Pillar 3 Report
as at 30 September 2023

Incorporating the requirements of APS 330

National Australia Bank Limited ABN 12 004 044 937

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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 on market discipline.

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

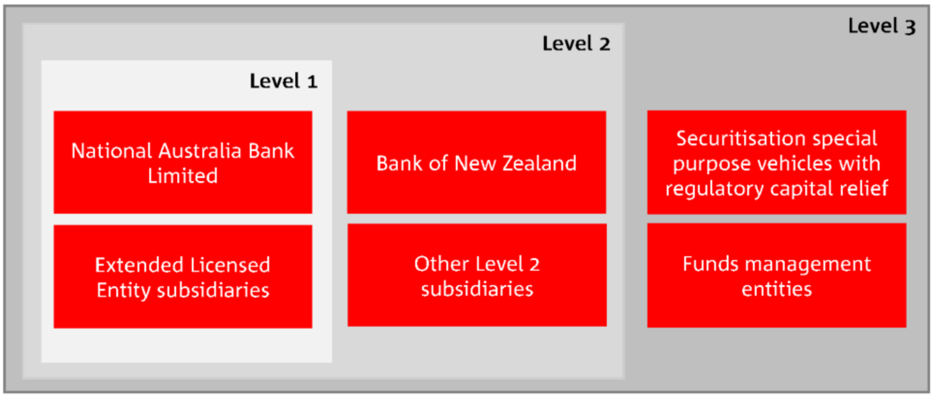
The Group uses the following approaches to measure capital adequacy as at 30 September 2023.

Credit risk	Operational risk	Non-traded market risk	Traded market risk
Internal Ratings-based Approach (IRB)(1)	Standardised Measurement Approach (SMA)	Internal Model Approach (IMA)	Internal Model Approach (IMA) and standard method

(1) The Group has received IRB accreditation from APRA and applies the advanced IRB, foundation IRB, supervisory slotting and standardised approaches to different portfolios. Risk-weighted assets (RWA) and expected loss for the Group's banking subsidiary regulated by the Reserve Bank of New Zealand (RBNZ), Bank of New Zealand (BNZ), are calculated using RBNZ prudential requirements, with the exception of scaling factors and the capital floor which are applied under APRA requirements.
BNZ has received IRB accreditation from the RBNZ and applies the internal rating-based approach, supervisory slotting estimates and standardised approach to different portfolios.

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 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.

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's prudential standards for the revised capital framework came into effect on 1 January 2023. Capital ratios presented in Table 4.1.C *Capital and leverage ratios* are in accordance with the revised framework. APRA's revisions to the framework include:
  - improving flexibility via increasing regulatory capital buffers.
  - implementing more risk-sensitive risk-weights.
  - introducing a capital floor for IRB ADIs.
  - improving transparency and comparability through the disclosure of RWA under the standardised approach.
- The Group has applied APS 115 *Capital Adequacy: Standardised Measurement Approach to Operational Risk* from 1 January 2022.
- APRA's revised leverage ratio exposure measurement methodology came into effect on 1 January 2023, as did the minimum leverage ratio requirement of 3.5% for IRB ADIs. Leverage ratios presented in Table 4.1.C *Capital and leverage ratios* after this date are in accordance with the revised methodology.
- APRA has announced that revisions to APS 117 *Capital Adequacy: Interest Rate Risk in the Banking Book* will be released for consultation in late 2023 with an expected effective date in 2025.
- Following the APS 117 finalisation, APRA plans to consult on revisions to the market risk capital standards over 2024. The process will implement the BCBS fundamental review of the trading book, effective from 2026.
- APRA has also deferred the implementation date for the Basel III reforms to APS 180 *Capital Adequacy: Counterparty Credit Risk* to 2026.

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 increase in the amount of Total capital required by domestic systemically important banks (D-SIBs) of 1.5% of RWA, 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. The interim requirement has been met based on the RWA and Total capital as at 30 September 2023.

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.

BNZ Tier 1 and Total capital ratios as at 30 September 2023 are presented in Table 4.1.C *Capital and leverage ratios*.

Additional Tier 1 capital discussion paper

In September 2023, APRA issued a discussion paper outlining potential options for, and seeking feedback from stakeholders on improving the effectiveness of Additional Tier 1 capital in Australia. APRA intends to follow this process with a formal consultation in 2024 on any proposed amendments to prudential standards.

Liquidity requirements

APRA expects to conduct a comprehensive review of APS 210 *Liquidity* in 2024, with an expected effective date in 2026.

Other regulatory changes

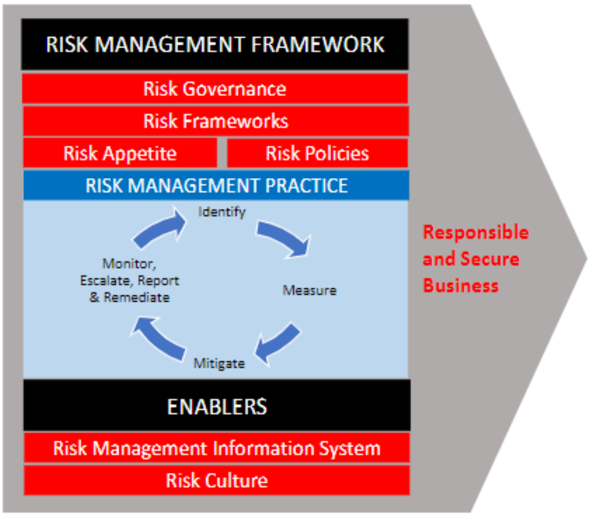
- In December 2022, APRA issued a revised APS 330 which aligns with the updated international standards for public disclosure set by the BCBS. The revised disclosure requirements are effective from 1 January 2025.
- In May 2023, APRA released final prudential requirements and guidance for recovery and resolution planning. CPS 190 *Recovery and Exit Planning* and CPS 900 *Resolution Planning* will come into effect from 1 January 2024.

Risk governance and management

Risk management

Risk includes the potential for harm and is 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 are held accountable for their oversight responsibilities 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 and independent Risk function develops risk management frameworks, defines risk boundaries, provides advice and 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 Internal Capital Adequacy Assessment Process (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 the Group's businesses and represents the interests of 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
- Board Customer Committee.

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.

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
- Personal Banking Risk Committee.

Each sub-committee oversees and governs the effective management of risk which supports the relevant accountable executives.

In addition:

- two sub-committees of the Executive Customer Committee (namely the Enterprise Product Committee and Banking Remediation Committee) evaluate new and existing product offerings and monitor customer remediation activities 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 2023 Annual Report.

Material risk	Definition	Key measures	Key governing policies and 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.	• Measures as outlined in the Group's strategic ambition	**Governing policies and other documents** • Group Organic Investment Policy • Group Inorganic Investment Policy
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).	• Credit concentration limits (including for single large exposures, industries, and countries) • Portfolio limits, settings and indicators in respect to credit quality having regard to Probability of Default (PD), Loss Given Default (LGD), Exposure at Default (EaD), RWA, and a range of more granular measures applicable to the nature of the credit risk (for example, loan-to-valuation ratios (LVR), days past due, impairments and write-offs) • Economic capital limits	**Governing policies and other documents** • Credit Risk Management Strategy • Group Model Risk Policy **Committees and other bodies** • Executive Risk & Compliance Committee • Group Credit & Market Risk Committee • Group Model Risk Committee
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. Traded market risk can be taken on and managed by the Markets division, while banking book market risks (interest rate risk and foreign exchange risk) arise from the management of bank-wide non-trading activity and is managed primarily by Group Treasury.	• Earnings at risk limits • Trading desk limits and settings (for example, stop loss limits) • Globally diversified Value-at-Risk (VaR), stressed VaR and inner stress limits • Economic capital limits	**Governing policies and other documents** • Group Traded Market Risk Policy • Interest Rate Risk in the Banking Book Policy • Group Foreign Exchange Risk in the Banking Book Policy • Funds Transfer Pricing Policy • Group Model Risk Policy **Committees and other bodies** • Executive Risk & Compliance Committee • Group Credit & Market Risk Committee • Group Asset & Liability Committee • Group Model Risk Committee
Balance Sheet and Liquidity	The risk of failing to manage and monitor key banking book structural risks such as liquidity risk and capital risk.	• Liquidity Coverage Ratio (LCR) • Net Stable Funding Ratio (NSFR) • Common Equity Tier 1 (CET1) capital ratio • Customer Funding Index	**Governing policies and other documents** • Group Capital Risk Policy • Group Liquidity Risk Policy • Group Equity Risk in the Banking Book Policy • Third Party Securitisation Risk Policy • Group Model Risk Policy • Contagion Risk Policy **Committees and other bodies** • Executive Risk & Compliance Committee • Group Asset & Liability Committee • Group Model Risk Committee

Material risk	Definition	Key measures	Key governing policies and committees
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 risk.	• 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)	**Governing policies and other documents** • Group Anti-Fraud Policy • Risk Management Practice Framework • Group Information Risk Policy • Group Business Continuity Management Policy • Group Outsourcing Policy • Group Model Risk Policy **Committees and other bodies** • Executive Risk & Compliance Committee • Group Non-Financial Risk Committee
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.	• Monitoring of compliance with risk appetite settings, including credit portfolio limits, and key risk indicators • Policy breach and exemptions reporting • ESG risk assessment as part of supply chain and credit risk assessment and due diligence processes for high-risk suppliers and customers and new suppliers and customers • Monitoring of progress against operational emissions and targets • Monitoring of attributable financed emissions • Climate-related stress testing and risk assessment	**Governing policies and other documents** • Group Environmental Management Policy • Group Environmental Reporting and Offset Management Policy • Group Human Rights Policy • Group Procurement Policy • Group Outsourcing Policy • Group Assessing Customer-related ESG Risk Policy • Group Assessing Customer-related Environmental Contamination Risk Policy • Group Equator Principles Policy • Net Zero Banking Alliance Policy • Social Impact Policy **Committees and other bodies** • Executive Risk & Compliance Committee • Group Credit & Market Risk Committee • Sustainability Council • Climate Governance Forum
Conduct	The risk that any action of the Group, or those acting on behalf of the Group, will result in unfair outcomes for customers.	• Measures through risk appetite settings and key risk indicators	**Governing policies and other documents** • Group Conduct Risk Framework • Code of Conduct • Framework for Customers Experiencing Vulnerability • Group Customer Complaints Policy • Customer Outcomes Framework **Committees and other bodies** • Executive Risk & Compliance Committee • Executive Customer Committee • Enterprise Product Committee • Banking Remediation Committee
Compliance	The risk of failing to understand and comply with relevant laws, regulations, licence conditions, supervisory requirements, self-regulatory industry codes of conduct and voluntary initiatives, as well as internal policies, standards, procedures and frameworks that support fair and equitable treatment of customers.	• Metrics related to the assessment of arrangements in place to fulfil regulatory compliance obligations • Timeliness of investigation of potentially reportable regulatory events • Status of Enhanced Customer Due Diligence (ECDD) for new to bank high-risk customers • Timeframes related to investigations into Australian Transaction Reports and Analysis Centre (AUSTRAC) related compliance events escalated to Financial Crime Regulatory Event Forum • Timeliness of customers identified for exit due to financial crime risk	**Governing policies and other documents** • Compliance Obligations Management Policy • Regulatory Breach Management Policy • Conflicts of Interest Policy • Gifts and Entertainment Policy • Personal Account Dealing Policy • Personal Conflicts of Interest Policy • Cross Border Policy • Information Barriers Policy • Mandatory Leave Policy • Policies on clearing, trade execution, reporting, risk mitigation and margining of over-the-counter derivative transactions • Swap Dealer Policy • Volcker Policy • Financial Benchmarks Policy • Group Anti-Bribery and Corruption Policy • Anti-Money Laundering & Counter-Terrorism Financing Program • Economic and Trade Sanctions Policy **Committees and other bodies** • Executive Risk & Compliance Committee • Group Non-Financial Risk Committee • Executive Financial Crime Risk Committee

Capital

4.1 Capital adequacy

Capital Management Strategy

The Capital Management Strategy is focused on adequacy, efficiency and flexibility. It 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. This approach is consistent across the Group's subsidiaries.

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. From 1 January 2023, the Group's CET1 target range is 11.00 to 11.50% to align with the calculation methodology under the revised capital framework.

Internal Capital Adequacy Assessment Process (ICAAP)

The amount of capital held by the Group is informed by the ICAAP, with capital adequacy determined for both the Level 1 and Level 2 Groups. The process is designed to assess the ability to withstand unexpected loss 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.

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/or 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. Second line 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 Second line, monitors the Group's capital position on a monthly basis and reports to management, the Board Risk & Compliance Committee and the Board.

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 23	31 Mar 23
	$m	$m
Credit risk		
Subject to advanced IRB approach		
Corporate (including small and medium-sized enterprises (SME))[(1)]	103,466	105,725
Retail SME[(1)]	10,200	10,641
Residential mortgage[(2)]	103,898	97,178
Qualifying revolving retail	2,664	2,553
Other retail	1,819	1,729
Subject to foundation IRB approach		
Corporate	22,694	26,390
Sovereign	1,496	1,806
Financial institution	20,839	23,145
Total IRB approach	**267,076**	**269,167**
Specialised lending	**2,332**	**2,043**
Subject to standardised approach		
Corporate	5,461	4,929
Residential mortgage	6,589	6,656
Other retail	5,988	6,359
Other[(3)]	4,671	5,058
Total standardised approach	**22,709**	**23,002**
RBNZ regulated banking subsidiary	**53,026**	**52,104**
Other		
Securitisation exposures	5,332	5,490
Credit valuation adjustment	5,079	4,501
Total other	**10,411**	**9,991**
Total credit risk	**355,554**	**356,307**
Market risk	8,811	8,496
Operational risk	41,178	41,178
Interest rate risk in the banking book	29,463	30,192
Total RWA	**435,006**	**436,173**

(1) In the six months ended 30 September 2023, LGD estimates for corporate (including SME) and retail SME exposures subject to the advanced IRB approach were updated, including the implementation of new LGD models and changes under the revised capital framework. The changes have reduced credit RWA for these exposures of the Group excluding BNZ.
(2) RWA for residential mortgages for the Group excluding BNZ measured under the IRB approach is $148,325 million when recomputed under the standardised approach for the purposes of the capital floor (31 March 2023: $150,328 million).
(3) Other subject to the standardised approach consists of cash items in the process of collection, premises and other fixed assets, and all other exposures, and includes $103 million for equity exposures (31 March 2023: $107 million).

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

	As at	
	30 Sep 23	31 Mar 23
	$m	$m
Total RWA	**386,624**	**388,047**

Table 4.1.B Capital floor

The measurement of total RWA includes a capital floor to limit the benefit of modelled estimates under the IRB approach relative to the standardised approach. The capital floor applies at the aggregate RWA level and requires IRB ADIs to apply the higher of total RWA calculated under the IRB approach and 72.5% of total RWA calculated under the standardised approach.

