

Wednesday, 9 November 2022

## **ASX ANNOUNCEMENT**

### **NAB 2022 Full Year Pillar 3 Report**

National Australia Bank Limited (NAB) today released its 2022 Full Year Pillar 3 Report, as required under the Australian Prudential Regulation Authority Prudential Standard APS 330 *Public Disclosure*.

The report is attached to this announcement and available at:

<http://www.nab.com.au/about-us/shareholder-centre/regulatory-disclosures>

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The release of this announcement was authorised by Gary Lennon, Group Chief Financial Officer.



# Pillar 3 Report

as at 30 September 2022

Incorporating the requirements  
of APS 330



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# 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 to contribute to the transparency of financial markets and to enhance market discipline. APS 330 was established to implement the third pillar of the Basel Committee on Banking Supervision's (BCBS) framework for bank capital adequacy. 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

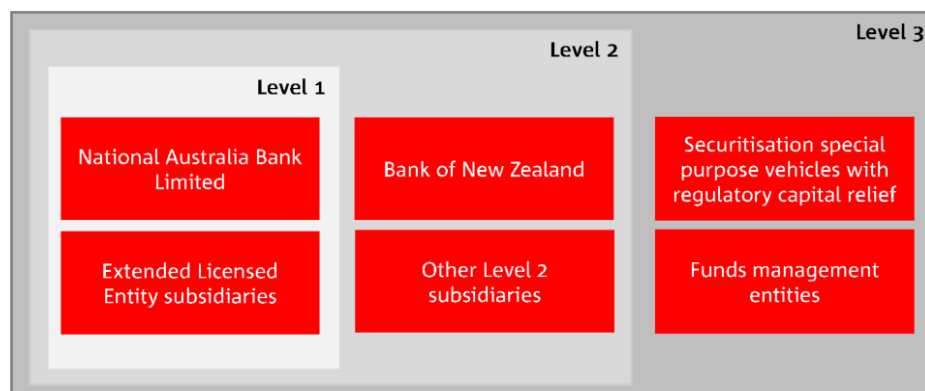
The Group uses the following approaches to measure capital adequacy as at 30 September 2022.

Credit risk	Operational risk	Non-traded market risk	Traded market risk
Advanced Internal Ratings-based Approach (IRB)	Standardised Measurement Approach (SMA)	Internal Model Approach (IMA)	Internal Model Approach (IMA) and standard method

On 1 June 2022, the Group completed the acquisition of Citigroup's Australian consumer business (Citi consumer business). The standardised approach has been applied to the acquired portfolios, with the exposure at default (EaD) and risk-weighted assets (RWA) related to this acquisition being approximately \$14.4 billion and \$8.1 billion respectively based on amounts as at 30 June 2022.

## Scope of Application

APRA measures the Group's capital adequacy by assessing financial strength at three levels as illustrated below.



Level 1 comprises NAB and its subsidiaries that have been approved by APRA as part of its Extended Licensed Entity.

Level 2 comprises NAB and the entities it controls, excluding securitisation special purpose vehicles (SPVs) to which assets have been transferred in accordance with the requirements for regulatory capital relief in APS 120 *Securitisation* and funds management entities. Level 2 controlled entities include Bank of New Zealand (BNZ), National Australia Bank Europe S.A. (NAB Europe) and other financial entities such as broking, wealth advisory and leasing companies.

Level 3 comprises the consolidation of NAB and all of its subsidiaries. On 30 September 2022, the Group completed the disposal of BNZ Life, its New Zealand life insurance business, and this subsidiary is no longer part of the Level 3 Group.

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

# Regulatory Reform

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

## Revisions to the capital framework

- APRA has finalised prudential standards for the revised ADI capital framework, with the focus now shifting to implementation (from 1 January 2023). APRA's revisions to the framework include:
  - improving flexibility via increasing regulatory capital buffers
  - implementing more risk-sensitive risk-weights
  - enhancing competition via a capital floor for IRB ADIs
  - improving transparency and comparability through the disclosure of capital ratios under the standardised approach.Overall, these revisions will result in changes to the calculation and presentation of capital ratios. APRA has communicated that it is not seeking to further increase the overall level of capital in the banking system.
- APRA has provided Advanced Measurement Approach accredited ADIs the option to apply APS 115 *Capital Adequacy: Standardised Measurement Approach to Operational Risk* from either 1 January 2022 or 1 January 2023. The Group has applied the SMA from 1 January 2022.
- The revised APS 111 *Capital Adequacy: Measurement of Capital*, including changes to the treatment of equity investments in subsidiaries for the purpose of calculating Level 1 regulatory capital, became effective from 1 January 2022. The changes have been incorporated in the Level 1 capital ratios disclosed in Table 4.1.B *Capital and Leverage Ratios*.
- APRA has introduced a minimum leverage ratio requirement of 3.5% for IRB ADIs and a revised leverage ratio exposure measurement methodology to be implemented from 1 January 2023. The Level 2 Group's leverage ratio as at 30 September 2022 of 5.06% (under the current methodology) is disclosed in further detail in Table 4.4.A *Leverage Ratio Disclosure Template*.
- APRA has announced its intention to finalise APS 117 *Capital Adequacy: Interest Rate Risk in the Banking Book* and consult on revisions to the market risk capital standards to implement the BCBS's fundamental review of the trading book.

## Increased loss-absorbing capacity for ADIs

In December 2021, APRA released its finalised requirements for the Australian loss-absorbing capacity framework. The final requirements represent a further 1.5% increase in the amount of Total capital required by domestic systemically important banks (D-SIBs), with a total increase of 4.5% of RWA required by January 2026. The interim requirement of an increase in the Total capital requirement of 3% of RWA by 1 January 2024 remains in place.

## Reserve Bank of New Zealand (RBNZ) capital review

In December 2019, the RBNZ finalised its review of the capital adequacy framework. The RBNZ amendments to the amount of regulatory capital required of locally incorporated banks include:

- an increase in credit RWA for banks that use the RBNZ's internal ratings-based approach due to:
  - the use of the standardised approach for bank and sovereign exposures, and the introduction of an overall minimum standardised floor, implemented on 1 January 2022
  - an increase in the RWA scalar, implemented on 1 October 2022.
- an increase in the Tier 1 capital requirement to 16% of RWA, and an increase in the Total capital requirement to 18% of RWA, to be phased in by 2028.

## RBNZ actions to support the banking system

From 1 July 2022, the RBNZ removed restrictions on the payment of dividends by New Zealand banks (including BNZ). The restrictions had previously been put in place in April 2020 in response to the impacts of COVID-19.

## Committed Liquidity Facility (CLF) reduction

On 10 September 2021, APRA announced that the CLF will be reduced to zero by the end of 2022 subject to financial market conditions. The CLF reduction is expected to be offset by ADIs increasing holdings of high-quality liquid assets (HQLA). APRA specified that ADIs should not rely on the CLF to meet the minimum 100% Liquidity Coverage Ratio (LCR) requirement from the beginning of 2022.

## Other regulatory changes

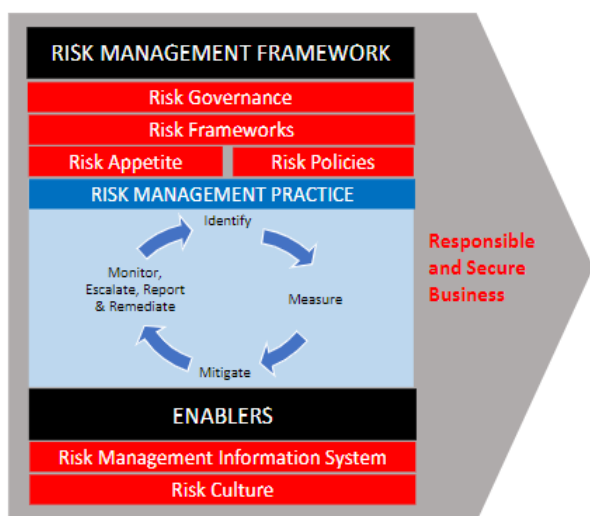
- The BCBS announced its revised market risk and Credit Valuation Adjustment (CVA) frameworks, which are due to come into effect from 1 January 2023 globally. APRA deferred the implementation date for Basel III reforms to APS 116 *Capital Adequacy: Market Risk* and APS 180 *Capital Adequacy: Counterparty Credit Risk* to 2025.
- 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.

# Risk Governance and Management

## Risk Management

Risk is the potential for harm and an inherent part of the Group's business. The Group's ability to manage risk effectively is critical to being a safe and secure bank that can serve customers well and help communities prosper. The Group's risk management is in line with APRA Prudential Standard CPS 220 *Risk Management*.

The Group's Risk Management Framework is outlined in the Risk Management Strategy and illustrated below. The Risk Management Framework consists of systems, structures, policies, processes, and people within the Group that manage the Group's material risks. The Risk Management Framework is comprehensively reviewed every three years for appropriateness, effectiveness, and adequacy by an operationally independent party. The Board is ultimately responsible for the Risk Management Framework and oversees its operation by management. In addition, directors and senior executives are held accountable for the parts of the Group's operations they manage or control.



The Group applies a 'Three Lines of Accountability' 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 is:

- First Line – Businesses own risks and obligations, and the controls and mitigation strategies that help manage them
- Second Line – 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
- Third Line – 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. Strategic planning is informed by the ICAAP and Internal Liquidity Adequacy Assessment Process (ILAAP) assessments of the Group's risk profile and the level of financial resources required to maintain suitable capital and liquidity for those risks. Key outputs of the strategic planning process are the Strategic Plan, Financial Plan, Funding Strategy, Capital Management Strategy and Risk Appetite Statement (RAS). These documents collectively establish performance targets and risk boundaries for the Group, legal entities, and individual businesses where applicable, with stress testing and scenario analysis used to inform risk appetite. These documents form the Group's Business Plan, which is endorsed by management and approved by the Board.

## Risk Governance

Risk governance refers to the formal structure used to support risk-based decision-making and oversight across all the Group's operations.

The Board provides strategic direction for our business and represents the interests of our shareholders through the creation of sustainable value. The Board achieves this through a focus on customers, colleagues and the broader community. The Board is supported by its committees, as follows:

- Board Risk & Compliance Committee
- Board Audit Committee
- Board People & Remuneration Committee
- Board Nomination & Governance Committee, and
- Board Customer Committee.

## Risk Governance and Management (cont.)

Information on Board committees and their charters is available in the Corporate Governance section of the Group's website at [nab.com.au/about-us/corporate-governance](https://nab.com.au/about-us/corporate-governance).

The Board delegates responsibility for the day-to-day management of the Group's operations to the Group Chief Executive Officer (Group CEO). The Group CEO delegates authority to members of the Executive Leadership Team. The delegations from the Board to the Group CEO, and the Group CEO to the Executive Leadership Team are reviewed on an annual basis. Both the Board, supported by its committees, and management, through its executives, promote awareness of a risk-based culture, supporting an acceptable balance between risk and return.

The Group CEO oversees enterprise-wide risk management through the Executive Risk & Compliance Committee and its supporting sub-committees, as follows:

- Group Credit & Market Risk Committee (GCMRC)
- Group Model Risk Committee (as a sub-committee of GCMRC)
- Group Asset & Liability Committee
- Group Non-Financial Risk Committee
- Executive Financial Crime Risk Committee
- Business & Private Banking Risk Committee
- Corporate & Institutional Banking Risk Committee, and
- Personal Banking Risk Committee.

Each sub-committee oversees and governs the effective management of risk which supports the relevant accountable executives. Through two sub-committees of the Executive Customer Committee, new and existing product offerings are evaluated and customer remediation activities are monitored to ensure transparent decision-making and consistent customer outcomes. The Executive Remuneration Committee reviews and makes recommendations to the Board People & Remuneration Committee on remuneration consequences of risk issues and events, including in connection with deferred incentives.



### Material Risks

The following table provides a summary of the Group's material risks. A number of measures exist across each of the material risks, including but not limited to those outlined in the table below. The Board, supported by its committees, is responsible for all material risks. Strategic risk is managed directly by the Board.

Detailed information on principal risks and uncertainties associated with the Group is outlined in the risk factors section of the 2022 Annual Report.

Material risk	Definition	Key measures	Governing policies and key committees
Strategic	The risk to earnings, capital, liquidity, funding or reputation arising from an inadequate response to changes in the external environment and risk of failing to properly consider downstream impacts and achieve effective outcomes when executing material change programs.	<ul style="list-style-type: none"> <li>- Measures as outlined in the Group's strategic ambition</li> </ul>	<b>Governing policies</b> <ul style="list-style-type: none"> <li>- Group Organic Investment Policy</li> <li>- Group Inorganic Investment Policy</li> </ul>
Financial risk categories			
Credit	The risk that a customer will fail to meet its obligations to the Group in accordance with agreed terms. It is a financial risk that the Group consciously elects to take through both the Group's lending activities (banking book) and markets and trading activities (trading book).	<ul style="list-style-type: none"> <li>- Economic capital limits</li> <li>- Credit concentration limits (including for single large exposures, industries, and countries)</li> <li>- Portfolio limits, settings and indicators in respect to credit quality having regard to Probability of Default (PD), Loss Given Default (LGD), 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)</li> </ul>	<b>Governing policies</b> <ul style="list-style-type: none"> <li>- Credit Risk Management Strategy</li> <li>- Group Model Risk Policy</li> </ul> <b>Key committees</b> <ul style="list-style-type: none"> <li>- Board Risk &amp; Compliance Committee</li> <li>- Executive Risk &amp; Compliance Committee</li> <li>- Group Credit &amp; Market Risk Committee</li> <li>- Group Model Risk Committee</li> </ul>
Market	The risk of loss from the Group's trading activities or management of structural balance sheet exposures. Losses can arise from a change in the value of positions in financial instruments, bank assets and liabilities or their hedges due to adverse movements in market prices. This may be due to changes in credit spreads, interest rates, foreign exchange rates, commodity and equity prices.	<ul style="list-style-type: none"> <li>- Economic capital limits</li> <li>- Earnings at risk limits</li> <li>- Trading desk limits and settings (for example, stop loss limits)</li> <li>- Globally diversified Value at Risk (VaR), stressed VaR and inner stress limits</li> </ul>	<b>Governing policies</b> <ul style="list-style-type: none"> <li>- Group Traded Market Risk Policy</li> <li>- Interest Rate Risk in the Banking Book Policy</li> <li>- Group Foreign Exchange Risk in the Banking Book Policy</li> <li>- Funds Transfer Pricing Policy</li> <li>- Group Model Risk Policy</li> </ul> <b>Key committees</b> <ul style="list-style-type: none"> <li>- Board Risk &amp; Compliance Committee</li> <li>- Executive Risk &amp; Compliance Committee</li> <li>- Group Credit &amp; Market Risk Committee</li> <li>- Group Model Risk Committee</li> </ul>
Balance Sheet and Liquidity	The risk of failing to manage and monitor key banking book structural risks such as liquidity risk and capital risk.	<ul style="list-style-type: none"> <li>- LCR</li> <li>- Net Stable Funding Ratio (NSFR)</li> <li>- Common Equity Tier 1 (CET1) capital ratio</li> <li>- Customer Funding Index</li> </ul>	<b>Governing policies</b> <ul style="list-style-type: none"> <li>- Group Capital Risk Policy</li> <li>- Group Liquidity Risk Policy</li> <li>- Group Equity Risk in the Banking Book Policy</li> <li>- Third Party Securitisation Risk Policy</li> <li>- Group Model Risk Policy</li> </ul> <b>Key committees</b> <ul style="list-style-type: none"> <li>- Board Risk &amp; Compliance Committee</li> <li>- Executive Risk &amp; Compliance Committee</li> <li>- Group Asset &amp; Liability Committee</li> <li>- Group Model Risk Committee</li> </ul>
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.	<ul style="list-style-type: none"> <li>- Economic capital limits</li> <li>- Operational risk metrics which ensure the Group operates within Board approved risk appetite limits and risk settings applicable to the management of operational risk such as financial losses, service disruption due to technology incidents, and information security (cyber)</li> </ul>	<b>Governing policies</b> <ul style="list-style-type: none"> <li>- Group Anti-Fraud Policy</li> <li>- Risk Management Practice Framework</li> <li>- Group Information Risk Policy</li> <li>- Group Business Continuity Management Policy</li> <li>- Physical Security Policy</li> <li>- Group Outsourcing Policy</li> <li>- Group Model Risk Policy</li> </ul> <b>Key committees</b> <ul style="list-style-type: none"> <li>- Board Risk &amp; Compliance Committee</li> <li>- Executive Risk &amp; Compliance Committee</li> <li>- Group Non-Financial Risk Committee</li> </ul>

