Absa Group Limited

Pillar 3 risk management report

for the reporting period ended 31 December 2021

The Pillar 3 risk management report for the reporting period ended 31 December 2021 provides the prescribed annual view of Absa Group Limited (the Group) regulatory capital and risk exposures. It complies with:

- The Basel Committee on Banking Supervision (BCBS) Pillar 3 disclosure requirements (Pillar 3 Standard).
- Regulation 43 of the Regulations relating to Banks (Regulations), issued in terms of the Banks Act, 1990 (Act No. 94 of 1990), where not superseded by the Pillar 3 disclosure requirements.

The report is supplemented with the Group's Pillar 3 risk management additional disclosures.

Management and the Group Risk and Capital Management Committee (GRCMC) have reviewed the report. The Board is satisfied that the Group's risk and capital management processes operated effectively for the period under review, and the Group is adequately capitalised and funded to support the execution of its strategy.

The information in this report is unaudited.

Contents

BCBS Pillar 3 disclosure requirements of sections and tables

References to disclosure requirements have been designated by [ ]

A Additional disclosure tables Pillar 3 risk management report for the reporting period ended 31 December 2021
B Not applicable to the Group

BCBS Pillar 3 disclosure requirements of sections and tables

A Additional disclosure tables Pillar 3 risk management report for the reporting period ended 31 December 2021
B Not applicable to the Group

1. Summary of risk profile and RWA

1. Summary of risk profile and RWA

1.1 Key performance metrics

Metric	Value	Prior year
Common equity tier 1 (CET1) ratio[1]	12.8%	2020: 11.2%
Economic capital (EC) coverage[1]	1.5	2020: 1.5
Leverage ratio[1]	7.9%	2020: 7.2%
Liquidity coverage ratio (LCR)[2]	116.8%	2020: 120.6%
Net stable funding ratio (NSFR)	116.1%	2020: 115.8%
Credit loss ratio (CLR)	0.77%	2020: 1.92%
Stage 3 ratio on gross loans and advances	5.4%	2020: 6.3%
Stage 1 and stage 2 coverage ratio	1.5%	2020: 1.7%
Stage 3 coverage ratio	44.6%	2020: 42.5%
Banking book net interest income (NII) sensitivity for a 2% upward shock in interest rates (Rm)	R1 216m	2020: R1 202m
Operational risk losses[3]	R893m	2020: R292m

Review of current reporting period

- Capital ratios were stronger year-on-year, driven by improved earnings and enhancements on risk weighted assets (RWA). CET1 has moved above the top end of the Board target range, well above minimum regulatory requirements.
- The liquidity position was healthy and liquidity metrics are within risk appetite.
- Interest rate risk sensitivity in the banking book is actively managed with increased hedging activities. Given the anticipated normalisation in policy rates, the Group's NII remains positively impacted by rising interest rates.
- Loan book growth continued to benefit from the growth momentum in RBB secured lending products and stronger corporate activity during the second half of the year.
- The CLR tracked at the lower end of the Group's through-the-cycle range. A reduction in impairment losses was evident across all market segments.
- Operational risk losses increased, impacted by the riots in South Africa and increased fraud risk losses.
- The Group continued to invest in infrastructure, process re-engineering, employee development and technology to deliver improved operational resilience.
- Sustainability training was conducted across the Group to increase the level of awareness and support management of sustainability risk, and incorporated climate stress testing in our risk management processes.

Priorities

The Group's operating environment is expected to continue to be challenging. Risk, liquidity and capital management will remain a priority, including:

- Creating sustainable value for shareholders while maintaining sufficient capital supply for growth. Capital ratios are to be maintained at the top end of the Board risk appetite and above minimum levels of regulatory capital.
- Continue to lengthen and diversify the funding base to support asset growth and other strategic initiatives while optimising funding costs.
- Monitor growth to ensure a well-diversified credit portfolio in line with the Group strategy and risk appetite.
- Monitor changes in the global macro-economic, political and regulatory environments to identify and manage risks at an early stage. The potential impact of these and other events are modelled in a comprehensive stress testing framework.
- Improve controls, efficiency and operational resilience, through enhanced platforms and digital capabilities, across critical processes including collections, cybersecurity and fraud, data management, disaster recovery and financial crime.
- Engage and collaborate with regulatory authorities and other stakeholders on upcoming regulatory changes, to ensure the most appropriate outcomes for the banking sector and broader economy.
- Develop climate action guidelines or standards to guide the Group's approach to climate change-related risks and opportunities to align with commitments made by the Group.
- Conduct business and product impact assessments to evaluate the quantitative and qualitative implications of implementing Basel III enhancements, including the Fundamental Review of the Trading Book (FRTB) and the proposed amendments to the Regulations relating to Banks.

[1] All numbers include unappropriated profits.

[2] The Group LCR reflects an aggregation of the Bank LCR and the ARO LCR. For this purpose, a simple average of the relevant three month-end data points is used in ARO, noting that the ARO LCR is capped at 80% per the minimum regulatory requirements. For the Bank, the LCR was calculated as a simple average of 90 calendar-day LCR observations. The LCR ratio continues to be measured and reported on the standard regulatory basis of a 100%, the regulatory minimum was however temporarily reduced to 80%.

[3] Includes post period recoveries relating to a payment and fraud related risk event.

1. Summary of risk profile and RWA

1.2 Risks arising from the operating environment

The Russia-Ukraine conflict has significantly increased already high levels of global uncertainty and is expected to impact global markets, outlooks and the expectations of the markets in which the Group operates. This is expected to materially heighten risks faced by financial market participants and the global and domestic economies. Active monitoring of the events unfolding in Europe and continuous assessments of the Group's exposure and potential risks, both direct and indirect, is ongoing as the impact on various markets will not be uniform. The Group has assessed that its direct exposure to Russia is currently negligible and thus monitoring is focused mainly on the indirect exposures and risks. Sensitivity to energy inflation and certain commodity prices will be elevated and are being monitored. The Group's focus remains on proactive risk and capital management to positively position itself as the spillover impact of the conflict unfolds. Risks are actively identified, and the consolidated response monitored to ensure effective implementation achieving the targeted result. Scenario analyses is used in the early detection of potential areas of weakness and to assess response effectiveness.

The Group's operations continue to be impacted by the ongoing COVID-19 pandemic and more detailed information can be found in the 2021 Financial Results Booklet.

Risk theme	Current and emerging risks
Global and local economic recovery uncertainty	• Recovery of economic activity remains under pressure from further variants and waves of infections while being impacted by disparate government responses, COVID-19 vaccine rollouts and uptake. • Increasing global inflation driving fiscal policy tightening will affect growth and economic recovery, potentially introducing supply-side inflation into economies under pressure. • High sovereign debt levels, combined with reduced debt and interest servicing capacity, increase the possibility of sovereign defaults and an emerging markets debt crisis. Management's response • Maintain a dynamic approach to risk appetite setting in response to the outlook for 2022 and beyond. • Use scenarios to evaluate the potential outcomes of a variety of external and internal factors. Management develops mitigating actions and assesses their effectiveness to guide decision making on an ongoing basis. • Monitor downside risk presented by the uncertainty in the outlook where the economic recovery is likely to be unstable and manage risk reduction strategies.
Strategic, execution and business risks arising from external and internal drivers	• Global uncertainty arising from developed markets protectionism, international relations and other market drivers, which result in increased pressure on emerging markets. • Actions taken to limit the impact of COVID-19 resulted in economic hardship, higher unemployment, increased inequality, and lower business and consumer confidence. • Power supply disruptions in certain markets continue to negatively impact stakeholders. • Disruption through changing customer preferences and competitor offerings. • Potential adverse impact of large strategic change projects on business risk, change risk and people risk. Management's response • Monitor and manage risk strategy and risk appetite based on the ongoing evaluation of global and regional developments to identify and mitigate risks as they arise. This includes re-evaluating credit policies and operational and resilience processes, while enabling business to pursue selective strategic opportunities. • Ongoing alignment of risk objectives with the Group's strategy to support its customers and communities efficiently, responsibly and sustainably. • Actively engage governments, communities and customers to support initiatives to address economic hardship. • Ensure sufficient investment to continue delivering scalable digital solutions that focus on current and evolving customer needs. • Build and embed a winning brand with a focus on innovative business processes and products designed to meet unique customer needs and preferences. • Ensure strategic and large change projects are properly scoped, fully capacitated and closely monitored through senior oversight, including independent quality assurance.

1. Summary of risk profile and RWA

Risk theme	Current and emerging risks
Environmental and social risks impact the Group, its customers and operating environment	• Adverse impact of ongoing and rapid climate and social change on communities and customers will sharply heighten the Group's credit and insurance risks. • Evolving complexities in the management of social trends, and the societies and political environments in which the Group operates. • Increasing expectations from stakeholders to integrate sustainability risk management practices with business activities. Management's response • Implement the United Nations Environmental Programme Finance Initiative Principles for Responsible Banking and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). • Reduce our direct environmental footprint in line with the Group's 2030 environmental action plan and understand physical climate risk impacts. • Embed processes encouraging customers to adopt business strategies and practices aligned with the Group's sustainability policy. • Develop financing standards for other climate sensitive industries in line with the existing coal financing standard. • Continuously enhance credit and insurance risk models to assess the impact of climate change risk. • Continue to develop internal capabilities to utilise scenario analyses and stress testing to better estimate the impact of climate change on the Group's portfolio to inform the review and alignment of Absa portfolios for climate change risk and opportunities. • Regularly assess the suitability and strategic alignment of products and customer value propositions with changing environmental and social factors and the impact on the Group's risk profile. • Maintain focus on the financial inclusivity of customers, including the ongoing support of small and medium-sized enterprises.
Heightened resilience, fraud, financial crime, people and cyber risks expected for the foreseeable future	• Heightened risk of social unrest due to weak economic environments and poor service delivery. • Heightened fraud and security risks arising from economic pressure. • Increasing opportunistic financial crime and cybercrime, combined with rising sophistication of criminal activity, impacting customers and the Group. • Increasing exposure to potential data leaks arising from third and fourth-party suppliers. • Heightened risk to employee wellness from the pandemic and a prolonged work-from-home situation. Management's response • Maintain focus on physical and digital operational resilience and proactively identify and mitigate risks. • Maintain high stability of the technology estate to minimise incidents impacting customers and operational effectiveness. • Continue to invest in security platforms and continuously evolve controls to secure customer information, including investments in technology, data capability (including external intelligence), customer awareness campaigns and industry collaboration. • Embed a strong and resilient risk culture across the group through ongoing awareness and training. • Enhance due diligence performed on third-party suppliers through ongoing review and monitoring of controls. • Monitor and manage the impact on employees through an expanded Group wellness programme and support employees in the evolution of working environments.
Increased compliance risk due to new and emerging regulations and oversight	• Increasing pace and evolving complexity of regulatory and statutory requirements across the Group's markets impact on the current business model, including: – Finalisation of Basel III – Benchmark reform – Sustainability regulations – Resolution Framework – Depositor Insurance Scheme – Conduct, culture and governance supervision • Potential long-term impact of regulatory changes on business strategy and Group performance. Management's response • Maintain a forward-looking approach to evaluate, respond to and monitor regulatory and statutory change. • Engage with regulatory authorities and other stakeholders on upcoming regulatory changes to ensure the most appropriate outcomes for the banking sector and broader economy. • Strengthen a culture of sound regulatory compliance across the Group. • Develop systems with the agility to accommodate rapid change. • Understand the impact of future requirements on the current business model and practices, and proactively make necessary changes.

1. Summary of risk profile and RWA

1.3 Overview of RWA [OV1]

The following table provides the RWA per risk type and the associated minimum capital requirements. Additional disclosures for each risk type, namely credit, counterparty credit, equity investment, securitisation, traded market and operational, are included in the sections that follow.

		Group				Bank[1]			
		a		b	c	a		b	c
		31 Dec 2021	31 Dec 2020	30 Sep 2021	31 Dec 2021	31 Dec 2021	31 Dec 2020	30 Sep 2021	31 Dec 2021
		RWA Rm	RWA Rm	RWA Rm	MCR[2] Rm	RWA Rm	RWA Rm	RWA Rm	MCR[2] Rm
1	Credit risk (excluding counterparty credit risk (CCR))	675 930	663 636	667 689	77 732	463 433	467 595	462 380	53 294
2	Of which: standardised approach (SA)	198 515	180 421	192 993	22 829	430	62	526	49
3	Of which: foundation internal ratings-based (FIRB) approach	-	-	-	-	-	-	-	-
4	Of which: supervisory slotting approach	-	-	-	-	-	-	-	-
5	Of which: advanced internal ratings-based (AIRB) approach	477 415	483 215	474 696	54 903	463 003	467 533	461 854	53 245
6	CCR	16 254	20 210	17 016	1 869	14 780	19 443	15 689	1 700
7	Of which: standardised approach for CCR (SA-CCR)	16 254	20 210	17 016	1 869	14 780	19 443	15 689	1 700
8	Of which: internal model method (IMM)	-	-	-	-	-	-	-	-
9	Of which: other CCR	-	-	-	-	-	-	-	-
10	Credit valuation adjustment (CVA)	10 203	14 663	11 061	1 173	8 594	13 844	9 840	988
11	Equity positions under the simple risk weight approach	3 578	4 080	4 258	411	1 815	1 714	1 961	209
12	Equity investments in funds – look-through approach	9 172	7 262	7 017	1 055	2 396	378	379	276
13	Equity investments in funds – mandate-based approach	-	-	-	-	-	-	-	-
14	Equity investments in funds – fall-back approach	446	-	547	51	199	-	-	23
15	Settlement risk	1 191	762	1 163	137	1 133	704	1 097	130
16	Securitisation exposures in banking book	3 937	4 451	4 056	453	3 937	4 451	4 056	453
17	Of which: IRB ratings-based approach (SEC-IRBA)	3 937	4 451	4 056	453	3 937	4 451	4 056	453
18	Of which: securitisation external RBA (SEC-ERBA), including internal assessment approach (IAA)	-	-	-	-	-	-	-	-
19	Of which: securitisation SA (SEC-SA)	-	-	-	-	-	-	-	-
20	Traded market risk	39 183	40 110	41 202	4 506	25 838	28 944	27 646	2 971
21	Of which: SA	19 693	18 142	21 483	2 265	6 348	6 976	7 927	730
22	Of which: internal model approach (IMA)	19 490	21 968	19 719	2 241	19 490	21 968	19 719	2 241
23	Capital charge for switch between trading book and banking book	-	-	-	-	-	-	-	-
24	Operational risk	115 059	117 197	111 193	13 232	73 504	80 107	73 921	8 453
	Non-customer assets	25 519	25 483	24 656	2 935	16 046	18 637	15 897	1 845
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	23 442	17 207	22 265	2 696	11 270	4 227	10 286	1 296
26	Floor adjustment (after application of transitional cap)[3]	7 610	-	4 588	875	7 035	-	4 472	809
27	Total (1+6+10+11+12+13+14+15+16+20+23+24+25+26+non-customer assets)	931 524	915 061	916 711	107 125	629 980	640 044	627 624	72 447

[1] Absa Bank Limited includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.