There was no capital floor adjustment as at 30 September 2023 or 31 March 2023 as shown below.

	As at	
	30 Sep 23	31 Mar 23
	$m	$m
Risk-weighted assets under the standardised approach		
Credit risk	513,968	526,010
Market risk	8,811	8,496
Operational risk	41,178	41,178
Interest rate risk in the banking book	n/a	n/a
Total	**563,957**	**575,684**
Risk-weighted assets prior to application of floor		
Credit risk	355,554	356,307
Market risk	8,811	8,496
Operational risk	41,178	41,178
Interest rate risk in the banking book	29,463	30,192
Total	**435,006**	**436,173**
Capital floor at 72.5%	**408,869**	**417,371**
Capital floor adjustment	**n/a**	**n/a**

Table 4.1.C 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 2023 and for the three previous quarters.

	As at	
	30 Sep 23	31 Mar 23
Capital ratios	%	%
Level 2 Common Equity Tier 1	12.22	12.21
Level 2 Tier 1	14.19	13.89
Level 2 Total	19.88	19.76
Level 1 Common Equity Tier 1	12.13	12.03
Level 1 Tier 1	14.36	13.92
Level 1 Total	20.67	20.43

	As at	
	30 Sep 23	31 Mar 23
RBNZ regulated banking subsidiary capital ratios[1]	%	%
BNZ Common Equity Tier 1	13.3	13.3
BNZ Tier 1	14.6	14.1
BNZ Total	15.7	15.7

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

	As at			
	30 Sep 23	30 Jun 23	31 Mar 23	31 Dec 22
Leverage ratio	$m	$m	$m	$m
Tier 1 capital	61,726	59,259	60,595	58,669
Total exposures	1,183,323	1,192,746	1,189,150	1,182,429
Leverage ratio (%)	**5.22%**	**4.97%**	**5.10%**	**4.96%**

4.2 Capital structure

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

Common Equity Tier 1 capital	Tier 1 capital	Total capital
Common Equity Tier 1 (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: - provide a permanent and unrestricted commitment of funds - are freely available to absorb losses - rank behind the claims of depositors and other more senior creditors in the event of winding-up of the issuer - provide for fully discretionary capital distributions.	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/programmes/capital-instruments.

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 Intra-group Transactions and 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 2023 is shown in Table 4.3.A *Regulatory capital disclosure template*.

	As at	
	30 Sep 23	31 Mar 23
	$m	$m
Common Equity Tier 1 capital before regulatory adjustments	61,158	61,416
Regulatory adjustments to Common Equity Tier 1 capital	(8,022)	(8,161)
Common Equity Tier 1 capital (CET1)	**53,136**	**53,255**
Additional Tier 1 capital before regulatory adjustments	8,610	7,360
Regulatory adjustments to Additional Tier 1 capital	(20)	(20)
Additional Tier 1 capital (AT1)	**8,590**	**7,340**
Tier 1 capital (T1 = CET1 + AT1)	**61,726**	**60,595**
Tier 2 capital before regulatory adjustments	24,852	25,674
Regulatory adjustments to Tier 2 capital	(110)	(101)
Tier 2 capital (T2)	**24,742**	**25,573**
Total capital (TC = T1 + T2)	**86,468**	**86,168**

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.

Explanation of how amounts in the template reconcile to the Level 2 Group balance sheet is contained in 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 23
		$m
Common Equity Tier 1 capital: instruments and reserves		
1	Directly issued qualifying ordinary shares (and equivalent for mutually-owned entities) capital	38,546
2	Retained earnings	23,804
3	Accumulated other comprehensive income (and other reserves)	(1,192)
5	Ordinary share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	–
6	**Common Equity Tier 1 capital before regulatory adjustments**	**61,158**
Common Equity Tier 1 capital: regulatory adjustments		
7	Prudential valuation adjustments	1
8	Goodwill	2,070
9	Other intangibles other than mortgage-servicing rights (net of related deferred tax balance)	3,100
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability)	120
11	Cash flow hedge reserve	(1,611)
12	Shortfall of provisions to expected losses	–
13	Securitisation gain on sale (as set out in paragraph 562 of Basel II framework)	–
14	Gains/(losses) due to changes in own credit risk on fair valued liabilities	(58)
15	Defined benefit superannuation plan assets (net of related tax liability)	28
16	Investments in own shares (if not already netted off paid-in capital on reported balance sheet)	–
17	Reciprocal cross-holdings in common equity	–
18	Investments in the capital of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions, where the ADI does not own more than 10% of the issued share capital (amount above 10% threshold)	–
19	Significant investments in the ordinary shares of banking, financial and insurance entities that are outside the scope of regulatory consolidation, net of eligible short positions (amount above 10% threshold)	–
20	Mortgage service rights (amount above 10% threshold)	–
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability)	–
22	Amount exceeding the 15% threshold	–
23	of which: significant investments in the ordinary shares of financial entities	–
24	of which: mortgage servicing rights	–
25	of which: deferred tax assets arising from temporary differences	–
APRA specific regulatory adjustments		
26	National specific regulatory adjustments (sum of rows 26a, 26b, 26c, 26d, 26e, 26f, 26g, 26h, 26i and 26j)	4,372
26a	of which: treasury shares	–
26b	of which: offset to dividends declared under a dividend reinvestment plan (DRP), to the extent that the dividends are used to purchase new ordinary shares issued by the ADI	–
26c	of which: deferred fee income[1]	(309)
26d	of which: equity investments in financial institutions not reported in rows 18, 19 and 23 (adjusted for intangible component of investments)	732
26e	of which: deferred tax assets not reported in rows 10, 21 and 25	2,390
26f	of which: capitalised expenses[1]	1,456
26g	of which: investments in commercial (non-financial) entities that are deducted under APRA prudential requirements	50
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	53
27	Regulatory adjustments applied to Common Equity Tier 1 due to insufficient Additional Tier 1 and Tier 2 to cover deductions	–
28	**Total regulatory adjustments to Common Equity Tier 1**	**8,022**
29	**Common Equity Tier 1 capital (CET1)**	**53,136**

(1) Where fee income eligible as regulatory capital relates to products giving rise to capitalised expenses, fee income is netted off against capitalised expenses in accordance with APS 111.

		As at 30 Sep 23 $m
Additional Tier 1 capital: instruments		
30	Directly issued qualifying Additional Tier 1 instruments	8,610
31	of which: classified as equity under applicable accounting standards	–
32	of which: classified as liabilities under applicable accounting standards	8,610
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)	–
36	**Additional Tier 1 capital before regulatory adjustments**	**8,610**
Additional Tier 1 capital: regulatory adjustments		
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)	–
41a	of which: holdings of capital instruments in group members by other group members on behalf of third parties	–
41b	of which: investments in the capital of financial institutions that are outside the scope of regulatory consolidations not reported in rows 39 and 40	–
41c	of which: other national specific regulatory adjustments not reported in rows 41a and 41b	–
42	Regulatory adjustments applied to Additional Tier 1 due to insufficient Tier 2 to cover deductions	–
43	**Total regulatory adjustments to Additional Tier 1 capital**	**20**
44	**Additional Tier 1 capital (AT1)**	**8,590**
45	**Tier 1 capital (T1 = CET1 + AT1)**	**61,726**
Tier 2 capital: instruments and provisions		
46	Directly issued qualifying Tier 2 instruments	22,684
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(1)	2,168
51	**Tier 2 capital before regulatory adjustments**	**24,852**
Tier 2 capital: regulatory adjustments		
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)	35
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	35
56c	of which: other national specific regulatory adjustments not reported in rows 56a and 56b	–
57	**Total regulatory adjustments to Tier 2 capital**	**110**
58	**Tier 2 capital (T2)**	**24,742**
59	**Total capital (TC = T1 + T2)**	**86,468**
60	**Total RWA based on APRA standards**	**435,006**

(1) Consists of eligible provisions held against non-defaulted exposures under the IRB approach ($1,920 million) and against exposures under the standardised approach ($248 million).

Detailed capital disclosures (cont.)

		As at 30 Sep 23
		$m
Capital ratios and buffers		
61	Common Equity Tier 1 (as a percentage of RWA)	12.22%
62	Tier 1 (as a percentage of RWA)	14.19%
63	Total capital (as a percentage of RWA)	19.88%
64	Buffer requirement (minimum CET1 requirement, plus capital conservation buffer, plus any countercyclical buffer requirements expressed as a percentage of RWA)(1)	10.08%
65	of which: capital conservation buffer requirement	3.75%
66	of which: ADI-specific countercyclical buffer requirements	0.83%
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)	12.22%
National minima (if different from Basel III)		
69	National Common Equity Tier 1 minimum ratio (if different from Basel III minimum)	n/a
70	National Tier 1 minimum ratio (if different from Basel III minimum)	n/a
71	National Total capital minimum ratio (if different from Basel III minimum)	n/a
Amounts below the thresholds for deduction (not risk-weighted)(2)		
72	Non-significant investments in the capital of other financial entities	196
73	Significant investments in the ordinary shares of financial entities (adjusted for intangible component of investments)	536
74	Mortgage servicing rights (net of related tax liability)	-
75	Deferred tax assets arising from temporary differences (net of related tax liability)	2,390
Applicable caps on the inclusion of provisions in Tier 2		
76	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to standardised approach (prior to application of cap)	248
77	Cap on inclusion of provisions in Tier 2 under standardised approach	360
78	Provisions eligible for inclusion in Tier 2 in respect of exposures subject to internal ratings-based approach (prior to application of cap)	2,102
79	Cap for inclusion of provisions in Tier 2 under internal ratings-based approach	1,920

(1) Comprises a minimum CET1 ratio of 4.5% per APS 110 *Capital Adequacy* paragraph 24(a), a capital conservation buffer of 3.75% 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 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 2023.

	Group balance sheet $m	Adjustments[(1)] $m	Level 2 Group balance sheet $m	Reference[(2)]
Assets				
Cash and liquid assets	24,699	–	24,699	
Due from other banks	117,306	–	117,306	
Collateral placed	11,286	–	11,286	
Trading assets	101,168	–	101,168	
Debt instruments	46,357	–	46,357	
Other financial assets	1,430	–	1,430	
Derivative assets	34,269	5	34,274	
Loans and advances	702,702	(1,875)	700,827	
Current tax assets	20	–	20	
Due from controlled entities	–	13	13	
Deferred tax assets	3,499	–	3,499	Table B
Property, plant and equipment	3,016	–	3,016	
Investments in controlled entities	–	10	10	
Goodwill and other intangible assets	4,952	–	4,952	Table A
Other assets	8,379	(1)	8,378	
Total assets	**1,059,083**	**(1,848)**	**1,057,235**	
Liabilities				
Due to other banks	39,516	–	39,516	
Collateral received	10,672	–	10,672	
Other financial liabilities	66,352	–	66,352	
Derivative liabilities	35,633	–	35,633	
Deposits and other borrowings	682,120	–	682,120	
Current tax liabilities	1,012	1	1,013	
Provisions	1,852	–	1,852	
Due to controlled entities	–	62	62	
Bonds, notes and subordinated debt	135,645	(1,915)	133,730	
Debt issues	8,561	–	8,561	
Other liabilities	16,217	–	16,217	
Total liabilities	**997,580**	**(1,852)**	**995,728**	
Net assets	**61,503**	**4**	**61,507**	
Equity				
Contributed equity	38,546	–	38,546	Row 1
Foreign currency translation reserve	156	–	156	
Asset revaluation reserve	21	–	21	
Cash flow hedge reserve	(1,611)	–	(1,611)	Row 11
Cost of hedging reserve	(34)	–	(34)	
Equity-based compensation reserve	237	–	237	
Debt instruments at fair value through other comprehensive income reserve	5	–	5	
Equity instruments at fair value through other comprehensive income reserve	34	–	34	
Total reserves	**(1,192)**	**–**	**(1,192)**	Row 3
Retained profits	23,800	4	23,804	Row 2
Total equity (attributable to owners of NAB)	**61,154**	**4**	**61,158**	
Non-controlling interests	349	–	349	
Total equity	**61,503**	**4**	**61,507**	

(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 show how amounts in the regulatory capital disclosure template in Table 4.3.A have been derived based on the Level 2 Group balance sheet in Table 4.3.B.

Table A	As at 30 Sep 23 $m	Disclosure template row
Goodwill and other intangible assets	4,952	
Associated net deferred tax asset	218	
Total	**5,170**	
which comprises:		
Goodwill	2,070	Row 8
Other intangibles other than mortgage-servicing rights (net of related tax)	3,100	Row 9

Table B	As at 30 Sep 23 $m	Disclosure template row
Deferred tax assets	3,499	
Less deferred tax assets that rely on future profitability	(120)	Row 10
Less unrealised revaluation on funding vehicles	(39)	
Less net deferred tax assets included in other regulatory adjustments or associated with reserves ineligible for inclusion in regulatory capital	(950)	
Deferred tax assets APRA specific regulatory adjustment	**2,390**	Row 26e, 75

Table C	As at 30 Sep 23 $m	Disclosure template row
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 Capital Notes 7	1,250	
Face value of NAB Wholesale Capital Notes	500	
Face value of NAB Wholesale Capital Notes 2	600	
Directly issued qualifying Additional Tier 1 instruments classified as liabilities	**8,610**	Row 32

Table D	As at 30 Sep 23 $m	Disclosure template row
Subordinated medium term notes	22,684	
Directly issued qualifying Tier 2 instruments	**22,684**	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.

		As at 30 Sep 23	
		Total assets	Total liabilities
Entity name	Principal activity	$m	$m
NAB Trust Services Limited	Trustee	11	-
National Australia Managers Limited	Funds manager	3	1
National RMBS Trust 2018-1	Securitisation	446	447
National RMBS Trust 2018-2	Securitisation	480	482
National RMBS Trust 2022-1	Securitisation	1,000	1,002

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 3.5% 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 a geographic breakdown of RWA associated with private sector credit exposures that are used to calculate the Level 2 Group's countercyclical capital buffer requirement.

	As at 30 Sep 23			
	Countercyclical capital buffer	RWA for private sector credit exposures	ADI-specific buffer	Disclosure template row
Country	%	$m	%	
Australia	1.00	267,088	0.757	
Denmark	2.50	180	0.001	
France	0.50	1,727	0.002	
Germany	0.75	821	0.002	
Hong Kong	1.00	1,109	0.003	
Ireland	0.50	398	0.001	
Luxembourg	0.50	882	0.001	
Netherlands	1.00	1,616	0.005	
Norway	2.50	301	0.002	
Sweden	2.00	536	0.003	
United Kingdom	2.00	10,024	0.057	
Other	-	68,322	-	
Total	**n/a**	**353,004**	**0.834**	Row 66

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 calculation is presented in the disclosure template below.