## Risk Governance and Management (cont.)

Material risk	Definition	Key measures	Governing policies and key committees
Sustainability	The risk that Environmental, Social or Governance (ESG) events or conditions negatively impact the risk and return profile of the Group or its customers and suppliers.	<ul style="list-style-type: none"> <li>- Measures through risk appetite settings, including credit portfolio limits, and key risk indicators</li> <li>- Policy breach reporting</li> <li>- ESG risk assessment as part of the credit risk assessment and due diligence process for high risk customers and potential customers</li> <li>- Operational emissions and targets</li> <li>- Attributable financed emissions</li> <li>- Climate-related stress testing and risk assessment</li> </ul>	<p><b>Governing Policies</b></p> <ul style="list-style-type: none"> <li>- Group Environmental Management Policy</li> <li>- Group Environmental Reporting and Offset Management Policy</li> <li>- Group Human Rights Policy</li> <li>- Group Procurement Policy</li> <li>- Group Outsourcing Policy</li> <li>- Credit Policy</li> <li>- Net Zero Banking Alliance Policy</li> <li>- Social Impact Policy</li> </ul> <p><b>Key Committees</b></p> <ul style="list-style-type: none"> <li>- Board Risk &amp; Compliance Committee</li> <li>- Executive Risk &amp; Compliance Committee</li> <li>- Group Credit &amp; Market Risk Committee</li> <li>- Sustainability Council</li> </ul>
Conduct	The risk that any action of the Group, or those acting on behalf of the Group, will result in unfair outcomes for customers.	<ul style="list-style-type: none"> <li>- Measures through risk appetite settings and key risk indicators</li> </ul>	<p><b>Governing policies</b></p> <ul style="list-style-type: none"> <li>- Group Conduct Risk Framework</li> <li>- Code of Conduct</li> <li>- Framework for Customers Experiencing Vulnerability</li> <li>- Group Customer Complaints Policy</li> <li>- Customer Outcomes Framework</li> </ul> <p><b>Key committees</b></p> <ul style="list-style-type: none"> <li>- Board Risk &amp; Compliance Committee</li> <li>- Executive Risk &amp; Compliance Committee</li> <li>- Enterprise Product Committee</li> <li>- Remediation Committee</li> </ul>
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, as well as internal policies, standards, procedures and frameworks that support fair and equitable treatment of customers.	<ul style="list-style-type: none"> <li>- Compliance obligation management</li> <li>- Compliance breach investigations</li> <li>- Timeliness of customer exits in managing financial crime risk exposure</li> <li>- Enhanced customer due diligence for new to bank high risk customers</li> </ul>	<p><b>Governing policies</b></p> <ul style="list-style-type: none"> <li>- Compliance Obligations Management Policy</li> <li>- Regulatory Breach Management Policy</li> <li>- Conflicts of Interest Framework</li> <li>- Cross Border Policy</li> <li>- G20 risk mitigation policies</li> <li>- Dodd-Frank Act policies</li> <li>- Group External Reporting Policy</li> <li>- Group Anti-Bribery and Corruption Policy</li> <li>- Anti-Money Laundering &amp; Counter-Terrorism Financing Policy</li> <li>- Economic and Trade Sanctions Policy</li> </ul> <p><b>Key committees</b></p> <ul style="list-style-type: none"> <li>- Board Risk &amp; Compliance Committee</li> <li>- Executive Risk &amp; Compliance Committee</li> <li>- Group Non-Financial Risk Committee</li> <li>- Executive Financial Crime Risk Committee</li> </ul>

# 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 appropriate capital and can respond appropriately in these situations.

The Board sets capital operating targets above regulatory minimums and capital buffers, taking 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
<b>Nature</b>	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
<b>Calculation</b>	Calculated under regulatory requirements and expressed as a percentage of RWA	Internal risk-based models
<b>Risk types</b>	Credit risk, market risk, operational risk and interest rate risk in the banking book (IRRBB)	As per regulatory capital requirements, plus other risks, including business/strategic risk, equity risk and foreign exchange risk in the banking book

The ICAAP describes capital adequacy for the Level 1 and Level 2 Groups. The process is designed to assess the 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 activities for which capital is a mitigant
- calibration of capital limits commensurate with the 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, Capital Management Strategy, RAS, Group Strategic Plan and Financial Plan 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 & Liability Committee and the Executive Risk & Compliance 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 BNZ's treasury functions each prepare an annual capital management strategy (incorporating capital targets) and execute the Board approved strategies.

Balance Sheet and Liquidity Risk Management is independent of Group Treasury and is responsible for capital risk oversight. Balance Sheet and Liquidity Risk Management 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 Balance Sheet and Liquidity Risk Management, monitors the Group's capital position on a monthly basis and reports to management and Board committees.

### 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 single large exposure limits, industry limits and country limits.

### Table 4.1.A 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 22	31 Mar 22
	\$m	\$m
<b>Credit risk</b>		
<b>Subject to IRB approach</b>		
Corporate (including small and medium-sized enterprises (SME))	137,118	133,619
Sovereign	1,870	1,625
Bank	6,447	6,426
Retail SME	6,961	6,916
Residential mortgage	110,551	112,447
Qualifying revolving retail	2,248	2,266
Other retail	2,004	2,060
<b>Total IRB approach</b>	<b>267,199</b>	<b>265,359</b>
<b>Specialised lending</b>	<b>62,003</b>	<b>61,242</b>
<b>Subject to standardised approach</b>		
Corporate	5,144	4,724
Residential mortgage	5,308	1,211
Other <sup>(1)</sup>	4,402	421
<b>Total standardised approach<sup>(2)</sup></b>	<b>14,854</b>	<b>6,356</b>
<b>Other</b>		
Securitisation exposures	6,472	6,268
Credit valuation adjustment	6,720	5,951
Central counterparty default fund contribution guarantee	99	100
Other <sup>(3)</sup>	9,914	9,826
<b>Total other</b>	<b>23,205</b>	<b>22,145</b>
<b>Total credit risk</b>	<b>367,261</b>	<b>355,102</b>
<b>Market risk</b>	7,907	8,958
<b>Operational risk</b>	41,124	41,124
<b>Interest rate risk in the banking book</b>	33,626	26,756
<b>Total RWA</b>	<b>449,918</b>	<b>431,940</b>

(1) Other subject to the standardised approach consists of several regulatory prescribed portfolios, and other portfolios where the standardised approach is applied by the Group, including the unsecured lending portfolio acquired as part of the Citi consumer business acquisition.

(2) The increase in credit RWA on exposures subject to the standardised approach is mainly due to the acquisition of the Citi consumer business on 1 June 2022. The credit RWA related to this acquisition was approximately \$8.1 billion, based on amounts as at 30 June 2022.

(3) Other consists of other assets, claims and exposures and overlay adjustments for regulatory prescribed methodology requirements. Other includes RWA of \$84 million for equity exposures (31 March 2022: \$78 million).

The following table provides total RWA for the Level 1 Group.

	As at	
	30 Sep 22	31 Mar 22
	\$m	\$m
<b>Total RWA</b>	<b>404,514</b>	<b>385,895</b>

## Table 4.1.B Capital and Leverage Ratios

The following tables provide:

- the key capital ratios for the Level 1 and Level 2 Groups
- the key capital ratios for the Group's significant overseas bank subsidiary, BNZ
- the leverage ratio for the Level 2 Group as at 30 September 2022 and for the three previous quarters.

Capital ratios	As at	
	30 Sep 22	31 Mar 22
	%	%
Level 2 Common Equity Tier 1	11.51	12.48
Level 2 Tier 1	13.14	14.07
Level 2 Total	18.17	18.55
Level 1 Common Equity Tier 1	11.24	12.32
Level 1 Tier 1	13.05	14.09
Level 1 Total	18.57	19.03

Significant overseas bank subsidiary capital ratios <sup>(1)</sup>	As at	
	30 Sep 22	31 Mar 22
	%	%
BNZ Common Equity Tier 1	12.8	12.7
BNZ Tier 1	13.8	13.7
BNZ Total	15.4	15.3

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

Leverage ratio	As at			
	30 Sep 22	30 Jun 22	31 Mar 22	31 Dec 21
	\$m	\$m	\$m	\$m
Tier 1 capital	59,112	58,684	60,759	60,542
Total exposures	1,167,759	1,161,897	1,103,622	1,084,305
Leverage ratio (%)	5.06%	5.05%	5.51%	5.58%

## 4.2 Capital Structure

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

CET1 capital	Tier 1 capital	Total capital
CET1 capital ranks behind the claims of depositors and other creditors in the event of winding-up of the issuer, absorbs losses as and when they occur, has full flexibility of dividend payments and has no maturity date. 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 Additional Tier 1 capital. Additional Tier 1 capital comprises high quality components of capital that satisfy the following characteristics: <ul style="list-style-type: none"> <li>- provide a permanent and unrestricted commitment of funds</li> <li>- are freely available to absorb losses</li> <li>- rank behind the claims of depositors and other more senior creditors in the event of winding-up of the issuer</li> <li>- provide for fully discretionary capital distributions.</li> </ul>	Tier 1 capital plus Tier 2 capital. Tier 2 capital comprises other components of capital that, to varying degrees, do not meet the requirements of Tier 1 capital but nonetheless contribute to the overall strength of an ADI and its capacity to absorb losses.

Further details of Additional Tier 1 and Tier 2 securities are available at [capital.nab.com.au/disclaimer-area/capital-instruments.phps](https://capital.nab.com.au/disclaimer-area/capital-instruments.phps).

## Restrictions and Major Impediments on the Transfer of Funds or Regulatory Capital within the Group

### Thin capitalisation rules

The transfer of funds or regulatory capital within the Group will take into account tax legislation that imposes interest deduction limitations based on prescribed minimum capital levels.

### Intragroup exposure limits

Exposures to related entities are managed in accordance with the Conglomerate Group Aggregate Risk Exposure Policy and prudential limits prescribed in APS 222 *Associations with Related Entities*.

### Table 4.2.A Regulatory Capital Structure

The table below provides the structure of regulatory capital for the Level 2 Group. A detailed breakdown as at 30 September 2022 is shown in Table 4.3.A *Regulatory Capital Disclosure Template*.

	As at	
	30 Sep 22	31 Mar 22
	\$m	\$m
Common Equity Tier 1 capital before regulatory adjustments	59,019	60,960
Regulatory adjustments to Common Equity Tier 1 capital	(7,243)	(7,036)
<b>Common Equity Tier 1 capital (CET1)</b>	<b>51,776</b>	<b>53,924</b>
Additional Tier 1 capital before regulatory adjustments	7,360	6,859
Regulatory adjustments to Additional Tier 1 capital	(24)	(24)
<b>Additional Tier 1 capital (AT1)</b>	<b>7,336</b>	<b>6,835</b>
<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>59,112</b>	<b>60,759</b>
Tier 2 capital before regulatory adjustments	22,719	19,468
Regulatory adjustments to Tier 2 capital	(96)	(117)
<b>Tier 2 capital (T2)</b>	<b>22,623</b>	<b>19,351</b>
<b>Total capital (TC = T1 + T2)</b>	<b>81,735</b>	<b>80,110</b>

## 4.3 Detailed Capital Disclosures

### Table 4.3.A 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 4.3.B *Reconciliation between the Group and Level 2 Group Balance Sheet* and Table 4.3.C *Reconciliation between the Level 2 Group Balance Sheet and Regulatory Capital Disclosure Template*.

## Detailed Capital Disclosures (cont.)

		As at 30 Sep 22
		\$m
<b>Common Equity Tier 1 capital: instruments and reserves</b>		
1	Directly issued qualifying ordinary shares (and equivalent for mutually-owned entities) capital	39,399
2	Retained earnings	21,459
3	Accumulated other comprehensive income (and other reserves)	(1,839)
5	Ordinary share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	-
<b>6</b>	<b>Common Equity Tier 1 capital before regulatory adjustments</b>	<b>59,019</b>
<b>Common Equity Tier 1 capital: regulatory adjustments</b>		
7	Prudential valuation adjustments	1
8	Goodwill	2,089
9	Other intangibles other than mortgage-servicing rights (net of related deferred tax balance)	2,770
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	36
11	Cash flow hedge reserve	(1,667)
12	Shortfall of provisions to expected losses	34
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	(9)
15	Defined benefit superannuation plan assets (net of related tax liability)	26
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	-
<b>APRA specific regulatory adjustments</b>		
26	National specific regulatory adjustments (sum of rows 26a, 26b, 26c, 26d, 26e, 26f, 26g, 26h, 26i and 26j)	3,963
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	798
26d	of which: equity investments in financial institutions not reported in rows 18, 19 and 23 (adjusted for intangible assets held by those entities)	646
26e	of which: deferred tax assets not reported in rows 10, 21 and 25	2,250
26f	of which: capitalised expenses	150
26g	of which: investments in commercial (non-financial) entities that are deducted under APRA prudential requirements	49
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	70
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions	-
<b>28</b>	<b>Total regulatory adjustments to Common Equity Tier 1</b>	<b>7,243</b>
<b>29</b>	<b>Common Equity Tier 1 capital (CET1)</b>	<b>51,776</b>

## Detailed Capital Disclosures (cont.)

	As at 30 Sep 22
	\$m
<b>Additional Tier 1 capital: instruments</b>	
30 Directly issued qualifying Additional Tier 1 instruments	7,360
31 of which: classified as equity under applicable accounting standards	-
32 of which: classified as liabilities under applicable accounting standards	7,360
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)	-
<b>36 Additional Tier 1 capital before regulatory adjustments</b>	<b>7,360</b>
<b>Additional Tier 1 capital: regulatory adjustments</b>	
37 Investments in own Additional Tier 1 instruments and any unused trading limit	20
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)	4
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	4
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	-
<b>43 Total regulatory adjustments to Additional Tier 1 capital</b>	<b>24</b>
<b>44 Additional Tier 1 capital (AT1)</b>	<b>7,336</b>
<b>45 Tier 1 capital (T1 = CET1 + AT1)</b>	<b>59,112</b>
<b>Tier 2 capital: instruments and provisions</b>	
46 Directly issued qualifying Tier 2 instruments	20,654
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)	-
50 Provisions <sup>(1)</sup>	2,065
<b>51 Tier 2 capital before regulatory adjustments</b>	<b>22,719</b>
<b>Tier 2 capital: regulatory adjustments</b>	
52 Investments in own Tier 2 instruments and any unused trading limit	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)	21
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	21
56c of which: other national specific regulatory adjustments not reported in rows 56a and 56b	-
<b>57 Total regulatory adjustments to Tier 2 capital</b>	<b>96</b>
<b>58 Tier 2 capital (T2)</b>	<b>22,623</b>
<b>59 Total capital (TC = T1 + T2)</b>	<b>81,735</b>
<b>60 Total RWA based on APRA standards</b>	<b>449,918</b>

(1) Consists of eligible provisions held against non-defaulted exposures under the IRB approach (\$1,912 million) and against exposures under the standardised approach (\$153 million).



