) - Traded Market Risk	The approach used in the assessment of traded market risk. The Group uses, under approval from APRA, the IMA to calculate general market risk for all transactions in the trading book other than those covered by the standardised approach.
IRRBB	Interest rate risk in the banking book.

Term	Description
Level 2 Group	NAB and the entities it controls excluding superannuation and funds management entities, insurance subsidiaries and securitisation special purpose vehicles to which assets have been transferred in accordance with the requirements for regulatory capital relief in APS 120 *Securitisation*.
Leverage ratio	Tier 1 capital divided by exposures as defined by APS 110 *Capital Adequacy.* It is a simple, non-risk based measure to supplement the RWA based capital requirements. Exposures include on-balance sheet exposures, derivative exposures, securities financing transaction exposures and other off-balance sheet exposures.
Liquidity Coverage Ratio (LCR)	A metric that measures the adequacy of high-quality liquid assets available to meet net cash outflows over a 30-day period during a severe liquidity stress scenario.
Loss Given Default (LGD)	An estimate of the expected severity of loss for a credit exposure following a default event. Regulatory LGDs reflect a stressed economic condition at the time of default.
Masterscale	A consistent series of grades applied to credit exposures that allows the Group to place every credit exposure into a specific grade or range that represents the likelihood of a credit default. This allows comparison of customers and portfolios.
NAB	National Australia Bank Limited ABN 12 004 044 937.
Net Stable Funding Ratio (NSFR)	A ratio of the amount of available stable funding to the amount of required stable funding.
Net write-offs	Write-offs, net of recoveries.
Past due facilities ≥ 90 days	Well-secured assets that are more than 90 days past due and portfolio managed facilities that are not well secured and between 90 and 180 days past due.
Probability of Default (PD)	An estimate of the likelihood of a customer defaulting or not repaying their borrowings and other obligations in the next 12 months.
RBA	Reserve Bank of Australia.
RBNZ	Reserve Bank of New Zealand.
Regulatory expected loss (EL)	A calculation of the estimated loss that may be experienced over the next 12 months. Regulatory EL calculations are based on the probability of default, loss given default and exposure at default values of the portfolio at the time of the estimate which includes stressed loss given default for economic conditions. As such, regulatory EL is not an estimate of long-run average expected loss.
Required Stable Funding (RSF)	A function of the liquidity characteristics and residual maturities of an ADI's assets and off-balance sheet activities.
Risk-weighted Assets (RWA)	A quantitative measure of risk required by the APRA risk-based capital adequacy framework, covering credit risk for on and off-balance sheet exposures, market risk, operational risk and interest rate risk in the banking book.
RMBS	Residential mortgage-backed securities.
SA-CCR	Standardised approach for measuring counterparty credit risk exposures.
Securitisation exposures	Securitisation exposures include the following exposure types: - liquidity facilities: facilities provided to securitisation vehicles for the primary purpose of funding any timing mismatches between receipts of funds on underlying exposures and payments on securities issued by the vehicle or to cover the inability of the vehicle to roll-over securities due to market disruption - warehouse facilities: lending facilities provided to securitisation vehicles for the financing of exposures in a pool. These may be on a temporary basis pending the issue of securities or on an on-going basis - credit enhancements: protection provided against credit losses to parties holding a securitisation exposure - securities: holding of debt securities issued by securitisation vehicles - derivatives: derivatives provided to securitisation vehicles, other than credit derivatives.
SME	Small and medium sized enterprises.
Specific provision for credit impairment	The provision assessed on an individual basis in accordance with Australian Accounting Standard AASB 9 *Financial Instruments*.
SPV	Special purpose vehicle.
Standardised approach	An alternative approach to the assessment of credit, operational and traded market risk whereby an ADI uses external rating agencies to assist in assessing credit risk and/or the application of specific values provided by regulators to determine risk-weighted assets.
Tier 1 capital	Tier 1 capital comprises Common Equity Tier 1 capital and instruments that meet the criteria for inclusion as Additional Tier 1 capital set out in APS 111 *Capital Adequacy: Measurement of Capital*.
Tier 1 capital ratio	Tier 1 capital divided by risk-weighted assets.
Tier 2 capital	Tier 2 capital includes other components of capital that, to varying degrees, fall short of the quality of Tier 1 capital but nonetheless contribute to the overall strength of an ADI and its capacity to absorb losses.
Total capital	The sum of Tier 1 capital and Tier 2 capital.
Total capital ratio	Total capital divided by risk-weighted assets.
Trading book	Positions in financial instruments, including derivative products and other off-balance sheet instruments, that are held either with a trading intent or to hedge other elements of the trading book.
Value at Risk (VaR)	A mathematical technique that uses statistical analysis of historical data to estimate the likelihood that a given portfolio’s losses will exceed a certain amount.
Write-offs	A reduction in the carrying amount of loans and advances at amortised cost and fair value where there is no reasonable expectation of recovery of a portion or the entire exposure.

Section 11

Reference to APS 330 Tables

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