The leverage ratio increased from 5.10% at 31 March 2023 to 5.22% at 30 September 2023, due to a $1.1 billion increase in Tier 1 capital, combined with a decrease in total exposures of $5.8 billion. The increase in Tier 1 capital was mainly due to the issuance of $1,250 million of NAB Capital Notes 7 in September 2023.

The decrease in total exposures was primarily driven by lower derivative exposures of $6.7 billion, lower credit equivalent amounts of non-market related off-balance sheet exposures of $5.8 billion, and a decrease in on-balance sheet exposures of $2.0 billion, mainly related to a decrease in amounts due from other banks (excluding reverse repurchase agreements) of $10.5 billion, partially offset by an increase in loans and advances of $7.9 billion. These decreases in exposures were partially offset by an increase in securities financing transaction exposures of $8.7 billion.

Table 4.4.A Leverage ratio disclosure template

		As at	
		30 Sep 23	31 Mar 23
		$m	$m
On-balance sheet exposures			
1	On-balance sheet items (excluding derivatives and securities financing transactions (SFTs), but including collateral)	939,122	940,177
2	(Asset amounts deducted in determining Tier 1 capital)	(9,857)	(8,889)
3	**On-balance sheet exposures (excluding derivatives and SFTs) (sum of rows 1 and 2)**	**929,265**	**931,288**
Derivative exposures			
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	11,445	12,364
5	Add-on amounts for potential future credit exposure (PFCE) associated with all derivatives transactions	22,726	23,872
6	Gross-up for derivatives collateral provided where not included in on-balance sheet exposures	9,051	6,402
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(13,943)	(6,578)
8	(Exempted central counterparty (CCP) leg of client-cleared trade exposures)	-	-
9	Adjusted effective notional amount of written credit derivatives	13,198	11,034
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(12,059)	(9,971)
11	**Derivative exposures (sum of rows 4 to 10)**	**30,418**	**37,123**
Securities financing transaction exposures			
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	101,134	89,102
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(14,264)	(14,841)
14	Counterparty Credit Risk (CCR) exposure for SFT assets	18,085	22,039
15	Agent transaction exposures	-	-
16	**Securities financing transaction exposures (sum of rows 12 to 15)**	**104,955**	**96,300**
Non-market related off-balance sheet exposures			
17	Off-balance sheet exposure at gross notional amount	240,504	240,947
18	(Adjustments for conversion to credit equivalent amounts)	(121,819)	(116,508)
19	**Non-market related off-balance sheet exposures (sum of rows 17 and 18)**	**118,685**	**124,439**
Capital and total exposures			
20	**Tier 1 capital**	**61,726**	**60,595**
21	**Total exposures (sum of rows 3, 11, 16 and 19)**	**1,183,323**	**1,189,150**
Leverage ratio			
22	**Leverage ratio**	**5.22%**	**5.10%**

Table 4.4.B Summary comparison of accounting assets vs leverage ratio exposure measure

		As at	
		30 Sep 23	31 Mar 23
		$m	$m
Items			
1	Total consolidated assets as per published financial statements	1,059,083	1,048,288
2	Adjustment for investments in entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	(1,848)	(2,115)
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	(3,856)	4,990
5	Adjustment for securities financing transactions	21,116	22,437
6	Adjustment for off-balance sheet exposures (credit equivalent amount)	118,685	124,439
7	Other adjustments	(9,857)	(8,889)
8	**Leverage ratio exposure**	**1,183,323**	**1,189,150**

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. 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).

The Group's management of credit risk is aligned to the following five principles:

1. Do the right thing by providing financial services in a responsible manner.
2. Only take credit risks that are transparent.
3. Plan and manage for the possibility of default.
4. Be proactive in managing exposures to customers and their credit risk.
5. Manage the portfolio of credit exposures responsibly and in the interest of capital providers and other relevant stakeholders.

These principles guide credit origination, credit assessment and approval activities, credit risk objectives and appetite.

Governance

The Board delegates oversight of credit risk to the Board Risk & Compliance Committee. The Board delegates credit limit authorities to the Group CEO who has the authority to subdelegate this authority and power to the Group Chief Risk Officer. The Group Chief Risk Officer delegates to the Chief Credit and Market Risk Officer, who sets the Delegated Commitment Authority (DCA) framework and subdelegates the credit decision making authority to the Group's divisions and individuals up to certain limits in accordance with the DCA hierarchy.

The Executive Risk & Compliance Committee and its sub-committees, in particular the Group Credit & Market Risk Committee, oversee the Group's credit risk appetite, principles, policies, models and systems for the management of credit risk. Internal risk forums and councils oversee implementation of these disciplines at a more granular level.

Management

The Credit Risk Management Strategy outlines the Group's approach to managing credit risk and articulates the Credit Risk Management Framework that seeks to ensure that credit risks are identified, measured, evaluated, monitored, reported and controlled or mitigated.

The Credit Risk Management Strategy is adaptable in managing shifts through economic and credit cycles through key credit risk management drivers which include:

- Credit risk appetite - the level of risk the Group is willing to assume to ensure that it operates within acceptable levels of credit risk and in compliance with obligations and commitments.
- Credit authorities - the mechanism used to support risk-based credit limit decisions across the Group.
- Credit risk policy - sets the mandatory requirements for the Group's credit risk activities, including credit origination, assessment and approval activities, and supports adherence to regulatory and legislative obligations.

The Credit Risk Management Framework and the use of key credit risk management drivers supports the Group to:

- deliver the Group's strategic ambition.
- protect customers and deliver fair outcomes.
- drive sustainable business performance in a safe and responsible manner.
- comply with the Group's obligations.

The Credit Assurance function performs a key assurance activity. Through a sampling process, this function reviews approvals undertaken across all business units. It also undertakes thematic reviews of portfolios of concern, and tests the reasonableness of specific provisions raised against non-performing exposures. The function operates independently of the credit approval process, and reports its findings to both the relevant business units, and to first and second line risk committees.

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 key management committees, the Board Risk & Compliance Committee and the Board.

The Group Credit & Market Risk Committee is periodically provided with portfolio and industry reviews. Credit risk is oversighted by the Board Risk & Compliance Committee and the Board.

Definition of non-performing

Exposures are non-performing when in default aligned to the definition in APS 220 *Credit Risk Management*. Default occurs when a loan obligation is contractually 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 remedial action, such as realisation of security.

Provisions and write-offs

Specific provision for credit impairment

A specific provision is raised for 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 macro-economic and industry-specific factors. This process includes judgements and estimates 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*). EaD throughout this section represents credit risk exposures net of offsets for eligible financial collateral, except where indicated. RWA in this section excludes the credit valuation adjustment risk capital charge which is not attributed to individual asset classes.

Table 5.1.A Credit risk summary

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

	As at 30 Sep 23					6 months ended 30 Sep 23
	Exposure at default	Risk-weighted assets	Expected loss	Non-performing exposures	Specific provision for credit impairment	Net write-offs
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach						
Corporate (including SME)	193,973	103,466	1,130	2,255	275	31
Retail SME	24,270	10,200	300	951	105	16
Residential mortgage	393,072	103,898	862	3,307	54	15
Qualifying revolving retail	9,276	2,664	117	57	–	39
Other retail	1,658	1,819	96	63	3	17
Subject to foundation IRB approach						
Corporate	41,848	22,694	71	14	12	–
Sovereign	172,792	1,496	2	–	–	–
Financial institution	71,559	20,839	50	25	10	–
Total IRB approach	**908,448**	**267,076**	**2,628**	**6,672**	**459**	**118**
Specialised lending	**2,841**	**2,332**	**24**	**–**	**–**	**21**
Subject to standardised approach						
Corporate	13,285	5,461	–	23	4	4
Residential mortgage	16,859	6,589	–	139	4	–
Other retail	8,570	5,988	–	71	–	30
Other	6,943	4,671	–	–	–	–
Total standardised approach	**45,657**	**22,709**	**–**	**233**	**8**	**34**
RBNZ regulated banking subsidiary	**135,716**	**53,026**	**527**	**1,087**	**72**	**17**
Total	**1,092,662**	**345,143**	**3,179**	**7,992**	**539**	**190**

	As at 31 Mar 23					6 months ended 31 Mar 23
	Exposure at default	Risk-weighted assets	Expected loss	Non-performing exposures	Specific provision for credit impairment	Net write-offs
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach						
Corporate (including SME)	188,491	105,725	1,088	1,686	248	34
Retail SME	23,936	10,641	318	831	87	16
Residential mortgage	386,453	97,178	810	2,879	59	10
Qualifying revolving retail	9,105	2,553	107	57	-	27
Other retail	1,552	1,729	83	43	3	17
Subject to foundation IRB approach						
Corporate	45,772	26,390	88	14	12	-
Sovereign	193,146	1,806	2	-	-	-
Financial institution	73,463	23,145	52	23	10	-
Total IRB approach	**921,918**	**269,167**	**2,548**	**5,533**	**419**	**104**
Specialised lending	**2,532**	**2,043**	**34**	**27**	**23**	**7**
Subject to standardised approach						
Corporate	13,074	4,929	-	28	4	-
Residential mortgage	16,563	6,656	-	143	6	-
Other retail	8,786	6,359	-	70	-	15
Other	7,533	5,058	-	-	-	-
Total standardised approach	**45,956**	**23,002**	**-**	**241**	**10**	**15**
RBNZ regulated banking subsidiary	**133,010**	**52,104**	**474**	**927**	**69**	**14**
Total	**1,103,416**	**346,316**	**3,056**	**6,728**	**521**	**140**

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.

	As at 30 Sep 23				6 months ended 30 Sep 23
	On-balance sheet	Non-market related off-balance sheet	Market related off-balance sheet	Total exposure at default	Average exposure at default
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach					
Corporate (including SME)	167,499	23,965	2,509	**193,973**	191,232
Retail SME	16,674	7,596	–	**24,270**	24,103
Residential mortgage	335,094	57,978	–	**393,072**	389,762
Qualifying revolving retail	4,019	5,257	–	**9,276**	9,190
Other retail	1,345	313	–	**1,658**	1,605
Subject to foundation IRB approach					
Corporate	23,239	12,179	6,430	**41,848**	43,810
Sovereign	154,376	836	17,580	**172,792**	182,969
Financial institution	30,679	19,275	21,605	**71,559**	72,511
Total IRB approach	**732,925**	**127,399**	**48,124**	**908,448**	**915,182**
Specialised lending	**2,050**	**713**	**78**	**2,841**	**2,687**
Subject to standardised approach					
Corporate	6,211	1,903	5,171	**13,285**	13,180
Residential mortgage	15,494	1,365	–	**16,859**	16,711
Other retail	5,342	3,228	–	**8,570**	8,678
Other	6,943	–	–	**6,943**	7,238
Total standardised approach	**33,990**	**6,496**	**5,171**	**45,657**	**45,807**
RBNZ regulated banking subsidiary	**114,367**	**17,490**	**3,859**	**135,716**	**134,363**
Total exposure at default	**883,332**	**152,098**	**57,232**	**1,092,662**	**1,098,039**

	As at 31 Mar 23				6 months ended 31 Mar 23
	On-balance sheet	Non-market related off-balance sheet	Market related off-balance sheet	Total exposure at default	Average exposure at default(1)
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach					
Corporate (including SME)	161,530	24,162	2,799	**188,491**	n/a
Retail SME	16,271	7,665	-	**23,936**	n/a
Residential mortgage	329,307	57,146	-	**386,453**	n/a
Qualifying revolving retail	3,935	5,170	-	**9,105**	n/a
Other retail	1,260	292	-	**1,552**	n/a
Subject to foundation IRB approach					
Corporate	25,516	13,397	6,859	**45,772**	n/a
Sovereign	168,570	890	23,686	**193,146**	n/a
Financial institution	31,889	17,694	23,880	**73,463**	n/a
Total IRB approach	**738,278**	**126,416**	**57,224**	**921,918**	**n/a**
Specialised lending	**1,864**	**547**	**121**	**2,532**	**n/a**
Subject to standardised approach					
Corporate	5,441	1,791	5,842	**13,074**	n/a
Residential mortgage	14,837	1,726	-	**16,563**	n/a
Other retail	5,167	3,619	-	**8,786**	n/a
Other	7,533	-	-	**7,533**	n/a
Total standardised approach	**32,978**	**7,136**	**5,842**	**45,956**	**n/a**
RBNZ regulated banking subsidiary	**112,216**	**16,683**	**4,111**	**133,010**	**n/a**
Total exposure at default	**885,336**	**150,782**	**67,298**	**1,103,416**	**n/a**

(1) Average exposure at default has not been reported as exposures are measured differently and reflected under different asset classes at the beginning and end of the reporting period due to the revised capital framework which came into effect on 1 January 2023.

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.

	As at 30 Sep 23			
	Australia	New Zealand	Asia, Europe and Americas	Total exposure at default
Exposure type	$m	$m	$m	$m
Subject to advanced IRB approach				
Corporate (including SME)	185,557	–	8,416	**193,973**
Retail SME	24,270	–	–	**24,270**
Residential mortgage	393,072	–	–	**393,072**
Qualifying revolving retail	9,276	–	–	**9,276**
Other retail	1,658	–	–	**1,658**
Subject to foundation IRB approach				
Corporate	29,589	–	12,259	**41,848**
Sovereign	159,080	–	13,712	**172,792**
Financial institution	35,143	–	36,416	**71,559**
Total IRB approach	**837,645**	**–**	**70,803**	**908,448**
Specialised lending	**1,707**	**–**	**1,134**	**2,841**
Subject to standardised approach				
Corporate	11,032	–	2,253	**13,285**
Residential mortgage	16,859	–	–	**16,859**
Other retail	8,570	–	–	**8,570**
Other	6,210	–	733	**6,943**
Total standardised approach	**42,671**	**–**	**2,986**	**45,657**
RBNZ regulated banking subsidiary	**–**	**135,716**	**–**	**135,716**
Total exposure at default	**882,023**	**135,716**	**74,923**	**1,092,662**

	As at 31 Mar 23			
	Australia[1]	New Zealand	Asia, Europe and Americas[1]	Total exposure at default
Exposure type	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach				
Corporate (including SME)	180,572	–	7,919	**188,491**
Retail SME	23,936	–	–	**23,936**
Residential mortgage	386,453	–	–	**386,453**
Qualifying revolving retail	9,105	–	–	**9,105**
Other retail	1,552	–	–	**1,552**
Subject to foundation IRB approach				
Corporate	32,255	–	13,517	**45,772**
Sovereign	172,091	–	21,055	**193,146**
Financial institution	37,640	–	35,823	**73,463**
Total IRB approach	**843,604**	**–**	**78,314**	**921,918**
Specialised lending	**1,654**	**–**	**878**	**2,532**
Subject to standardised approach				
Corporate	11,415	–	1,659	**13,074**
Residential mortgage	16,563	–	–	**16,563**
Other retail	8,786	–	–	**8,786**
Other	6,738	–	795	**7,533**
Total standardised approach	**43,502**	**–**	**2,454**	**45,956**
RBNZ regulated banking subsidiary	**–**	**133,010**	**–**	**133,010**
Total exposure at default	**888,760**	**133,010**	**81,646**	**1,103,416**

(1) The breakdown of credit risk exposures by major geographical area has been restated, with a $14,546 million increase in exposures for the Australia geographical area, and a corresponding decrease in the Asia, Europe and Americas geographical area compared to that previously disclosed. The restatement is reflected across the relevant asset classes.