## Detailed Capital Disclosures (cont.)

	As at 30 Sep 22
	\$m
<b>Capital ratios and buffers</b>	
61 Common Equity Tier 1 (as a percentage of RWA)	11.51%
62 Tier 1 (as a percentage of RWA)	13.14%
63 Total capital (as a percentage of RWA)	18.17%
64 Buffer requirement (minimum CET1 requirement plus capital conservation buffer plus any countercyclical buffer requirements expressed as a percentage of RWA) <sup>(1)</sup>	8.01%
65 of which: capital conservation buffer requirement	3.50%
66 of which: ADI-specific countercyclical buffer requirements	0.01%
67 of which: Global Systemically Important Bank (G-SIB) buffer requirement	n/a
68 Common Equity Tier 1 available to meet buffers (as a percentage of RWA)	8.01%
<b>National minima (if different from Basel III)</b>	
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
<b>Amounts below the thresholds for deduction (not risk-weighted)<sup>(2)</sup></b>	
72 Non-significant investments in the capital of other financial entities	636
73 Significant investments in the ordinary shares of financial entities (adjusted for intangible assets held by those entities)	10
74 Mortgage servicing rights (net of related tax liability)	-
75 Deferred tax assets arising from temporary differences (net of related tax liability)	2,250
<b>Applicable caps on the inclusion of provisions in Tier 2</b>	
76 Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	153
77 Cap on inclusion of provisions in Tier 2 under standardised approach	353
78 Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	1,912
79 Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	2,034

(1) Comprises a minimum CET1 ratio of 4.5% per APS 110 *Capital Adequacy* paragraph 23(a), a capital conservation buffer of 2.5% of RWA, an additional capital buffer applicable to D-SIBs of 1% of RWA and a countercyclical capital buffer (refer to Table 4.3.E *Countercyclical Capital Buffer*).

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

**Table 4.3.B 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 2022.

	Group balance sheet	Adjustments <sup>(1)</sup>	Level 2 Group balance sheet	Reference <sup>(2)</sup>
	\$m	\$m	\$m	
<b>Assets</b>				
Cash and liquid assets	56,451	-	56,451	
Due from other banks	141,861	-	141,861	
Collateral placed	13,115	-	13,115	
Trading securities	40,573	-	40,573	
Debt instruments	42,080	-	42,080	
Other financial assets	2,061	-	2,061	
Derivative assets	61,016	-	61,016	
Loans and advances	680,434	(2,431)	678,003	
of which: deferred net fee income	798	-	798	Row 26c
Current tax assets	16	-	16	
Due from controlled entities	-	10	10	
Deferred tax assets	3,385	-	3,385	Table C
Property, plant and equipment	3,009	-	3,009	
Investments in controlled entities	-	10	10	
Goodwill and other intangible assets	4,652	-	4,652	Table A
Other assets	6,473	-	6,473	
<b>Total assets</b>	<b>1,055,126</b>	<b>(2,411)</b>	<b>1,052,715</b>	
<b>Liabilities</b>				
Due to other banks	74,679	-	74,679	
Collateral received	17,245	-	17,245	
Other financial liabilities	23,286	-	23,286	
Derivative liabilities	57,486	21	57,507	
Deposits and other borrowings	683,526	-	683,526	
Current tax liabilities	1,011	(7)	1,004	
Provisions	2,096	-	2,096	
Due to controlled entities	-	71	71	
Bonds, notes and subordinated debt	119,283	(2,486)	116,797	
Other debt issues	7,318	-	7,318	
Other liabilities	10,164	3	10,167	
<b>Total liabilities</b>	<b>996,094</b>	<b>(2,398)</b>	<b>993,696</b>	
<b>Net assets</b>	<b>59,032</b>	<b>(13)</b>	<b>59,019</b>	
<b>Equity</b>				
Contributed equity	39,399	-	39,399	Row 1
Foreign currency translation reserve	(516)	-	(516)	
Asset revaluation reserve	25	-	25	
Cash flow hedge reserve	(1,667)	-	(1,667)	Row 11
Cost of hedging reserve	81	-	81	
Equity-based compensation reserve	180	-	180	
Debt instruments at fair value through other comprehensive income reserve	36	-	36	
Equity instruments at fair value through other comprehensive income reserve	22	-	22	
<b>Total reserves</b>	<b>(1,839)</b>	<b>-</b>	<b>(1,839)</b>	Row 3
Retained profits	21,472	(13)	21,459	Row 2
<b>Total equity</b>	<b>59,032</b>	<b>(13)</b>	<b>59,019</b>	

(1) The adjustments remove the assets, liabilities and equity balances of Level 3 entities deconsolidated for regulatory purposes, and reinstate any intragroup assets and liabilities, treating them as external to the Level 2 Group.

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

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

The following tables provide information on the differences between the Level 2 Group Balance Sheet in Table 4.3.B and amounts in the Regulatory Capital Disclosure Template in Table 4.3.A.

<b>Table A</b>	<b>As at 30 Sep 22 \$m</b>	<b>Disclosure template row</b>
Goodwill and other intangible assets	4,652	
Associated net deferred tax asset	207	
<b>Total</b>	<b>4,859</b>	
<i>which comprises:</i>		
Goodwill	2,089	Row 8
Other intangibles other than mortgage-servicing rights (net of related tax)	2,770	Row 9

<b>Table B</b>	<b>As at 30 Sep 22 \$m</b>	<b>Disclosure template row</b>
Non-defaulted expected loss	2,296	
<i>Less</i>		
Collective provision for credit impairment	4,361	
<i>Add</i>		
Eligible provisions held against exposures under the standardised approach	153	Row 50, 76
Eligible provisions held against non-defaulted exposures under the IRB approach	1,912	Row 50, 78
<b>Non-defaulted: shortfall of provisions to expected losses</b>	<b>-</b>	
Defaulted expected loss	1,117	
<i>Less</i>		
Individual provision for credit impairment subject to the IRB approach <sup>(1)</sup>	504	
Partial write-offs	155	
Collective provision for credit impairment for defaulted exposures subject to the IRB approach <sup>(2)</sup>	424	
<b>Defaulted: shortfall of provisions to expected losses</b>	<b>34</b>	
<b>Gross deduction of shortfall of provisions to expected losses</b>	<b>34</b>	Row 12

(1) Excludes individual provision for credit impairment subject to the standardised approach of \$27 million.

(2) Excludes collective provision for credit impairment on defaulted exposures subject to the standardised approach of \$41 million.

<b>Table C</b>	<b>As at 30 Sep 22 \$m</b>	<b>Disclosure template row</b>
Deferred tax assets	3,385	
<i>Less</i>		
Deferred tax assets that rely on future profitability	36	Row 10
Unrealised revaluation on funding vehicles	90	
Net deferred tax assets included in other regulatory adjustments or associated with reserves ineligible for inclusion in regulatory capital	1,009	
<b>Deferred tax assets APRA specific regulatory adjustment</b>	<b>2,250</b>	Row 26e, 75

<b>Table D</b>	<b>As at 30 Sep 22 \$m</b>	<b>Disclosure template row</b>
Face value of NAB Capital Notes 3	1,874	
Face value of NAB Capital Notes 5	2,386	
Face value of NAB Capital Notes 6	2,000	
Face value of NAB Wholesale Capital Notes	500	
Face value of NAB Wholesale Capital Notes 2	600	
<b>Directly issued qualifying Additional Tier 1 instruments classified as liabilities</b>	<b>7,360</b>	Row 32

## Detailed Capital Disclosures (cont.)

Table E	As at 30 Sep 22 \$m	Disclosure template row
Subordinated medium term notes	20,654	
<b>Directly issued qualifying Tier 2 instruments</b>	<b>20,654</b>	Row 46

### Table 4.3.D Entities Excluded from the 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.

Entity name	Principal activity	As at 30 Sep 22	
		Total assets \$m	Total liabilities \$m
NAB Trust Services Limited	Trustee	11	-
National Australia Managers Limited	Funds Manager	3	1
National RMBS Trust 2018-1	Securitisation	570	572
National RMBS Trust 2018-2	Securitisation	604	606
National RMBS Trust 2022-1	Securitisation	1,319	1,320

### Table 4.3.E 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 (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 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.

Country	As at 30 Sep 22			
	Countercyclical capital buffer %	Private sector credit exposure \$m	RWA \$m	ADI-specific buffer %
Hong Kong	1.00	4,609	1,594	0.005
Luxembourg	0.50	1,765	858	0.001
Norway	1.50	283	148	0.001
Sweden	1.00	671	372	0.001
Other	-	1,020,594	342,050	0.000
<b>Total</b>	<b>n/a</b>	<b>1,027,922</b>	<b>345,022</b>	<b>0.008</b>

## 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). 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 disclosure template below. The leverage ratio decreased from 5.51% at 31 March 2022 to 5.06% at 30 September 2022, due to an increase in total exposures of \$64.1 billion, combined with a decrease in Tier 1 capital of \$1.6 billion.

On-balance sheet exposures increased by \$31.2 billion, mainly related to an increase in loans and advances of \$26.8 billion. Other drivers of the increase in on-balance sheet exposures include an increase in amounts due from other banks (excluding reverse repurchase agreements) and collateral placed of \$4.2 billion and \$3.1 billion respectively, which were partially offset by a \$5.4 billion decrease in trading securities. There were also increases in securities financing transaction exposures from higher reverse repurchase agreements of \$20.5 billion, derivative exposures of \$7.4 billion, and the credit equivalent amount of other off-balance sheet exposures of \$5.0 billion.

The decrease in Tier 1 capital was mainly driven by the reduction in contributed equity from the on-market buy-back of NAB ordinary shares combined with increased regulatory adjustments to CET1 capital, partially offset by an increase in retained profits.

**Table 4.4.A Leverage Ratio Disclosure Template**

	As at	
	30 Sep 22	31 Mar 22
	\$m	\$m
<b>On-balance sheet exposures</b>		
1 On-balance sheet items (excluding derivatives and securities financing transactions (SFTs), but including collateral)	912,330	880,406
2 (Asset amounts deducted in determining Tier 1 capital)	(8,793)	(8,025)
<b>3 On-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 and 2)</b>	<b>903,537</b>	<b>872,381</b>
<b>Derivative exposures<sup>(1)</sup></b>		
4 Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	15,764	10,006
5 Add-on amounts for potential future credit exposure (PFCE) associated with all derivatives transactions	22,864	20,025
6 Gross-up for derivatives collateral provided where not included in on-balance sheet items	7,272	2,042
7 (Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(11,391)	(4,866)
8 (Exempted central counterparty (CCP) leg of client-cleared trade exposures)	-	-
9 Adjusted effective notional amount of written credit derivatives	8,100	5,357
10 (Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(7,054)	(4,429)
<b>11 Derivative exposures (sum of rows 4 to 10)</b>	<b>35,555</b>	<b>28,135</b>
<b>Securities financing transaction exposures</b>		
12 Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	96,927	81,128
13 (Netted amounts of cash payables and cash receivables of gross SFT assets)	(17,558)	(17,386)
14 Counterparty Credit Risk (CCR) exposure for SFT assets	23,280	18,360
15 Agent transaction exposures	-	-
<b>16 Securities financing transaction exposures (sum of rows 12 to 15)</b>	<b>102,649</b>	<b>82,102</b>
<b>Other off-balance sheet exposures</b>		
17 Off-balance sheet exposure at gross notional amount	237,144	220,877
18 (Adjustments for conversion to credit equivalent amounts)	(111,126)	(99,873)
<b>19 Other off-balance sheet exposures (sum of rows 17 and 18)</b>	<b>126,018</b>	<b>121,004</b>
<b>Capital and total exposures</b>		
<b>20 Tier 1 capital</b>	<b>59,112</b>	<b>60,759</b>
<b>21 Total exposures (sum of rows 3, 11, 16 and 19)</b>	<b>1,167,759</b>	<b>1,103,622</b>
<b>Leverage ratio</b>		
<b>22 Leverage ratio</b>	<b>5.06%</b>	<b>5.51%</b>

(1) Derivative exposures under the current exposure method.

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

	As at	
	30 Sep 22	31 Mar 22
	\$m	\$m
<b>Items</b>		
1 Total consolidated assets as per published financial statements	1,055,126	975,876
2 Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(2,411)	(1,372)
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	(25,461)	(2,221)
5 Adjustment for securities financing transactions	23,280	18,360
6 Adjustment for off-balance sheet exposures (credit equivalent amount)	126,018	121,004
7 Other adjustments	(8,793)	(8,025)
<b>8 Leverage ratio exposure</b>	<b>1,167,759</b>	<b>1,103,622</b>

# 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 the 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 & Compliance Committee. This is further delegated via the Group CEO, Group Chief Risk Officer and Group Chief Credit and Market Risk Officer, who set the Delegated Commitment Authority (DCA) framework. The Group Chief Credit and Market Risk Officer subdelegates the decision-making authority to the Group's divisions and individuals.

The Executive Risk & Compliance Committee and its subcommittees oversee the Group's credit risk appetite, principles, policies, models and systems for the management of credit risk. Internal risk committees oversee implementation of these disciplines at a divisional level.

The Board Risk & Compliance 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 required to be 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 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.

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. 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.

The Credit Assurance function is a key assurance area across non-retail banking activities. This function independently reviews and reports on asset quality across transaction-managed lending portfolios. The function operates independently of 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 monitoring and reporting credit and asset quality. The Group Chief Risk Officer receives regular reports covering credit risk, credit quality, asset concentrations, asset quality, ESG 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, large credit approvals and updates on defaulted counterparties. Key reports are provided to internal committees and the Board Risk & Compliance Committee.

The Board Risk & Compliance Committee and the Executive Risk & Compliance Committee are periodically provided 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. Loan obligations considered in default are subject to a probation period where repayments are required to be made over a continuous period of at least 90 days before being considered performing.

## General Disclosures (cont.)

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.

## Provisions and Write-offs

### 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 security 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 Australian Accounting Standard 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 judgements and estimates that the Group believes to be reasonable in line with the requirements of AASB 9.

### Write-offs

Where there is no reasonable expectation of recovery of a portion or the entire value of an exposure, a write-off is reflected 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

This section excludes credit risk information in respect of securitisation exposures within the scope of APS 120 (which have separate disclosures in Section 6 *Securitisation*) and other assets, claims and exposures. EaD throughout this section represents credit risk exposures net of offsets for eligible financial collateral, except where indicated.