[2] The 2021 minimum total regulatory capital adequacy requirement of 11.5% includes the capital conservation buffer, Pillar 2A at zero percent and the D-SIB add-on but excludes the bank specific individual capital requirement (Pillar 2B add-on).

[3] Includes the operational risk floor.

2. Basis of preparation

2. Basis of preparation

2.1 Scope of consolidation

The Group's registered head office is in Johannesburg, South Africa and operates in 14 countries. The Group has banks[1] in Botswana, Ghana, Kenya, Mauritius, Mozambique, Seychelles, South Africa, Tanzania (Absa Bank Tanzania and National Bank of Commerce), Uganda and Zambia, as well as insurance operations in Botswana, Kenya, Mozambique, South Africa and Zambia. The Group also has representative offices in Namibia, Nigeria and the United States, as well as securities entities in the United Kingdom and the United States.

The legal structure below outlines the Group's holdings:

2.2 Pillar 3 risk management report oversight

The purpose of the Pillar 3 risk management report is to provide a comprehensive view of the Group's RC and risk exposures. It complies with:

- The BCBS revised Pillar 3 disclosure requirements (Pillar 3 Standard).
- Regulation 43 of the Regulations relating to Banks (Regulations), issued in terms of the Banks Act, No. 94 of 1990 (Banks Act), where not superseded by the revised Pillar 3 disclosure requirements.

The information in this report is unaudited.

For the reporting period 31 December 2021 (compared with 31 December 2020), the Board is satisfied that the Group's risk and capital management processes operated effectively, that business activities were managed within the Board-approved risk appetite, and that the Group is adequately capitalised and funded to support the execution of its strategy.

[1] Banks are wholly owned, apart from the following where the Group holds majority stakes: Botswana 67.8%, Kenya 68.5%, Mozambique 98.7%, National Bank of Commerce, Tanzania 55% and Seychelles 99.8%

2. Basis of preparation

2.3 Preparation, validation and sign-off

This report was prepared in line with the Board-approved public disclosure policy. The policy sets out responsibilities in the preparation, validation and sign-off of the report. The Group's risk function centrally reviewed and challenged the disclosures to ensure they are a fair representation of the risk profile. The report was validated and approved through the Group's risk governance channels which include Principal Risk Officers (PROs), the Group Chief Risk Officer (GCRO), Group Financial Director, and the Group Risk and Capital Management Committee (GRCMC).

2.4 Scope of application of Basel measurement

The Group applies the following RC demand measurement approaches when determining its Pillar 1 capital requirements:

Risk type	Approach used
Credit risk (South Africa)	
• Retail and wholesale credit risk	• AIRB
• CCR	• SA-CCR and AIRB
• CVA	• SA
• Securities financing	• Comprehensive approach
• Statutory reserve	• SA
• Liquid asset portfolio	• AIRB
• Equity investment risk in the banking book – listed and unlisted	• Market-based simple risk weight approach
• Investments in associates and joint ventures	• Equity investments in funds-look-through approach and pro rata consolidated methodology or the deduction approach
Credit risk (ARO)	
• All entities and credit risk types	• SA
Traded market risk	
• General position risks for trading book positions	• IMA
• Issuer-specific risks for trading book positions	• SA
Operational risk	
• Operational risk – majority of the Group's divisions	• Advanced measurement approach (AMA)
• Certain joint ventures and associates and ARO legal entities	• Basic indicator approach (BIA) or SA
Other risks	
• Non-customer assets	• SA

2.5 Accounting policies and valuation methodologies

The principal accounting policies applied are set out in the Group's most recent audited annual financial statements.

2.6 Linkages between financial statements and regulatory exposures

Where a different treatment is applied for Basel regulatory reporting compared to statutory accounting reporting, the approach is set out below:

Entity	Statutory accounting treatment	Basel III regulatory treatment
Subsidiaries engaged in insurance activities (Absa Financial Services Limited (AFS))	Consolidated	Excluded from the calculation of the capital adequacy ratio
Associates, joint ventures and participation in businesses that are financial in nature	Equity-accounted	Deducted from qualifying capital or proportionately consolidated
Associates, joint ventures and participation in businesses that are not financial in nature	Equity-accounted	Included in equity investment risk capital

2. Basis of preparation

2.6.1 Differences between accounting and regulatory scope of consolidation and mapping of financial statement categories with regulatory risk categories [LI1]

The carrying values under the scope of regulatory consolidation below are based on the SARB's regulatory requirements. The financial statement carrying values reflect IFRS requirements.

	a	b	c	d	e	f		g
	2021							
			Carrying values of items					
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to credit risk framework	Subject to CCR framework	Subject to securitisation framework	Subject to market risk framework	Equity Investment Risk	Other Assets	Not subject to capital requirements or subject to deduction from capital
	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Assets									
Cash, cash balances and balances with central banks	66 041	63 237	6 610	-	-	-	-	56 675	-
Investment securities	188 898	182 844	179 154	-	-	-	3 825	-	-
Trading portfolio assets	203 079	203 079	79 394	52 424	-	73 097	47 075	-	-
Hedging portfolio assets	5 159	5 159	2	3 555	-	3 555	-	-	-
Other assets	24 156	23 256	-	-	-	-	-	14 049	-
Current tax assets	665	438	-	-	-	-	-	-	-
Non-current assets held for sale	4 259	4 259	-	-	-	-	-	872	-
Loans and advances	1 092 257	1 091 191	58 673	22 792	-	22 792		-	-
Reinsurance assets	732	-	-	-	-	-	-	-	-
Investments linked to investment contracts	19 803	-	-	-	-	-	-	-	-
Investments in associates and joint ventures	1 593	1 593	-	-	-	-	1 593	-	-
Investment properties	421	233	-	-	-	-	-	233	-
Property and equipment	15 970	15 875	-	-	-	-	-	15 875	-
Goodwill and intangible assets	11 903	11 535	-	-	-	-	-	8	11 535
Deferred tax assets	5 897	5 724	-	-	-	-	-	(28)	5 724
Total assets	**1 640 833**	**1 608 423**	323 833	78 771	-	99 444	52 493	87 684	17 259

2. Basis of preparation

	a	b	c	d	e	f			g
	2021								
			Carrying values of items						
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to credit risk framework	Subject to CCR framework	Subject to securitisation framework	Subject to market risk framework	Equity investment risk	Other Assets	Not subject to capital requirements or subject to deduction from capital
	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm	Rm
Liabilities									
Trading portfolio liabilities	72 819	72 819	-	-		72 819			-
Hedging portfolio liabilities	3 659	3 659	-	-	-	-	-	-	3 659
Other liabilities	48 410	47 072	-	-	-	-	-	-	47 072
Provisions	5 396	5 289	-	-	-	-	-	-	5 289
Current tax liabilities	1 091	1 080	-	-	-	-	-	-	1 080
Non-current liabilities held for sale	289	289	-	-	-	-	-	-	289
Deposits	1 173 766	1 173 766	-	-	-	-	-	-	1 173 766
Debt securities in issue	131 076	131 076	-	-	-	-	-	-	131 076
Liabilities under investment contracts	24 301	3 634	-	-	-	-	-	-	3 634
Policyholder liabilities under insurance contracts	5 731	(3 094)	-	-	-	-	-	-	(3 094)
Borrowed funds	26 600	26 600	-	-	-	-	-	-	26 600
Deferred tax liabilities	386	129	-	-	-	-	-	-	129
Total liabilities	**1 493 524**	**1 462 319**	**-**		**-**	**72 819**	**-**	**-**	**1 389 500**

Column b: The regulatory scope of consolidation excludes balances related to the Group's insurance entities. The financial statements include these balances.

Columns c to g: The carrying value under regulatory scope of consolidation does not equal the sum of the amounts subject to the different risk framework due to:

- Derivative financial instruments (contained in trading portfolio assets, trading portfolio liabilities and hedging portfolio assets) are subject to RC for both CCR and market risk.
- Reverse repos to non-banks included in loans and advances to customers are subject to RC under the credit and CCR frameworks.
- Reverse repos to banks are included in loans and advances to banks and are subject to RC under the credit and CCR frameworks.

2. Basis of preparation

2.6.2 Main sources of differences between regulatory exposure amounts and carrying values in financial statements [LI2]

				a			b	c
		2021						
			Items subject to					
		Total	Credit risk framework	Securitisation framework	CCR framework	Market risk framework	Equity investment risk	Other assets
		Rm	Rm	Rm	Rm	Rm	Rm	Rm
1	Asset carrying value amount under scope of regulatory consolidation (as per template LI1)	1 587 988	323 833	-	78 771	99 444	52 493	87 684
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	72 819	-	-	-	72 819	-	-
3	**Total net amount under regulatory scope of consolidation**	**1 515 169**	**323 833**	**-**	**78 771**	**26 625**	**52 493**	**87 684**
4	Off-balance sheet amounts	-	357 827	-	-	-	-	-
5	Differences in valuations	-	871 162	816	(38 285)	-	(49 266)	-
6	Differences due to consideration of provisions	-	(33 534)	-	-	-	-	-
7	Credit conversion factor (CCF)	-	(115 092)	-	-	-	-	-
8	Significant investments not subject to RWA	-	-	-	-	-	-	-
9	**Exposure amounts considered for regulatory purposes**	**1 515 169**	**1 404 196**	**816**	**40 486**	**26 625**	**3 227**	**87 684**

The most important drivers of the difference between the carrying value and exposures considered for regulatory purposes are: [LIA]

- Line 4: Pre-CCF off-balance sheet exposures that contribute to the regulatory credit risk framework.
- Line 5: Differences in valuations under the credit risk framework relate to differences in treatment between risk and finance due to eliminations and grossing up of transactions, including netting and valuation effects under the CCR framework as well as valuation effects under the CCR framework.
- Line 6: Differences due to consideration of provisions relate to impairments under the AIRB approach deducted from credit risk framework in table LI1.

The exposure amounts considered for regulatory purposes in table LI2 above correspond to the exposure reported in the following tables:

- Credit risk framework total corresponds to the sum of exposure at default (EAD) post-CRM and CCF in table CR6 on page 42 and exposures post-CCF and CRM in table CR4 on page 37.
- Securitisation framework total corresponds to the sum of securitisation exposures where the Group acted as originator and sponsor in table SEC1 on page 59.
- CCR framework total corresponds to the sum of EAD post-CRM under the different approaches in table CCR1 on page 54.

Equity investment risk total corresponds to the sum of exposure amount in table CR10 on page 62.

2. Basis of preparation

2.6.3 Prudent valuation adjustments (PVA) [PV1]

The total PVA adjustment for 2021 amounted to R761m (2020: R725m), of which R670m related to the South African operation and R91m to ARO.

The Group has a robust independent valuation control framework responsible for ensuring positions held at fair value are valued at exit price as evidenced by independent market data and according to IFRS. PVA is considered the excess of valuation adjustments required to achieve the identified prudent value over and above any adjustments applied under IFRS and recognized in CET1 capital. The Group applies the simplified approach for the calculation of PVA.

	2021		
	Full PVA R'000	Trading book R'000	Banking book R'000
Absa Bank	667 290	255 954	411 335
Absa Group	1 957	-	1 957
Absa Regional Operations	91 460	19 523	71 936
Africa WIMI	1 700	-	1 700
Mozambique	2 458	167	2 290
Botswana	2 886	211	2 675
Ghana	18 073	8 489	9 584
Kenya	19 095	6 597	12 497
Mauritius Offshore	12 868	7	12 861
Mauritius Onshore	16 609	1 375	15 234
NBC	2 503	299	2 204
Nigeria	12	-	12
Seychelles	-	-	-
Tanzania	1 906	409	1 497
Uganda	8 044	770	7 274
Zambia	5 299	1 196	4 103
Total PVA	760 707	275 478	485 229

3. Risk management overview

3. Risk management overview

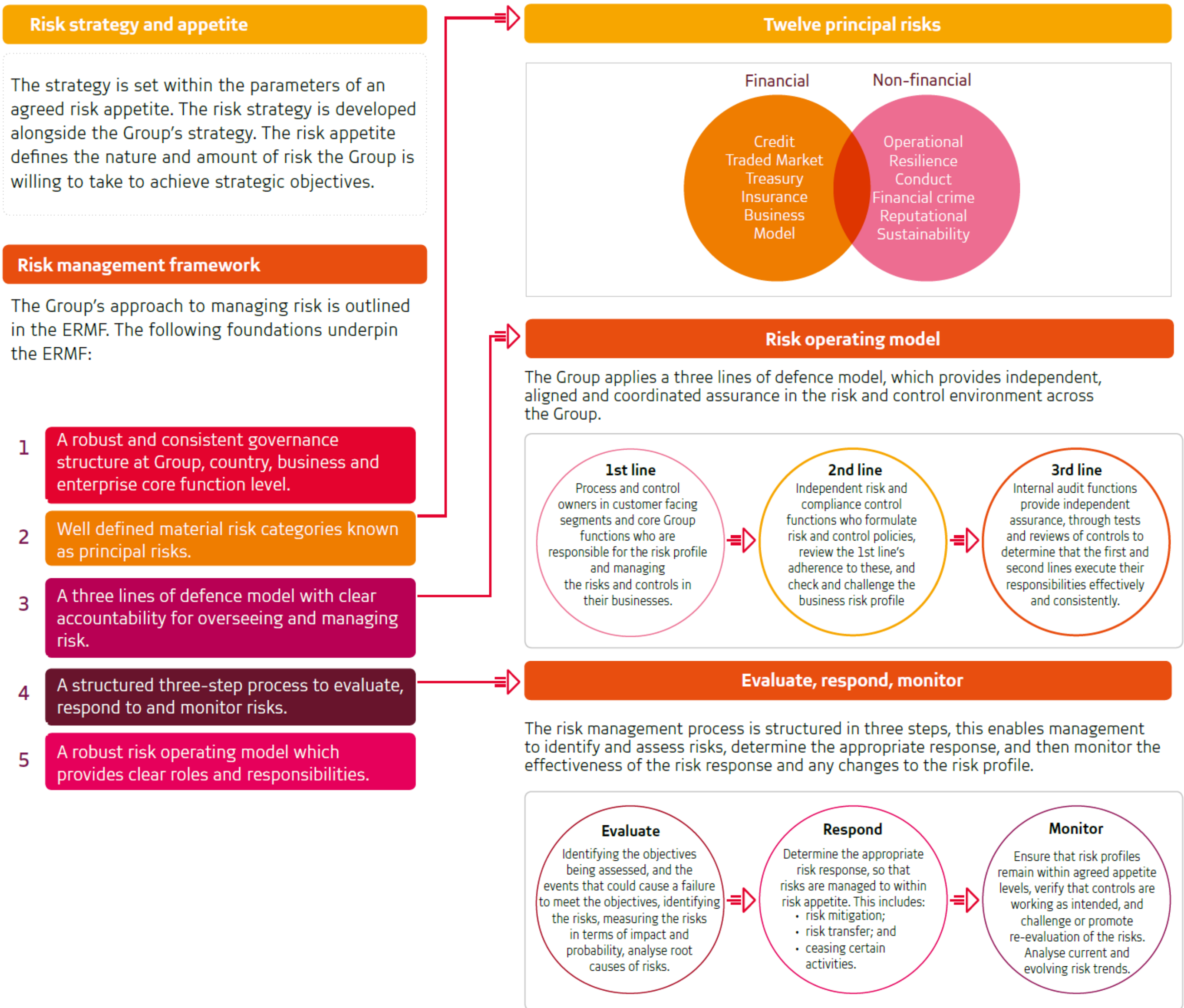
3.1 Risk management approach [OVA]

The Group actively identifies and assesses risks arising from internal and external environments, while also proactively identifying emerging risks. To ensure effective implementation, this consolidated response is monitored as follows:

- An integrated governance structure at Group, country, business and enterprise core function levels, promoting a sound risk culture.
- Well-defined risk categories, known as principal risks, for complete risk coverage.
- A combined assurance model with clear accountability for managing and overseeing the effective execution of assurance throughout the Group.
- Comprehensive and structured processes for evaluating, responding to and monitoring risks.
- An entrenched risk culture underpinning an effective risk operating model and appropriate risk practices, tools and techniques to support the Group's strategy.