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 23														
	Accommodation and hospitality	Agriculture, forestry, fishing and mining	Business services and property services	Commercial property	Construction	Finance and insurance	Government and public authorities	Manufacturing	Personal	Residential mortgages	Retail and wholesale trade	Transport and storage	Utilities	Other[1]	Total exposure at default
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach															
Corporate (including SME)	8,640	40,591	12,202	67,378	6,708	479	548	10,294	–	–	16,767	11,390	5,700	13,276	**193,973**
Retail SME	1,094	5,727	3,625	281	3,021	1,136	–	1,723	–	–	3,688	1,456	58	2,461	**24,270**
Residential mortgage	–	–	–	–	–	–	–	–	–	393,072	–	–	–	–	**393,072**
Qualifying revolving retail	–	–	–	–	–	–	–	–	9,276	–	–	–	–	–	**9,276**
Other retail	–	–	–	–	–	–	–	–	1,658	–	–	–	–	–	**1,658**
Subject to foundation IRB approach															
Corporate	266	5,201	3,924	4,376	1,156	334	–	4,030	–	–	5,878	7,824	5,903	2,956	**41,848**
Sovereign	–	–	–	–	–	113,430	59,362	–	–	–	–	–	–	–	**172,792**
Financial institution	–	–	–	–	–	71,559	–	–	–	–	–	–	–	–	**71,559**
Total IRB approach	**10,000**	**51,519**	**19,751**	**72,035**	**10,885**	**186,938**	**59,910**	**16,047**	**10,934**	**393,072**	**26,333**	**20,670**	**11,661**	**18,693**	**908,448**
Specialised lending	**48**	**311**	**–**	**–**	**–**	**–**	**–**	**328**	**–**	**–**	**–**	**634**	**1,230**	**290**	**2,841**
Subject to standardised approach															
Corporate	21	16	434	28	17	9,035	28	18	–	–	118	44	32	3,494	**13,285**
Residential mortgage	–	–	–	–	–	–	–	–	–	16,859	–	–	–	–	**16,859**
Other retail	–	–	–	–	–	–	–	–	8,406	–	–	–	–	164	**8,570**
Other	–	–	–	–	–	–	–	–	–	–	–	–	–	6,943	**6,943**
Total standardised approach	**21**	**16**	**434**	**28**	**17**	**9,035**	**28**	**18**	**8,406**	**16,859**	**118**	**44**	**32**	**10,601**	**45,657**
RBNZ regulated banking subsidiary	**1,380**	**16,670**	**2,861**	**8,067**	**2,098**	**21,429**	**4,563**	**5,112**	**1,430**	**56,492**	**5,966**	**3,267**	**1,019**	**5,362**	**135,716**
Total exposure at default	**11,449**	**68,516**	**23,046**	**80,130**	**13,000**	**217,402**	**64,501**	**21,505**	**20,770**	**466,423**	**32,417**	**24,615**	**13,942**	**34,946**	**1,092,662**

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

As at 31 Mar 23

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[1]	Total exposure at default
	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m	$m
Subject to advanced IRB approach															
Corporate (including SME)	8,131	38,137	11,314	66,910	6,578	559	499	9,765	28	–	16,835	11,585	4,716	13,434	**188,491**
Retail SME	1,061	5,780	3,540	317	2,934	1,166	–	1,672	–	–	3,582	1,435	56	2,393	**23,936**
Residential mortgage	–	–	–	–	–	–	–	–	–	386,453	–	–	–	–	**386,453**
Qualifying revolving retail	–	–	–	–	–	–	–	–	9,105	–	–	–	–	–	**9,105**
Other retail	–	–	–	–	–	–	–	–	1,552	–	–	–	–	–	**1,552**
Subject to foundation IRB approach															
Corporate	133	5,808	4,558	4,366	1,100	332	–	4,132	–	–	6,971	7,968	6,838	3,566	**45,772**
Sovereign	–	–	–	–	–	130,713	62,433	–	–	–	–	–	–	–	**193,146**
Financial institution	–	–	–	–	–	73,463	–	–	–	–	–	–	–	–	**73,463**
Total IRB approach	**9,325**	**49,725**	**19,412**	**71,593**	**10,612**	**206,233**	**62,932**	**15,569**	**10,685**	**386,453**	**27,388**	**20,988**	**11,610**	**19,393**	**921,918**
Specialised lending	**52**	**273**	**–**	**–**	**63**	**–**	**–**	**–**	**–**	**–**	**–**	**777**	**1,172**	**195**	**2,532**
Subject to standardised approach															
Corporate	26	25	478	50	29	9,024	36	15	15	–	116	12	10	3,238	**13,074**
Residential mortgage	–	–	–	–	–	–	–	–	–	16,563	–	–	–	–	**16,563**
Other retail	–	–	–	–	–	–	–	–	8,668	–	–	–	–	118	**8,786**
Other	–	–	–	–	–	–	–	–	–	–	–	–	–	7,533	**7,533**
Total standardised approach	**26**	**25**	**478**	**50**	**29**	**9,024**	**36**	**15**	**8,683**	**16,563**	**116**	**12**	**10**	**10,889**	**45,956**
RBNZ regulated banking subsidiary	**1,344**	**16,707**	**2,895**	**8,641**	**2,040**	**19,017**	**4,834**	**5,078**	**1,492**	**55,777**	**5,748**	**3,027**	**1,306**	**5,104**	**133,010**
Total exposure at default	**10,747**	**66,730**	**22,785**	**80,284**	**12,744**	**234,274**	**67,802**	**20,662**	**20,860**	**458,793**	**33,252**	**24,804**	**14,098**	**35,581**	**1,103,416**

(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, where:

- 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.
- the no specified maturity category includes exposures related to credit cards, on demand facilities and guarantees with no fixed maturity date.

	As at 30 Sep 23				
	≤12 months	1 - 5 years	>5 years	No specified maturity	Total exposure at default
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach					
Corporate (including SME)	78,724	105,295	9,630	324	**193,973**
Retail SME	9,397	9,362	5,395	116	**24,270**
Residential mortgage	29	509	369,337	23,197	**393,072**
Qualifying revolving retail	-	-	-	9,276	**9,276**
Other retail	156	757	578	167	**1,658**
Subject to foundation IRB approach					
Corporate	10,676	24,881	6,226	65	**41,848**
Sovereign	120,095	17,761	34,846	90	**172,792**
Financial institution	42,521	27,286	1,706	46	**71,559**
Total IRB approach	**261,598**	**185,851**	**427,718**	**33,281**	**908,448**
Specialised lending	**233**	**1,532**	**1,076**	**-**	**2,841**
Subject to standardised approach					
Corporate	4,834	4,509	3,677	265	**13,285**
Residential mortgage	282	15	16,549	13	**16,859**
Other retail	1,179	225	-	7,166	**8,570**
Other	4,489	-	-	2,454	**6,943**
Total standardised approach	**10,784**	**4,749**	**20,226**	**9,898**	**45,657**
RBNZ regulated banking subsidiary	**29,401**	**39,141**	**58,112**	**9,062**	**135,716**
Total exposure at default	**302,016**	**231,273**	**507,132**	**52,241**	**1,092,662**

	As at 31 Mar 23				
	≤12 months	1 - 5 years	>5 years	No specified maturity	Total exposure at default
Exposure type	**$m**	**$m**	**$m**	**$m**	**$m**
Subject to advanced IRB approach					
Corporate (including SME)	68,171	109,813	10,214	293	**188,491**
Retail SME	9,252	9,714	4,858	112	**23,936**
Residential mortgage(1)	21	522	361,380	24,530	**386,453**
Qualifying revolving retail	-	-	-	9,105	**9,105**
Other retail	144	729	516	163	**1,552**
Subject to foundation IRB approach					
Corporate	12,045	26,384	7,258	85	**45,772**
Sovereign	125,573	28,215	39,293	65	**193,146**
Financial institution	44,298	27,160	1,861	144	**73,463**
Total IRB approach	**259,504**	**202,537**	**425,380**	**34,497**	**921,918**
Specialised lending	**266**	**1,555**	**711**	**-**	**2,532**
Subject to standardised approach					
Corporate	6,494	3,129	3,203	248	**13,074**
Residential mortgage	570	11	15,966	16	**16,563**
Other retail	1,675	176	-	6,935	**8,786**
Other	4,997	-	-	2,536	**7,533**
Total standardised approach	**13,736**	**3,316**	**19,169**	**9,735**	**45,956**
RBNZ regulated banking subsidiary	**27,911**	**37,827**	**58,142**	**9,130**	**133,010**
Total exposure at default	**301,417**	**245,235**	**503,402**	**53,362**	**1,103,416**

(1) The residual contractual maturity of residential mortgages has been restated from that previously disclosed, with certain line of credit facilities moved from specific maturity buckets to no specified maturity to more accurately reflect the contractual arrangements.

Credit provisions and losses

Table 5.1.F Provisions by asset class

The following table provides information on asset quality.

	As at 30 Sep 23		6 months ended 30 Sep 23	
Exposure type	Non-performing exposures $m	Specific provision for credit impairment $m	Specific credit impairment charge $m	Net write-offs $m
Subject to advanced IRB approach				
Corporate (including SME)	2,255	275	72	31
Retail SME	951	105	26	16
Residential mortgage	3,307	54	7	15
Qualifying revolving retail	57	–	35	39
Other retail	63	3	17	17
Subject to foundation IRB approach				
Corporate	14	12	(1)	–
Financial institution	25	10	–	–
Total IRB approach	**6,672**	**459**	**156**	**118**
Specialised lending	**–**	**–**	**–**	**21**
Subject to standardised approach				
Corporate	23	4	(1)	4
Residential mortgage	139	4	(1)	–
Other retail	71	–	32	30
Total standardised approach	**233**	**8**	**30**	**34**
RBNZ regulated banking subsidiary	**1,087**	**72**	**21**	**17**
Total	**7,992**	**539**	**207**	**190**

	As at 31 Mar 23		6 months ended 31 Mar 23	
Exposure type	Non-performing exposures $m	Specific provision for credit impairment $m	Specific credit impairment charge $m	Net write-offs $m
Subject to advanced IRB approach				
Corporate (including SME)	1,686	248	27	34
Retail SME	831	87	21	16
Residential mortgage	2,879	59	3	10
Qualifying revolving retail	57	–	27	27
Other retail	43	3	13	17
Subject to foundation IRB approach				
Corporate	14	12	–	–
Financial institution	23	10	–	–
Total IRB approach	**5,533**	**419**	**91**	**104**
Specialised lending	**27**	**23**	**22**	**7**
Subject to standardised approach				
Corporate	28	4	1	–
Residential mortgage	143	6	–	–
Other retail	70	–	15	15
Total standardised approach	**241**	**10**	**16**	**15**
RBNZ regulated banking subsidiary	**927**	**69**	**(3)**	**14**
Total	**6,728**	**521**	**126**	**140**

Provisions held against performing exposures that represent a purely forward-looking amount for future losses that are presently unidentified were $4,380 million as at 30 September 2023 (31 March 2023: $4,524 million).

Table 5.1.G Provisions by industry

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

	As at 30 Sep 23		6 months ended 30 Sep 23	
	Non-performing exposures $m	Specific provision for credit impairment $m	Specific credit impairment charge $m	Net write-offs $m
Industry sector				
Accommodation and hospitality	173	21	2	-
Agriculture, forestry, fishing and mining	1,210	46	15	5
Business services and property services	346	99	12	3
Commercial property	841	18	3	3
Construction	291	64	17	2
Finance and insurance	79	16	3	1
Manufacturing	273	50	33	1
Personal	186	4	86	91
Residential mortgages	3,736	60	6	15
Retail and wholesale trade	463	83	28	13
Transport and storage	155	45	10	2
Utilities	5	3	-	23
Other[1]	234	30	(8)	31
Total	**7,992**	**539**	**207**	**190**

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

	As at 31 Mar 23		6 months ended 31 Mar 23	
	Non-performing exposures $m	Specific provision for credit impairment $m	Specific credit impairment charge $m	Net write-offs $m
Industry sector				
Accommodation and hospitality	127	24	3	5
Agriculture, forestry, fishing and mining	840	35	4	-
Business services and property services	307	93	8	2
Commercial property	475	21	(3)	31
Construction	262	51	7	11
Finance and insurance	68	13	(1)	-
Manufacturing	267	21	5	6
Personal	178	4	58	62
Residential mortgages	3,335	65	5	10
Retail and wholesale trade	402	72	22	8
Transport and storage	157	39	(14)	3
Utilities	30	24	24	-
Other[1]	280	59	8	2
Total	**6,728**	**521**	**126**	**140**

(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.

	As at 30 Sep 23		
	Non-performing exposures	Specific provision for credit impairment	Collective provision for credit impairment
	$m	$m	$m
Geographic region			
Australia	6,889	462	4,377
New Zealand	1,087	72	801
Asia, Europe and Americas	16	5	36
Total	**7,992**	**539**	**5,214**

	As at 31 Mar 23		
	Non-performing exposures	Specific provision for credit impairment	Collective provision for credit impairment
	$m	$m	$m
Geographic region			
Australia	5,744	424	4,267
New Zealand	926	69	743
Asia, Europe and Americas	58	28	46
Total	**6,728**	**521**	**5,056**

Factors impacting loss experience in the period

Non-performing exposures

Non-performing exposures as at 30 September 2023 increased compared to 31 March 2023, driven by an increase in 90+ days past due facilities due to an increase in delinquencies across the Australian home lending portfolio and the business lending portfolio in both Business and Private Banking, and New Zealand Banking. In addition, there was an increase in default <90 days past due but not impaired assets, primarily across the Business and Private Banking business lending portfolio.

Specific provision for credit impairment

Specific provision for credit impairment as at 30 September 2023 increased compared to 31 March 2023 primarily due to new and increased specific provisions in the Business and Private Banking business lending portfolio, partially offset by work-outs for a small number of larger exposures in the Australian business lending portfolio.