**Table 5.1.A Credit Risk Exposures Summary**

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

Exposure type	As at 30 Sep 22					6 months ended 30 Sep 22
	Exposure at default	Risk- weighted assets	Regulatory expected loss	Impaired facilities	Specific provision for credit impairment	Net write- offs
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>						
Corporate (including SME)	313,877	137,118	1,245	547	325	60
Sovereign	200,469	1,870	4	-	-	-
Bank	30,017	6,447	10	-	-	-
Retail SME	17,012	6,961	192	95	62	23
Residential mortgage	431,676	110,551	935	238	65	18
Qualifying revolving retail	8,989	2,248	93	-	-	20
Other retail	2,745	2,004	75	5	4	12
<b>Total IRB approach</b>	<b>1,004,785</b>	<b>267,199</b>	<b>2,554</b>	<b>885</b>	<b>456</b>	<b>133</b>
<b>Specialised lending</b>	<b>71,818</b>	<b>62,003</b>	<b>859</b>	<b>107</b>	<b>48</b>	<b>23</b>
<b>Subject to standardised approach</b>						
Corporate	11,905	5,144	-	19	22	-
Residential mortgage	13,986	5,308	-	18	5	-
Other	5,136	4,402	-	-	-	16
<b>Total standardised approach</b>	<b>31,027</b>	<b>14,854</b>	<b>-</b>	<b>37</b>	<b>27</b>	<b>16</b>
<b>Total</b>	<b>1,107,630</b>	<b>344,056</b>	<b>3,413</b>	<b>1,029</b>	<b>531</b>	<b>172</b>

Exposure type	As at 31 Mar 22					6 months ended 31 Mar 22
	Exposure at default	Risk- weighted assets	Regulatory expected loss	Impaired facilities	Specific provision for credit impairment	Net write- offs
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>						
Corporate (including SME)	297,823	133,619	1,257	608	376	35
Sovereign	192,068	1,625	3	-	-	-
Bank	29,292	6,426	9	-	-	-
Retail SME	17,037	6,916	197	95	64	13
Residential mortgage	426,177	112,447	1,005	268	84	17
Qualifying revolving retail	8,950	2,266	102	-	-	26
Other retail	2,829	2,060	78	4	3	13
<b>Total IRB approach</b>	<b>974,176</b>	<b>265,359</b>	<b>2,651</b>	<b>975</b>	<b>527</b>	<b>104</b>
<b>Specialised lending</b>	<b>70,962</b>	<b>61,242</b>	<b>872</b>	<b>125</b>	<b>69</b>	<b>13</b>
<b>Subject to standardised approach</b>						
Corporate	10,505	4,724	-	19	22	2
Residential mortgage	2,638	1,211	-	15	4	1
Other	1,206	421	-	-	-	-
<b>Total standardised approach</b>	<b>14,349</b>	<b>6,356</b>	<b>-</b>	<b>34</b>	<b>26</b>	<b>3</b>
<b>Total</b>	<b>1,059,487</b>	<b>332,957</b>	<b>3,523</b>	<b>1,134</b>	<b>622</b>	<b>120</b>

**Table 5.1.B Total and Average Credit Risk Exposures**

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

Exposure type	As at 30 Sep 22				6 months ended 30 Sep 22
	On-balance sheet	Non-market related off-balance sheet	Market related off-balance sheet	Total exposure at default	Average exposure at default
	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>					
Corporate (including SME)	186,458	95,153	32,266	<b>313,877</b>	305,850
Sovereign	169,699	2,865	27,905	<b>200,469</b>	196,268
Bank	15,917	2,109	11,991	<b>30,017</b>	29,654
Retail SME	12,514	4,498	-	<b>17,012</b>	17,025
Residential mortgage	373,872	57,804	-	<b>431,676</b>	428,926
Qualifying revolving retail	3,804	5,185	-	<b>8,989</b>	8,970
Other retail	1,805	940	-	<b>2,745</b>	2,787
<b>Total IRB approach</b>	<b>764,069</b>	<b>168,554</b>	<b>72,162</b>	<b>1,004,785</b>	<b>989,480</b>
<b>Specialised lending</b>	<b>61,236</b>	<b>10,354</b>	<b>228</b>	<b>71,818</b>	<b>71,390</b>
<b>Subject to standardised approach</b>					
Corporate	5,809	718	5,378	<b>11,905</b>	11,205
Residential mortgage	12,716	1,270	-	<b>13,986</b>	8,312
Other	5,028	108	-	<b>5,136</b>	3,171
<b>Total standardised approach<sup>(1)</sup></b>	<b>23,553</b>	<b>2,096</b>	<b>5,378</b>	<b>31,027</b>	<b>22,688</b>
<b>Total exposure at default</b>	<b>848,858</b>	<b>181,004</b>	<b>77,768</b>	<b>1,107,630</b>	<b>1,083,558</b>

(1) The increase in total EaD subject to the standardised approach is mainly due to the acquisition of the Citi consumer business on 1 June 2022. The EaD related to this acquisition was approximately \$14.4 billion, based on the exposures as at 30 June 2022.

Exposure type	As at 31 Mar 22				6 months ended 31 Mar 22
	On-balance sheet	Non-market related off-balance sheet	Market related off-balance sheet	Total exposure at default	Average exposure at default
	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>					
Corporate (including SME)	182,586	91,789	23,448	<b>297,823</b>	291,645
Sovereign	165,207	2,581	24,280	<b>192,068</b>	183,225
Bank	16,662	1,670	10,960	<b>29,292</b>	28,860
Retail SME	12,438	4,599	-	<b>17,037</b>	16,969
Residential mortgage	369,820	56,357	-	<b>426,177</b>	419,144
Qualifying revolving retail	3,778	5,172	-	<b>8,950</b>	8,941
Other retail	1,820	1,009	-	<b>2,829</b>	2,835
<b>Total IRB approach</b>	<b>752,311</b>	<b>163,177</b>	<b>58,688</b>	<b>974,176</b>	<b>951,619</b>
<b>Specialised lending</b>	<b>60,122</b>	<b>10,438</b>	<b>402</b>	<b>70,962</b>	<b>69,566</b>
<b>Subject to standardised approach</b>					
Corporate	5,214	701	4,590	<b>10,505</b>	10,783
Residential mortgage	2,361	277	-	<b>2,638</b>	2,314
Other	1,206	-	-	<b>1,206</b>	1,182
<b>Total standardised approach</b>	<b>8,781</b>	<b>978</b>	<b>4,590</b>	<b>14,349</b>	<b>14,279</b>
<b>Total exposure at default</b>	<b>821,214</b>	<b>174,593</b>	<b>63,680</b>	<b>1,059,487</b>	<b>1,035,464</b>

**Table 5.1.C Credit Risk Exposures by Geography**

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

Exposure type	As at 30 Sep 22			
	Australia	New Zealand	Asia, Europe and Americas	Total exposure at default
	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>				
Corporate (including SME)	207,999	43,389	62,489	313,877
Sovereign	175,496	12,247	12,726	200,469
Bank	15,508	3,987	10,522	30,017
Retail SME	15,489	1,523	-	17,012
Residential mortgage	380,784	50,892	-	431,676
Qualifying revolving retail	8,989	-	-	8,989
Other retail	1,339	1,406	-	2,745
<b>Total IRB approach</b>	<b>805,604</b>	<b>113,444</b>	<b>85,737</b>	<b>1,004,785</b>
<b>Specialised lending</b>	<b>63,375</b>	<b>6,931</b>	<b>1,512</b>	<b>71,818</b>
<b>Subject to standardised approach</b>				
Corporate	10,168	883	854	11,905
Residential mortgage	13,957	8	21	13,986
Other	5,136	-	-	5,136
<b>Total standardised approach</b>	<b>29,261</b>	<b>891</b>	<b>875</b>	<b>31,027</b>
<b>Total exposure at default</b>	<b>898,240</b>	<b>121,266</b>	<b>88,124</b>	<b>1,107,630</b>

Exposure type	As at 31 Mar 22			
	Australia	New Zealand	Asia, Europe and Americas	Total exposure at default
	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>				
Corporate (including SME)	198,954	43,146	55,723	297,823
Sovereign	155,369	15,913	20,786	192,068
Bank	17,489	2,983	8,820	29,292
Retail SME	15,400	1,637	-	17,037
Residential mortgage	372,837	53,340	-	426,177
Qualifying revolving retail	8,950	-	-	8,950
Other retail	1,293	1,536	-	2,829
<b>Total IRB approach</b>	<b>770,292</b>	<b>118,555</b>	<b>85,329</b>	<b>974,176</b>
<b>Specialised lending</b>	<b>61,903</b>	<b>7,404</b>	<b>1,655</b>	<b>70,962</b>
<b>Subject to standardised approach</b>				
Corporate	9,426	782	297	10,505
Residential mortgage	2,603	9	26	2,638
Other	1,206	-	-	1,206
<b>Total standardised approach</b>	<b>13,235</b>	<b>791</b>	<b>323</b>	<b>14,349</b>
<b>Total exposure at default</b>	<b>845,430</b>	<b>126,750</b>	<b>87,307</b>	<b>1,059,487</b>

## General Disclosures (cont.)

### Table 5.1.D 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 22															
Exposure type	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 <sup>(1)</sup>	Total exposure at default
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>															
Corporate (including SME)	9,859	63,804	20,818	15,968	10,262	80,155	-	21,316	37	-	31,700	24,901	13,160	21,897	<b>313,877</b>
Sovereign	-	-	-	-	-	139,367	60,921	-	-	-	-	-	-	181	<b>200,469</b>
Bank	-	-	-	-	-	28,286	1,731	-	-	-	-	-	-	-	<b>30,017</b>
Retail SME	791	3,645	2,578	225	2,167	943	-	1,161	3	-	2,734	923	38	1,804	<b>17,012</b>
Residential mortgage	-	-	-	-	-	-	-	-	-	431,676	-	-	-	-	<b>431,676</b>
Qualifying revolving retail	-	-	-	-	-	-	-	-	8,989	-	-	-	-	-	<b>8,989</b>
Other retail	-	-	-	-	-	-	-	-	2,745	-	-	-	-	-	<b>2,745</b>
<b>Total IRB approach</b>	<b>10,650</b>	<b>67,449</b>	<b>23,396</b>	<b>16,193</b>	<b>12,429</b>	<b>248,751</b>	<b>62,652</b>	<b>22,477</b>	<b>11,774</b>	<b>431,676</b>	<b>34,434</b>	<b>25,824</b>	<b>13,198</b>	<b>23,882</b>	<b>1,004,785</b>
<b>Specialised lending</b>	<b>52</b>	<b>937</b>	<b>-</b>	<b>68,141</b>	<b>64</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>705</b>	<b>1,553</b>	<b>362</b>	<b>71,818</b>
<b>Subject to standardised approach</b>															
Corporate	20	91	508	35	118	6,951	8	259	20	78	662	161	9	2,985	<b>11,905</b>
Residential mortgage	-	-	-	-	-	-	-	-	-	13,986	-	-	-	-	<b>13,986</b>
Other	-	-	-	-	-	-	-	-	5,070	-	-	-	-	66	<b>5,136</b>
<b>Total standardised approach</b>	<b>20</b>	<b>91</b>	<b>508</b>	<b>35</b>	<b>118</b>	<b>6,951</b>	<b>8</b>	<b>259</b>	<b>5,090</b>	<b>14,064</b>	<b>662</b>	<b>161</b>	<b>9</b>	<b>3,051</b>	<b>31,027</b>
<b>Total exposure at default</b>	<b>10,722</b>	<b>68,477</b>	<b>23,904</b>	<b>84,369</b>	<b>12,611</b>	<b>255,702</b>	<b>62,660</b>	<b>22,736</b>	<b>16,868</b>	<b>445,740</b>	<b>35,096</b>	<b>26,690</b>	<b>14,760</b>	<b>27,295</b>	<b>1,107,630</b>

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

## General Disclosures (cont.)

As at 31 Mar 22															
	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 <sup>(1)</sup>	Total exposure at default
Exposure type	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>															
Corporate (including SME)	9,356	59,955	20,180	15,936	9,911	70,215	-	19,835	47	-	31,691	25,072	13,604	22,021	<b>297,823</b>
Sovereign	-	-	-	-	-	133,438	58,341	-	-	-	-	-	-	289	<b>192,068</b>
Bank	-	-	-	-	-	27,669	1,623	-	-	-	-	-	-	-	<b>29,292</b>
Retail SME	792	3,687	2,571	256	2,150	988	-	1,136	5	-	2,698	929	42	1,783	<b>17,037</b>
Residential mortgage	-	-	-	-	-	-	-	-	-	426,177	-	-	-	-	<b>426,177</b>
Qualifying revolving retail	-	-	-	-	-	-	-	-	8,950	-	-	-	-	-	<b>8,950</b>
Other retail	-	-	-	-	-	-	-	-	2,829	-	-	-	-	-	<b>2,829</b>
<b>Total IRB approach</b>	<b>10,148</b>	<b>63,642</b>	<b>22,751</b>	<b>16,192</b>	<b>12,061</b>	<b>232,310</b>	<b>59,964</b>	<b>20,971</b>	<b>11,831</b>	<b>426,177</b>	<b>34,389</b>	<b>26,001</b>	<b>13,646</b>	<b>24,093</b>	<b>974,176</b>
<b>Specialised lending</b>	<b>50</b>	<b>1,158</b>	<b>-</b>	<b>66,507</b>	<b>240</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>-</b>	<b>-</b>	<b>695</b>	<b>1,839</b>	<b>469</b>	<b>70,962</b>
<b>Subject to standardised approach</b>															
Corporate	17	90	452	24	98	5,969	-	249	11	101	622	143	12	2,717	<b>10,505</b>
Residential mortgage	-	-	-	-	-	-	-	-	-	2,638	-	-	-	-	<b>2,638</b>
Other	-	-	-	-	-	-	-	-	1,128	-	-	-	-	78	<b>1,206</b>
<b>Total standardised approach</b>	<b>17</b>	<b>90</b>	<b>452</b>	<b>24</b>	<b>98</b>	<b>5,969</b>	<b>-</b>	<b>249</b>	<b>1,139</b>	<b>2,739</b>	<b>622</b>	<b>143</b>	<b>12</b>	<b>2,795</b>	<b>14,349</b>
<b>Total exposure at default</b>	<b>10,215</b>	<b>64,890</b>	<b>23,203</b>	<b>82,723</b>	<b>12,399</b>	<b>238,279</b>	<b>59,964</b>	<b>21,220</b>	<b>12,974</b>	<b>428,916</b>	<b>35,011</b>	<b>26,839</b>	<b>15,497</b>	<b>27,357</b>	<b>1,059,487</b>

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

**Table 5.1.E Credit Risk Exposures by Maturity**

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

Overdraft and other similar revolving facilities are allocated to the maturity bucket that most appropriately captures the maturity characteristics of the product. The maturity of derivatives subject to an International Swaps and Derivatives Association (ISDA) netting agreement is based on individual contract maturity. No specified maturity includes exposures related to credit cards, on demand facilities and guarantees with no fixed maturity date.

Exposure type	As at 30 Sep 22				
	≤12 months	1 – 5 years	> 5 years	No specified maturity	Total exposure at default
	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>					
Corporate (including SME)	112,361	173,596	22,393	5,527	313,877
Sovereign	136,817	26,428	37,111	113	200,469
Bank	19,862	8,989	1,155	11	30,017
Retail SME	5,602	7,119	3,745	546	17,012
Residential mortgage	22,205	5,694	403,777	-	431,676
Qualifying revolving retail	-	-	-	8,989	8,989
Other retail	230	692	402	1,421	2,745
<b>Total IRB approach</b>	<b>297,077</b>	<b>222,518</b>	<b>468,583</b>	<b>16,607</b>	<b>1,004,785</b>
<b>Specialised lending</b>	<b>28,295</b>	<b>41,197</b>	<b>2,041</b>	<b>285</b>	<b>71,818</b>
<b>Subject to standardised approach</b>					
Corporate	5,509	3,077	3,066	253	11,905
Residential mortgage	103	14	13,869	-	13,986
Other	1,014	153	1	3,968	5,136
<b>Total standardised approach</b>	<b>6,626</b>	<b>3,244</b>	<b>16,936</b>	<b>4,221</b>	<b>31,027</b>
<b>Total exposure at default</b>	<b>331,998</b>	<b>266,959</b>	<b>487,560</b>	<b>21,113</b>	<b>1,107,630</b>

Exposure type	As at 31 Mar 22				
	≤12 months	1 – 5 years	> 5 years	No specified maturity	Total exposure at default
	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>					
Corporate (including SME)	99,761	166,080	23,555	8,427	297,823
Sovereign	123,426	28,116	40,415	111	192,068
Bank	19,424	8,298	1,557	13	29,292
Retail SME	5,873	7,330	3,255	579	17,037
Residential mortgage	22,831	6,179	397,167	-	426,177
Qualifying revolving retail	-	-	-	8,950	8,950
Other retail	261	723	326	1,519	2,829
<b>Total IRB approach</b>	<b>271,576</b>	<b>216,726</b>	<b>466,275</b>	<b>19,599</b>	<b>974,176</b>
<b>Specialised lending</b>	<b>26,583</b>	<b>41,607</b>	<b>2,515</b>	<b>257</b>	<b>70,962</b>
<b>Subject to standardised approach</b>					
Corporate	4,778	2,768	2,831	128	10,505
Residential mortgage	195	15	2,428	-	2,638
Other	1,053	153	-	-	1,206
<b>Total standardised approach</b>	<b>6,026</b>	<b>2,936</b>	<b>5,259</b>	<b>128</b>	<b>14,349</b>
<b>Total exposure at default</b>	<b>304,185</b>	<b>261,269</b>	<b>474,049</b>	<b>19,984</b>	<b>1,059,487</b>

## Credit Provisions and Losses

Table 5.1.F Provisions by Asset Class

The following table provides information on asset quality.