3.2 Enterprise Risk Management Framework (ERMF)

The following graphic is a visual representation of the ERMF:



The role of risk management is to evaluate, respond to and monitor risks in the execution of the Group's strategy. The Group's strategy is supported by an effective ERMF. The Group's risk function performs conformance reviews; checks and challenges the risk profile; and retains independence in analysis and decision-making, underpinned by regular reporting to the Executive Committee and the Board. The GCRO assumes responsibility for the ERMF.

The ERMF:

- Outlines the approach to the management of risk and provides the basis for setting frameworks and policies, and establishing appropriate risk practices throughout the Group;
- Defines the risk management process and sets out the activities, tools, techniques and the operating model to ensure material risks can be identified and managed;
- Ensures appropriate responses are in place to protect the Group and its stakeholders; and
- Sets out principal risks and assigns clear ownership and accountability for these risks.

3. Risk management overview

The principal risks as defined in the ERMF are credit, traded market, treasury, insurance, business, model, operational, resilience, conduct, financial crime, reputational and sustainability. Risks are defined in recognition of their significance to the Group's strategic ambitions.

3.3 Strategy and risk appetite

3.3.1 Strategy, business model and risk appetite

The Group creates, grows and protects wealth through its banking, insurance and asset management businesses by implementing the Group's business strategy. The strategy focuses on opportunities for growth and considers the matters believed to be material to long-term sustainability. It is the key driver of risk and return and should be achieved within risk appetite.

The risk strategy is developed alongside the Group's business strategy and forms an integral part of the integrated planning process. Within the risk strategy, risk appetite defines the nature and amount of risk that the Group is willing to take to meet its strategic objectives. This forms part of the strategic planning process to ensure the business strategy is achievable within risk appetite, and risk information is considered in the organisation's decision-making and planning process.

The Group's risk appetite:

- Specifies the level of risk the Group is willing to take.
- Considers all principal and material risks individually and, where appropriate, in aggregate.
- Consistently measures, monitors and communicates the level of risk for different risk types, expressed in qualitative and quantitative terms.
- Describes agreed parameters for the Group's performance under varying levels of financial stress relating to earnings, capital adequacy, leverage and liquidity ratios.
- Is considered in key decision-making processes, including business planning, mergers and acquisitions, new product approvals and business change initiatives.

The Group's risk appetite is stated qualitatively in terms of risk principles and risk preferences, and refers to the types of risk the Group actively seeks as well as those it accepts and avoids. In addition, the maximum amount of risk that the Group is prepared to accept to achieve its business objectives is defined using a range of quantitative metrics relating to capital adequacy, earnings volatility, liquidity and leverage. These are cascaded to the level of principal risk, legal entity and business unit.

Group quantitative risk appetite metrics	Description
CET1 adequacy ratio (%)	The Group aims to have sufficient capital supply to remain within risk appetite and above minimum regulatory CET1 capital adequacy ratio post -management actions following a severe yet plausible stress.
Tier 1 adequacy ratio (%)	The Group aims to have sufficient capital supply to remain within risk appetite and above minimum regulatory tier 1 capital adequacy ratio post-management actions following a severe yet plausible stress.
Total capital adequacy ratio (%)	The Group aims to have sufficient capital supply to remain within risk appetite and above minimum regulatory total capital adequacy ratio post-management actions following a severe yet plausible stress.
Economic capital coverage (multiple)	The Group aims to have sufficient capital supply to remain within risk appetite and maintain an investment-grade credit rating post-management actions following a severe yet plausible stress.
CLR (%)	The Group aims to maintain credit losses in its portfolios within risk appetite following a severe yet plausible stress.
Earnings-at-risk (EaR) (%)	With 90% confidence, the reduction in the Group's pre-tax earnings will not exceed 80% following a severe stress event.
Leverage ratio (%)	The Group aims to remain within risk appetite and above regulatory minimum leverage ratio post-management actions following a severe yet plausible stress.
LCR (%)	The Group has sufficient high-quality liquid assets (HQLA) to survive a significant stress over a 30-day period.
NSFR (%)	The Group maintains a stable funding profile where available stable funding (ASF) is adequate to meet its required stable funding (RSF).

3. Risk management overview

Group qualitative risk appetite statement

The Group's qualitative risk appetite statement provides a high-level perspective on what the Group considers the most important risk themes impacting its aggregate risk profile. It provides guiding principles on the risk that the Group actively seeks, risks that arise from being in business and risks that should be avoided.

Risk theme	Qualitative statement
Business and strategy	• Focus risk-taking on activities and business engagements that are core to the business strategy. This includes products, customer segments and geographies as they relate to the Group's deposit taking, lending, transacting, trading, advisory, insurance and investment businesses. • Pursue risk-taking through activities that the Group understands and has the requisite skills and capabilities to manage. Continue to enhance the Group's skills and capabilities in line with emerging opportunities, trends and changing markets. • Minimise strategic drift in pursuing business objectives by proactively monitoring and timeously responding to material deviations from planned outcomes. This risk appetite statement takes cognisance of the continuous change in the business environment and emerging opportunities. Maintain alignment to strategy while ensuring that the strategy remains supportive of the Group's growth objectives, risk preferences and stakeholder value creation.
People and leadership	• Recruit, develop and train an appropriate level of skilled and capable human capital in line with an effective operating model design for resourcing, supporting systems, diversity and performance. • Align remuneration to support the delivery of strategic objectives and the efficient usage of financial resources in accordance with approved risk appetite. • The Group has no tolerance for any form of discrimination or prejudicial treatment based on age, culture, race, gender and disability, including harassment of any kind. • Leadership to set an example for a high-performing and values-based culture. • The Group has no tolerance for fraud by its employees and considers it unacceptable behaviour.
Data and technology	• Maintain robust systems and recovery capabilities to minimise disruptions to operations due to incidents relating to technology infrastructure, third-party service providers, fraud, financial crime, cybersecurity and data protection. • Protect the Group's infrastructure and customer assets as it pursues its digital strategy while maintaining robust and value-adding data management and processing capabilities. • Evaluate the technology landscape on a continuous basis to ensure the Group has a forward-looking view of existing and emerging market trends to which it must respond.
Capital adequacy	• Maintain capital adequacy at levels that enable the Group to continue doing business under severe yet plausible stress conditions within the Board-approved risk appetite. • Maintain capital levels above minimum regulatory requirements under a very severe stress event. • Allocate capital optimally to generate appropriate returns and ensure the Group does not unduly hold capital in excess of the approved risk appetite.
Funding and liquidity	• Maintain a healthy liquidity position by holding adequate but not excessive buffers of HQLA above minimum regulatory requirements. • Maintain the tenor composition of assets and liabilities at levels that ensure the sustainability of the Group's funding structure under business as usual and stressed conditions.
Concentrations	• Always maintain a well-diversified portfolio, while being cognisant of structural constraints that exist in specific markets in which the Group operates. Manage structural concentrations within approved risk appetite. • Conduct risk-taking activities in a manner that optimises concentrations in industries, sectors, products, counterparties, maturity, funding base, countries, types of collateral and credit protection providers.
Earnings volatility	• Maintain diversified sources of earnings through an economic cycle to ensure sustainable shareholder value creation. • Manage risk-taking activities within the Board-approved risk appetite for earnings volatility under business as usual and stressed conditions.
Conduct, legal and reputation	• Minimise the risk of our customers being harmed, or the integrity and stability of the market. • Regularly assess our customer engagement model to ensure we deliver on our customer-centric principles. • Always uphold a satisfactory level of employee conduct and ethical behaviour when executing activities on the Group's behalf. • Always comply with regulatory requirements and other laws to which the Group and its subsidiaries are bound. • Maintain business activities and processes that uphold the Group's reputation, brand and franchise value.
Environmental	• Continuous assessment of the suitability of the Group's products and customer value propositions against changing environmental factors, while continuing to fulfil its role of growing the economy in a sustainable and responsible manner.

Additional qualitative statements and risk appetite metrics relevant for the risk types, legal entities and business units are defined to align strategy execution and support the Group's defined risk appetite.

3. Risk management overview

3.3.2 Stress testing and scenario planning

Stress testing and scenario analyses are key elements of the Group's integrated planning and risk management process. The use thereof allows the Group to assess the performance and resilience of its business model in specific economic environments. Stress tests provide a forward-looking view of risks under adverse circumstances to estimate the potential impact on the financial system and the group, including its subsidiaries and business lines / portfolios. This is supported by a framework, policies, procedures and consideration of international best practice and infrastructure platforms. The Group Risk and Capital Management Committee is responsible for oversight of the stress testing results with senior management committees such as the Executive Risk Committee tasked with developing, reviewing and challenging the robustness of the process.

Absa Group's Stress Testing Framework

Absa Group's stress testing framework supports key business processes namely:

- Strategic and financial planning.
- Risk appetite setting and measurement.
- Internal Capital Adequacy Assessment Process (ICAAP), including capital planning and the setting of capital buffers.
- Internal Liquidity Adequacy Assessment Process (ILAAP), including liquidity planning and setting of liquidity buffers.
- Identification of risks and mitigation of risks through the review and challenge of limits, restraining of exposures and/or hedging of underlying risks.
- Development and review of contingency and recovery plans.
- Risk and Portfolio management.
- Communication with internal and external stakeholders on the sensitivity of Absa Group to external events and macro-economic downturn.
- Regulatory stress test requirements.

Absa Group performs the following types of stress tests:

Type of exercise	Purpose	Scenario type	Approach	Frequency
Internal enterprise-wide stress testing	Evaluates the impact of changing market variables on business decisions (e.g., financial, capital and funding implications).	Based on a range of plausible macroeconomic scenarios ranging from mild to severe stresses.	Largely bottom-up approaches, with specific risks being tested through top-down approaches.	At least annually
Supervisory stress testing	Evaluates the impact of regulator determined scenarios on key regulatory measures (e.g., capital, liquidity and operational targets and metrics).	Based on macroeconomic scenarios provided by regulatory authorities.	The approach taken varies based on regulatory scenarios. However, it is largely a top-down approach focusing mainly on an asset class, legal entity, or Group-wide stress assessment.	As directed by the Regulator
Reverse and business model stress testing	Assists the Group in understanding key risks and scenarios that may put business strategies and the Group's ability to remain a going concern at risk, as well as understanding the effectiveness and credibility of proposed recovery actions.	Based on extremely severe stress scenarios that would result in the bank reaching a 'point of failure' without implementing any recovery actions.	Largely top-down approaches used.	Annually
Risk type and ad hoc stress testing	Typically evaluates sensitivity of a specific risk type, combination of risk types, business line, portfolio or legal entity to a single shock or multiple shocks.	Based on a combination of internally determined use case scenarios ranging from mild to severe stress scenarios and idiosyncratic risks.	Largely top-down approaches used.	Ad hoc

Over the reporting period, the Group's stress testing programme focused on automating its stress testing process using a vendor supported cloud-based platform. The primary objective of the automation project was to implement the internally developed stress testing models on an enhanced production IT platform to improve operational performance, use and governance. Additionally to cater for future enhancements as stress testing evolves.

The Group performed the following stress tests during the period:

- The annual reverse stress test was performed to test the vulnerability of the Group's business models to a very severe global macroeconomic deterioration and internal idiosyncratic factors. The results was used to support the recovery planning review process.
- The annual enterprise-wide stress test primarily focused on identifying and measuring probable downside risks and scenarios relating to the continued global weak economic environment and COVID-19 pandemic strains on the performance and resilience of the Group's operations.
- The SARB 2021 Common Scenario Stress Test (CSST) which aims to test the resilience of the South African banking sector to a selection of hypothetical, severe but plausible adverse macroeconomic scenarios. The exercise assessed the impact of the scenario on the solvency position and liquidity profile of the bank. Additionally, the exercise included a focused qualitative and quantitative assessment on climate, physical and transition risk.

3. Risk management overview

3.4 Risk process

The risk management process follows a three-step approach, namely evaluate, respond and monitor (the E-R-M process). This enables management to identify and assess risks, determine the appropriate risk response, and then monitor the effectiveness of the risk response and any changes to the risk profile. The analysis is used to promote an efficient and effective approach to risk management.

This three-step risk management process:

- Can be applied to every objective at every level across the Group.
- Is embedded into business decision-making processes.
- Guides the Group's response to changes in the external or internal environment.
- Involves all colleagues and all three lines of defence.