Specific credit impairment charge

The specific credit impairment charge for the six months ended 30 September 2023 is $207 million, $81 million higher than the six months ended 31 March 2023. The increase was in Business and Private Banking, due to a small number of individual impairments and the Australian unsecured retail portfolio. This was combined with the non-recurrence of write-backs for a small number of larger exposures in New Zealand Banking in the prior period.

Net write-offs

Net write-offs for the six months ended 30 September 2023 is $190 million, $50 million higher than the six months ended 31 March 2023. This increase is primarily due to a higher level of write-off activity for the Group's lending portfolio, noting the low level of net write-offs in the prior period.

Table 5.1.I Movement in provisions

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

	6 months ended 30 Sep 23 $m	6 months ended 31 Mar 23 $m
Collective provision		
Collective provision on loans and advances at amortised cost at beginning of period	4,849	4,541
Net transfer to specific provision	(55)	(35)
New and increased provisions (net of collective provision releases)	256	301
Foreign currency translation and other adjustments	(4)	42
Collective provision on loans and advances at amortised cost	**5,046**	**4,849**
Collective provision on loans and derivatives at fair value	168	207
Collective provision for credit impairment	**5,214**	**5,056**
Specific provision		
Specific provision on loans and advances at amortised cost at beginning of period	521	515
Net transfer from collective provision	55	35
New and increased provision (net of collective provision releases)[1]	242	244
Write-back of specific provisions[1]	(58)	(90)
Write-off from specific provisions	(223)	(186)
Foreign currency translation and other adjustments	2	3
Specific provision for credit impairment	**539**	**521**
Total provisions	**5,753**	**5,577**

(1) Comparative information has been restated to align to the presentation in the current period.

Loss experience and risk estimates

The revised capital framework has resulted in changes in how exposures are classified by asset class. The following loss experience and risk estimate disclosures are based on prudential requirements prior to the revised capital framework. Loss experience and risk estimate information based on revised capital framework asset classes is being captured from 1 April 2023, and will be disclosed when there is sufficient history under the revised capital framework.

As a significant portion of specialised lending exposures that were subject to supervisory slotting prior to 1 January 2023 are now subject to the advanced or foundation IRB approaches under APRA requirements, risk estimate information for this asset class has been included in Table 5.1.J (ii) *Accuracy of risk estimates for Probability of Default and Exposure at Default* and Table 5.1.J (iii) *Accuracy of risk estimates for Loss Given Default* for the Level 2 Group excluding BNZ. In addition, risk estimate information in these tables has been disclosed for the RBNZ regulated banking subsidiary's significant asset classes, being corporate (including SME) and residential mortgages.

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 based on a 10-year observation period, except where indicated, 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	As at 30 Sep 23 Exposure-weighted average actual loss $m	As at 30 Sep 23 Exposure-weighted average EL $m
Corporate (including SME)	190	1,252
Sovereign	–	3
Bank	–	14
Retail SME	41	163
Residential mortgage	56	868
Qualifying revolving retail	133	185
Other retail	74	103
RBNZ regulated banking subsidiary		
Non-retail	38	344
Retail	15	125

Exposure type subject to advanced IRB approach	As at 31 Mar 23 Exposure-weighted average actual loss $m	As at 31 Mar 23 Exposure-weighted average EL $m
Corporate (including SME)	195	1,330
Sovereign	–	3
Bank	–	14
Retail SME	40	160
Residential mortgage	56	890
Qualifying revolving retail	131	193
Other retail	74	110
RBNZ regulated banking subsidiary(1)		
Non-retail	39	327
Retail	16	130

(1) Actual losses and EL averaged over a period of 9 years to 31 March 2023.

Exposure type subject to advanced IRB approach	As at 30 Sep 22 Exposure-weighted average actual loss $m	As at 30 Sep 22 Exposure-weighted average EL $m
Corporate (including SME)	210	1,293
Sovereign	–	3
Bank	–	14
Retail SME	42	161
Residential mortgage	60	872
Qualifying revolving retail	139	193
Other retail	77	106
RBNZ regulated banking subsidiary(1)		
Non-retail	39	354
Retail	17	127

(1) Actual losses and EL averaged over a period of 9 years to 30 September 2022.

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.

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 a 10-year observation period.

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.

	As at 30 Sep 23		
	Average estimated PD	Average actual PD	Ratio of estimated to actual EaD
Exposure type subject to IRB approach	%	%	
Corporate (including SME)	1.62	1.37	1.1
Specialised lending	1.62	1.50	1.1
Sovereign[1]	0.36	0.13	1.0
Bank[1]	0.42	0.12	1.0
Retail SME	2.47	1.96	1.1
Residential mortgage	0.87	0.91	1.0
Qualifying revolving retail	1.33	1.32	1.1
Other retail	5.04	5.22	1.1
RBNZ regulated banking subsidiary			
Corporate (including SME)	1.44	1.36	1.0
Residential mortgage	1.01	0.68	1.0

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

	As at 31 Mar 23		
	Average estimated PD	Average actual PD	Ratio of estimated to actual EaD
Exposure type subject to advanced IRB approach	%	%	
Corporate (including SME)	1.63	1.41	1.1
Specialised lending	1.60	1.41	1.1
Sovereign[1]	0.38	0.12	1.0
Bank[1]	0.40	0.12	1.0
Retail SME	2.46	1.96	1.1
Residential mortgage	0.90	0.91	1.0
Qualifying revolving retail	1.44	1.35	1.1
Other retail	5.07	5.06	1.1
RBNZ regulated banking subsidiary			
Corporate (including SME)	1.46	1.33	1.0
Residential mortgage	1.01	0.69	1.0

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

	As at 30 Sep 22		
	Average estimated PD	Average actual PD	Ratio of estimated to actual EaD
Exposure type subject to advanced IRB approach	%	%	
Corporate (including SME)	1.65	1.48	1.1
Sovereign[1]	0.36	0.13	1.0
Bank[1]	0.42	0.15	1.4
Retail SME	2.50	1.95	1.1
Residential mortgage	0.88	0.93	1.0
Qualifying revolving retail	1.38	1.38	1.1
Other retail	4.89	4.94	1.1
RBNZ regulated banking subsidiary			
Corporate (including SME)	1.47	1.23	1.0
Residential mortgage	1.02	0.71	1.0

(1) 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 a 10-year observation period 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.

	As at 30 Sep 23	
	Average estimated downturn LGD	Average actual LGD
Exposure type subject to IRB approach	%	%
Corporate (including SME)[1]	32.3	16.4
Specialised lending	29.8	6.1
Sovereign	15.0	-
Bank	58.8	-
Retail SME	31.5	13.1
Residential mortgage[1]	20.0	2.0
Qualifying revolving retail	82.5	50.2
Other retail	74.2	45.7
RBNZ regulated banking subsidiary		
Corporate (including SME)	40.8	6.6
Residential mortgage[2]	23.7	2.1

(1) Estimated downturn LGD subject to APRA imposed regulatory floors.
(2) RBNZ prudential rules prescribe LGDs for residential mortgages.

	As at 31 Mar 23	
	Average estimated downturn LGD	Average actual LGD
Exposure type subject to advanced IRB approach	%	%
Corporate (including SME)[1]	33.2	16.2
Specialised lending	29.6	7.4
Sovereign	45.0	-
Bank	59.6	-
Retail SME	32.1	13.7
Residential mortgage[1]	20.0	2.2
Qualifying revolving retail	83.6	50.7
Other retail	75.2	45.4
RBNZ regulated banking subsidiary		
Corporate (including SME)	40.7	8.2
Residential mortgage[2]	23.9	2.3

(1) Estimated downturn LGD subject to APRA imposed regulatory floors.
(2) RBNZ prudential rules prescribe LGDs for residential mortgages.

	As at 30 Sep 22	
	Average estimated downturn LGD	Average actual LGD
Exposure type subject to advanced IRB approach	%	%
Corporate (including SME)[1]	33.3	20.9
Sovereign	45.0	-
Bank	21.0	-
Retail SME	32.4	14.7
Residential mortgage[1]	20.0	2.7
Qualifying revolving retail	83.5	51.4
Other retail	74.3	46.2
RBNZ regulated banking subsidiary		
Corporate (including SME)	40.9	8.1
Residential mortgage[2]	24.1	2.6

(1) Estimated downturn LGD subject to APRA imposed regulatory floors.
(2) RBNZ prudential rules prescribe LGDs for residential mortgages.

5.2 Standardised and supervisory slotting portfolios

Standardised credit risk portfolios

The standardised approach to credit risk is applied to:

- bank and sovereign exposures of the RBNZ regulated banking subsidiary in accordance with RBNZ prudential requirements.
- several regulatory prescribed portfolios, such as, qualifying central clearing counterparties, self-managed superannuation funds and margin lending.
- non-standard mortgages of the Level 2 Group excluding BNZ.
- other portfolios where the standardised approach to credit risk is applied by the Group, including the Citi consumer business.
- cash items in the process of collection, premises and other fixed assets, and all other exposures.

Fitch Ratings, Moody's Investor Services and S&P Global Ratings credit ratings are used to determine the risk-weights within the standardised approach. 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*.

Table 5.2.A Standardised exposures by risk-weight

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

	As at 30 Sep 23			As at 31 Mar 23		
	Level 2 Group excluding BNZ	RBNZ regulated banking subsidiary	Total exposure at default	Level 2 Group excluding BNZ	RBNZ regulated banking subsidiary	Total exposure at default
Risk-weights	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
0%	937	16,080	17,017	1,204	14,641	15,845
2%	5,901	776	6,677	6,223	806	7,029
20%	7,172	2,423	9,595	6,678	1,765	8,443
25%	2,501	-	2,501	2,401	-	2,401
30%	2,914	-	2,914	2,912	-	2,912
35%	3,839	-	3,839	3,423	-	3,423
40%	1,124	-	1,124	1,189	-	1,189
45%	1,881	-	1,881	1,924	-	1,924
50%	1,018	1,860	2,878	1,097	2,221	3,318
75%	6,449	-	6,449	6,233	-	6,233
100%	10,072	1,080	11,152	11,318	997	12,315
Other risk-weights	1,436	-	1,436	1,042	-	1,042
Central counterparty default fund contribution guarantee(1)	413	27	440	312	26	338
Total exposure at default subject to the standardised approach	**45,657**	**22,246**	**67,903**	**45,956**	**20,456**	**66,412**

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

Portfolios subject to supervisory risk-weights in the IRB approach

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, are subject to the supervisory slotting approach. Specialised lending is represented by the following sub-asset classes:

- project finance exposures.
- object finance exposures.
- commodities finance exposures.

In addition, supervisory risk-weights are applied to BNZ income-producing real estate exposures under RBNZ prudential requirements.

The Group maps its internal rating grades for specialised lending to the five supervisory slotting categories of strong, good, satisfactory, weak and default. 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, with the S&P Global Ratings external rating equivalent.

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.B Supervisory slotting exposures by risk-weight

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

	As at 30 Sep 23			As at 31 Mar 23		
	Level 2 Group excluding BNZ	RBNZ regulated banking subsidiary	Total exposure at default	Level 2 Group excluding BNZ	RBNZ regulated banking subsidiary	Total exposure at default
Risk-weights	**$m**	**$m**	**$m**	**$m**	**$m**	**$m**
70%	1,577	1,000	**2,577**	1,529	1,280	**2,809**
90%	902	4,442	**5,344**	636	4,863	**5,499**
115%	362	811	**1,173**	333	647	**980**
250%	-	125	**125**	7	104	**111**
Default	-	44	**44**	27	33	**60**
Total specialised lending exposure subject to supervisory slotting	**2,841**	**6,422**	**9,263**	**2,532**	**6,927**	**9,459**

5.3 Internal ratings-based portfolios

General disclosure on the internal ratings-based approach

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

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 of APRA prudential requirements	Rating approach
Non-retail exposures subject to the advanced IRB approach		
Corporate (including SME)	Corporations, partnerships, proprietorships, public sector entities and any other credit exposure not elsewhere classified.	Statistical risk model, external credit rating and expert judgement
Non-retail exposures subject to the foundation IRB approach		
Corporate	Corporations, partnerships, proprietorships and public sector entities with consolidated annual revenue greater than $750 million.	Statistical risk model, external credit rating and expert judgement
Sovereign	- Australian and overseas central and subnational governments. A subnational government is a government of a geographically defined part of a state which has powers to raise revenue and borrow money. - The Reserve Bank of Australia (RBA) and overseas central banks. - Multilateral development banks or institutions eligible for a zero risk-weight.	Statistical risk model, external credit rating and expert judgement
Financial institution	Exposures to a legal entity whose main business includes the management of financial assets, lending, factoring, leasing, provision of credit enhancements, securitisation (excluding securitisation exposures subject to the requirements of APS 120), investments, financial custody, central counterparty services (excluding qualifying central counterparty exposures) and proprietary trading.	Statistical risk model, external credit rating and expert judgement
Retail exposures subject to the advanced IRB approach		
Retail SME	Non-complex exposures to small-business customers managed as part of a portfolio for risk management purposes where: - the consolidated annual revenue of borrower is less than $75 million, and - the total small-business-related exposure to the borrower is less than $1.5 million.	Statistical risk model
Residential mortgage	Exposures partly or fully secured by residential properties, other than non-standard mortgages	Statistical risk model
Qualifying revolving retail	Consumer credit card exposures less than $100,000.	Statistical risk model
Other retail	Retail exposures other than residential mortgage and qualifying revolving retail, including personal loan products, overdrafts and transaction account exposures.	Statistical risk model

Internal risk rating and external ratings

The structure of the internal risk rating system and its relationship with external ratings provided by S&P Global Ratings and Moody's Investor Services is outlined below.

Internal risk rating and external ratings

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 in the calculation of credit RWA.

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.

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.

Credit rating system control

In addition to monthly performance reporting, credit models are reviewed at least annually in accordance with the 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 resultant 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).

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, as well as 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-valuation 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 10% 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.