Exposure type	As at 30 Sep 22			6 months ended 30 Sep 22	
	Impaired facilities	Past due facilities ≥ 90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write-offs
	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>					
Corporate (including SME)	547	402	325	13	60
Retail SME	95	359	62	18	23
Residential mortgage	238	2,427	65	(4)	18
Qualifying revolving retail	–	16	–	41	20
Other retail	5	31	4	15	12
<b>Total IRB approach</b>	<b>885</b>	<b>3,235</b>	<b>456</b>	<b>83</b>	<b>133</b>
<b>Specialised lending</b>	<b>107</b>	<b>107</b>	<b>48</b>	<b>4</b>	<b>23</b>
<b>Subject to standardised approach</b>					
Corporate	19	26	22	1	–
Residential mortgage	18	90	5	–	–
Other	–	23	–	–	16
<b>Total standardised approach</b>	<b>37</b>	<b>139</b>	<b>27</b>	<b>1</b>	<b>16</b>
<b>Total</b>	<b>1,029</b>	<b>3,481</b>	<b>531</b>	<b>88</b>	<b>172</b>

Exposure type	As at 31 Mar 22			6 months ended 31 Mar 22	
	Impaired facilities	Past due facilities ≥ 90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write-offs
	\$m	\$m	\$m	\$m	\$m
<b>Subject to IRB approach</b>					
Corporate (including SME)	608	309	376	21	35
Retail SME	95	350	64	10	13
Residential mortgage	268	2,981	84	3	17
Qualifying revolving retail	–	19	–	31	26
Other retail	4	35	3	11	13
<b>Total IRB approach</b>	<b>975</b>	<b>3,694</b>	<b>527</b>	<b>76</b>	<b>104</b>
<b>Specialised lending</b>	<b>125</b>	<b>104</b>	<b>69</b>	<b>7</b>	<b>13</b>
<b>Subject to standardised approach</b>					
Corporate	19	4	22	–	2
Residential mortgage	15	19	4	–	1
Other	–	1	–	–	–
<b>Total standardised approach</b>	<b>34</b>	<b>24</b>	<b>26</b>	<b>–</b>	<b>3</b>
<b>Total</b>	<b>1,134</b>	<b>3,822</b>	<b>622</b>	<b>83</b>	<b>120</b>

**Table 5.1.G Provisions by Industry**

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

Industry sector	As at 30 Sep 22			6 months ended 30 Sep 22	
	Impaired facilities	Past due facilities ≥ 90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write- offs
	\$m	\$m	\$m	\$m	\$m
Accommodation and hospitality	37	45	26	(5)	5
Agriculture, forestry, fishing and mining	115	264	35	15	5
Business services and property services	126	75	84	2	6
Commercial property	122	131	55	6	25
Construction	68	77	54	9	5
Finance and insurance	16	24	15	-	-
Manufacturing	49	63	22	(3)	20
Personal	7	78	3	57	53
Residential mortgages	256	2,517	70	(4)	19
Retail and wholesale trade	88	83	57	9	27
Transport and storage	88	53	56	1	3
Utilities	1	1	2	-	(1)
Other <sup>(1)</sup>	56	70	52	1	5
<b>Total</b>	<b>1,029</b>	<b>3,481</b>	<b>531</b>	<b>88</b>	<b>172</b>

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

Industry sector	As at 31 Mar 22			6 months ended 31 Mar 22	
	Impaired facilities	Past due facilities ≥ 90 days	Specific provision for credit impairment	Specific credit impairment charge	Net write- offs
	\$m	\$m	\$m	\$m	\$m
Accommodation and hospitality	58	52	35	(3)	7
Agriculture, forestry, fishing and mining	96	180	28	(8)	12
Business services and property services	125	80	89	(1)	5
Commercial property	141	133	75	6	13
Construction	69	63	51	29	4
Finance and insurance	18	19	15	-	-
Manufacturing	74	64	44	-	1
Personal	6	57	3	42	40
Residential mortgages	283	3,000	88	3	18
Retail and wholesale trade	114	86	78	5	6
Transport and storage	92	50	61	6	4
Utilities	-	1	-	6	6
Other <sup>(1)</sup>	58	37	55	(2)	4
<b>Total</b>	<b>1,134</b>	<b>3,822</b>	<b>622</b>	<b>83</b>	<b>120</b>

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



**Table 5.1.H Provisions by Geography**

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

Geographic region	As at 30 Sep 22			
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	Collective provision for credit impairment
	\$m	\$m	\$m	\$m
Australia	860	3,248	443	4,137
New Zealand	148	232	80	649
Asia, Europe and Americas	21	1	8	40
<b>Total</b>	<b>1,029</b>	<b>3,481</b>	<b>531</b>	<b>4,826</b>

Geographic region	As at 31 Mar 22			
	Impaired facilities	Past due facilities ≥90 days	Specific provision for credit impairment	Collective provision for credit impairment
	\$m	\$m	\$m	\$m
Australia	939	3,686	506	3,961
New Zealand	177	132	108	627
Asia, Europe and Americas	18	4	8	46
<b>Total</b>	<b>1,134</b>	<b>3,822</b>	<b>622</b>	<b>4,634</b>

**Table 5.1.I Movement in Provisions**

The following table provides details of the movement in provisions over the reporting period for both collective provisions and specific provisions.

	6 months ended 30 Sep 22	6 months ended 31 Mar 22
	\$m	\$m
<b>Collective provision</b>		
Collective provision on loans and advances at amortised cost at beginning of period	4,423	4,521
Net transfer to specific provision	(38)	(52)
New and increased provisions (net of collective provision releases)	75	(28)
Foreign currency translation and other adjustments	81	(18)
<b>Collective provision on loans and advances at amortised cost</b>	<b>4,541</b>	<b>4,423</b>
Collective provision on loans and derivatives at fair value	285	211
<b>Collective provision for credit impairment</b>	<b>4,826</b>	<b>4,634</b>
<b>Specific provision</b>		
Specific provision on loans and advances at amortised cost at beginning of period	604	650
Net transfer from collective provision	38	52
New and increased provision (net of collective provision releases)	172	136
Write-back of specific provisions	(78)	(83)
Write-off from specific provisions	(215)	(147)
Foreign currency translation and other adjustments <sup>(1)</sup>	(6)	(4)
<b>Specific provision on loans and advances at amortised cost</b>	<b>515</b>	<b>604</b>
Specific provision on loans at fair value	16	18
<b>Specific provision for credit impairment</b>	<b>531</b>	<b>622</b>
<b>Total provisions</b>	<b>5,357</b>	<b>5,256</b>

(1) Includes the impact on provisions from the acquisition of the Citi consumer business.

**Factors Impacting Loss Experience in the Period****90+ days past due facilities**

90+ days past due facilities as at 30 September 2022 decreased compared to 31 March 2022 primarily due to improved delinquencies across the Australian mortgage portfolio, partially offset by a small number of larger exposures in the New Zealand agriculture portfolio.

**Impaired facilities**

Impaired facilities as at 30 September 2022 decreased compared to 31 March 2022 predominantly driven by work-outs in both the Business & Private Banking and New Zealand Banking business lending portfolios.

**Specific provision for credit impairment**

Specific provisions for credit impairment as at 30 September 2022 decreased compared to 31 March 2022 primarily due to work-outs for a small number of exposures in the business lending portfolios in Australia and New Zealand.

**Specific credit impairment charge**

The specific credit impairment charge for the six months ended 30 September 2022 is \$88 million, \$5 million higher than the six months ended 31 March 2022. This was driven by the acquisition of the Citi consumer business, partially offset by a lower level of charges for the Australian mortgage portfolio.

**Net write-offs**

Net write-offs for the six months ended 30 September 2022 is \$172 million, \$52 million higher than the six months ended 31 March 2022, due to a small number of larger name write-offs in the Group's business lending portfolio.

**Table 5.1.J (i) Loss Experience**

The following table provides annual actual losses (i.e. net write-offs) and Expected Loss (EL), both calculated as an exposure-weighted average (before credit risk mitigation). Actual losses are historical, whereas EL is a forward-looking measure of estimated loss that may be experienced over the next 12 months at a point in time.

Actual losses will differ from EL 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.
- EL is based on the quality of exposures at a point in time using long-run PD and stressed LGD. In most periods actual losses would be below the EL estimate.
- EL includes expected losses on non-defaulted assets which is a function of long-run PDs and downturn stressed LGDs. For defaulted exposures, EL is based on the Group's best estimate of expected loss.

Exposure type subject to IRB approach	30 Sep 22	
	Exposure-weighted average actual loss <sup>(1)</sup>	Exposure-weighted average EL <sup>(1)</sup>
	\$m	\$m
Corporate (including SME)	337	1,974
Sovereign	–	4
Bank	1	35
Retail SME	58	223
Residential mortgage	74	939
Qualifying revolving retail	148	202
Other retail	86	140
<b>Total IRB approach</b>	<b>704</b>	<b>3,517</b>

(1) Actual losses and EL averaged over a period of thirteen years to 30 September 2022.

Exposure type subject to IRB approach	31 Mar 22	
	Exposure-weighted average actual loss <sup>(1)</sup>	Exposure-weighted average EL <sup>(1)</sup>
	\$m	\$m
Corporate (including SME)	361	2,088
Sovereign	–	2
Bank	1	37
Retail SME	61	228
Residential mortgage	79	967
Qualifying revolving retail	157	212
Other retail	91	148
<b>Total IRB approach</b>	<b>750</b>	<b>3,682</b>

(1) Actual losses and EL averaged over a period of twelve years to 31 March 2022.

Exposure type subject to IRB approach	30 Sep 21	
	Exposure-weighted average actual loss <sup>(1)</sup>	Exposure-weighted average EL <sup>(1)</sup>
	\$m	\$m
Corporate (including SME)	395	2,054
Sovereign	–	4
Bank	4	37
Retail SME	63	225
Residential mortgage	81	922
Qualifying revolving retail	163	208
Other retail	94	143
<b>Total IRB approach</b>	<b>800</b>	<b>3,593</b>

(1) Actual losses and EL averaged over a period of twelve years to 30 September 2021.

## Accuracy of Risk Estimates

The following tables 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 5.1.J (ii) Accuracy of Risk Estimates for Probability of Default and Exposure at Default

#### Accuracy of risk estimates for Probability of Default

The following table provides internal estimates of long-run PD and actual default rates by asset class. Averages of actual and estimated PD are calculated using the cohort that is not in default at the beginning of the reporting period and averaged out over the observation period since 2010.

#### Accuracy of risk estimates for Exposure at Default

The ratio of estimated to actual EaD in the following table provides a comparison of EaD for customers that are not in default at the beginning of the reporting period, with EaD at the point of default. A ratio greater than 1.0 signifies that on average, EaD is lower at the point of default than at the beginning of the reporting period.

Exposure type	As at 30 Sep 22		
	Average estimated PD <sup>(1)</sup>	Average actual PD <sup>(1)</sup>	Ratio of estimated to actual EaD
	%	%	
<b>Subject to IRB approach</b>			
Corporate (including SME)	1.68	1.62	1.1
Sovereign <sup>(2)</sup>	0.42	0.12	1.0
Bank <sup>(2)</sup>	0.38	0.11	1.1
Retail SME	2.27	2.09	1.1
Residential mortgage	0.92	0.89	1.0
Qualifying revolving retail	1.44	1.39	1.1
Other retail	2.66	2.76	1.1

(1) These values provide a comparison of internal estimates of long-run PD with actual default rates averaged over a period of thirteen years to 30 September 2022.

(2) Average actual PDs for sovereign and bank exposures are based on a low number of observed defaults.

Exposure type	As at 31 Mar 22		
	Average estimated PD <sup>(1)</sup>	Average actual PD <sup>(1)</sup>	Ratio of estimated to actual EaD
	%	%	
<b>Subject to IRB approach</b>			
Corporate (including SME)	1.67	1.60	1.1
Sovereign <sup>(2)</sup>	0.44	0.08	1.0
Bank <sup>(2)</sup>	0.40	0.13	1.0
Retail SME	2.29	2.05	1.1
Residential mortgage	0.95	0.89	1.0
Qualifying revolving retail	1.53	1.39	1.1
Other retail	2.75	2.78	1.1

(1) These values provide a comparison of internal estimates of long-run PD with actual default rates averaged over a period of twelve years to 31 March 2022.

(2) Average actual PDs for sovereign and bank exposures are based on a low number of observed defaults.

## General Disclosures (cont.)

Exposure type	As at 30 Sep 21		
	Average estimated PD <sup>(1)</sup>	Average actual PD <sup>(1)</sup>	Ratio of estimated to actual EaD
	%	%	
<b>Subject to IRB approach</b>			
Corporate (including SME)	1.70	1.68	1.1
Sovereign <sup>(2)</sup>	0.42	0.10	1.0
Bank <sup>(2)</sup>	0.38	0.10	1.1
Retail SME	2.25	2.12	1.1
Residential mortgage	0.92	0.91	1.0
Qualifying revolving retail	1.47	1.42	1.1
Other retail	2.69	2.80	1.1

(1) These values provide a comparison of internal estimates of long-run PD with actual default rates averaged over a period of twelve years to 30 September 2021.

(2) Average actual PDs for sovereign and bank exposures are based on a low number of observed defaults.

### Table 5.1.J (iii) Accuracy of Risk Estimates for Loss Given Default

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 over the observation period since 2010 to the reporting date, excluding recent defaults 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.

Exposure type	As at 30 Sep 22	
	Average estimated downturn LGD <sup>(1)</sup>	Average actual LGD <sup>(1)</sup>
	%	%
<b>Subject to IRB approach</b>		
Corporate (including SME) <sup>(2)</sup>	37.9	20.2
Sovereign	45.0	n/a
Bank	51.1	-
Retail SME	34.6	17.4
Residential mortgage <sup>(2)</sup>	20.4	3.9
Qualifying revolving retail	84.4	53.0
Other retail	75.7	44.4

(1) These values provide a comparison of internal estimates of downturn LGD with actual losses which were evidenced during the thirteen years to 30 September 2022.

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

Exposure type	As at 31 Mar 22	
	Average estimated downturn LGD <sup>(1)</sup>	Average actual LGD <sup>(1)</sup>
	%	%
<b>Subject to IRB approach</b>		
Corporate (including SME) <sup>(2)</sup>	38.1	20.4
Sovereign	45.0	n/a
Bank	52.9	-
Retail SME	34.8	17.3
Residential mortgage <sup>(2)</sup>	20.4	3.9
Qualifying revolving retail	84.9	53.1
Other retail	76.1	45.1

(1) These values provide a comparison of internal estimates of downturn LGD with actual losses which were evidenced during the twelve years to 31 March 2022.

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

## General Disclosures (cont.)

Exposure type	As at 30 Sep 21	
	Average estimated downturn LGD <sup>(1)</sup>	Average actual LGD <sup>(1)</sup>
	%	%
<b>Subject to IRB approach</b>		
Corporate (including SME) <sup>(2)</sup>	38.2	21.8
Sovereign	45.0	n/a
Bank	51.1	-
Retail SME	34.9	18.0
Residential mortgage <sup>(2)</sup>	20.5	4.3
Qualifying revolving retail	84.8	53.5
Other retail	75.6	45.1

(1) These values provide a comparison of internal estimates of downturn LGD with actual losses which were evidenced during the twelve years to 30 September 2021.

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

## 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 other portfolios where the standardised approach to credit risk is applied by the Group, including the acquired Citi consumer business.