The three-step E-R-M process is employed as follows:

Risk management process	
Evaluate	• Communicating and consulting with appropriate external and internal stakeholders in and throughout all steps of the risk management process. Communication seeks to promote awareness and understanding of risk, and consultation involves obtaining feedback and information to support decision-making. • Defining the scope, context and criteria, customising the risk management process and enabling effective risk assessment (identification, analysis or evaluation) and risk treatment. • Clearly identifying the objective(s) being assessed, and the events or circumstances that could cause a delay or failure to meet the objective(s) in full, including the external environment (e.g. economy or competitive landscape), internal environment (people, process or infrastructure), and touchpoints between the Group and its customers, suppliers, regulators and other stakeholders. • Using appropriate tools for identifying risks such as interviews, surveys, self-assessments, workshops, audit findings, industry benchmarking, review of prior loss events, critical path analysis, and challenging assumptions and dependencies by developing contrary views and positions and using expert judgement. • Calibrating and measuring risks in terms of impact, probability and speed of onset (where the use of models must adhere to set principles). • Categorising risks (preventive, strategic or external) and matching them to an appropriate risk management model/system. Assessing risks based on inherent and residual risks. • Analysing the root causes of identified events and circumstances, the underlying sources of risk, and the cause -and -effect relationships. • Investigating the relationships and interactions between risks, compounding effects, correlations, concentrations and aggregations. • Ranking risks and taking an overall portfolio view of them to determine priorities.
Respond	• Determining the appropriate risk treatment, which is an iterative process of formulating and selecting risk treatment options, planning and implementing, assessing the effectiveness, deciding whether the remaining risk is acceptable, and taking further action if needed. • Embedding controls into the business activity/process and automating controls wherever possible, e.g. as they may apply to preventive risks. Considering the implications of control failures, and whether secondary or latent controls should be deployed in the case of material risks. • Debating/discussing strategic risks to determine cause and effect with appropriate responses. • Reviewing and redesigning stress/scenario testing in response to the development of new/unanticipated external risks. • Complying with all relevant laws and regulations and focusing on priority risks first. • Looking for a response that might mitigate more than one risk and extend or replicate existing controls if appropriate. Considering any unintended consequences, e.g. mitigating actions taken to control one risk could introduce other risks or undermine existing controls. • Significant risk events undergo an independent root cause analysis.
Monitor	• Establishing monitoring and review processes to assure and improve design, implementation and outcomes. • Establishing recording and reporting processes to provide information for decision-making and improve management activities. • Focusing on progress towards objectives, using key performance indicators (KPIs) to identify objectives that require further attention. • Analysing current and evolving risk profiles and risk trends, using key risk indicators (KRIs) to understand changes in the risk environment, proactive monitoring of new risks that might impact objectives (e.g. horizon scanning and scenario analyses), and monitoring changes in risk materiality, frequency and impact, and the appropriateness of existing responses. New risk evaluations should be initiated if necessary. • Ensuring risks are maintained within set limits (refer to the risk appetite section on page 18), and that this remains appropriate as circumstances and objectives evolve. • Checking that controls are functioning as intended and remain fit for purpose: track performance using key control indicators (KCIs), monitoring first-line activities to ensure these are operating within mandates, ensuring policies are routinely updated and standards have been implemented, and ensuring appropriate resources are being deployed. Monitoring includes assurance, control testing and conformance reviews. • Applying a combined assurance model to optimise overall assurance in the risk and control environment. • Where a risk event materialises assessing root causes, identifying possible control failures, identifying potential behavioural failures, considering whether better knowledge would have improved decision-making, and identifying what lessons could be learned for future assessments and management of risks. Control issues must be assigned clear ownership and timelines for resolution. • KPIs, KRIs and KCIs must adhere to set principles.

3. Risk management overview

3.5 Risk architecture

3.5.1 Risk culture

The Board takes the lead in establishing the 'tone at the top' by promoting risk awareness in a sound risk culture. Executive leadership ensures a sound risk culture supports the Group's ability to operate consistently within its risk appetite, identify any desirable changes to the risk culture and ensure it takes steps to address those changes.

The purpose of risk management is the creation and protection of value. It improves performance, encourages innovation and supports the achievement of the Group's strategy.

Principles of effective risk management culture:

- Integrated – risk management is an integral part of all the Group's activities.
- Structured and comprehensive – a structured and comprehensive approach to risk management contributes to consistent and comparable results.
- Customised – the risk management framework and process are customised and proportionate to the Group's external and internal context related to its objectives.
- Inclusive – appropriate and timely involvement of stakeholders enables their knowledge, views and perceptions to be considered. This results in improved awareness and informed risk management.
- Dynamic – risks can emerge, change or disappear as the Group's external and internal context changes. Risk management anticipates, detects, acknowledges and responds to those changes and events appropriately and timeously.
- Best available information – the inputs to risk management are based on historical and current information, as well as on future expectations. Risk management explicitly considers any limitations and uncertainties associated with such information and expectations. Information should be timeous, clear, and available to relevant stakeholders.
- Human and cultural factors – human behaviour and culture significantly influence all aspects of risk management at each level and stage. The Group strives for ethical behaviour underpinned by the Absa Values.
- Continuous improvement – risk management is improved through ongoing learning and experience.

3.5.2 The three lines of defence

The Group applies a three lines of defence model to govern risk across all businesses and functions. The ERMF assigns specific responsibilities to each line of defence.

All employees are responsible for ensuring the Group operates within its risk appetite. These responsibilities are defined in terms of the employee's role in the three lines of defence.

<table>
<tr><th colspan="3">Three lines of defence</th></tr>
<tr><th>1st line of defence</th><th>2nd line of defence</th><th>3rd line of defence</th></tr>
<tr><th>Business units</th><th>Risk and compliance functions</th><th>Internal audit</th></tr>
<tr><td>• Develop and implement standards and procedures.
• Propose and agree risk appetite and supporting limits with the second line of defence.
• Identify and manage risks in business activities in line with the approved appetite and agreed limits.
• Implement and maintain controls.</td><td>• Framework and policy development and conformance.
• Independent review and challenge of business units' risk appetite, underlying limits and profiles.
• Operate as centres of excellence for specified risk types.
• Analyse and monitor risk information
• Establish and operate proper governance.</td><td>• Internal audit provides independent assurance to the Board and executive management over the effectiveness of governance, risk management and control over current, systemic and evolving risks.</td></tr>
<tr><td colspan="3">All three lines of defence support coordinated, effective and efficient combined assurance.</td></tr>
</table>

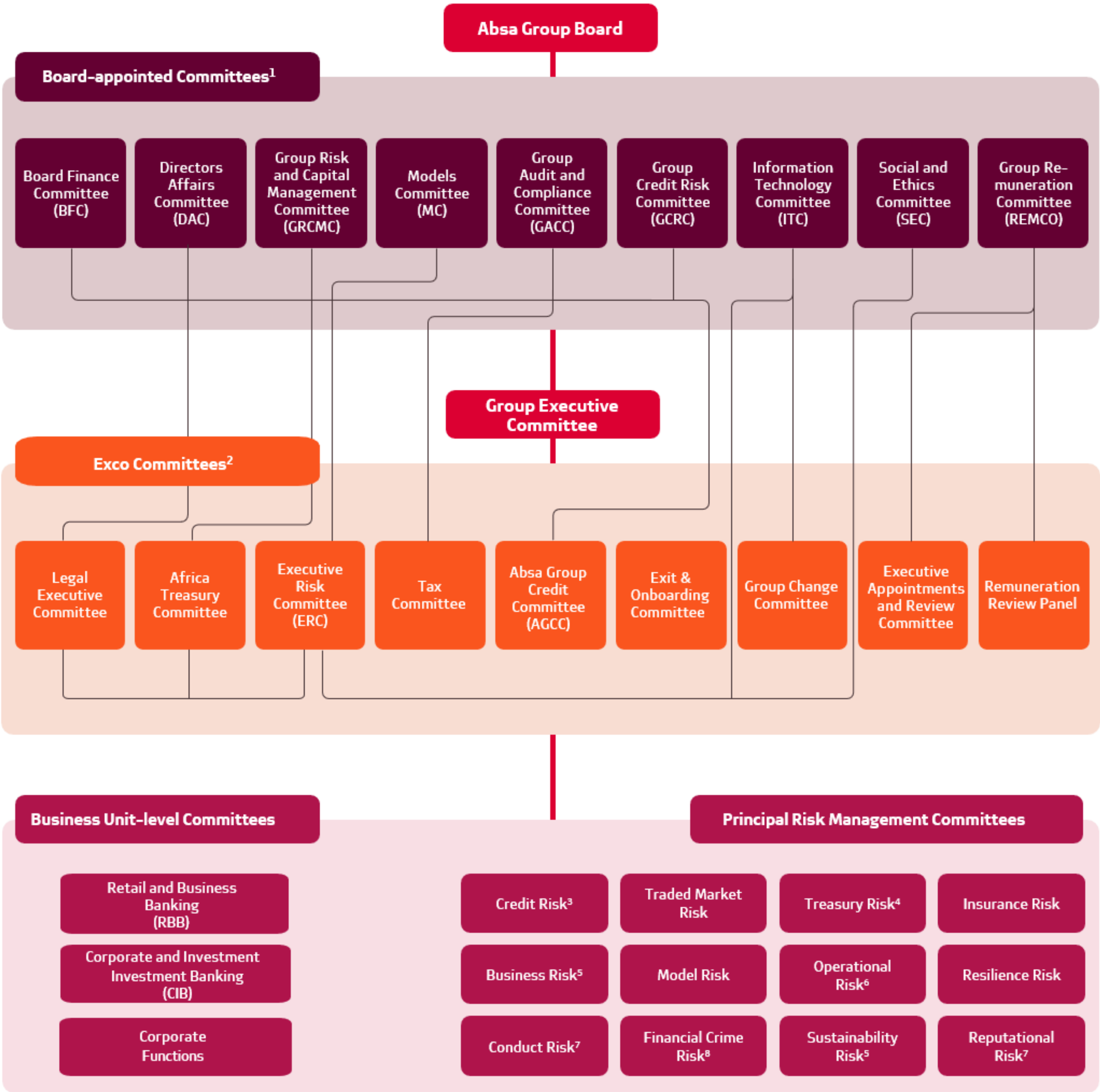
Regardless of their function, all teams who manage processes in the Group are responsible for designing, implementing, remediating, monitoring and testing the controls for those processes.

3. Risk management overview

3.5.3 Governance

The Group Board is supported by several committees at Board, executive, business and function levels. The diagram below depicts the risk-related committees. ARO risk governance structures are compatible with the Group and comply with in-country regulations.

Risk governance structure



[1] Board appointed committees in place not included in the diagram are Directors' Affairs Committee and the Board Finance Committee.

[2] Exco committees in place not included in the diagram are Regulatory Investigations Oversight Committee and the Group Investment Committee.

[3] Credit risk managed through business unit credit committees, Group ERC and Group Credit Committee (GCC).

[4] Treasury risk managed through Africa Treasury Committee (ATC).

[5] Business and sustainability risk managed through Group ERC.

[6] Operational risk managed through GRCMC (responsible for risk management matters) and GACC (responsible for control environment matters).

[7] Conduct risk and reputational risk managed through Market Conduct Steerco.

[8] Financial crime risk managed through Financial Crime Oversight Committee (FCOC).

3. Risk management overview

The main risk-related responsibilities of the Board-appointed committees are as follows:

Committees	Key risk focus areas	Principal risk covered
Group Risk and Capital Management Committee (GRCMC)	Risk, risk appetite, all elements of the ERMF, capital, funding and liquidity management.	Full responsibility: • Traded market risk • Treasury risk • Insurance risk • Business risk Monitors: • Credit risk • Model risk • Operational risk • Resilience risk • Conduct risk • Financial crime risk • Reputational risk • Sustainability risk
Models Committee (MC)	Approval of material models and model governance oversight.	• Model risk
Group Audit and Compliance Committee (GACC) (includes Disclosure Committee)	Internal controls, compliance, internal and external audit, accounting and external reporting.	• Operational risk • Financial crime risk
Group Credit Risk Committee (GCRC)	Approval of large single-name exposures and material country risk limits, credit portfolio oversight, consideration and management of emerging risks and material concentrations.	• Credit risk
Information Technology Committee (ITC)	IT systems, data, architecture and innovation, resilience and return on investment.	• Resilience risk
Social and Ethics Committee (SEC)	Conduct, sustainability, stakeholder management, corporate citizenship, ethics, labour, diversity and inclusion, and general human resources and talent management matters.	• Conduct risk • Sustainability risk • Operational risk (people risk)
Group Remuneration Committee (RemCo)	Remuneration and incentive arrangements, policy and disclosures, executive appointments and succession.	• Operational risk (people risk) • Elements of reputational risk
Directors Affairs Committee (DAC)	Assists in corporate governance including composition of Board, induction and director training; effectiveness evaluation of the Board, and considering matters of regulatory and reputational risk	• Reputational risk

3.5.4 Combined assurance

The Group adheres to the combined assurance model, as outlined in Principle 15 of the King IV Report on Corporate Governance™ for South Africa 2016[1]. Combined assurance is a coordinated activity that aligns and integrates assurance work across the Group's three lines of defence. It includes external assurance providers, maintaining segregation of duties, and the efficient and effective management of the Group's control environment. This ensures optimal coverage over the material risks that the Group is exposed to. Combined assurance is integrated to daily business decisions and activities.

Each business is expected to:

- Drive the coordination of assurance activities across the three lines of defence by implementing effective governance and oversight processes.
- Demonstrate adequate risk and control coverage over critical processes, material control issue remediation and strategic change initiatives as requested by senior management, Board and regulatory requests.
- Demonstrate appropriate remedial responses to the identification of unacceptable residual risk exposure and control issues.

Combined assurance coverage, plans and reports are monitored at business and functional levels, and the ERC and the GACC report these to Exco and Board respectively.

3.5.5 Frameworks, policies and standards

The Group's policy hierarchy delivers a consistent approach across the Group:

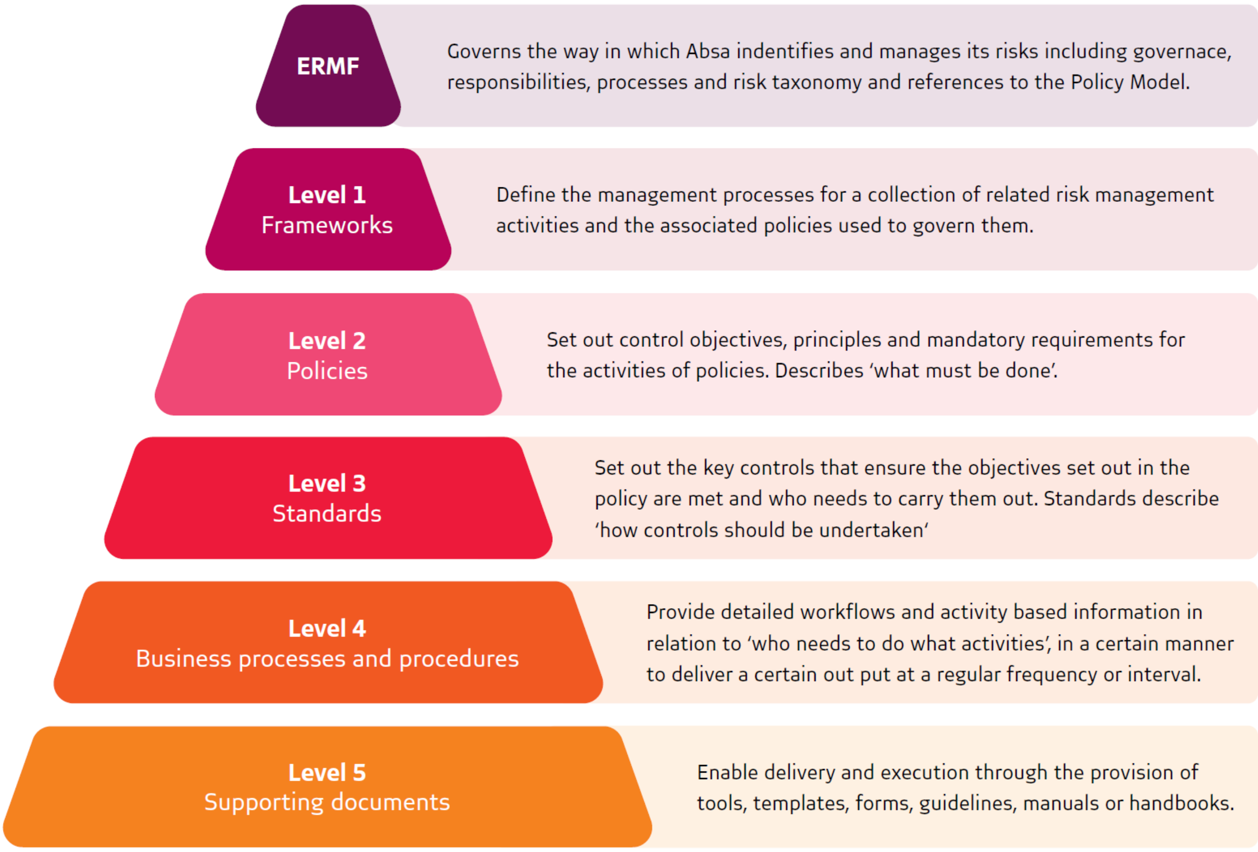
- Defining and implementing Group-wide frameworks, policies and standards.
- Limiting variation from Group minimum requirements and policy to circumstances where specific jurisdictional legal or regulatory requirements apply.
- Mandating alignment of governance documentation to the requirements and definitions of the hierarchy.