	As at 30 Sep 23						
	PD risk grade mapping						
	0<0.03%	0.03<0.11%	0.11<0.55%	0.55<2.00%	2.00<5.01%	5.01<99.99%	100%
	$m	$m	$m	$m	$m	$m	$m
Exposure at default							
Subject to advanced IRB approach							
Corporate (including SME)	-	6,352	50,989	109,746	21,286	3,346	2,254
Subject to foundation IRB approach							
Corporate	-	8,306	26,198	6,519	746	76	3
Sovereign	168,784	3,903	94	1	-	10	-
Financial institution	-	56,228	13,118	1,847	278	65	23
Total IRB approach	168,784	74,789	90,399	118,113	22,310	3,497	2,280
RBNZ regulated banking subsidiary	-	5,282	18,554	18,854	3,273	802	796
Total exposure at default	**168,784**	**80,071**	**108,953**	**136,967**	**25,583**	**4,299**	**3,076**
Undrawn commitments(1)							
Subject to advanced IRB approach							
Corporate (including SME)	-	2,402	6,452	8,734	2,096	162	76
Subject to foundation IRB approach							
Corporate	-	2,019	5,461	1,001	192	4	1
Sovereign	546	259	-	-	-	1	-
Financial institution	-	9,145	2,205	156	29	3	-
Total IRB approach	546	13,825	14,118	9,891	2,317	170	77
RBNZ regulated banking subsidiary	-	3,018	5,715	3,095	557	88	71
Total undrawn commitments	**546**	**16,843**	**19,833**	**12,986**	**2,874**	**258**	**148**
Average exposure at default ($m)(2)							
Subject to advanced IRB approach							
Corporate (including SME)	-	0.92	0.55	0.58	0.43	0.27	0.50
Subject to foundation IRB approach							
Corporate	-	4.67	1.72	1.25	1.20	0.80	0.08
Sovereign	47.44	2.89	2.94	0.03	small	0.45	-
Financial institution	-	0.60	0.89	0.46	0.37	0.25	0.45
RBNZ regulated banking subsidiary	-	1.54	0.83	0.59	0.39	0.51	0.86
Exposure-weighted average LGD (%)							
Subject to advanced IRB approach							
Corporate (including SME)	-	34.8%	25.6%	25.4%	26.4%	28.3%	31.0%
Subject to foundation IRB approach							
Corporate	-	45.3%	42.4%	38.8%	32.0%	46.0%	25.2%
Sovereign	5.0%	24.2%	27.4%	16.7%	25.0%	27.1%	n/a
Financial institution	-	45.2%	49.6%	38.3%	32.2%	37.3%	35.8%
RBNZ regulated banking subsidiary	-	40.1%	33.3%	31.1%	36.9%	38.4%	35.7%
Exposure-weighted average risk-weight (%)(3)							
Subject to advanced IRB approach							
Corporate (including SME)	-	19.6%	32.2%	53.5%	72.6%	117.4%	200.0%
Subject to foundation IRB approach							
Corporate	-	28.4%	53.0%	84.9%	100.1%	234.5%	-
Sovereign	0.6%	9.1%	50.5%	34.7%	76.7%	158.8%	-
Financial institution	-	21.7%	49.0%	96.2%	113.5%	184.1%	-
RBNZ regulated banking subsidiary	-	15.8%	36.0%	56.3%	91.6%	137.4%	250.0%

(1) Undrawn commitments are included in total exposure shown above.
(2) Simple average of exposure by number of arrangements.
(3) RWA overlay adjustments for regulatory prescribed methodology requirements have been excluded from exposure-weighted average risk weights.

	As at 31 Mar 23						
	PD risk grade mapping						
	0<0.03%	0.03<0.11%	0.11<0.55%	0.55<2.00%	2.00<5.01%	5.01<99.99%	100%
	$m	$m	$m	$m	$m	$m	$m
Exposure at default							
Subject to advanced IRB approach							
Corporate (including SME)	–	6,323	50,139	106,568	20,884	2,981	1,596
Subject to foundation IRB approach							
Corporate	–	8,310	29,588	6,799	700	358	17
Sovereign	186,770	6,285	89	2	–	–	–
Financial institution	–	55,554	15,649	1,925	272	41	22
Total IRB approach	186,770	76,472	95,465	115,294	21,856	3,380	1,635
RBNZ regulated banking subsidiary(1)	2,792	2,205	19,453	18,333	2,730	648	620
Total exposure at default	**189,562**	**78,677**	**114,918**	**133,627**	**24,586**	**4,028**	**2,255**
Undrawn commitments(2)(3)							
Subject to advanced IRB approach							
Corporate (including SME)	–	1,986	6,439	9,676	2,282	154	51
Subject to foundation IRB approach							
Corporate	–	1,643	5,956	1,014	264	80	–
Sovereign	754	102	–	1	–	–	–
Financial institution	–	8,194	2,115	203	23	2	–
Total IRB approach	754	11,925	14,510	10,894	2,569	236	51
RBNZ regulated banking subsidiary(1)	788	1,015	5,946	2,965	366	66	31
Total undrawn commitments	**1,542**	**12,940**	**20,456**	**13,859**	**2,935**	**302**	**82**
Average exposure at default ($m)(4)							
Subject to advanced IRB approach							
Corporate (including SME)	–	0.86	0.57	0.57	0.41	0.28	0.46
Subject to foundation IRB approach							
Corporate	–	4.45	1.77	1.47	2.32	2.28	1.13
Sovereign	52.35	4.56	2.48	0.04	small	0.04	–
Financial institution	–	0.54	0.92	0.47	0.38	0.21	0.42
RBNZ regulated banking subsidiary(1)	10.42	0.62	0.88	0.57	0.34	0.39	0.90
Exposure-weighted average LGD (%)							
Subject to advanced IRB approach							
Corporate (including SME)	–	39.6%	27.1%	27.0%	28.6%	29.3%	36.3%
Subject to foundation IRB approach							
Corporate	–	41.1%	42.5%	41.0%	38.6%	16.2%	45.1%
Sovereign	5.0%	25.0%	24.9%	29.4%	25.0%	25.0%	n/a
Financial institution	–	49.5%	48.0%	39.8%	29.5%	36.1%	43.0%
RBNZ regulated banking subsidiary(1)	48.5%	39.2%	34.5%	31.7%	34.5%	41.7%	36.3%
Exposure-weighted average risk-weight (%)(5)							
Subject to advanced IRB approach							
Corporate (including SME)	–	21.1%	34.5%	57.8%	78.9%	119.1%	152.7%
Subject to foundation IRB approach							
Corporate	–	27.2%	55.3%	92.5%	138.0%	143.3%	–
Sovereign	0.6%	8.9%	50.8%	48.0%	68.3%	46.9%	–
Financial institution	–	24.2%	47.6%	99.7%	106.6%	194.0%	–
RBNZ regulated banking subsidiary(1)	4.0%	31.6%	37.2%	58.1%	85.3%	158.1%	269.7%

(1) Amounts for the RBNZ regulated banking subsidiary have been restated from that previously disclosed as retail SME exposures have been removed from this table and included in Table 5.3.B *Retail exposures by risk grade*.
(2) Undrawn commitments are included in total exposure shown above.
(3) Undrawn commitments have been restated from that previously disclosed.
(4) Simple average of exposure by number of arrangements.
(5) RWA overlay adjustments for regulatory prescribed methodology requirements have been excluded from exposure-weighted average risk weights.

Table 5.3.B Retail exposures by risk grade

The following table provides a breakdown of the retail credit exposures by PD risk grade.

	As at 30 Sep 23					
	PD risk grade					
	0<0.1%	0.1<0.5%	0.5<2.0%	2.0<5.0%	5.0<99.9%	100%
	$m	$m	$m	$m	$m	$m
Exposure at default						
Subject to advanced IRB approach						
Retail SME	598	6,508	11,041	4,210	959	954
Residential mortgage	64,740	204,252	93,365	15,411	12,004	3,300
Qualifying revolving retail	-	5,725	2,119	983	421	28
Other retail	63	119	486	613	327	50
Total IRB approach	**65,401**	**216,604**	**107,011**	**21,217**	**13,711**	**4,332**
RBNZ regulated banking subsidiary	839	2,215	54,097	1,950	64	321
Total exposure at default	**66,240**	**218,819**	**161,108**	**23,167**	**13,775**	**4,653**
Undrawn commitments(1)						
Subject to advanced IRB approach						
Retail SME	317	2,762	2,855	658	121	74
Residential mortgage	28,441	24,983	3,665	536	316	37
Qualifying revolving retail	-	4,253	750	193	61	-
Other retail	61	73	70	41	68	-
Total IRB approach	**28,819**	**32,071**	**7,340**	**1,428**	**566**	**111**
RBNZ regulated banking subsidiary	593	978	2,156	118	7	4
Total undrawn commitments	**29,412**	**33,049**	**9,496**	**1,546**	**573**	**115**
Average exposure at default ($m)(2)						
Subject to advanced IRB approach						
Retail SME	0.13	0.06	0.05	0.06	0.03	0.06
Residential mortgage	0.06	0.36	0.45	0.54	0.42	0.40
Qualifying revolving retail	-	0.01	0.01	0.01	0.01	0.01
Other retail	small	0.01	0.01	0.01	small	small
RBNZ regulated banking subsidiary	small	0.02	0.17	0.05	small	0.05
Exposure-weighted average LGD (%)						
Subject to advanced IRB approach						
Retail SME	23.2%	24.3%	26.5%	27.4%	28.0%	28.7%
Residential mortgage	13.5%	15.3%	17.2%	18.8%	17.8%	22.6%
Qualifying revolving retail	-	74.0%	74.7%	76.1%	76.4%	77.0%
Other retail	71.5%	72.5%	72.4%	72.7%	75.2%	82.7%
RBNZ regulated banking subsidiary	78.0%	34.7%	18.7%	21.5%	60.3%	21.7%
Exposure-weighted average risk-weight (%)(3)						
Subject to advanced IRB approach						
Retail SME	6.0%	15.0%	32.0%	50.8%	76.2%	184.3%
Residential mortgage	5.8%	13.1%	34.8%	86.9%	139.8%	230.7%
Qualifying revolving retail	-	8.0%	33.6%	73.9%	159.0%	357.3%
Other retail	12.5%	41.6%	87.9%	110.9%	156.4%	250.9%
RBNZ regulated banking subsidiary	11.7%	19.0%	25.4%	64.1%	108.0%	237.4%

(1) Undrawn commitments are included in total exposure shown above.
(2) Simple average of exposure by number of arrangements.
(3) RWA overlay adjustments for regulatory prescribed methodology requirements have been excluded from exposure-weighted average risk weights.

	As at 31 Mar 23					
	PD risk grade					
	0<0.1%	0.1<0.5%	0.5<2.0%	2.0<5.0%	5.0<99.9%	100%
	$m	$m	$m	$m	$m	$m
Exposure at default						
Subject to advanced IRB approach						
Retail SME	640	6,565	10,934	4,077	903	817
Residential mortgage	65,254	202,607	90,738	14,092	10,936	2,826
Qualifying revolving retail	–	5,730	2,006	922	381	66
Other retail	63	116	479	569	286	39
Total IRB approach	**65,957**	**215,018**	**104,157**	**19,660**	**12,506**	**3,748**
RBNZ regulated banking subsidiary(1)	962	2,383	53,080	2,035	126	260
Total exposure at default	**66,919**	**217,401**	**157,237**	**21,695**	**12,632**	**4,008**
Undrawn commitments(2)(3)						
Subject to advanced IRB approach						
Retail SME	347	2,843	2,917	620	116	54
Residential mortgage	28,499	24,156	3,606	679	169	37
Qualifying revolving retail	–	4,271	669	163	52	15
Other retail	59	71	67	35	59	1
Total IRB approach	**28,905**	**31,341**	**7,259**	**1,497**	**396**	**107**
RBNZ regulated banking subsidiary(1)	654	1,089	2,194	111	7	3
Total undrawn commitments	**29,559**	**32,430**	**9,453**	**1,608**	**403**	**110**
Average exposure at default ($m)(4)						
Subject to advanced IRB approach						
Retail SME	0.13	0.06	0.05	0.06	0.03	0.06
Residential mortgage	0.06	0.34	0.44	0.48	0.42	0.30
Qualifying revolving retail	–	0.01	0.01	0.01	0.01	0.01
Other retail	small	0.01	0.01	0.01	small	small
RBNZ regulated banking subsidiary(1)	small	0.02	0.17	0.05	small	0.03
Exposure-weighted average LGD (%)						
Subject to advanced IRB approach						
Retail SME	25.5%	27.5%	30.2%	31.1%	31.6%	32.7%
Residential mortgage	13.8%	15.1%	17.1%	18.5%	17.5%	24.3%
Qualifying revolving retail	–	74.0%	74.7%	76.0%	76.2%	75.3%
Other retail	71.8%	72.5%	72.5%	72.8%	75.4%	83.5%
RBNZ regulated banking subsidiary(1)	77.1%	30.9%	18.7%	21.9%	44.5%	21.6%
Exposure-weighted average risk-weight (%)(5)						
Subject to advanced IRB approach						
Retail SME	6.8%	16.9%	36.6%	57.6%	86.6%	167.4%
Residential mortgage	6.1%	12.9%	34.4%	85.3%	137.6%	237.1%
Qualifying revolving retail	–	7.9%	33.4%	73.4%	163.4%	199.0%
Other retail	13.7%	40.9%	88.2%	111.1%	164.2%	328.1%
RBNZ regulated banking subsidiary(1)	12.5%	18.2%	25.1%	66.0%	158.6%	266.0%

(1) Amounts for the RBNZ regulated banking subsidiary have been restated from that previously disclosed as retail SME exposures that were previously included in Table 5.3.A *Non-retail exposures by risk grade* have been included in this table.
(2) Undrawn commitments are included in total exposure shown above.
(3) Undrawn commitments have been restated from that previously disclosed.
(4) Simple average of exposure by number of arrangements.
(5) RWA overlay adjustments for regulatory prescribed methodology requirements have been excluded from exposure-weighted average risk weights.

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

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.

Income-producing real estate may be recognised as eligible collateral provided the conditions in APS 113 are satisfied, including that:

- losses stemming from lower risk income-producing real estate lending are less than 0.3% of outstanding income-producing real estate exposures in each of the past three years. Lower risk income-producing real estate lending are exposures up to the lower of 50% of the market value or 60% of the lending value.
- overall losses stemming from income-producing real estate lending are less than 0.5% of outstanding income-producing real estate exposures in each of the past three years.

Losses stemming from income-producing real estate exposures of the Level 2 Group excluding BNZ have been below these thresholds, and the level of losses is monitored and measured by:

- summing income-producing real estate write-offs at arrangement level over each of the past three calendar years, and dividing these amounts by the sum of all arrangement-level exposures as at the end of each calendar year.
- identifying lower risk income-producing real estate exposures based on the haircut market value of collateral assessed against income-producing real estate exposures as at the end of the calendar year position.