Fitch Ratings, Moody's Investor Services and S&P Global Ratings credit ratings are used to determine the risk-weights within the 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	S&P	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 5.2.A Standardised Exposures by Risk-weight

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

Risk-weights	As at	
	30 Sep 22	31 Mar 22
	Exposure at default \$m	Exposure at default \$m
2%	5,330	4,433
4%	262	189
20%	2,287	2,338
35%	12,202	1,541
50%	1,316	657
75%	368	405
100%	8,916	4,565
150%	82	29
Central counterparty default fund contribution guarantee <sup>(1)</sup>	264	192
<b>Total exposure at default subject to the standardised approach</b>	<b>31,027</b>	<b>14,349</b>

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

**Table 5.2.B Standardised Exposures by Risk Grade**

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

Asset class by rating grade	As at	
	30 Sep 22	31 Mar 22
	Exposure at default \$m	Exposure at default \$m
Corporate		
External rating grade 1	4,786	3,866
External rating grade 2	1,391	1,193
Unrated	5,728	5,446
Sub-total	11,905	10,505
Residential mortgage		
Unrated	13,986	2,638
Other		
Unrated	5,136	1,206
<b>Total exposure at default subject to the standardised approach</b>	<b>31,027</b>	<b>14,349</b>

**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 *Capital Adequacy: Internal Ratings-based Approach to Credit Risk* (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	N/A	N/A

**Table 5.2.C Supervisory Slotting Exposures by Risk-weight**

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

Risk-weights	As at	
	30 Sep 22	31 Mar 22
	Exposure at default \$m	Exposure at default \$m
70%	25,174	26,795
90%	39,169	36,248
115%	6,535	6,788
250%	496	668
Default	444	463
<b>Total specialised lending exposure subject to supervisory slotting</b>	<b>71,818</b>	<b>70,962</b>



## 5.3 Internal Ratings-based Portfolios

### General Disclosure on the Internal Ratings-based Approach

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	Exposures to Australian and overseas central and subnational governments, and to the Reserve Bank of Australia (RBA) and overseas central banks. A subnational government is a government of a geographically defined part of a state which has powers to raise revenue and borrow money.	Statistical risk model, external credit rating and expert judgement
Bank	ADIs and overseas banks.	Statistical risk model, external credit rating and expert judgement
Retail SME	Small business and agriculture exposures where the total aggregated business related exposures of the customer and its related entities are less than \$1 million.	Statistical risk model
Specialised lending	Exposures associated with the financing of individual projects where repayment is highly dependent on the performance of the underlying pool or collateral, rather than the customer'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 card exposures (which are classified as other retail under RBNZ rules).	Statistical risk model
Other retail	Retail exposures other than residential mortgage and qualifying revolving retail. Other retail includes personal loan products, overdrafts, transaction account exposures and BNZ credit card exposures.	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 measures the likelihood that a customer 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 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.

## Internal Ratings-based Portfolios (cont.)

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 utilising regulatory imposed floors.

### Exposure at Default

EaD is calculated according to the facility type. The Group's EaD models predict the amount that is outstanding if the customer 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 EL, 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, segment and counterparty size, and incorporate regional variances.

The rating model used is dependent on:

- industry, based on ANZSIC classification
- available financial information
- 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 (for example, 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.

## 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).

## Internal Ratings-based Portfolios (cont.)

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. 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.

## Portfolios Subject to Internal Ratings-based Approach

Table 5.3.A Non-retail Exposures by Risk Grade

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

External credit rating equivalent	As at 30 Sep 22						
	PD risk grade mapping						Default
	Aa3 and above	A1, A2, A3	Baa1, Baa2, Baa3	Ba1, Ba2	Ba3, B1	B2 and below	
	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
<b>Exposure at default</b>							
Corporate (including SME)	-	79,312	115,445	94,315	19,294	3,667	1,844
Sovereign	193,752	5,362	1,260	3	92	-	-
Bank	-	26,577	3,390	11	35	4	-
Retail SME	-	1,808	5,326	6,135	2,427	628	688
<b>Total exposure at default</b>	<b>193,752</b>	<b>113,059</b>	<b>125,421</b>	<b>100,464</b>	<b>21,848</b>	<b>4,299</b>	<b>2,532</b>
<b>Undrawn commitments<sup>(1)</sup></b>							
Corporate (including SME)	-	28,340	34,586	15,209	2,752	534	98
Sovereign	2,576	237	1	1	1	-	-
Bank	-	825	188	5	34	-	-
Retail SME	-	1,070	1,489	966	258	57	47
<b>Total undrawn commitments</b>	<b>2,576</b>	<b>30,472</b>	<b>36,264</b>	<b>16,181</b>	<b>3,045</b>	<b>591</b>	<b>145</b>
<b>Subject to IRB approach</b>							
<b>Average exposure at default (\$m)<sup>(2)</sup></b>							
Corporate (including SME)	-	2.29	0.93	0.58	0.38	0.35	0.47
Sovereign	55.00	4.31	10.86	0.02	2.25	0.02	-
Bank	-	0.25	0.61	0.38	0.83	0.33	-
Retail SME	-	0.04	0.05	0.05	0.04	0.02	0.04
<b>Exposure-weighted average LGD (%)</b>							
Corporate (including SME)	-	51.4%	35.6%	28.3%	27.9%	30.9%	37.0%
Sovereign	8.2%	37.2%	45.0%	44.9%	15.2%	45.0%	-
Bank	-	51.2%	59.0%	59.6%	59.4%	59.6%	59.6%
Retail SME	-	23.3%	24.1%	26.6%	28.1%	28.3%	30.4%
<b>Exposure-weighted average risk-weight (%)</b>							
Corporate (including SME)	-	23.8%	39.9%	52.9%	68.3%	116.4%	200.6%
Sovereign	7.0%	12.0%	23.9%	96.9%	55.4%	149.7%	-
Bank	-	17.3%	52.5%	110.9%	140.7%	226.5%	-
Retail SME	-	5.7%	13.7%	30.9%	49.6%	75.6%	207.6%

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

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

## Internal Ratings-based Portfolios (cont.)

External credit rating equivalent	As at 31 Mar 22						
	PD risk grade mapping						
	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
<b>Exposure at default</b>							
Corporate (including SME)	-	69,655	111,374	92,014	18,979	4,141	1,660
Sovereign	186,673	5,256	32	4	97	-	6
Bank	-	26,446	2,798	35	2	11	-
Retail SME	-	1,976	5,417	5,934	2,383	650	677
<b>Total exposure at default</b>	<b>186,673</b>	<b>103,333</b>	<b>119,621</b>	<b>97,987</b>	<b>21,461</b>	<b>4,802</b>	<b>2,343</b>
<b>Undrawn commitments<sup>(1)</sup></b>							
Corporate (including SME)	-	24,960	34,739	15,598	2,698	599	89
Sovereign	2,111	429	1	2	1	-	-
Bank	-	734	91	6	-	-	-
Retail SME	-	1,167	1,526	941	254	67	44
<b>Total undrawn commitments</b>	<b>2,111</b>	<b>27,290</b>	<b>36,357</b>	<b>16,547</b>	<b>2,953</b>	<b>666</b>	<b>133</b>
<b>Subject to IRB approach</b>							
<b>Average exposure at default (\$m)<sup>(2)</sup></b>							
Corporate (including SME)	-	1.98	0.91	0.58	0.36	0.39	0.43
Sovereign	47.83	3.96	0.25	0.03	1.58	0.02	1.43
Bank	-	0.32	0.48	1.12	0.04	0.90	-
Retail SME	-	0.04	0.05	0.05	0.04	0.02	0.04
<b>Exposure-weighted average LGD (%)</b>							
Corporate (including SME)	-	49.8%	34.9%	29.3%	27.6%	29.8%	38.6%
Sovereign	4.1%	36.7%	44.5%	56.7%	15.3%	45.0%	41.1%
Bank	-	52.1%	56.1%	59.6%	59.6%	59.6%	-
Retail SME	-	23.4%	24.3%	26.7%	27.6%	28.6%	31.4%
<b>Exposure-weighted average risk-weight (%)</b>							
Corporate (including SME)	-	24.1%	39.8%	55.0%	67.5%	113.8%	193.0%
Sovereign	0.5%	12.2%	37.9%	118.3%	55.7%	161.8%	521.9%
Bank	-	18.8%	49.2%	129.7%	154.6%	240.7%	-
Retail SME	-	5.8%	13.7%	30.8%	48.4%	78.6%	212.5%

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

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

**Table 5.3.B 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 22					
	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
<b>Exposure at default</b>						
Residential mortgage	64,384	206,023	134,813	13,703	9,471	3,282
Qualifying revolving retail	1,768	4,107	1,932	829	329	24
Other retail	720	528	655	550	248	44
<b>Total exposure at default</b>	<b>66,872</b>	<b>210,658</b>	<b>137,400</b>	<b>15,082</b>	<b>10,048</b>	<b>3,350</b>
<b>Undrawn commitments<sup>(1)</sup></b>						
Residential mortgage	27,904	23,851	5,332	545	161	11
Qualifying revolving retail	1,600	2,776	619	139	51	-
Other retail	488	234	137	46	35	-
<b>Total undrawn commitments</b>	<b>29,992</b>	<b>26,861</b>	<b>6,088</b>	<b>730</b>	<b>247</b>	<b>11</b>
<b>Subject to IRB approach</b>						
<b>Average exposure at default (\$m)<sup>(2)</sup></b>						
Residential mortgage	0.17	0.35	0.31	0.44	0.44	0.35
Qualifying revolving retail	0.01	0.01	0.01	0.01	0.01	0.01
Other retail	small	small	small	0.01	small	small
<b>Exposure-weighted average LGD (%)</b>						
Residential mortgage	20.0%	20.0%	19.5%	19.8%	20.0%	19.9%
Qualifying revolving retail	74.0%	74.1%	74.7%	75.8%	75.9%	76.5%
Other retail	85.2%	83.0%	76.8%	74.1%	75.9%	82.5%
<b>Exposure-weighted average risk-weight (%)</b>						
Residential mortgage	4.9%	16.4%	33.0%	75.7%	123.8%	203.1%
Qualifying revolving retail	2.6%	8.8%	32.0%	69.9%	155.8%	543.5%
Other retail	12.8%	40.0%	86.3%	108.9%	149.7%	379.2%

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

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

## Internal Ratings-based Portfolios (cont.)

	As at 31 Mar 22					
	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
<b>Exposure at default</b>						
Residential mortgage	63,330	201,179	134,749	13,150	10,122	3,647
Qualifying revolving retail	1,745	4,110	1,876	848	350	21
Other retail	754	553	660	539	280	43
<b>Total exposure at default</b>	<b>65,829</b>	<b>205,842</b>	<b>137,285</b>	<b>14,537</b>	<b>10,752</b>	<b>3,711</b>
<b>Undrawn commitments<sup>(1)</sup></b>						
Residential mortgage	27,458	22,805	5,397	513	169	15
Qualifying revolving retail	1,578	2,819	591	136	48	-
Other retail	521	253	144	48	43	-
<b>Total undrawn commitments</b>	<b>29,557</b>	<b>25,877</b>	<b>6,132</b>	<b>697</b>	<b>260</b>	<b>15</b>
<b>Subject to IRB approach</b>						
<b>Average exposure at default (\$m)<sup>(2)</sup></b>						
Residential mortgage	0.18	0.34	0.31	0.42	0.42	0.36
Qualifying revolving retail	0.01	0.01	0.01	0.01	0.01	0.01
Other retail	small	small	small	0.01	small	small
<b>Exposure-weighted average LGD (%)</b>						
Residential mortgage	20.0%	20.0%	19.8%	19.8%	20.0%	19.9%
Qualifying revolving retail	74.0%	74.0%	74.7%	75.7%	75.8%	76.3%
Other retail	85.2%	82.8%	77.1%	73.9%	76.2%	83.3%
<b>Exposure-weighted average risk-weight (%)</b>						
Residential mortgage	4.9%	16.4%	33.1%	75.8%	124.5%	200.7%
Qualifying revolving retail	2.7%	8.7%	31.9%	69.9%	159.0%	325.0%
Other retail	12.7%	40.0%	86.1%	108.9%	148.4%	377.0%

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

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

## 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 a counterparty cannot meet its contractual repayment obligations.

Common types of collateral include:

- 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, 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 counterparties with strong credit quality (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

The Risk function manages the overall risk of the corporate, sovereign and bank credit portfolios. A variety of techniques are used to mitigate identified credit risks, 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 limit purposes.

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



**Table 5.4.A Mitigation by Eligible Financial Collateral**

The following table provides credit risk exposures, in the form of gross exposures, covered by eligible financial collateral. The gross exposure amount is before the application of eligible financial collateral, and excludes positive haircut adjustments made in the calculation of exposure at default for repurchase agreements.

Exposure type	As at 30 Sep 22	
	Gross exposure	Covered by eligible financial collateral
	\$m	\$m
<b>Subject to IRB approach</b>		
Corporate (including SME)	383,359	70,368
Sovereign	236,356	44,310
Bank	86,273	56,592
Retail SME	17,018	5
Residential mortgage	431,676	-
Qualifying revolving retail	8,989	-
Other retail	2,746	1
<b>Total IRB approach</b>	<b>1,166,417</b>	<b>171,276</b>
<b>Specialised lending</b>	<b>72,054</b>	<b>236</b>
<b>Subject to standardised approach</b>		
Corporate	55,668	43,763
Residential mortgage	13,986	-
Other	5,166	30
<b>Total standardised approach</b>	<b>74,820</b>	<b>43,793</b>
<b>Total exposure at default</b>	<b>1,313,291</b>	<b>215,305</b>

Exposure type	As at 31 Mar 22	
	Gross exposure	Covered by eligible financial collateral
	\$m	\$m
<b>Subject to IRB approach</b>		
Corporate (including SME)	371,552	74,806
Sovereign	226,750	42,933
Bank	64,222	35,190
Retail SME	17,044	5
Residential mortgage	426,177	-
Qualifying revolving retail	8,950	-
Other retail	2,830	1
<b>Total IRB approach</b>	<b>1,117,525</b>	<b>152,935</b>
<b>Specialised lending</b>	<b>71,155</b>	<b>193</b>
<b>Subject to standardised approach</b>		
Corporate	48,277	37,772
Residential mortgage	2,638	-
Other	1,235	29
<b>Total standardised approach</b>	<b>52,150</b>	<b>37,801</b>
<b>Total exposure at default</b>	<b>1,240,830</b>	<b>190,929</b>

**Table 5.4.B Mitigation by Guarantees and Credit Derivatives**

The following table provides credit risk exposures, in the form of gross exposure at default, covered by guarantees and credit derivatives. Gross exposure at default is before the application of eligible financial collateral.

Exposure type	As at 30 Sep 22		
	Gross exposure at default \$m	Covered by guarantees \$m	Covered by credit derivatives \$m
<b>Subject to IRB approach</b>			
Corporate (including SME)	384,245	30,515	-
Sovereign	244,779	1	-
Bank	86,609	-	-
Retail SME	17,017	-	-
Residential mortgage	431,676	-	-
Qualifying revolving retail	8,989	-	-
Other retail	2,746	-	-
<b>Total IRB approach</b>	<b>1,176,061</b>	<b>30,516</b>	<b>-</b>
<b>Specialised lending</b>	<b>72,054</b>	<b>-</b>	<b>-</b>
<b>Subject to standardised approach</b>			
Corporate	55,668	-	-
Residential mortgage	13,986	-	-
Other	5,166	-	-
<b>Total standardised approach</b>	<b>74,820</b>	<b>-</b>	<b>-</b>
<b>Total exposure at default</b>	<b>1,322,935</b>	<b>30,516</b>	<b>-</b>

Exposure type	As at 31 Mar 22		
	Gross exposure at default \$m	Covered by guarantees \$m	Covered by credit derivatives \$m
<b>Subject to IRB approach</b>			
Corporate (including SME)	372,629	29,453	-
Sovereign	235,001	1	-
Bank	64,482	48	-
Retail SME	17,042	-	-
Residential mortgage	426,177	-	-
Qualifying revolving retail	8,950	-	-
Other retail	2,830	-	-
<b>Total IRB approach</b>	<b>1,127,111</b>	<b>29,502</b>	<b>-</b>
<b>Specialised lending</b>	<b>71,155</b>	<b>-</b>	<b>-</b>
<b>Subject to standardised approach</b>			
Corporate	48,277	-	-
Residential mortgage	2,638	-	-
Other	1,235	-	-
<b>Total standardised approach</b>	<b>52,150</b>	<b>-</b>	<b>-</b>
<b>Total exposure at default</b>	<b>1,250,416</b>	<b>29,502</b>	<b>-</b>

## 5.5 Counterparty Credit Risk

This section describes the Group's approach to managing credit risk relating to derivatives. Counterparty credit risk is the risk that a counterparty to a derivative transaction may default before final settlement of the transaction's cash flows. An economic loss could 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 (ISDA master agreements and credit support annexes). Eligible collateral may be subject to haircuts depending on asset type. Counterparties may also be subject to posting collateral before a transaction is executed.