This drives consistency and efficiency, and enables enhanced aggregation, risk oversight across the businesses, and improved line of sight to all levels of management.

[1] Copyright and trademarks are owned by the Institute of Directors in South Africa NPC and all of its rights are reserved.

3. Risk management overview

The hierarchy has five tiers, with each level cascading from the level above. The degree of granularity and specific requirements increases as the levels descend.



- ERMF and frameworks include risk appetite and stress testing, as well as the 12 principal risks. These describe the high-level Group-wide approach for a specific risk and are mandatory for each of the principal risks identified in the ERMF. Frameworks also outline the risk and policy taxonomy that enables proper management and governance of the principal risk.
- Policies set out the control objectives, principles and other core requirements for the organisation's activities. Policies explain what businesses, functions and legal entities need to do, rather than how they need to do it.
- Standards set out the key controls that ensure policy objectives are met, and people responsible for them. Standards describe how the policy objectives will be met in a particular entity, business or function.

Ownership and approval

All frameworks and policies are owned by Group and standards are owned by the business unit or function responsible for performing the described activity. The Board or mandated Board sub-committee approve the principal risk frameworks. Policies are approved either by committees or individuals, as determined by the PRO.

Frameworks, policies and standards are subject to at least an annual review.

3.5.6 Data

3.5.6.1 Risk data

Internal and external data is utilised in meeting regulatory requirements and the management of risk. The Group enters into selected data and analytics partnerships with third parties to enhance and heighten its understanding of customers. Internal data is owned and managed by the respective business units with regular assessment of data quality via their respective risk governance structures. All key datasets are subject to the requirements of the Group's data and records management policies and standards.

3.5.6.2 Risk reporting

The objective of risk reporting is to provide timeous, accurate, comprehensive and useful information to the Board and senior management to facilitate informed decision-making. Board and senior management risk committees determine their requirements in terms of content and frequency of reporting under both normal and stressed conditions. Risk reporting processes flow from the business unit and relevant risk committees to the ERC and thereafter to Board committees. The content and level of aggregation are adjusted to suit the needs of each committee. Risk reports typically contain the following key information:

- Monitoring and management of the risk profile and key risk metrics per risk type against risk appetite and forecasts, including trend analysis.
- Monitoring of emerging risks and changes in the environment with an assessment of the potential impact on the Group.
- Results of stress testing exercises to assess the adequacy of financial resources and the Group's sensitivity to stresses.
- An assessment of the risk governance profile, including an assessment of the degree to which risk frameworks and policies are implemented throughout the Bank and assurance activities.

3. Risk management overview

In 2013, the BCBS published regulations (BCBS 239) pertaining to the principles for risk data aggregation and risk reporting (RDARR). The Group's risk data aggregation capabilities and risk reporting practices are aligned with the principles of BCBS 239.

3.5.7 Models

Model risk is a principal risk to be managed under the ERMF, with specific guidelines set out in the Model Risk Management Framework, model risk appetite statement, Group model risk policy (GMRP) and relevant standards covering model ownership, development, approval, implementation, monitoring and validation.

3.5.8 Technology

IT is an essential enabler for enterprise risk management practices. Technology solutions present ongoing opportunities to create, sustain and deliver value to the business. The technology solutions include:

- Data collection and analysis
- Risk analysis and modelling
- Robust Minimum Control Requirements inventory
- Model for calculating the risk and criticality of technology assets
- Risk assessment, control and monitoring
- Risk reporting and insights

The risk technology capabilities are focused on integration of technologies such as Big Data analytics, cloud computing, enterprise risk management applications, automated control assessments and parallel processing platforms. Greater advantage has been gained from capturing, extracting, transforming and using legacy databases to perform risk assessments, stress tests and risk scenario analyses. The IT evolutions have a significant impact on the way the organisation tracks and manages risks.

3.6 Principal risks

The ERMF includes risks taken by the Group that are foreseeable and material enough to merit establishing specific Group-wide control frameworks. These are grouped into 12 principal risks [1] that account for the vast majority of the total risk faced by the Group.

- Financial principal risks
  - Credit risk
  - Traded market risk
  - Treasury risk
  - Insurance risk[1]
  - Business risk[1]
  - Model risk
- Non-financial principal risks
  - Operational risk
  - Resilience risk
  - Conduct risk[1]
  - Financial crime risk
  - Reputational risk[1]
  - Sustainability risk[1]

The Board annually reviews and approves the ERMF on recommendation by the GRCMC. The Group Chief Executive grants authority and responsibility to the GCRO to ensure the principal risks are managed under appropriate risk control frameworks and within the Board-approved risk appetite and risk budget.

Individual events may entail more than one principal risk. For example, internal fraud by a trader may expose the Group to operational and market risks and many aspects of conduct risk.

Credit, traded market, treasury, business, insurance and model risks are collectively known as financial principal risks. The remaining risks are referred to as non-financial principal risks.

This is not an exhaustive list of risks the Group is subject to. For example, the Group is also subject to political and regulatory risks in the jurisdictions where it operates. While these may be consequential and are assessed in the Group's planning and decision-making, they are not considered principal risks. However, these other risks are subject to this framework and oversight by risk management.

The GCRO is accountable for ensuring frameworks, policies and associated standards are developed and implemented for each of the principal risks and that they are subject to limits, monitored, reported on and escalated as required. The Chief Compliance Officer is accountable for conduct, financial crime and reputational risks.

[1] For more information on the 12 principal risks, refer to the credit, traded market, treasury, operational and model risks sections. For details on insurance, business, resilience, conduct, financial crime, reputational and sustainability risks, refer to the risk management section of the financial booklet.

4. Credit risk

4. Credit risk

Credit risk is the risk of suffering financial loss due to a borrower, counterparty to a derivative transaction, or an issuer of debt securities defaulting on its contractual obligations. [CRA]

4.1 Review of current reporting period

Key risk metrics	2021	2020
CLR (%)	0.77	1.92
Stage 3 ratio on gross loans and advances (%)	5.4	6.3
Stage 3 coverage ratio (%)	44.6	42.5
Stage 1 and stage 2 coverage ratio (%)	1.5	1.7
Total coverage ratio (%)	4.1	4.5
Performing book weighted average probability of default (PD) (%) [1]	2.3	2.4
Weighted average loss given default (LGD) (%) [1]	29.9	30.7
Credit risk economic capital (EC) (Rbn) [2]	64.4	54.6
Total credit risk weighted assets (RWA) (Rbn)	719.5	714.3
Primary credit risk RWA (Rbn) [3]	679.8	668.1
CCR RWA (Rbn) [4]	26.5	34.9
Equity risk RWA (Rbn)	13.2	11.3

- Gross loans and advances increased to R1 134bn (December 2020: R1 058bn). This was largely driven by continued growth in RBB secured lending products and increased corporate activity during the second half of the year.
- The CLR at 0.77% (December 2020: 1.92%) was tracking at the lower end of the Group's through-the-cycle range of 0.75% to 1.00%. A reduction in impairment charges was evident across all market segments, primarily driven by a strong collections performance, the improvement in forward-looking information and the benefit realised from model enhancements in RBB during the first half of 2021 (refer to the 2021 Financial Results Booklet for a detailed impact analysis of model changes on impairment losses).
- The Group's stage 3 ratio decreased to 5.4% (December 2020: 6.3%). While the expiry of payment relief resulted in higher non-performing loans (NPLs), this was partially offset by the following key drivers:
  - The business embarked on a project to redefine the definition of default. The implementation of the revised definition of default resulted in a reduction in NPLs, specifically in the secured portfolios (refer to the 2021 Financial Results Booklet for a detailed impact analysis of the revised South African retail definition of default).
  - Sale of unsecured legal balances in Personal Loans and Card.
  - Higher write-offs in RBB South Africa in the unsecured portfolios and the workout of NPLs as backlogs in legal processes started to clear.
  - Growth in loans and advances to banks and customers.
- Stage 3 coverage increased to 44.6 % (December 2020: 42.5%) as the definition of default revision resulted in loans with lower coverage transferring to the performing book. This was further supplemented by stage 3 impairments raised on single name counterparties in distress.
- Stage 1 and stage 2 coverage decreased to 1.5% (December 2020: 1.7%) due to model enhancements and partial release of the macro-overlay, given an improved macroeconomic outlook relative to initial expectation. Coverages continue to be closely monitored to ensure the Group remains adequately protected against future losses.
- Credit risk economic capital increased to R64.4bn (December 2020: R54.6bn) due to exposure growth, new model calibrations and an increase in sovereign bond holdings resulting in higher concentration risk.
- Primary credit risk RWA[2] increased to R679.8bn (December 2020: R668.1bn) due to growth and exchange rate movements. However, RWA intensity decreased due to a favourable change in balance sheet mix, model updates and RWA optimisation initiatives.
- Counterparty credit risk RWA consumption decreased to R26.5bn (December 2020: R34.9bn) due to a reduction in risk positions and mark-to-market movements.
- Equity risk RWA increased to R13.2bn (December 2020: R11.3bn) due to an equity investment in a renewable energy platform.

4.2 Priorities

- Monitor growth to ensure a well-diversified credit portfolio in line with the Group strategy and risk appetite.
- Monitor changes in the global macro-economic, political and regulatory environments to identify and manage risks at an early stage. The potential impact of these and other events are modelled in a comprehensive stress testing framework.
- Proactively manage legacy distressed names to maximise recovery rates.

[1] The percentages include only portfolios subject to the internal ratings-based (IRB) approaches.

[2] Includes equity risk, CCR, CVA and securitisation.

[3] Primary credit risk RWA includes credit risk (excluding CCR) and securitisation exposures in the banking book

[4] CCR RWA includes credit valuation adjustment (CVA).

4. Credit risk

- Enhance collections capabilities to effectively manage credit risk through the cycle.
- Focus on talent development and succession planning, ensuring a fully capacitated and well-skilled credit team.
- Keep abreast of regulatory changes, specifically the rollout of a new large exposure framework and Basel III enhancements to capital rules for credit risk.

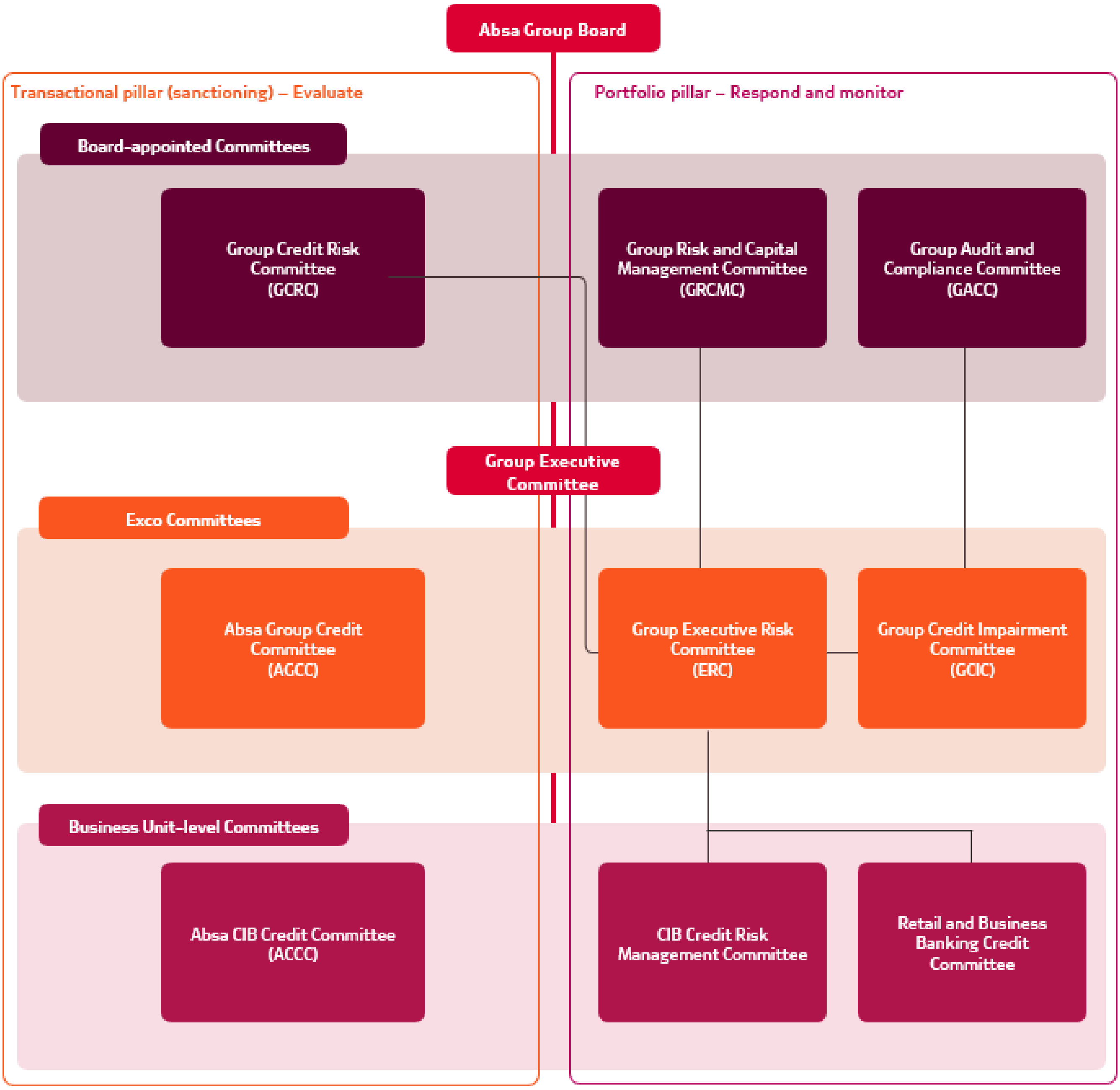
4.3 General information about credit risk

4.3.1 Risk identification and risk management

Credit risk is managed as a principal risk in accordance with the ERMF and the Credit Risk Management Framework (CRMF) and its associated policies. The risk management process is structured into three elements being evaluate, respond and monitor. This enables management to identify and assess risks, determine the appropriate risk response, and then monitor the effectiveness of the risk response and any changes to the risk profile. This process is used to promote an efficient and effective approach to risk management.