Guarantor and credit derivative counterparties

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

	As at 30 Sep 23	
	Gross exposure	Covered by eligible financial collateral
Exposure type	$m	$m
Subject to advanced IRB approach		
Corporate (including SME)	193,973	–
Retail SME	24,270	–
Residential mortgage	393,072	–
Qualifying revolving retail	9,276	–
Other retail	1,658	–
Subject to foundation IRB approach		
Corporate	43,501	1,702
Sovereign	200,982	33,568
Financial institution	181,092	111,039
Total IRB approach	**1,047,824**	**146,309**
Specialised lending	**2,841**	**–**
Subject to standardised approach		
Corporate	49,956	36,730
Residential mortgage	16,859	–
Other retail	8,608	38
Other	6,943	–
Total standardised approach	**82,366**	**36,768**
RBNZ regulated banking subsidiary	**142,120**	**7,857**
Total exposure at default	**1,275,151**	**190,934**

	As at 31 Mar 23	
	Gross exposure	Covered by eligible financial collateral
Exposure type	$m	$m
Subject to advanced IRB approach		
Corporate (including SME)	188,674	186
Retail SME	23,936	–
Residential mortgage	386,453	–
Qualifying revolving retail	9,105	–
Other retail	1,552	–
Subject to foundation IRB approach		
Corporate	47,612	1,895
Sovereign	230,495	45,115
Financial institution	175,167	103,324
Total IRB approach	**1,062,994**	**150,520**
Specialised lending	**2,532**	**–**
Subject to standardised approach		
Corporate	47,925	34,858
Residential mortgage	16,570	6
Other retail	8,835	50
Other	7,533	–
Total standardised approach	**80,863**	**34,914**
RBNZ regulated banking subsidiary	**139,243**	**7,429**
Total exposure at default	**1,285,632**	**192,863**

Table 5.4.B Mitigation by guarantees and credit derivatives

The following table provides credit risk exposures covered by guarantees and credit derivatives.

	As at 30 Sep 23		
	Exposure at default	Covered by guarantees	Covered by credit derivatives
Exposure type	$m	$m	$m
Subject to advanced IRB approach			
Corporate (including SME)	193,973	9,579	-
Retail SME	24,270	181	-
Residential mortgage	393,072	136	-
Qualifying revolving retail	9,276	-	-
Other retail	1,658	-	-
Subject to foundation IRB approach			
Corporate	41,848	12,177	-
Sovereign	172,792	-	-
Financial institution	71,559	1,725	-
Total IRB approach	**908,448**	**23,798**	**-**
Specialised lending	**2,841**	**45**	**-**
Subject to standardised approach			
Corporate	13,285	145	-
Residential mortgage	16,859	1	-
Other retail	8,570	-	-
Other	6,943	-	-
Total standardised approach	**45,657**	**146**	**-**
RBNZ regulated banking subsidiary	**135,716**	**3,989**	**-**
Total exposure at default	**1,092,662**	**27,978**	**-**

	As at 31 Mar 23		
	Exposure at default	Covered by guarantees	Covered by credit derivatives
Exposure type	$m	$m	$m
Subject to advanced IRB approach			
Corporate (including SME)	188,491	8,474	-
Retail SME	23,936	179	-
Residential mortgage	386,453	137	-
Qualifying revolving retail	9,105	-	-
Other retail	1,552	-	-
Subject to foundation IRB approach			
Corporate	45,772	13,558	-
Sovereign	193,146	-	-
Financial institution	73,463	2,495	-
Total IRB approach	**921,918**	**24,843**	**-**
Specialised lending	**2,532**	**45**	**-**
Subject to standardised approach			
Corporate	13,074	136	-
Residential mortgage	16,563	2	-
Other retail	8,786	-	-
Other	7,533	-	-
Total standardised approach	**45,956**	**138**	**-**
RBNZ regulated banking subsidiary	**133,010**	**3,960**	**-**
Total exposure at default	**1,103,416**	**28,986**	**-**

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 as those 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 2023, the Group as party to derivative transactions would need to post an estimated amount of $16 million of collateral in the event of a one-notch downgrade to the Group's credit rating, and $230 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.

Net derivative credit exposure is measured:

- under the standardised approach for measuring counterparty credit risk exposures (SA-CCR) for exposures of the Level 2 Group excluding BNZ.
- under the current exposure method for BNZ exposures.

	As at 30 Sep 23 $m	As at 31 Mar 23 $m
Gross positive fair value of derivative contracts	142,229	118,932
Netting and collateral benefits	(132,617)	(108,158)
Replacement cost (RC)	**9,612**	**10,774**
Potential future credit exposure	12,203	13,885
Effective expected positive exposure	**21,815**	**24,659**
Impact of 1.4 multiplier and incurred credit valuation adjustment(1)	8,623	9,731
Level 2 Group excluding BNZ net derivatives credit exposure	**30,438**	**34,390**
RBNZ regulated banking subsidiary net derivatives credit exposure	**1,768**	**1,840**
Total net derivatives credit exposure	**32,206**	**36,230**

(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.

Exposure type	As at 30 Sep 23 $m	As at 31 Mar 23 $m
Interest rate contracts	5,843	6,537
Foreign exchange and gold contracts	18,901	19,333
Equity contracts	42	11
Commodity contracts other than precious metals	975	2,738
Other market related contracts	35	29
Central counterparty(1)	4,642	5,742
Level 2 Group excluding BNZ net derivatives credit exposure	**30,438**	**34,390**
RBNZ regulated banking subsidiary net derivatives credit exposure	**1,768**	**1,840**
Total net derivatives credit exposure	**32,206**	**36,230**

(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 23			As at 31 Mar 23		
Credit derivative products	Protection bought notional $m	Protection sold notional $m	Total notional $m	Protection bought notional $m	Protection sold notional $m	Total notional $m
Credit default swaps used for own credit portfolio	1,341	-	1,341	2,046	-	2,046
Credit default swaps used for intermediation	609	1,546	2,155	388	1,352	1,740
Total credit derivative notional value	**1,950**	**1,546**	**3,496**	**2,434**	**1,352**	**3,786**

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 *General disclosures* in the credit risk section. 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 of the Level 2 Group excluding BNZ.

A self-assessment demonstrating compliance with the prudential standard is prepared covering all securitisation transactions and 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.

Under the revised capital framework which came into effect on 1 January 2023, securitisation exposures of the RBNZ regulated banking subsidiary are outside the scope of APS 120, and are subject to the RBNZ's internal ratings-based approach.

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 2023 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).

	As at 30 Sep 23			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS(1)	Third party originated assets
Underlying asset	$m	$m	$m	$m
Residential mortgages	1,917	926	142,910	-

(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 $129,200 million.

	As at 31 Mar 23			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS(1)	Third party originated assets
Underlying asset	$m	$m	$m	$m
Residential mortgages	2,197	1,189	144,522	-

(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 $130,807 million.

There were no exposures securitised either in the trading book or synthetically by the Group as at 30 September 2023 or 31 March 2023.

Table 6.1.B Non-performing banking book exposures securitised

The following table provides non-performing exposures that have been originated and securitised by the Group in the banking book and any losses that have been recognised on these securitised exposures.

	As at 30 Sep 23			As at 31 Mar 23		
	Outstanding exposure	Non-performing exposures	Losses recognised	Outstanding exposure	Non-performing exposures	Losses recognised
Underlying asset	$m	$m	$m	$m	$m	$m
Residential mortgages	145,753	926	–	147,908	793	–

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.

	6 months ended 30 Sep 23			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS	Gain or loss on sale
Underlying asset	$m	$m	$m	$m
Residential mortgages	(280)	(263)	(1,612)	–

	6 months ended 31 Mar 23			
	Group originated capital relief	Group originated funding only	Group originated internal RMBS	Gain or loss on sale
Underlying asset	$m	$m	$m	$m
Residential mortgages	(289)	(171)	(2,015)	–

The Group had no outstanding exposures in either the banking or trading book that were intended to be securitised as at 30 September 2023 or 31 March 2023.

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.

	As at 30 Sep 23			As at 31 Mar 23		
	On-balance sheet	Off-balance sheet	Total	On-balance sheet	Off-balance sheet	Total
Securitisation exposure type	$m	$m	$m	$m	$m	$m
Liquidity facilities	258	1,007	**1,265**	429	918	**1,347**
Warehouse facilities	16,476	5,846	**22,322**	17,162	6,781	**23,943**
Securities	7,329	–	**7,329**	7,006	–	**7,006**
Derivatives	–	54	**54**	–	42	**42**
Total	**24,063**	**6,907**	**30,970**	**24,597**	**7,741**	**32,338**

The Group had $324 million of derivative exposures held in the trading book subject to the IMA under APS 116 as at 30 September 2023 (31 March 2023: $335 million). The Group had no trading book exposures subject to APS 120 which were either risk-weighted or deducted from capital at 30 September 2023 or 31 March 2023.

The Group had no exposures subject to early amortisation in either the banking or trading book at 30 September 2023 or 31 March 2023.

Table 6.1.E Securitisation exposures by risk-weight

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

	As at 30 Sep 23		As at 31 Mar 23	
	Exposure	RWA	Exposure	RWA
Risk-weight bands	$m	$m	$m	$m
15% ≤ 25%	30,004	5,015	31,407	5,150
> 25% ≤ 35%	781	219	636	183
> 35% ≤ 50%	78	32	115	43
> 50% ≤ 75%	107	66	180	114
Total	**30,970**	**5,332**	**32,338**	**5,490**

The Group deducted $5 million of in-the-money derivatives provided to capital relief securitisation vehicles from CET1 capital as at 30 September 2023 (31 March 2023: $4 million).

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 risks are discussed in Section 9 *Balance sheet and liquidity risk*.

The Group undertakes trading activities to support its customers and aims to profit in the short-term from differences in interest rate, credit, foreign exchange, commodity and equity markets. Traded market risk is the risk of gains or losses from the Group's trading activities resulting from market price movements.

The Group's exposure to market risk arises from 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 the 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 key management committees including the Group Credit & Market Risk Committee, 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 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 risk 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 the internal model 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 policies and regulatory standards.
- 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 the Finance Rates and Revaluation Policy.

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:

- 99% one-tailed confidence level.
- holding period of 10 days.
- observation period of 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 monitors positions daily against the relevant limits and escalates any breaches in accordance with market risk policy 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 or 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 is responsible for managing risk and aiming to deliver profits, while ensuring compliance with all limits and policies.

Capital methodology

As detailed in the following table, the Group is accredited by APRA to use the IMA under APS 116 for all trading asset classes except for specific market risk, equities, and certain 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
Calculation	Internally-developed VaR calculation	As per APS 116 (Attachment B)
General market risk	Foreign exchange, commodities, credit, interest rate and inflation products	Equities, certain inflation products
Specific market risk	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 23	31 Mar 23
	$m	$m
Market risk RWA under the internal model approach	**8,431**	**8,163**
Market risk RWA under the standard method		
Interest rate risk	373	328
Equity position risk	7	5
Total market risk RWA under the standard method	**380**	**333**
Total	**8,811**	**8,496**

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 23			As at
	Mean value	Minimum value	Maximum value	30 Sep 23
	$m	$m	$m	$m
At a 99% confidence level				
VaR	31.5	17.7	59.9	35.1
Stressed VaR	97.5	54.2	184.2	61.3

	6 months ended 31 Mar 23			As at
	Mean value	Minimum value	Maximum value	31 Mar 23
	$m	$m	$m	$m
At a 99% confidence level				
VaR	41.2	27.3	69.3	34.1
Stressed VaR	99.0	36.7	194.2	83.3

Back-testing

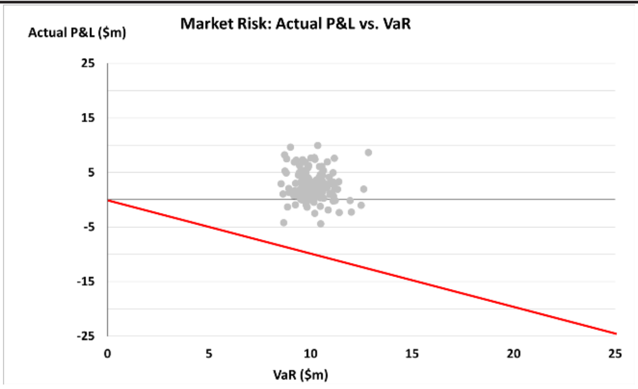
VaR estimates are back-tested regularly for reasonableness. Back-testing is a process that compares the Group's daily VaR estimates against both actual and hypothetical daily profit or loss (P&L) to ensure that model integrity is maintained.

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.

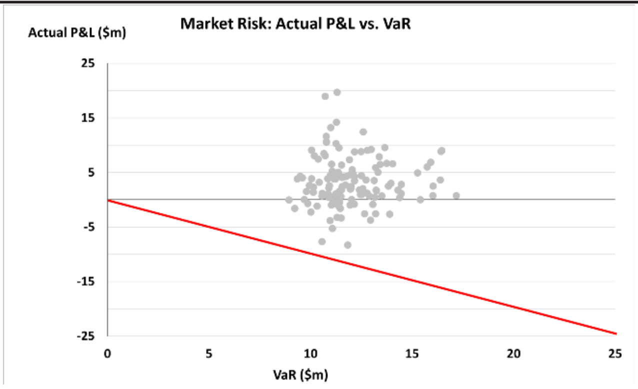
Back-testing results

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 2023



Results for the six months ended 31 March 2023



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 2023 or the six months ended 31 March 2023. 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 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 the Group's obligations.

Structure and organisation

The operational risk profile is overseen by the Board via the Board Risk & Compliance Committee and key management committees including the Executive Risk & Compliance Committee who endorses the Risk Management Strategy and the RAS through to the Board Risk & Compliance Committee and ultimately the Board for approval. 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 the Resilience Risk team 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 policies, standards, processes and tools detailed in the 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

The Resilience Risk team 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 and Group Non-Financial Risk Committee.

The Group Chief Risk Officer and management risk committees may also request the Resilience Risk team 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 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

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.

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.

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 fall 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

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 high-quality liquid assets (HQLA) that can be readily converted to cash and used to support intraday payments. The Group's liquid asset portfolio is maintained by geography, currency and legal entity across NAB, BNZ, 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 Committed Liquidity Facility (which was reduced to zero on 1 January 2023) 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, 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 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 and subsidiary 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, and measurement of IRRBB exposures.
- 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 Second line risk teams are responsible for IRRBB monitoring and oversight and are independent of the Group and subsidiary treasury functions. They maintain a risk framework for IRRBB and have responsibility for 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 the IMA 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 amounts 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 for a tenor of between one year and five years. When invested for longer than a 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 also account for earnings offset.

	As at 30 Sep 23		As at 31 Mar 23	
	200 bp parallel increase $m	200 bp parallel decrease $m	200 bp parallel increase $m	200 bp parallel decrease $m
Change in economic value				
AUD	(531)	560	(507)	524
EUR	(20)	21	(8)	9
GBP	(15)	15	4	(3)
HKD	1	(1)	-	1
JPY	7	(7)	10	(10)
NZD	(294)	303	(285)	292
USD	(40)	43	(29)	31
Other	3	(3)	1	(1)
Total change in economic value	**(889)**	**931**	**(814)**	**843**

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. Second line 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 is dependent 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 23		As at 31 Mar 23	
	Carrying value	Fair value	Carrying value	Fair value
	$m	$m	$m	$m
Unlisted equities	797	797	752	752

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 investments, where:

- realised gains or losses represent the difference between the cost of equity investments 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 investments and their carrying value.