### 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 implementation of risk policies.

### Downgrade Impact

As at 30 September 2022, the Group as party to derivative transactions would need to post an estimated amount of \$9 million of collateral in the event of a one-notch downgrade to the Group's credit rating, and \$346 million in the event of a two-notch downgrade.

**Table 5.5.A (i) Net Derivatives Credit Exposure**

The following table provides the calculation of net derivatives credit exposure, under the standardised approach for measuring counterparty credit risk exposures (SA-CCR).

	30 Sep 22	31 Mar 22
	\$m	\$m
Gross positive fair value of derivative contracts	178,113	100,795
Netting and collateral benefits	(160,459)	(89,704)
<b>Replacement cost (RC)</b>	<b>17,654</b>	<b>11,091</b>
Potential future credit exposure	13,563	13,798
<b>Effective expected positive exposure</b>	<b>31,217</b>	<b>24,889</b>
Impact of 1.4 scaling factor and incurred credit valuation adjustment <sup>(1)</sup>	12,291	9,823
<b>Total net derivatives credit exposure</b>	<b>43,508</b>	<b>34,712</b>

(1) Incurred credit valuation adjustment is the loss expensed for accounting purposes.

**Table 5.5.A (ii) Distribution of Current Credit Exposure**

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

	30 Sep 22	31 Mar 22
	Exposure at default	Exposure at default
Exposure type	\$m	\$m
Interest rate contracts	5,882	8,424
Foreign exchange and gold contracts	29,653	16,773
Equity contracts	55	96
Commodity contracts other than precious metals	1,877	3,700
Other market related contracts	35	43
Central counterparty <sup>(1)</sup>	6,006	5,676
<b>Total exposure at default</b>	<b>43,508</b>	<b>34,712</b>

(1) Derivative contracts with qualifying central clearing counterparties have not been broken down by type of derivative.

**Table 5.5.B 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.

	As at 30 Sep 22			As at 31 Mar 22		
	Protection bought notional	Protection sold notional	Total notional	Protection bought notional	Protection sold notional	Total notional
Credit derivative products	\$m	\$m	\$m	\$m	\$m	\$m
Credit default swaps used for own credit portfolio	2,197	-	2,197	2,579	-	2,579
Credit default swaps used for intermediation	85	1,130	1,215	73	1,002	1,075
<b>Total credit derivative notional value</b>	<b>2,282</b>	<b>1,130</b>	<b>3,412</b>	<b>2,652</b>	<b>1,002</b>	<b>3,654</b>

# 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 of Securitisation Activities

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 SPVs. They also include investing in securities issued by third-party securitisation SPVs 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 has also established internal securitisation SPVs and holds the issued residential mortgage-backed securities (RMBS). These internal RMBS are available as collateral for contingent liquidity purposes as 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, Interest Rate Swap Provider, Liquidity Facility Provider, Redraw 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. Factors such as underlying pool composition, type and level of credit enhancement, and structural features of the transaction are considered. 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 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.

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 identified and recorded in appropriate finance and risk management applications. Underlying pool exposure data is obtained 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 and are reported to the relevant risk committees as appropriate.

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.

## Securitisation (cont.)

A self-assessment demonstrating compliance with the prudential standard is prepared for all securitisation transactions. This self-assessment is reviewed annually.

The Group complies with the approaches 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 S&P Global Ratings, 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 pool assets. In the event neither approach can be applied, the exposure is deducted from CET1 capital.

Securitisation exposures held in the trading book are subject to APS 116.

## 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 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 2022 Annual Report, in particular in the financial instruments overview section, and the notes on financial asset transfers and interest in subsidiaries and other entities.

## Table 6.1.A 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).

Underlying asset	As at 30 Sep 22			
	Group originated capital relief	Group originated funding only <sup>(1)</sup>	Group originated internal RMBS <sup>(2)</sup>	Third party originated assets
	\$m	\$m	\$m	\$m
Residential mortgages	2,487	1,359	146,537	-

(1) The increase in Group originated funding only securitisation exposures since 31 March 2022 is due to the acquisition of the Citi consumer business, with certain securitisation SPVs forming part of the Group from 1 June 2022.

(2) 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 \$132,868 million.

Underlying asset	As at 31 Mar 22			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS <sup>(1)</sup>	Third party originated assets
	\$m	\$m	\$m	\$m
Residential mortgages	1,349	754	146,428	-

(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 \$132,794 million.

There were no exposures securitised either in the trading book or synthetically by the Group as at 30 September 2022 or 31 March 2022.

### Table 6.1.B 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.

Underlying asset	As at 30 Sep 22			
	Outstanding exposure	Impaired facilities	Past due facilities ≥90 days	Losses recognised
	\$m	\$m	\$m	\$m
Residential mortgages	150,383	24	634	-

Underlying asset	As at 31 Mar 22			
	Outstanding exposure	Impaired facilities	Past due facilities ≥90 days	Losses recognised
	\$m	\$m	\$m	\$m
Residential mortgages	148,531	33	673	-

### Table 6.1.C Recent Securitisation Activity

The following table provides the net movement in exposures securitised by the Group, and any gain or loss recognised on the sale of assets by the Group to securitisation SPVs.

Underlying asset	6 months ended 30 Sep 22			
	Group originated capital relief	Group originated funding only <sup>(1)</sup>	Group originated internal RMBS	Gain or loss on sale
	\$m	\$m	\$m	\$m
Residential mortgages	1,138	605	108	-

(1) The increase in Group originated funding only securitisation exposures is due to the acquisition of the Citi consumer business, with certain securitisation SPVs forming part of the Group from 1 June 2022.

Underlying asset	6 months ended 31 Mar 22			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS	Gain or loss on sale
	\$m	\$m	\$m	\$m
Residential mortgages	(212)	(105)	31,625	-

The Group had no outstanding exposures in either the banking or trading book that were intended to be securitised as at 30 September 2022 or 31 March 2022.

### Table 6.1.D 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.

Securitisation exposure type	As at 30 Sep 22			As at 31 Mar 22		
	On-balance sheet	Off-balance sheet	Total	On-balance sheet	Off-balance sheet	Total
	\$m	\$m	\$m	\$m	\$m	\$m
Liquidity facilities	394	1,104	1,498	380	1,126	1,506
Warehouse facilities	19,865	7,207	27,072	16,406	7,812	24,218
Securities	7,761	-	7,761	8,571	-	8,571
Derivatives	-	43	43	-	53	53
<b>Total</b>	<b>28,020</b>	<b>8,354</b>	<b>36,374</b>	<b>25,357</b>	<b>8,991</b>	<b>34,348</b>

The Group had \$306 million of derivative exposures held in the trading book subject to the IMA under APS 116 as at 30 September 2022 (31 March 2022: \$482 million). The Group had no trading book exposures subject to APS 120 which were either risk-weighted or deducted from capital at 30 September 2022 or 31 March 2022.

The Group had no exposures subject to early amortisation in either the banking or trading book at 30 September 2022 or 31 March 2022.

**Table 6.1.E Securitisation Exposures by Risk-weight**

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

Risk-weight bands	As at 30 Sep 22		As at 31 Mar 22	
	Exposure \$m	RWA \$m	Exposure \$m	RWA \$m
15% ≤ 25%	34,696	5,655	32,650	5,389
> 25% ≤ 35%	1,091	300	1,127	307
> 35% ≤ 50%	64	26	43	18
> 50% ≤ 75%	463	260	468	262
> 75% ≤ 100%	-	-	1	1
> 100% ≤ 650%	47	139	37	101
> 650% ≤ 850%	13	92	13	91
> 850% < 1250%	-	-	9	99
Deductions from CET1 capital	-	-	-	-
<b>Total</b>	<b>36,374</b>	<b>6,472</b>	<b>34,348</b>	<b>6,268</b>



# 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 customers 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, BNZ Markets and NAB Europe. 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 RAS, and governed by the Group Traded Market Risk Policy.

The market risk settings outlined in the Risk Setting Statement and the comprehensive market risk setting framework complement the RAS 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 RAS 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 & Compliance 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 more senior committees as necessary.

Market Risk is independent of 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 intraday risk oversight as well as periodic desk review
- back-testing of 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 review of compliance with policies, procedures, process and limits by Internal Audit.

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
- observation period – 550 days (unweighted, updated daily).

VaR limits are assigned to individual trading desks and regions or product lines in accordance with the RAS.

## Market Risk (cont.)

Market Risk monitors positions daily against the relevant limits and escalates any breaches in accordance with market risk standards and procedures. Additionally, 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 sensitivities in the portfolio that may only become apparent 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 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 Market Risk.

Corporate & Institutional Banking Markets are responsible for managing risk and delivering 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, and some inflation products. These asset classes are managed with regulatory capital calculated as an add-on to that from the 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.

	Internal model approach	Standard method
<b>Calculation</b>	Internally developed VaR calculation	As per APS 116 (Attachment B)
<b>General market risk</b>	Foreign exchange, commodities, credit, interest rate and inflation products	Equities, some inflation products
<b>Specific market risk</b>	N/A	All applicable products

## Table 7.1.A Market Risk Risk-weighted Assets

The following table provides a breakdown of market risk RWA.

	As at	
	30 Sep 22	31 Mar 22
<b>Market risk RWA</b>	<b>\$m</b>	<b>\$m</b>
Internal model approach	7,534	8,448
Standard method	373	510
<b>Total</b>	<b>7,907</b>	<b>8,958</b>

	As at	
	30 Sep 22	31 Mar 22
<b>Standard method RWA</b>	<b>\$m</b>	<b>\$m</b>
Interest rate risk	370	504
Equity position risk	3	6
<b>Total</b>	<b>373</b>	<b>510</b>

**Table 7.1.B Internal Model Approach Value at Risk and Stressed Value at Risk**

The following table provides information on the mean, minimum and maximum VaR and stressed VaR over the reporting period and at period end. VaR and stressed VaR provided are based on a 10-day holding period.

	6 months ended 30 Sep 22			As at
	Mean value	Minimum value	Maximum value	30 Sep 22
	\$m	\$m	\$m	\$m
<b>At a 99% confidence level</b>				
VaR	50.3	25.8	89.5	36.3
Stressed VaR	91.9	51.4	206.8	101.1
	6 months ended 31 Mar 22			As at
	Mean value	Minimum value	Maximum value	31 Mar 22
	\$m	\$m	\$m	\$m
<b>At a 99% confidence level</b>				
VaR	53.2	32.5	87.8	64.7
Stressed VaR	115.7	68.8	216.0	101.3

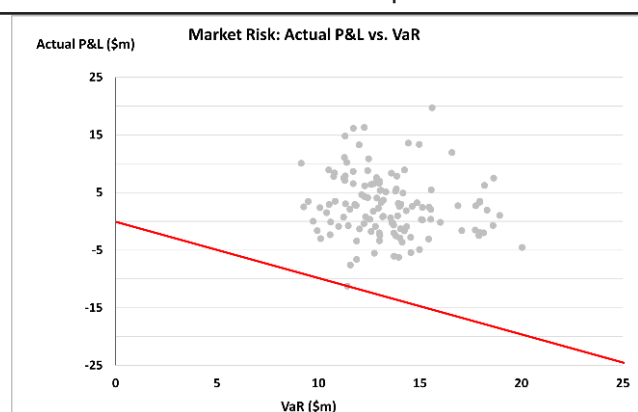
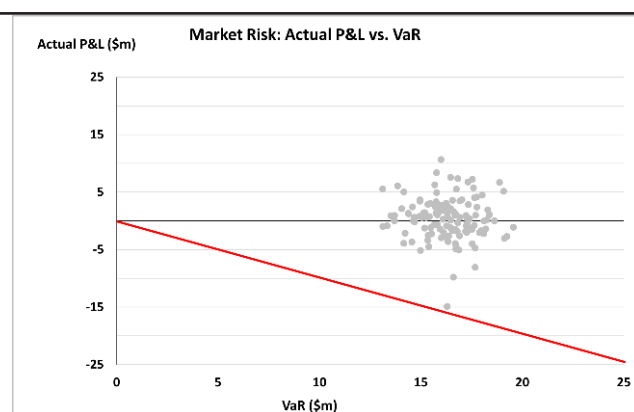
## Back-testing

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 periodic reviews and independent validation at frequencies specified by the Group Model Risk Policy.

## Back-testing results

The following graphs compare 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 2022****Results for the six months ended 31 March 2022**

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 2022 or the six months ended 31 March 2022. This remains within the model parameters and indicates acceptable operation of the VaR model within APRA's guidelines.

# 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 and reputational risk.

The Group aims to ensure that operational risk is identified, assessed and managed to acceptable levels while allowing for the achievement of business and strategic objectives and compliance with our obligations.

## Structure and Organisation

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

## Management

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

Implementation of the Risk Management Practice Framework leads to:

- all colleagues 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
- risk decisions being made on an informed basis, considering risk appetite, 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 Risk Management Practice 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 under the SMA based on the Group's business indicator, which is a financial statement-based proxy of operational risk exposure. Should APRA consider that the regulatory capital for operational risk is not commensurate with the operational risk profile, APRA may require an adjustment to the level of capital.

## Monitoring and Reporting

Resilience 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 & Compliance Committee and Executive Risk & Compliance Committee as part of the Group Chief Risk Officer reporting material.
- regular material risk update papers to the Board Risk & Compliance Committee via the Executive Risk & Compliance Committee.

The Group Chief Risk Officer and risk committees may also request Resilience Risk to report on topics of operational risk such as technology risk, information security risk or business continuity management. Resilience 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

The Group's insurance program is used to mitigate the financial impacts of operational risk exposures at the Group level. 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.

# 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 short-term and long-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 the RAS, Group Liquidity Risk Policy, Funding Strategy, Contingent Funding Plan and ILAAP.

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

The Group Liquidity Risk Policy requires that the Group maintain a liquid asset portfolio, comprising 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, NAB Europe and branches in London, New York and Asia. The liquidity portfolio comprises a mix of:

- cash
- Australian government and semi-government securities, and foreign sovereign securities
- central bank reserves
- other securities that are eligible for repurchase with the RBA to support the CLF and Term Funding Facility (TFF).

The target size, diversity and tenor of the Group's funding mix is set annually in the Funding Strategy. The strategy is updated quarterly to reflect current market conditions and outlook. The Group's funding is sourced from:

- customer deposits generated through transaction accounts, savings accounts and term deposits from individuals, small and medium-sized enterprises and corporations
- wholesale funding 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. Regulatory liquidity metric results are reported to the Board Risk & Compliance Committee, Executive Risk & Compliance Committee and Group Asset & 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

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 Group's framework aims 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 as 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 Standard Operating Procedures 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
- the Group, BNZ and NAB Europe's treasury functions 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's balance sheet market risk teams are responsible for IRRBB monitoring and oversight and are independent of Group Treasury and BNZ and NAB Europe's treasury functions. They maintain a risk framework for IRRBB and have responsibility for IRRBB measurement of exposures, and limit 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:

Measure	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-interest bearing accounts, rate locks and CET1 capital. Any changes to the material assumptions require approval by subsidiary asset, liability and capital committees or the Group Asset & 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, a one-year investment term of capital, and a 12-month holding period.

The investment term of capital can be invested on a tenor between one year and five years. When not invested at the one-year tenor the earnings offset will differ from regulatory capital.

## Monitoring and Reporting

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

### Table 9.2.A 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 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 22		As at 31 Mar 22	
	200 bp parallel increase	200 bp parallel decrease	200 bp parallel increase	200 bp parallel decrease
	\$m	\$m	\$m	\$m
<b>Change in economic value</b>				
AUD	(495)	530	(608)	634
CAD	-	-	(1)	1
EUR	(8)	9	-	(1)
GBP	(1)	1	(23)	23
HKD	-	-	(1)	1
JPY	5	(5)	6	(6)
NZD	(304)	318	(353)	376
USD	(34)	36	(51)	55
Other	4	(4)	4	(4)
<b>Total change in economic value</b>	<b>(833)</b>	<b>885</b>	<b>(1,027)</b>	<b>1,079</b>

## 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 is the potential for financial loss as a result of reduction in the value of an equity investment.