4.3.2 Governance

The credit risk management and control function consists of committees at Board, executive management and business unit levels. The key committees involved in the governance of credit risk are depicted below:



- **Credit oversight:** The GCRC is the primary Board committee responsible for credit risk oversight. An overview of the Group's credit portfolio is to be tabled by the Absa Group Chief Credit Officer at every committee sitting and must include an evaluation of the overall health of the credit portfolio, emerging risks (including regional political and sovereign risks in presence countries), and material concentrations within the credit portfolios. The business unit credit risk committees provide strategic risk management leadership and act as second line functions of independent oversight and monitoring of credit

4. Credit risk

risk. The committees oversee the business unit credit risk profile to ensure it remains within approved appetite, and considers for action business unit conformance reviews and controls testing results, outstanding audit items, regulatory issues, and risk events relating to credit risk.

- **Sanctioning:** The GCRC is the ultimate credit sanctioning authority in the Group, responsible for the approval of single-name exposures that exceed 10% of the Group's qualifying capital and reserves (large exposures), irrespective of risk grade or material country risk limits. The Absa Group Credit Committee (AGCC) is a Group Executive sub-committee mandated to opine on credit applications in respect of aggregate total financing limits up to 10% of the Group's qualifying capital and reserves irrespective of risk grade.
- **Risk oversight:** The ERC is accountable for the oversight of the enterprise-wide risk profile of the Bank. It considers and agrees risk appetite, stress testing scenarios, limits and triggers, and makes appropriate recommendations to the Board and Board sub-committees for review and/or approval. It is also responsible for the review and reporting of risk appetite consumption against forecasts, the Absa strategy and the risk appetite limits as approved by the Board.

4.3.3 Reporting

The PRO is responsible for the following reporting:

- An overview of the Group's credit portfolio is to be tabled at senior management and Board sub-committees (Group ERC and GCRC), which includes an evaluation of the overall health of the credit portfolio, emerging risks, and material concentrations within the credit portfolios.
- Reports provide key insights into developing industry, sector and product trends and incorporate agreed management actions to modify behaviour and strategy in accordance with specific findings.
- Monitoring and reporting must be performed at a Group and Business Unit level and should include the following:
  - Current state of the credit portfolio as measured through the relevant metrics, and changes to the credit risk position with reference to an outlook based on a relevant forecast horizon.
  - Risk Appetite utilisation above the limit and/or trigger level on a current or forecasted basis for all key risk metrics.
  - Management actions in response to any emerging issues, developments, and breaches of risk appetite triggers and limits.

4.3.4 Credit quality of assets

Various regulatory and accounting terms are used to refer to assets that are not performing as expected at the time of origination. The diagram below depicts these terms.

Stage 1 Performing (not impaired)

- Performing loans with no significant deterioration in credit quality since origination.
- Accounts in current status
- 30 days past due (dpd) back stop.

Stage 1 ECL allowance reflects the total losses associated with defaults that are expected to occur within 12 months of the reporting date.

Stage 2 Performing (credit deteriorated)

- Arrears >30 dpd <90 dpd
- Distressed restructures that do not result in a reduced financial obligation.
- PD deterioration rules since origination.
- High risk based on a qualitative assessment.
- Watch list framework applied to the wholesale portfolio, which is used to identify customers facing financial difficulties or where there are grounds for concern regarding their financial health.

Stage 2 exposures reflect an ECL allowance that is based on the losses expected to occur over the lifetime of the exposure.

Stage 3 Non-performing (credit impaired)

- Credit impaired on origination or subsequent to initial recognition.
- Indications of unlikeliness to pay, these include:
  - 90 days past due
  - Insolvency, death, debt review, business rescue or similar protection.
  - Distressed restructures likely to result in a diminished financial obligation.

Stage 3 exposures reflect an ECL allowance that is based on the losses expected to occur over the lifetime of the exposure.

The age analysis of credit exposures [CRB(i)]

The following tables provide the age analysis of the Group's loans and advances, debt securities and off-balance sheet items. Assets are classified as defaulted when the Group considers that the obligor is unlikely to pay its credit obligations without recourse by the Group to actions such as realising security. Elements that indicate unlikeliness to pay include:

- The Group consents to a distressed restructuring/forbearance of the credit obligation where this is likely to result in a diminished financial obligation caused by the material forgiveness of principal, interest or fees.
- The customer is under debt review, business rescue or similar protection.
- Advice is received of customer insolvency or death.
- The obligor is 90 days or more past due on any credit obligation to the Group.

4. Credit risk

In addition, within the retail portfolios:

- All accounts of forbearance are treated as being in default from a regulatory reporting perspective, regardless of whether the restructure led to a diminished financial obligation or not.
- The Group requires an exposure to reflect at least 12 consecutive months of performance to be considered to have been cured from default.

The application of the policy of credit impaired from an accounting perspective in the retail portfolio has changed in the 2021 financial year. Refer to the 2021 Financial Results Booklet for an explanation of the change.

The Group has an established framework and related processes to govern its approach to credit risk management and any resultant impairment of financial assets. Refer to the consolidated and separate annual financial statements for the reporting period ended 31 December 2021 for further detail.

In the following tables, defaulted exposures are aligned to the regulatory definition of default, non-defaulted exposures are performing exposures and allowances/impairments are total expected credit loss allowances.

Credit quality of assets [CR1]

		a	b	c	d
		2021			
		Gross carrying values of			Net values
		Defaulted exposures	Non-defaulted exposures	Allowances/impairments	(a+b-c)
		Rm	Rm	Rm	Rm
1	Loans	71 921	1 061 136	41 441	1 091 616
2	Debt Securities	874	182 384	414	182 844
3	Off-balance sheet exposures	925	237 501	1 080	237 346
4	**Total**	**73 720**	**1 481 021**	**42 935**	**1 511 806**

		a	b	c	d
		2020[1]			
		Gross carrying values of			Net values
		Defaulted exposures	Non-defaulted exposures	Allowances/impairments	(a+b-c)
		Rm	Rm	Rm	Rm
1	Loans	66 487	990 663	43 696	1 013 454
2	Debt Securities	-	149 026	227	148 799
3	Off-balance sheet exposures	1 212	233 179	917	233 474
4	Total	67 699	1 372 868	44 840	1 395 727

The table below depicts the main drivers of the change in defaulted exposures. [CR2]

		a		
		31 Dec 2021	30 Jun 2021	31 Dec 2020
		Defaulted exposures[2]	Defaulted Exposures[1, 3]	Defaulted Exposures[1]
		Rm	Rm	Rm
1	Defaulted loans and debt securities at end of the previous reporting period	72 599	67 699	62 645
2	Loans and debt securities that have defaulted since the last reporting period	18 686	18 844	14 793
3	Returned to non-defaulted status	(2 752)	(1 973)	(2 577)
4	Amounts written off	(8 217)	(5 288)	(4 654)
5	Other changes, including repayments received	(6 596)	(6 683)	(2 508)
6	**Defaulted loans and debt securities at end of the reporting period**	**73 720**	72 599	67 699

[1] The table has been restated from that previously published on 31 December 2020 to include impairment allowances on debt securities and off-balance sheet exposures and to more accurately attribute off-balance sheet exposures between defaulted and non-defaulted exposures.

[2] Includes defaulted off-balance sheet exposures.

[3] Restated to align to the regulatory definition of default.

4. Credit risk

Restructured exposures (impaired versus not impaired) [CRB(ii)] [1]

A loan restructure (modification) is a permanent change to one or more of the loan terms. Enforcing or adopting terms that were present in the original terms of the facility is not a modification. The treatment of a renegotiation or modification of the contractual cash flows of a financial asset depend on whether the modification is done for commercial reasons or because of financial difficulty of the borrower.

Contractual modifications on commercial terms are treated as a new transaction resulting in derecognition of the original financial asset and the recognition of a 'new' financial asset. Any difference between the carrying amount of the derecognised asset and the fair value of the new asset is recognised in profit or loss.

When the Group modifies the contractual conditions due to financial difficulties of the borrower, the asset is not derecognised unless the terms of the contract are substantively changed (such as the inclusion of an equity participation or a substantial change in counterparty). If the asset is not substantially modified, the gross carrying amount of the financial asset is recalculated to be the present value of the modified cash flows discounted at the original effective interest rate and any gain or loss is recognised in profit or loss as part of the total impairment loss.

The table below reflects restructures and distressed restructures that are concluded as part of the normal course of business within the retail portfolios:

	2021			2020		
	Gross carrying values of			Gross carrying values of		
	Total	Impaired[2]	Not Impaired	Total	Impaired[4]	Not Impaired
	Rm	Rm	Rm	Rm	Rm	Rm
Total restructured exposures	11 176	5 658	5 518	10 958	10 722	236

- The reduction in impaired restructures was mainly driven by the refined application of the existing default definition within the IFRS 9 accounting models. Refer to the 2021 Financial Results Booklet for an explanation of the change.

In 2020, the Group implemented various payment relief programmes across market segments. Directive 3 of 2020 (D3/2020) was issued by the South African Reserve Bank to provide temporary relief on the minimum capital requirements for banks relating to credit risk, specifically the treatment of restructured credit exposures related to COVID-19. During the current year, the Group discontinued the application of D3/2020 and applied the Group's existing credit policies to customers and clients that remained with COVID-19 related concessions and where new relief requests were received.

However, in order to ensure heightened credit monitoring, customers who previously received payment relief remain classified as being in relief until full settlement of the outstanding loan balance. The table below reflects the gross carrying amount of loans and advances where payment relief was provided within the retail portfolios:

	2021			2020		
	Gross carrying values of			Gross carrying values of		
	Total	Impaired[4]	Not Impaired	Total	Impaired[4]	Not Impaired
	Rm	Rm	Rm	Rm	Rm	Rm
Total restructured exposures	110 981	12 139	98 842	133 632	6 725	126 907

- The relief population is a finite list of accounts which continue to amortise. Distressed customer accounts amortise at a slower pace than the performing population, and therefore a negative selection of accounts remain.
- The increase in impaired advances was driven by obligors falling more than 90 days past due post expiry of payment relief and additional relief requests which triggered distressed restructures.

Refer to the impact of COVID-19 section in the 2021 Financial Results Booklet for more information.

[1] This section has been updated to separately disclose COVID-19 relief and restructures and distressed restructures concluded as part of the normal course of business within the retail portfolios.

[2] Aligned to stage 3 exposures (non-performing loans) per the Annual Financial Statements. Credit exposures are classified within stage 3 when they are regarded as being credit impaired.

4. Credit risk

Exposures by geography [CRB(iii)]

	2021			
	Total exposure Rm	NPLs[1] Rm	Specific impairments Rm	Write-Offs Rm
South Africa	1 208 170	52 499	22 857	10 160
Other African countries	293 180	9 952	4 821	3 345
Europe	56 823	-	-	-
North America	31 670	-	-	-
Asia	23 231	-	-	-
South America	356	-	-	-
Other	6 234	-	-	-
Total	1 619 664	62 451	27 678	13 505

	2020[2]			
	Total exposure Rm	NPLs[1] Rm	Specific impairments Rm	Write-Offs Rm
South Africa	1 153 919	59 312	24 493	6 305
Other African countries	275 979	7 175	3 752	1 110
Europe	29 175	-	-	-
North America	9 254	-	-	-
Asia	17 040	-	-	-
South America	392	-	-	-
Other	6 918	-	-	-
Total	1 492 677	66 487	28 245	7 415

[1] Aligned to stage 3 exposures per the Annual Financial Statements. Credit exposures are classified within stage 3 when they are regarded as being credit impaired.
[2] Restated to reflect refinements made to the elimination of intergroup exposures.

4. Credit risk

Exposures by industry [CRB(iv)]

	2021		
	Total exposure Rm	NPLs[1] Rm	Specific impairments Rm
Agriculture, hunting, forestry and fishing	65 521	1 869	618
Business services	89 039	2 863	1 674
Community, social and personal services	107 605	168	302
Construction	15 877	879	504
Electricity, gas and water supply	51 146	389	108
Financial intermediation and insurance	282 271	1 877	476
Manufacturing	89 915	1 347	608
Mining and quarrying	36 213	1 177	233
Other[2]	21 037	272	87
Private households	595 671	46 106	21 195
Real estate	111 547	2 943	823
Transport, storage and communication	49 177	1 550	598
Wholesale and retail trade, repair of specified items, hotels and restaurants	104 645	1 011	452
Total	1 619 664	62 451	27 678

	2020		
	Total exposure[3] Rm	NPLs[1] Rm	Specific impairments Rm
Agriculture, hunting, forestry and fishing	54 328	1 865	496
Business services	70 035	3 444	2 084
Community, social and personal services	105 379	101	28
Construction	17 296	1 900	522
Electricity, gas and water supply	40 412	537	25
Financial intermediation and insurance	175 567	597	152
Manufacturing	86 339	2 351	512
Mining and quarrying	33 257	1 035	74
Other	89 119	261	69
Private households	553 772	47 814	22 224
Real estate	107 810	2 309	892
Transport, storage and communication	52 758	1 844	455
Wholesale and retail trade, repair of specified items, hotels and restaurants	106 605	2 429	712
Total	1 492 677	66 487	28 245

[1] Aligned to stage 3 exposures per the Annual Financial Statements. Credit exposures are classified within stage 3 when they are regarded as being credit impaired.
[2] The reduction in other reflects data quality improvements which allow a more granular attribution of industry classifications.
[3] Restated to reflect refinements made to the elimination of intergroup exposures.

4. Credit risk

Exposures by Basel asset class and maturity [CRB(v)]

	2021				
	Total exposure Rm	Current to 6 months Rm	6 months to 1 year Rm	1 year to 5 years Rm	More than 5 years Rm
Banks	96 245	49 446	20 205	25 329	1 265
Corporate	419 430	94 218	42 967	243 786	38 459
Local governments and municipalities	10 612	1 399	8	3 979	5 226
Public sector entities (PSEs)	23 900	6 212	2 072	8 764	6 852
Retail – other	162 152	15 587	4 746	101 848	39 971
Retail mortgages (including any home equity line of credit)	342 397	30 192	1 061	28 524	282 620
Retail revolving credit	96 310	64 783	4 478	23 443	3 606
Securities firms	5 103	1 514	326	3 220	43
SME Corporate	189 558	88 778	11 865	60 977	27 938
SME Retail	23 521	13 357	317	5 542	4 305
Sovereign (including central government and central bank)	189 954	50 421	21 989	77 170	40 374
Specialised lending – income producing real estate	32 884	11 570	1 906	18 228	1 180
Specialised lending – project finance (PF)	27 598	1 880	930	11 493	13 295
Total	1 619 664	429 357	112 870	612 303	465 134

	2020[1]				
	Total exposure Rm	Current to 6 months Rm	6 months to 1 year Rm	1 year to 5 years Rm	More than 5 years Rm
Banks	74 639	37 736	14 335	21 676	892
Corporate	413 988	100 995	43 438	231 339	38 216
Local governments and municipalities	10 250	2 423	12	1 949	5 866
Public sector entities (PSEs)	23 987	7 059	2 337	8 443	6 148
Retail – other	145 620	12 305	3 863	106 803	22 649
Retail mortgages (including any home equity line of credit)	317 935	31 698	995	24 371	260 871
Retail revolving credit	95 899	64 873	4 555	23 347	3 124
Securities firms	6 527	771	1 757	3 995	4
SME Corporate	170 746	78 970	14 314	53 594	23 868
SME Retail	27 378	15 728	1 203	5 247	5 200
Sovereign (including central government and central bank)	151 859	33 339	12 708	48 282	57 530
Specialised lending – income producing real estate	28 319	11 220	1 910	13 611	1 578
Specialised lending – project finance (PF)	25 530	1 186	734	9 971	13 639
Total	1 492 677	398 303	102 161	552 628	439 585

4.3.5 Measuring and **the management of** credit concentrations

Credit risk is accountable for the management of concentrations, or pools of exposures, whose collective performance could negatively affect the Group even if each individual transaction in a pool is soundly underwritten. When exposures in a pool are sensitive to certain economic or business correlations, that sensitivity, if triggered, may cause the sum of the transactions to perform as if it were a single, large exposure.