	30 Sep 23	31 Mar 23
	$m	$m
Gains/(losses) on equity investments		
Realised gains/(losses)	3	(5)
Cumulative unrealised losses	(228)	(285)

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. The Group's main structural foreign exchange exposures are due to its investment in BNZ. Currency movements can impact profit or loss, cash flows and the balance sheet.

The Group's objective in relation to foreign exchange risk is to protect the Group's capital from the impact of currency movements and to manage non-structural foreign exchange risk within risk appetite.

The Board approves the risk appetite for FXRBB as a limit for economic capital. In addition, with guidance from the Group Asset & Liability Committee and 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 treasury functions are responsible for the development and execution of foreign exchange risk management strategies approved by the Board and the Group Asset & Liability Committee.
- the Group and subsidiary Second line risk teams provide independent oversight. They are responsible for monitoring and challenge and review of First line 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 Liquidity Coverage Ratio (LCR) measures the adequacy of HQLA available to meet net cash outflows over a 30-day period during a severe liquidity stress scenario. The Board sets LCR targets above regulatory minimums and the Group manages its LCR position daily across the legal entity structure, major currencies and jurisdictions in which business activities are undertaken. The APRA minimum LCR is 100%. Liquid assets surplus to APRA minimums in NZD are not included in Group LCR, reflecting constraints on transferability.

The LCR for the three months ended 30 September 2023 and 30 June 2023 are presented in Table 9.5.A *Liquidity Coverage Ratio disclosure template*, and are based on a simple average of daily LCR outcomes excluding non-business days. There were 65 daily LCR data points used in calculating the average for the current quarter and 61 in the previous quarter.

Average LCR for the three months ended 30 September 2023 increased to 140% driven by a $6.5 billion reduction in average net cash outflows, offset by a decrease in average liquid assets of $4.5 billion.

The decrease in average net cash outflows was largely due to reductions in wholesale deposit and unsecured wholesale funding cash outflows in the 30-day stress period, partially offset by an increase in cash outflows from secured wholesale funding related to TFF maturities.

The reduction in average liquid assets was mainly as a result of lower central bank deposits, holdings of government bonds and RBNZ securities, partially offset by an increase in HQLA through reverse repurchase agreements.

Table 9.5.A Liquidity Coverage Ratio disclosure template

		3 months ended			
		30 Sep 23		30 Jun 23	
		Unweighted value (average)(1)	Weighted value (average)	Unweighted value (average)(1)	Weighted value (average)
		$m	$m	$m	$m
Liquid assets, of which:			**209,561**		**214,039**
1	High-quality liquid assets (HQLA)(2)(3)		209,354		211,793
2	Alternative liquid assets (ALA)(3)		–		–
3	Reserve Bank of New Zealand (RBNZ) securities(2)(3)		207		2,246
Cash outflows					
4	Retail deposits and deposits from small business customers	273,980	29,947	276,753	31,408
5	of which: stable deposits	116,860	5,843	113,027	5,651
6	of which: less stable deposits	157,120	24,104	163,726	25,757
7	Unsecured wholesale funding	177,563	82,299	183,568	91,265
8	of which: operational deposits (all counterparties) and deposits in networks for cooperative banks	86,162	21,540	89,319	22,329
9	of which: non-operational deposits (all counterparties)	78,261	47,619	75,414	50,101
10	of which: unsecured debt	13,140	13,140	18,835	18,835
11	Secured wholesale funding(3)		10,701		5,866
12	Additional requirements	204,959	38,693	203,812	39,088
13	of which: outflows related to derivatives exposures and other collateral requirements	8,155	8,154	8,319	8,316
14	of which: outflows related to loss of funding on debt products	–	–	–	–
15	of which: credit and liquidity facilities	196,804	30,539	195,493	30,772
16	Other contractual funding obligations	81	81	778	778
17	Other contingent funding obligations	73,935	5,219	73,994	5,311
18	**Total cash outflows**		**166,940**		**173,716**
Cash inflows					
19	Secured lending (e.g. reverse repos)	49,216	3,898	42,746	3,155
20	Inflows from fully performing exposures	20,121	11,788	20,899	11,971
21	Other cash inflows	1,590	1,589	2,429	2,422
22	**Total cash inflows**	**70,927**	**17,275**	**66,074**	**17,548**
23	**Total liquid assets**		**209,561**		**214,039**
24	**Total net cash outflows**		**149,665**		**156,168**
25	**Liquidity Coverage Ratio (%)**		**140%**		**137%**

(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 2023 and 30 June 2023 was on average $9.2 billion and $6.7 billion respectively.
(3) Disclosed on a weighted basis only, consistent with the disclosure template prescribed by APS 330.

Net Stable Funding Ratio

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

The NSFR as at 30 September 2023 and 30 June 2023 are presented in Table 9.5B *Net Stable Funding Ratio disclosure template*, and are based on spot balances.

The NSFR decreased to 116% as at 30 September 2023 with a $10.3 billion increase to $556.0 billion of RSF, while ASF was consistent with 30 June 2023 as increases in regulatory capital and deposits were largely offset by lower wholesale funding.

The increase in RSF is related to the repayment of drawdowns of the TFF initial allowance in the three months ended 30 September 2023. The RSF weighting of residential mortgages increased for mortgages that were previously pledged as collateral against the TFF in the form of mortgage-backed securities.

Table 9.5.B Net Stable Funding Ratio disclosure template

		As at 30 Sep 23				
		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	
		$m	$m	$m	$m	$m
Available Stable Funding (ASF) Item						
1	Capital	63,635	–	–	30,294	93,929
2	of which: regulatory capital	63,635	–	–	30,294	93,929
3	of which: other capital instruments	–	–	–	–	–
4	Retail deposits and deposits from small business customers	257,636	83,933	–	–	313,957
5	of which: stable deposits	114,251	16,678	–	–	124,382
6	of which: less stable deposits	143,385	67,255	–	–	189,575
7	Wholesale funding	121,007	270,942	65,502	102,819	234,214
8	of which: operational deposits	81,617	–	–	–	40,809
9	of which: other wholesale funding	39,390	270,942	65,502	102,819	193,405
10	Liabilities with matching interdependent assets	–	–	–	–	–
11	Other liabilities	–	16,479	–	4,408	4,408
12	of which: NSFR derivative liabilities[1]			4,287		
13	of which: all other liabilities and equity not included in the above categories	–	12,192	–	4,408	4,408
14	**Total ASF**					**646,508**
Required Stable Funding (RSF) Item						
15a	High-quality liquid assets (HQLA) for NSFR purposes					4,676
15b	Alternative liquid assets (ALA)					1,760
15c	RBNZ securities					395
16	Deposits held at other financial institutions for operational purposes	–	–	–	–	–
17	Performing loans and securities	18,135	156,259	53,141	548,265	506,778
18	of which: performing loans to financial institutions secured by Level 1 HQLA	–	59,460	3,787	–	7,840
19	of which: performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	143	29,805	7,972	20,713	29,313
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):	17,975	56,630	36,182	146,289	182,044
21	of which: with a risk-weight of less than or equal to 35% under APS 112	–	–	–	14,461	9,400
22	of which: performing residential property loans	–	5,442	4,635	373,173	276,230
23	of which: standard loans to individuals with an LVR of 80% or below[2]	–	–	–	228,634	148,612
24	of which: securities that are not in default and do not qualify as HQLA, including exchange-traded equities	17	4,922	565	8,090	11,351
25	Assets with matching interdependent liabilities	–	–	–	–	–
26	Other assets	20,361	6,104	20	30,948	32,025
27	of which: physical traded commodities, including gold	610				519
28	of which: assets posted as initial margin for derivative contracts and contributions to default funds of CCPs[1]			3,201		2,721
29	of which: NSFR derivative assets[1]			4,287		–
30	of which: NSFR derivative liabilities before deduction of variation margin posted[1]			21,010		4,202
31	of which: all other assets not included in the above categories	19,751	6,104	20	2,450	24,583
32	Off-balance sheet items[1]			197,108		10,382
33	**Total RSF**					**556,016**
34	**Net Stable Funding Ratio (%)**					**116%**

(1) Disclosed in total and not by maturity bucket, consistent with the disclosure template prescribed by APS 330.
(2) Comprises performing, unencumbered standard residential property loans to individual(s) with a maturity of one year or more and a LVR of 80% or below, as defined under APS 112.

		As at 30 Jun 23				
		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	
		$m	$m	$m	$m	$m
	Available Stable Funding (ASF) Item					
1	Capital	61,835	–	–	28,765	90,601
2	of which: regulatory capital	61,835	–	–	28,765	90,601
3	of which: other capital instruments	–	–	–	–	–
4	Retail deposits and deposits from small business customers	254,910	80,484	–	–	308,246
5	of which: stable deposits	111,674	16,144	–	–	121,428
6	of which: less stable deposits	143,236	64,340	–	–	186,818
7	Wholesale funding	129,301	266,354	84,300	103,036	243,904
8	of which: operational deposits	88,659	–	–	–	44,329
9	of which: other wholesale funding	40,642	266,354	84,300	103,036	199,575
10	Liabilities with matching interdependent assets	–	–	–	–	–
11	Other liabilities	–	15,888	–	4,435	4,435
12	of which: NSFR derivative liabilities(1)			6,077		
13	of which: all other liabilities and equity not included in the above categories	–	9,811	–	4,435	4,435
14	**Total ASF**					**647,186**
	Required Stable Funding (RSF) Item					
15a	High-quality liquid assets (HQLA) for NSFR purposes					4,385
15b	Alternative liquid assets (ALA)					3,226
15c	RBNZ securities					352
16	Deposits held at other financial institutions for operational purposes	–	–	–	–	–
17	Performing loans and securities	18,418	166,698	51,900	529,498	495,933
18	of which: performing loans to financial institutions secured by Level 1 HQLA	–	65,250	3,351	–	8,586
19	of which: performing loans to financial institutions secured by non-Level 1 HQLA and unsecured performing loans to financial institutions	122	28,478	7,536	20,327	28,488
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):	17,728	63,296	36,254	144,986	182,623
21	of which: with a risk-weight of less than or equal to 35% under APS 112	–	–	–	14,189	9,223
22	of which: performing residential property loans	–	5,211	4,420	355,801	264,644
23	of which: standard loans to individuals with an LVR of 80% or below(2)	–	–	–	211,123	137,230
24	of which: securities that are not in default and do not qualify as HQLA, including exchange-traded equities	568	4,463	339	8,384	11,592
25	Assets with matching interdependent liabilities	–	–	–	–	–
26	Other assets	19,648	4,397	7	32,320	31,311
27	of which: physical traded commodities, including gold	473				402
28	of which: assets posted as initial margin for derivative contracts and contributions to default funds of CCPs(1)			3,674		3,123
29	of which: NSFR derivative assets(1)			6,077		–
30	of which: NSFR derivative liabilities before deduction of variation margin posted(1)			20,014		4,003
31	of which: all other assets not included in the above categories	19,175	4,397	7	2,555	23,783
32	Off-balance sheet items(1)			203,208		10,534
33	**Total RSF**					**545,741**
34	**Net Stable Funding Ratio (%)**					**119%**

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

(2) Comprises performing, unencumbered standard residential property loans to individual(s) with a maturity of one year or more and a LVR of 80% or below, as defined under APS 112.

Reference to APS 330 tables

Table number	Table title	APS 330 reference
Table 4.1.A	Risk-weighted assets	APS 330 Table 6b-f and 6h
Table 4.1.B	Capital floor	APS 330 Table 6i
Table 4.1.C	Capital and leverage ratios	APS 330 Table 6g
Table 4.2.A	Regulatory capital structure	n/a
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Table 4.3.B	Reconciliation between the Group and Level 2 Group balance sheet	APS 330 paragraph 13a, 13c and 13d
Table 4.3.C	Reconciliation between the Level 2 Group balance sheet and regulatory capital disclosure template	APS 330 paragraph 13d
Table 4.3.D	Entities excluded from the Level 2 Group balance sheet	APS 330 paragraph 13b and 14
Table 4.3.E	Countercyclical capital buffer	APS 330 Attachment A, paragraph 2
Table 4.4.A	Leverage ratio disclosure template	APS 330 Table 18
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Table 6.1.D	Securitisation exposures retained or purchased	APS 330 Table 12k, 12m, 12r, 12s, 12t and 12v
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Table 9.5.A	Liquidity Coverage Ratio disclosure template	APS 330 Table 20
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Glossary

ADI
Authorised Deposit-taking Institution.

Advanced Internal Ratings-based Approach (IRB)
The approach used by the Group, under approval from APRA, to calculate the capital requirement for credit risk, which utilises the outputs of internally developed models for probability of default, loss given default and exposure at default.

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.

Bank of New Zealand (BNZ)
Bank of New Zealand, a banking subsidiary regulated by the Reserve Bank of New Zealand.

Banking book
Exposures not contained in the trading book.

BCBS
Basel Committee on Banking Supervision.

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.

Citi consumer business
Citigroup's Australian consumer business, acquired by the Group in June 2022.

Citigroup
Citigroup Pty Limited and Citigroup Overseas Investment Corporation.

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. The CLF was reduced to zero on 1 January 2023.

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.

Expected loss (EL)
A calculation of the estimated loss that may be experienced over the next 12 months. 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, expected loss is not an estimate of long-run average expected loss.

Exposure at default (EaD)
An estimate of the credit exposure amount outstanding if a customer defaults. EaD is presented net of eligible financial collateral, except where indicated.

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'.

Foundation Internal Ratings-based Approach (Foundation IRB)
An approach to calculate the capital requirement for credit risk, which utilises the outputs of internally developed models for probability of default, and supervisory estimates for loss given default and exposure at default.

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 by the Group, under approval from APRA, to calculate the capital requirement for non-traded market risk. The IMA is used to calculate interest rate risk in the banking book for transactions in the banking book.

Internal Model Approach (IMA) - Traded Market Risk
The approach used by the Group, under approval from APRA, to calculate the capital requirement for traded market risk. The IMA is used to calculate general market risk for 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.

LVR
Loan-to-valuation ratio.

NAB
National Australia Bank Limited ABN 12 004 044 937.

NAB Europe
National Australia Bank Europe S.A.

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.

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.

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.

Revised capital framework
Revisions to APRA's capital adequacy and credit risk capital requirements for ADIs, which came into effect on 1 January 2023. The revised requirements are contained in APS 110 'Capital Adequacy', APS 112 'Capital Adequacy: Standardised Approach to Credit Risk' and APS 113 'Capital Adequacy: Internal Ratings-based Approach to Credit Risk'.

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 used to calculate the capital requirement for traded market risk, which applies supervisory risk-weights to positions arising from trading activities.

Standardised approach

An alternative approach used to calculate the capital requirement for 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.

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.