### Management

Banking book equity risk is managed via investment policy and Group Corporate Structure protocols. 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.

Business units are responsible for managing their approved equity investments in line with the requirements of the non-traded equity risk framework. Balance Sheet and Liquidity Risk Management review and challenge the effectiveness of non-traded equity risk management.

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 sales price that would be received in an orderly transaction between market participants. Fair value for unlisted equities is determined using accepted market valuation techniques.

#### Table 9.3.A 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 22		As at 31 Mar 22	
	Carrying value	Fair value	Carrying value	Fair value
	\$m	\$m	\$m	\$m
Unlisted equities	702	702	692	692

#### Table 9.3.B Gains and Losses from Equity Holdings

The following table provides realised and unrealised gains or losses before 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 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 22	31 Mar 22
	\$m	\$m
Gains/(losses) on equity investments		
Realised gains	2	16
Cumulative unrealised losses	(296)	(291)



## 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 as a limit for economic capital. In addition, with guidance from the Board Risk & Compliance 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, which 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 & Liability Committee approved foreign exchange risk management strategies
- the Group and subsidiary balance sheet market risk teams provide independent oversight. They are responsible for monitoring and oversight to ensure FXRBB is managed in compliance with policy
- periodic reporting to management and governance committees of FXRBB exposures and compliance.

## 9.5 Liquidity Disclosures

### Liquidity Coverage Ratio

The 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 2022 and 30 June 2022 is presented in Table 9.5.A *Liquidity Coverage Ratio Disclosure Template*, and is based on a simple average of daily LCR outcomes excluding non-business days. There were 65 daily LCR observations or data points used in calculating the average for the current quarter and 61 observations in the previous quarter.

Average LCR for the three months ended 30 September 2022 increased to 137% with a \$10.7 billion increase in average liquid assets, partially offset by a \$7.1 billion increase in average net cash outflows. The increase in average liquid assets was driven by increased holdings of HQLA, partially offset by a reduction in the CLF limit during the quarter from \$15.5 billion to \$7.8 billion. The increase in HQLA in response to the phase-out of the CLF during the 2022 calendar year further supports the requirement that ADIs maintain minimum LCRs without the CLF at all times from 1 January 2022 onwards. The increase in net cash outflows was largely driven by:

- higher deposit outflows, including Citi consumer business deposits which are reflected for the entire quarter ended 30 September 2022, compared to one month in the quarter ended 30 June 2022
- model updates following APRA's issuance of interpretational guidance in the form of frequently asked questions (FAQs)
- lower cash inflows from reverse repurchase agreements and business and institutional lending.

These movements were partially offset by decreased outflows from short-term funding maturities.

Table 9.5.A Liquidity Coverage Ratio Disclosure Template

	3 months ended			
	30 Sep 22		30 Jun 22	
	Unweighted value (average) <sup>(1)</sup> \$m	Weighted value (average) \$m	Unweighted value (average) <sup>(1)</sup> \$m	Weighted value (average) \$m
<b>Liquid assets, of which:</b>		<b>214,108</b>		<b>203,416</b>
1 High-quality liquid assets (HQLA) <sup>(2)(3)</sup>		200,194		185,349
2 Alternative liquid assets (ALA) <sup>(3)</sup>		12,893		17,685
3 Reserve Bank of New Zealand (RBNZ) securities <sup>(2)(3)</sup>		1,021		382
<b>Cash outflows</b>				
4 Retail deposits and deposits from small business customers	283,362	29,942	281,124	29,956
5 of which: stable deposits	121,353	6,058	121,101	6,055
6 of which: less stable deposits	162,009	23,884	160,023	23,901
7 Unsecured wholesale funding	186,842	90,089	185,629	84,945
8 of which: operational deposits (all counterparties) and deposits in networks for cooperative banks	96,853	24,213	101,219	25,305
9 of which: non-operational deposits (all counterparties)	73,293	49,180	65,652	40,882
10 of which: unsecured debt	16,696	16,696	18,758	18,758
11 Secured wholesale funding <sup>(3)</sup>		5,068		5,899
12 Additional requirements	205,816	39,483	205,105	38,058
13 of which: outflows related to derivatives exposures and other collateral requirements	15,428	15,421	15,473	15,468
14 of which: outflows related to loss of funding on debt products	-	-	-	-
15 of which: credit and liquidity facilities	190,388	24,062	189,632	22,590
16 Other contractual funding obligations	2,084	1,047	2,585	1,862
17 Other contingent funding obligations	61,964	4,425	62,060	4,476
<b>18 Total cash outflows</b>		<b>170,054</b>		<b>165,196</b>
<b>Cash inflows</b>				
19 Secured lending	41,677	2,102	39,122	3,237
20 Inflows from fully performing exposures	17,751	9,640	18,949	10,579
21 Other cash inflows	1,712	1,705	1,895	1,889
<b>22 Total cash inflows</b>	<b>61,140</b>	<b>13,447</b>	<b>59,966</b>	<b>15,705</b>
<b>23 Total liquid assets</b>		<b>214,108</b>		<b>203,416</b>
<b>24 Total net cash outflows</b>		<b>156,607</b>		<b>149,491</b>
<b>25 Liquidity Coverage Ratio (%)</b>		<b>137%</b>		<b>136%</b>

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

(2) Weighted values exclude New Zealand dollar (NZD) liquid asset holdings in excess of NZD LCR of 100%, reflecting liquidity transferability considerations. The amount excluded during the three months to 30 September 2022 and 30 June 2022 was on average \$7.2 billion and \$7.5 billion respectively.

(3) Disclosed on a weighted basis only, consistent with the disclosure template prescribed by APS 330.

### Net Stable Funding Ratio

The 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%. Available Stable Funding (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. Required Stable Funding (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.

The NSFR as at 30 September 2022 and 30 June 2022 is presented in Table 9.5.B *Net Stable Funding Ratio Disclosure Template*, and is based on spot balances. The NSFR decreased to 119% as at 30 September 2022 with a \$7.7 billion decrease to \$623.1 billion of ASF, combined with a \$3.9 billion increase to \$525.4 billion of RSF. The decrease in ASF was primarily due to a reduction in wholesale funding, in particular as initial TFF drawdowns approach maturity a lower percentage of the funding qualifies as ASF. The increase in RSF was driven by growth in business lending.

Table 9.5.B Net Stable Funding Ratio Disclosure Template

As at 30 Sep 2022					
	Unweighted value by residual maturity				Weighted value
	No maturity	< 6 months	6 months to < 1 year	≥ 1 year	
	\$m	\$m	\$m	\$m	\$m
<b>Available Stable Funding (ASF) Item</b>					
1 Capital	61,084	–	–	26,587	87,671
2 of which: regulatory capital	61,084	–	–	26,587	87,671
3 of which: other capital instruments	–	–	–	–	–
4 Retail deposits and deposits from small business customers	260,299	68,434	155	–	301,329
5 of which: stable deposits	118,868	11,744	–	–	124,081
6 of which: less stable deposits	141,431	56,690	155	–	177,248
7 Wholesale funding	128,276	253,945	64,606	104,906	231,858
8 of which: operational deposits	93,502	–	–	–	46,751
9 of which: other wholesale funding	34,774	253,945	64,606	104,906	185,107
10 Liabilities with matching interdependent assets	–	–	–	–	–
11 Other liabilities	–	21,681	–	2,240	2,240
12 of which: NSFR derivative liabilities <sup>(1)</sup>		7,915	0	0	
13 of which: all other liabilities and equity not included in the above categories	–	13,766	–	2,240	2,240
<b>14 Total ASF</b>					<b>623,098</b>
<b>Required Stable Funding (RSF) Item</b>					
15a High-quality liquid assets (HQLA) for NSFR purposes					4,127
15b Alternative liquid assets (ALA)					4,002
15c RBNZ securities					326
16 Deposits held at other financial institutions for operational purposes	–	–	–	–	–
17 Performing loans and securities	15,056	142,570	56,216	519,073	476,657
18 of which: performing loans to financial institutions secured by Level 1 HQLA	–	56,082	4,696	–	7,956
19 of which: performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	53	25,381	8,437	22,973	31,052
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):	14,902	48,187	36,901	164,219	191,571
21 of which: with a risk-weight of less than or equal to 35% under APS 112	–	–	–	11,297	7,343
22 of which: performing residential mortgages:	–	5,575	4,604	324,681	233,499
23 of which: with a risk-weight equal to 35% under APS 112	–	5,575	4,604	281,683	196,951
24 of which: securities that are not in default and do not qualify as HQLA, including exchange-traded equities	101	7,345	1,578	7,200	12,579
25 Assets with matching interdependent liabilities	–	–	–	–	–
26 Other assets	18,341	3,389	23	41,590	30,217
27 of which: physical traded commodities, including gold	–				–
28 of which: assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs) <sup>(1)</sup>		2,992			2,543
29 of which: NSFR derivative assets <sup>(1)</sup>		9,577			1,662
30 of which: NSFR derivative liabilities before deduction of variation margin posted <sup>(1)</sup>		27,950			5,590
31 of which: all other assets not included in the above categories	18,341	3,389	23	1,071	20,422
32 Off-balance sheet items <sup>(1)</sup>		0			10,114
<b>33 Total RSF</b>					<b>525,443</b>
<b>34 Net Stable Funding Ratio (%)</b>					<b>119%</b>

(1) Disclosed in total and not by maturity bucket, consistent with the disclosure template prescribed by APS 330.

## Liquidity Disclosures (cont.)

As at 30 Jun 2022					
	Unweighted value by residual maturity				Weighted value
	No maturity	< 6 months	6 months to < 1 year	≥ 1 year	
	\$m	\$m	\$m	\$m	\$m
<b>Available Stable Funding (ASF) Item</b>					
1 Capital	61,187	1,499	–	23,371	86,057
2 of which: regulatory capital	61,187	1,499	–	23,371	86,057
3 of which: other capital instruments	–	–	–	–	–
4 Retail deposits and deposits from small business customers	264,933	59,809	383	94	299,304
5 of which: stable deposits	120,857	11,093	–	–	125,353
6 of which: less stable deposits	144,076	48,716	383	94	173,951
7 Wholesale funding	134,979	257,752	46,772	122,340	243,114
8 of which: operational deposits	97,392	–	–	–	48,696
9 of which: other wholesale funding	37,587	257,752	46,772	122,340	194,418
10 Liabilities with matching interdependent assets	–	–	–	–	–
11 Other liabilities	–	18,629	–	2,292	2,292
12 of which: NSFR derivative liabilities <sup>(1)</sup>		6,498			
13 of which: all other liabilities and equity not included in the above categories	–	12,131	–	2,292	2,292
<b>14 Total ASF</b>					<b>630,767</b>
<b>Required Stable Funding (RSF) Item</b>					
15a High-quality liquid assets (HQLA) for NSFR purposes					4,124
15b Alternative liquid assets (ALA)					4,777
15c RBNZ securities					286
16 Deposits held at other financial institutions for operational purposes					
17 Performing loans and securities	15,549	137,603	46,309	520,746	472,650
18 of which: performing loans to financial institutions secured by Level 1 HQLA	–	51,110	5,710	–	7,966
19 of which: performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	40	26,943	6,794	23,546	31,024
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):	14,864	49,596	26,748	166,602	189,016
21 of which: with a risk-weight of less than or equal to 35% under APS 112	–	–	–	11,261	7,320
22 of which: performing residential mortgages:	–	6,799	5,781	322,392	233,152
23 of which: with a risk-weight equal to 35% under APS 112	–	6,799	5,781	279,345	196,562
24 of which: securities that are not in default and do not qualify as HQLA, including exchange-traded equities	645	3,155	1,276	8,206	11,492
25 Assets with matching interdependent liabilities	–	–	–	–	–
26 Other assets	19,536	1,340	17	32,980	29,607
27 of which: physical traded commodities, including gold	1,467				1,247
28 of which: assets posted as initial margin for derivative contracts and contributions to default funds of central counterparties (CCPs) <sup>(1)</sup>				2,834	2,409
29 of which: NSFR derivative assets <sup>(1)</sup>				8,717	2,219
30 of which: NSFR derivative liabilities before deduction of variation margin posted <sup>(1)</sup>				19,761	3,952
31 of which: all other assets not included in the above categories	18,069	1,340	17	1,668	19,780
32 Off-balance sheet items <sup>(1)</sup>				194,679	10,096
<b>33 Total RSF</b>					<b>521,540</b>
<b>34 Net Stable Funding Ratio (%)</b>					<b>121%</b>

(1) Disclosed in total and not by maturity bucket, consistent with the disclosure template prescribed by APS 330.

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# Glossary

## 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.

## 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 and Term Funding Facility provided by the Reserve Bank of Australia to ADIs are treated as ALAs 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 reliably provided 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

Common Equity Tier 1 capital.

## Collective provision for credit impairment

The provision assessed on a collective basis in accordance with Australian Accounting Standard AASB 9 'Financial Instruments'.

## 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. APRA has announced that the CLF will be reduced to zero by the end of 2022 subject to financial market conditions. The CLF reduction is expected to be offset by ADIs increasing holdings of high-quality liquid assets.

## Common Equity Tier 1 capital ratio

Common Equity Tier 1 capital divided by risk-weighted assets.

## CPS

Prudential Standards issued by APRA applicable to regulated entities, including ADIs.

## Credit valuation adjustment (CVA)

A capital charge to reflect potential mark-to-market losses due to counterparty migration risk for bilateral over-the-counter derivative contracts.

## D-SIB

Domestic Systemically Important Bank.

## DCA

Delegated Commitment Authority.

## Default fund

Clearing members' funded or unfunded contributions towards, or underwriting of, a central counterparty's mutualised loss sharing arrangements.

## 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, eligible financial collateral 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.

## ESG

Environmental, Social or Governance.

## Exposure at default (EaD)

An estimate of the credit exposure amount outstanding if a customer defaults. EaD is presented net of eligible financial collateral.

## Extended Licensed Entity

The ADI and any APRA approved subsidiaries assessed as effectively part of a single 'stand-alone' entity, as defined in APS 222 'Associations with Related Entities'.

## Group

NAB and its controlled entities.

## High-quality liquid assets (HQLA)

Consists primarily of cash, deposits with central banks, Australian government 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.

## 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 standard method.

## IRRBB

Interest rate risk in the banking book.

## 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.

## NAB

National Australia Bank Limited ABN 12 004 044 937.

## NAB Europe

National Australia Bank Europe S.A., a subsidiary established in Paris in 2022.

## 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

Assets that are contractually 90 days or more past due, but not impaired.

## 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.

## RAS

Risk Appetite Statement.

## 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 expected loss 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 expected loss is not an estimate of long-run average expected loss.

## Required Stable Funding (RSF)

The amount of stable funding an ADI is required to hold measured as a function of the liquidity characteristics and residual maturities of the various assets held by an ADI, including off-balance sheet exposures.

## 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.

## 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 securitisation vehicle or to cover the inability of the securitisation 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.
- securities: holding of debt securities issued by securitisation vehicles.
- derivatives: derivatives provided to securitisation vehicles, other than for credit risk mitigation purposes.

## SME

Small and medium-sized enterprises.

## SPV

Special purpose vehicle.

## Standard method

An alternative approach to the assessment of traded market risk which applies supervisory risk-weights to positions arising from trading activities.

## Standardised approach

An alternative approach to the assessment of credit risk which utilises regulatory prescribed risk-weights based on external ratings and/or the application of specific regulator defined metrics to determine risk-weighted assets.



**Standardised Measurement Approach (SMA)**

An approach used to calculate the capital requirement for operational risk based on a business indicator, a financial statement proxy of operational risk exposure. This approach was applied by the Group from 1 January 2022.

**Term Funding Facility (TFF)**

A facility provided by the Reserve Bank of Australia to certain ADIs to support lending to Australian businesses. The facility closed to new drawdowns of funding on 30 June 2021.

**Tier 1 capital ratio**

Tier 1 capital divided by risk-weighted assets.

**Total capital ratio**

Total capital divided by risk-weighted assets.

**Trading book**

Positions in financial instruments, including derivatives 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.