Credit concentration risk is managed from the following perspectives:

[1] Restated to reflect refinements made to the elimination of intergroup exposures.

4. Credit risk

- **Large exposures and maximum exposure guidelines:** Reviews of large exposures to a single counterparty or group of counterparties are carried out in accordance with regulatory requirements. In addition to the regulatory requirements, a framework of internally derived maximum exposure guidelines informs risk appetite guideline levels to single counterparties or groups of counterparties.
- **Mandate and scale:** Mandate and scales are selected on the basis that they isolate segments of high loss volatilities (i.e. where loss rates increase disproportionately relative to the remainder of the portfolio in a stress environment) or where concentrations are considered significant.
- **Country risk:** Country risk is the risk of incurring a loss due to an obligor's cross-border obligations as a consequence of the implementation of capital controls (transfer risk) and/or as a result of a country event (e.g. adverse political and legal changes), or due to macroeconomic (jurisdiction risk) or environmental factors.

4.4 Credit risk mitigation (CRM) [CRC]

CRM is used to reduce the credit risk associated with an exposure, and consequently to reduce potential losses in the event of obligor default or other specified credit events. Collateral is applied internally to mitigate underwriting risk where appropriate, and externally for RWA and RC purposes, where eligible.

Risk mitigants are classified as either funded or unfunded collateral. Funded collateral includes financial collateral (i.e. cash/deposits), physical collateral (i.e. fixed property) and other such receivables. Unfunded collateral includes guarantees, set-off (where legally enforceable), risk participations and other.

Collateral is a secondary consideration for the protection of the Group's lending activities as and when applicable to the specific type of lending under consideration. The main underwriting consideration remains an assessment of the primary exit from the exposure based on a cash flow analysis.

Generally, one or more forms of CRM are used in the credit approval process. The use and approach to CRM varies by product type, portfolio, customer and business strategy. Minimum requirements are prescribed in policies and standards, and cover, inter alia, valuations, haircuts and any required volatility adjustments, conditions or restrictions, legal certainty, correlations, concentrations and other.

4.4.1 Valuation of collateral

The Group uses several approaches for the valuation of collateral that is not in a defaulted state, including physical inspection, an automated valuation model (AVM), desktop valuations, statistical indexing and price volatility modelling. Valuations are regularly refreshed, with the frequency of valuation reviews based on the specific collateral type.

Once an asset becomes non-performing, the following is triggered:

- In the wholesale portfolio, collateral valuations are updated and impairment risk assessed. These valuations and capital at risk are regularly reviewed to ensure impairments remain adequate.
- In the retail portfolio, mortgage asset valuations are updated using an AVM, and an indexing methodology is used for instalment sale assets. High-value property assets are valued through a physical valuation. Valuations are updated at least six-monthly.

The banking book collateral management process focuses on the efficient handling and processing of a large number of cases in the retail portfolio and the lower end of the corporate sector, therefore heavily relying on the Group's collateral and document management systems. For larger wholesale exposures and capital market transactions, collateral is jointly managed between the credit and legal functions as transactions and associated legal agreements are often bespoke in nature. All security structures and legal covenants are reviewed at least annually to ensure they comply with the credit risk requirement.

4.4.2 Types of guarantor and credit derivative counterparties

In the commercial, corporate and financial sector, reliance is often placed on a third-party guarantor, which may be a parent company to the borrower, a major shareholder or a bank. Similarly, credit derivative transactions are sometimes used to hedge specific parts of any single-name risk in the wholesale portfolio. For these transactions, the most common counterparties or issuers are banks, non-bank financial institutions, large corporates and governments. The creditworthiness of the guarantor or derivative counterparty/issuer is assessed as part of the credit approval process and the value of such a guarantee or derivative contract is recorded against the guarantor/issuer's credit limits.

Overview of CRM techniques employed by the Group [CR3]

The following table depicts the extent to which the Group uses collateral and financial guarantees to secure exposures and reduce capital requirements:

		a	b	c	d	e
				2021		
		Exposures unsecured: carrying amount Rm	Exposures secured by collateral Rm	Exposures secured by collateral of which secured amount Rm	Exposures secured by financial guarantees Rm	Exposures secured by financial guarantee, of which secured amount Rm
1	Loans	518 091	573 525	573 525	21 230	19 107
2	Debt securities	182 844	-	-	-	-
3	**Total**	**700 935**	**573 525**	**573 525**	**21 230**	**19 107**
4	Of which defaulted	36 345	36 450	36 450	-	-

4. Credit risk

		a	b	c	d	e
		2020				
		Exposures unsecured: carrying amount	Exposures secured by collateral	Exposures secured by collateral of which secured amount	Exposures secured by financial guarantees	Exposures secured by financial guarantee, of which secured amount
		Rm	Rm	Rm	Rm	Rm
1	Loans	502 479	510 975	510 975	21 230	19 107
2	Debt securities	148 799	-	-	-	-
3	Total	651 278	510 975	510 975	21 230	19 107
4	Of which defaulted	32 326	34 161	34 161	-	-

4.5 Credit risk under the SA [CRD]

The Group uses the SA for its ARO banking book portfolios (both wholesale and retail). Due to the relative scarcity of data, the ARO portfolios are not currently on the IRB migration plan.

Standard and Poor's and Moody's ratings are used by the Group as input into standardised capital formulas for the Group, corporate and sovereign asset classes. Rating agencies have limited coverage in ARO. Where more than one rating is available, the more conservative rating is applied. Issuer ratings are generally used. Obligors that are not rated externally are classified as unrated for RC purposes.

The following table provides an analysis, per Basel asset class, of the exposure and impact of CRM under the SA. In the ARO portfolio, there are limited amounts of eligible collateral available for use in regulatory calculations:

SA – credit risk exposure and CRM effects [CR4]

		a	b	c	d	e	f
		2021					
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
		Rm	Rm	Rm	Rm	Rm	%
1	Corporate	32 310	27 168	31 422	11 780	45 318	105
2	SME Corporate	35 072	14 978	33 602	7 315	42 499	104
3	PSEs	2 827	1 275	2 241	638	1 619	56
4	Local governments and municipalities	-	-	-	-	-	-
5	Sovereign (including central government and central bank)	77 639	1 520	76 272	760	56 503	73
6	Banks	26 869	7 014	25 733	2 970	15 527	54
7	Securities firms	-	-	-	-	-	-
8	Residential mortgages (including any home equity line of credit)	11 583	-	11 306	-	4 438	39
9	Retail – revolving credit	1 946	2 236	1 789	105	1 418	75
10	Retail – other	38 302	1	36 043	1	26 987	75
11	SME retail	777	35	735	23	578	76
12	Total	227 325	54 227	219 143	23 592	194 887	80

4. Credit risk

		a	b	c	d	e	f
		2020[1]					
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
		On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
		Rm	Rm	Rm	Rm	Rm	%
1	Corporate	31 575	21 837	31 095	10 689	44 460	106
2	SME Corporate	31 623	17 094	30 481	9 441	42 741	107
3	PSEs	2 999	1 235	2 435	497	1 525	52
4	Local governments and municipalities	-	-	-	-	-	-
5	Sovereign (including central government and central bank)	58 872	1 370	58 790	604	47 420	80
6	Banks	22 252	3 243	20 452	1 581	11 276	51
7	Securities firms	-	-	-	-	-	-
8	Residential mortgages (including any home equity line of credit)	10 185	-	9 962	-	4 133	41
9	Retail – revolving credit	1 942	2 133	1 788	1 065	2 160	76
10	Retail – other	31 367	37	30 202	12	22 673	75
11	SME retail	697	682	682	151	644	77
12	Total	191 512	47 631	185 887	24 040	177 032	84

[1] Restated to reflect refinements made to the elimination of intergroup exposures.

4. Credit risk

The following table provides an analysis, per Basel asset class, of the risk weights applied to standardised exposures:

SA – exposures by asset classes and risk weights [CR5]

		2021										
		a	b	c	d	e	f	g	h	i	j	k
		Risk weight										Total credit exposures amount (post CCF and post-CRM)
		0%	>0% - 10%	>10% - 20%	>20 % - 35%	>35% - 50%	>50 % - 75%	>75 % - 100 %	>100% - 150%	>150 %	Others	
	Asset classes											
1	Corporate	-	-	-	-	363	-	36 222	6 617	-	-	43 202
2	SME Corporate	-	-	821	-	254	-	32 454	7 389	-	-	40 918
3	PSEs	-	-	-	-	2 698	-	-	180	-	-	2 878
4	Local governments and municipalities	-	-	-	-	-	-	-	-	-	-	-
5	Sovereign (including central government and central bank)	19 340	-	3 133	-	9 243	-	33 437	11 879	-	-	77 032
6	Banks	-	-	12 971	-	5 803	-	9 162	768	-	-	28 704
7	Securities firms	-	-	-	-	-	-	-	-	-	-	-
8	Residential mortgages (including any home equity line of credit)	-	-	-	5 841	241	3 936	1 288	-	-	-	11 306
9	Retail – revolving credit	-	-	-	-	19	1 870	2	2	-	-	1 893
10	Retail – other	-	-	-	-	379	35 568	50	47	-	-	36 044
11	SME retail	-	-	-	-	13	726	2	17	-	-	758
12	Total	19 340	-	16 925	5 841	19 013	42 100	112 617	26 899	-	-	242 735

4. Credit risk

		a	b	c	d	e	f	g	h	i	j	k
		2020[1]										
		Risk weight										Total credit exposures amount (post CCF and post-CRM)
		0%	>0% - 10%	>10% - 20%	>20 % - 35%	>35% - 50%	>50 % - 75%	>75 % - 100 %	>100% - 150%	>150 %	Others	
	Asset classes											
1	Corporate	-	-	838	-	93	-	34 070	6 784	-	-	41 785
2	SME Corporate	-	-	1	-	436	-	33 411	6 075	-	-	39 923
3	PSEs	-	-	-	-	2 814	-	117	-	-	-	2 931
4	Local governments and municipalities	-	-	-	-	-	-	-	-	-	-	-
5	Sovereign (including central government and central bank)	7 065	-	3 860	-	9 171	-	33 769	5 529	-	-	59 394
6	Banks	-	-	12 265	-	2 347	-	6 959	461	-	-	22 032
7	Securities firms	-	-	-	-	-	-	-	-	-	-	-
8	Residential mortgages (including any home equity line of credit)	-	-	-	662	9 100	95	105	-	-	-	9 962
9	Retail – revolving credit	-	-	-	-	44	2 703	98	8	-	-	2 853
10	Retail – other	-	-	-	-	251	29 755	162	46	-	-	30 214
11	SME retail	-	-	-	-	4	588	236	5	-	-	833
12	Total	7 065	-	16 964	662	24 260	33 141	108 927	18 908	-	-	209 927

4.6 Credit risk under the IRB approach [CRE]

Refer to the model risk section (section 8) for further details on credit risk under the IRB approach.

The principal objective of credit modelling is to produce the most accurate possible quantitative assessment of the Group's credit risk at a counterparty and portfolio level. Integral to this is the calculation of internal credit parameters used for credit risk management purposes and in the calculation of RC, EC and impairment requirements. The key credit parameters used in this process are EAD, PD, LGD, maturity (M) and asset correlation.

[1] Restated to reflect refinements made to the elimination of intergroup exposures.

4. Credit risk

Key risk parameters used in credit risk measurement

EAD	PD	LGD	M	Correlation
Exposure at default	**Probability of default**	**Loss-given default**	**Maturity**	**Correlation**
An estimate of the level of credit exposure, should the obligor default occur during the next (rolling) 12-month period.	Represents the likelihood that an individual obligor/facility will default during the next (rolling) 12-month period.	Represents an estimate of the percentage of EAD that will not be recovered, should the obligor/facility default occur during the next (rolling) 12-month period.	Remaining time until the effective maturity date of the loan or other credit facility.	Measures to what extent the risks in the various industry sector and regions in the loan portfolio are related to common factors.
These parameters can be calculated to represent different views of the credit cycle, which are used in different applications:				
	Through-the-cycle (TTC): reflecting the predicted default frequency in an average 12-month period across the credit cycle. **Point-in-time (PIT):** reflecting the predicted default frequency contingent on the macroeconomic environment.	**Downturn (DT):** reflecting behaviour observed under stressed economic conditions. **Long run (LR):** reflecting business-as-usual measures or behaviour under benign/average conditions.		

Internal and vendor-supplied credit models are used to estimate the key credit parameters of EAD, PD, LGD and asset correlation. The Group uses different modelling methodologies, ranging from pure statistical models and cash flow models to expert-based models, taking into account quantitative and qualitative risk drivers.

To provide a common measure of default risk across the Group, an internal default grade scale is used. This scale is mapped to a scale of default probabilities for regulatory reporting purposes and to external agency ratings for benchmarking purposes.

The application of the key risk parameters in credit risk measurement and decision-making is set out in the following tables:

Application of key risk parameters in credit risk measurement

EAD	PD	LGD	M	Correlation
Exposure at default	**Probability of default**	**Loss given default**	**Maturity**	**Correlation**
EL: The EL calculation is determined making use of EAD, TTC PD and depending on being a DT EL or LR EL will make use of either the DT LGD or LR LGD respectively. **Impairment parameters:** The impairment calculation makes use of EAD considering all contractual terms over the lifetime of the instrument, PD reflecting the current and future economic cycles to the extent relevant to the remaining life of the loan calculated at a PIT and a current or forward looking LGD reflecting impact of economic scenarios.				
RC parameters: The RC calculation makes use of EAD, TTC PD, DT LGD and contractual maturity.				
EC parameters: The EC calculation makes use of EAD, TTC PD, LR LGD, contractual maturity as well as asset correlation, including PD-LGD correlation.				

Application of key risk parameters in credit risk decision-making

Credit approval	PD models are used in the approval process in both retail and wholesale portfolios. In high-volume retail portfolios, application and behaviour scorecards are frequently used as decision-making tools. In wholesale and certain retail home loan portfolios, PD models are used to direct applications to an appropriate credit sanctioning level.
Risk reward and pricing	PD, EAD and LGD metrics are used to assess the profitability of deals and portfolios and to allow for risk-adjusted pricing and strategy decisions.
Risk appetite setting and monitoring	RC and EC (including measures of earnings volatility) are used in the Group's risk appetite framework. Measures of stressed losses and capital utilisation are used in the setting of concentration risk limits.
Risk profile reporting	Credit risk reports to Board and senior management use model outputs to describe the Group's credit risk profile.

4. Credit risk

The following tables provide a detailed breakdown, per Basel asset class, of the drivers of the Group's capital requirements under the AIRB approach:

Credit risk exposures by portfolio and PD range [CR6]

	a	b	c	d	e	f	g	h	i	j	k	l
	2021											
PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post-CCF	Average PD[1]	Number of obligors	Average LGD	Average maturity	RWA	RWA density[2]	EL	Pro-visions
	Rm	Rm	%	Rm	%	#	%	%	Rm	%	Rm	Rm
Corporate												
0.00 to <0.15	83 568	55 569	23	104 775	0.11	205	31	1.65	17 913	17	33	64
0.15 to <0.25	19 071	13 750	12	26 438	0.22	134	26	1.75	6 234	24	15	33
0.25 to <0.50	45 039	34 250	44	62 429	0.36	444	27	2.13	21 989	35	61	97
0.50 to <0.75	15 664	7 826	36	18 634	0.58	269	30	2.15	9 291	50	32	58
0.75 to <2.50	44 943	23 212	38	58 491	1.51	3 494	31	1.85	40 923	70	272	416
2.50 to <10.00	7 058	5 783	21	8 985	5.39	237	32	1.94	9 685	108	148	345
10.00 to <100.00	853	78	83	904	25.27	83	40	2.53	1 762	195	91	33
100.00 (Default)	2 808	478	17	2 940	100.00	45	35	1.94	1 929	66	1 371	1 371
Sub-total	219 004	140 946	30	283 596	1.78	4 911	29	2.00	109 726	39	2 023	2 417
Specialised lending												
0.00 to <0.15	326	204	42	412	0.16	49	17	4.53	79	19	-	1
0.15 to <0.25	13 913	3 241	8	14 794	0.25	74	26	4.29	6 122	41	10	17
0.25 to <0.50	7 759	1 391	8	8 043	0.39	128	22	2.92	2 700	34	7	9
0.50 to <0.75	2 944	662	3	2 964	0.60	59	22	2.69	1 099	37	4	4
0.75 to <2.50	15 823	6 129	8	17 607	1.49	864	26	2.72	10 222	58	67	74
2.50 to <10.00	4 615	767	8	4 677	5.78	51	35	2.69	6 087	130	94	152
10.00 to <100.00	130	9	38	134	31.00	28	19	4.49	133	99	8	5
100.00 (Default)	2 540	29	-	2 540	100.00	43	24	2.64	810	32	635	634
Sub-total	48 050	12 432	8	51 171	6.25	1 296	26	3.01	27 252	53	825	896
SME Corporate												
0.00 to <0.15	7 811	2 790	19	2 511	0.05	699	41	2.77	251	10	1	21
0.15 to <0.25	2 197	741	43	2 202	0.22	974	24	2.29	462	21	1	3
0.25 to <0.50	14 698	6 323	50	18 920	0.42	3 129	33	2.80	8 387	44	27	62
0.50 to <0.75	11 563	3 746	66	14 041	0.63	2 839	33	2.95	7 179	51	29	61
0.75 to <2.50	54 995	14 700	57	64 568	1.59	36 550	33	2.98	43 947	68	351	503
2.50 to <10.00	8 224	1 152	74	9 192	5.07	1 909	34	2.85	8 643	94	161	151
10.00 to <100.00	4 259	388	52	4 469	30.00	1 496	38	2.96	8 052	180	504	303
100.00 (Default)	5 568	353	27	5 679	100.00	1 039	44	2.84	7 573	133	2 449	2 450
Sub-total	109 315	30 193	53	121 582	7.15	48 635	34	2.89	84 494	69	3 523	3 554
Public sector entities												
0.00 to <0.15	585	618	1	587	0.08	6	38	2.99	150	25	-	-
0.15 to <0.25	59	721	4	267	0.24	3	29	1.01	62	23	-	-
0.25 to <0.50	3 151	3 682	17	4 068	0.50	24	29	1.99	1 758	43	6	8
0.50 to <0.75	9 066	93	100	7 064	0.56	4	28	2.45	3 286	47	11	37
0.75 to <2.50	1	10	100	9	1.49	105	25	1.23	4	46	-	-
2.50 to <10.00	19	18	100	30	4.10	8	30	1.00	27	89	-	1
10.00 to <100.00	-	-	100	-	23.45	2	23	1.00	-	112	-	-
100.00 (Default)	1 284	489	100	1 889	100.00	2	29	1.25	870	46	432	432
Sub-total	14 165	5 631	23	13 914	14.02	154	29	1.19	6 157	44	449	478

[1] Total asset class average weighted PD percentage includes defaulted EADs

[2] Post-model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
						2021						
PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post-CCF	Average PD[1]	Number of obligors	Average LGD	Average maturity	RWA	RWA density[2]	EL	Provisions
	Rm	Rm	%	Rm	%	#	%	%	Rm	%	Rm	Rm
Local government and municipalities												
0.00 to <0.15	10	11	93	19	0.11	13	46	1.53	5	24	-	-
0.15 to <0.25	317	95	10	325	0.24	14	21	4.55	99	31	-	1
0.25 to <0.50	6 155	1 121	15	5 376	0.42	39	26	3.20	2 291	43	6	11
0.50 to <0.75	-	15	100	9	0.57	7	16	2.89	2	25	-	-
0.75 to <2.50	50	217	36	126	2.13	144	32	1.53	99	79	1	-
2.50 to <10.00	2 191	115	16	2 209	10.00	4	21	2.48	2 106	95	46	60
10.00 to <100.00	314	1	100	324	30.00	3	10	1.00	181	56	10	2
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	9 037	1 575	19	8 388	4.10	224	24	1.79	4 783	57	63	74
Sovereign (including central government and central bank)												
0.00 to <0.15	102 057	1 423	18	102 414	0.01	35	31	3.13	7 350	7	4	2
0.15 to <0.25	-	2	100	1	0.23	1	29	1.00	-	22	-	-
0.25 to <0.50	6 435	139	32	6 486	0.40	18	30	3.32	3 304	51	8	11
0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	-
0.75 to <2.50	302	26	82	320	2.44	40	51	2.65	476	149	4	7
2.50 to <10.00	254	158	-	275	4.45	5	27	2.98	264	96	3	6
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	109 048	1 747	18	109 496	0.05	99	31	2.09	11 394	10	19	26
Banks												
0.00 to <0.15	30 732	14 617	52	31 138	0.05	96	40	1.05	3 804	12	6	10
0.15 to <0.25	38	445	22	115	0.23	8	37	0.96	38	33	-	-
0.25 to <0.50	1 468	1 461	9	1 577	0.44	16	41	1.45	862	55	3	1
0.50 to <0.75	3	63	96	61	0.54	5	37	1.87	47	76	-	-
0.75 to <2.50	3 574	2 054	105	4 834	1.56	69	31	0.92	2 985	62	22	12
2.50 to <10.00	3 797	3 677	94	6 411	7.32	33	29	0.72	6 580	103	134	57
10.00 to <100.00	145	292	103	329	15.82	8	38	1.09	618	188	19	4
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	39 756	22 608	61	44 464	1.39	235	38	0.77	14 934	34	184	84
Securities firms												
0.00 to <0.15	2 401	600	32	1 439	0.12	16	23	1.57	179	12	-	-
0.15 to <0.25	178	891	1	699	0.25	11	40	1.42	243	35	1	1
0.25 to <0.50	7	574	-	62	0.47	8	42	1.19	31	50	-	-
0.50 to <0.75	2	7	10	7	0.60	4	44	1.00	4	60	-	-
0.75 to <2.50	412	26	94	310	1.25	37	30	1.56	184	60	1	1
2.50 to <10.00	4	1	97	4	5.38	2	45	1.00	6	142	-	-
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	3 004	2 099	11	2 521	0.31	78	29	0.88	647	26	2	2

[1] Total asset class average weighted PD percentage includes defaulted EADs.
[2] PMAs not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2021											
PD scale	Original on-balance sheet gross exposure Rm	Off-balance sheet exposures pre CCF Rm	Average CCF %	EAD post CRM and post-CCF Rm	Average PD[1] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[2] %	EL Rm	Pro-visions Rm
Retail mortgages (including any home equity line of credit)												
0.00 to <0.15	9 659	13 835	36	14 773	0.11	39 756	12	-	463	3	2	3
0.15 to <0.25	5 710	5 824	36	7 901	0.22	20 403	12	-	430	5	2	1
0.25 to <0.50	18 928	12 452	48	25 554	0.39	50 691	14	-	2 454	10	14	15
0.50 to <0.75	19 270	6 376	54	23 199	0.65	42 392	14	-	3 156	14	21	13
0.75 to <2.50	117 731	12 836	47	126 399	1.73	177 339	14	-	33 836	27	317	396
2.50 to <10.00	65 459	7 590	12	68 334	5.34	81 569	16	-	38 123	56	579	614
10.00 to <100.00	8 285	100	46	8 467	26.89	12 689	15	-	7 072	84	325	371
100.00 (Default)	26 660	100	-	26 660	100.00	43 200	23	-	5 010	19	5 579	5 577
Sub-total	**271 702**	**59 113**	**40**	**301 287**	**11.64**	**468 039**	**15**	**-**	**90 544**	**30**	**6 839**	**6 990**
Retail revolving credit												
0.00 to <0.15	634	6 971	51	5 993	0.10	415 703	56	-	216	4	3	9
0.15 to <0.25	881	2 812	50	2 625	0.23	131 970	59	-	195	7	4	6
0.25 to <0.50	3 488	5 955	52	7 346	0.39	356 367	58	-	827	11	17	33
0.50 to <0.75	2 541	2 486	52	4 207	0.65	191 396	58	-	705	17	16	11
0.75 to <2.50	12 082	6 581	52	16 929	1.60	729 986	57	-	5 477	32	154	345
2.50 to <10.00	19 887	16 255	63	27 201	5.03	621 083	58	-	19 899	73	786	1 585
10.00 to <100.00	3 174	355	58	3 715	27.31	187 706	56	-	5 492	148	564	1 178
100.00 (Default)	7 840	186	2	7 848	100.00	211 837	74	-	4 521	58	5 393	5 392
Sub-total	**50 527**	**41 601**	**56**	**75 864**	**13.93**	**2 846 048**	**59**	**-**	**37 332**	**49**	**6 937**	**8 559**
SME Retail												
0.00 to <0.15	1 099	1 141	96	2 422	0.04	87 956	71	-	95	4	1	88
0.15 to <0.25	269	251	78	452	0.22	10 290	28	-	57	13	-	2
0.25 to <0.50	873	1 120	93	2 082	0.39	32 017	64	-	588	28	5	39
0.50 to <0.75	851	411	87	1 244	0.63	9 277	50	-	461	37	4	7
0.75 to <2.50	7 368	2 397	96	10 148	1.57	55 578	49	-	5 053	50	83	71
2.50 to <10.00	3 257	901	95	4 310	5.96	44 102	67	-	4 258	99	164	107
10.00 to <100.00	1 157	167	98	1 364	25.91	5 798	67	-	2 350	172	236	52
100.00 (Default)	1 444	3	94	1 348	100.00	11 105	56	-	557	41	690	690
Sub-total	**16 318**	**6 391**	**94**	**23 370**	**9.14**	**256 123**	**57**	**-**	**13 419**	**57**	**1 183**	**1 056**
Retail – other												
0.00 to <0.15	1 348	969	70	4 251	0.15	16 492	26	-	349	8	1	4
0.15 to <0.25	304	239	27	463	0.22	8 577	62	-	130	28	1	1
0.25 to <0.50	2 129	157	81	2 387	0.47	19 512	38	-	659	28	4	4
0.50 to <0.75	2 417	89	23	2 500	0.65	15 199	36	-	777	31	6	4
0.75 to <2.50	23 775	1 140	61	24 936	1.79	160 008	38	-	12 306	49	154	252
2.50 to <10.00	58 817	93	34	58 925	5.51	365 056	40	-	37 132	63	1 297	1 819
10.00 to <100.00	17 279	45	12	17 309	19.93	131 728	43	-	16 694	96	1 485	1 996
100.00 (Default)	15 028	22	9	15 038	100.00	130 818	49	-	5 626	37	7 457	7 457
Sub-total	**121 096**	**2 754**	**59**	**125 808**	**17.66**	**847 390**	**40**	**-**	**73 674**	**59**	**10 406**	**11 537**
Total (all portfolios)	**1 011 022**	**327 090**	**40**	**1 161 461**	**7.74**	**4 473 232**	**30**	**2.31**	**474 356**	**41**	**32 453**	**35 673**

[1] Total asset class average weighted PD percentage includes defaulted EADs.

[2] PMAs not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2020											
PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post-CCF	Average PD[1]	Number of obligors	Average LGD	Average maturity	RWA	RWA density[2]	EL	Pro-visions
	Rm	Rm	%	Rm	%	#	%	%	Rm	%	Rm	Rm
Corporate												
0.00 to <0.15	67 866	42 466	24	84 590	0.11	243	33	1.63	15 085	18	29	69
0.15 to <0.25	23 196	11 798	33	29 427	0.23	132	29	1.97	8 213	28	19	64
0.25 to <0.50	58 815	35 369	29	77 545	0.36	425	30	2.04	29 288	38	83	174
0.50 to <0.75	16 226	13 162	50	22 040	0.57	220	35	2.23	12 825	58	44	67
0.75 to <2.50	49 456	20 378	47	51 031	1.52	2 677	35	1.88	40 406	79	273	404
2.50 to <10.00	10 822	5 075	32	12 870	5.41	314	35	1.82	15 473	120	248	520
10.00 to <100.00	1 043	605	71	1 324	22.53	94	37	1.44	2 445	185	105	108
100.00 (Default)	3 416	882	46	3 639	100.00	49	33	1.64	3 720	102	1 087	1 087
Sub-total	230 840	129 735	33	282 466	2.11	4 154	32	1.88	127 455	45	1 888	2 493
Specialised lending												
0.00 to <0.15	1 524	181	54	1 665	0.15	71	21	3.58	309	19	1	12
0.15 to <0.25	11 539	2 269	8	12 184	0.23	89	27	4.41	5 058	42	7	16
0.25 to <0.50	7 472	1 473	25	7 842	0.35	124	22	3.96	2 947	38	6	14
0.50 to <0.75	2 221	484	6	2 262	0.59	51	24	2.96	974	43	3	4
0.75 to <2.50	13 705	7 222	8	16 261	1.46	839	25	2.84	9 416	58	58	92
2.50 to <10.00	1 573	635	54	1 933	6.01	77	37	2.84	2 632	136	44	76
10.00 to <100.00	957	11	62	970	19.64	42	25	1.81	1 257	130	47	122
100.00 (Default)	2 573	7	-	2 586	100.00	35	29	2.96	2 029	78	679	679
Sub-total	41 564	12 282	13	45 703	7.00	1 328	25	3.47	24 622	54	845	1 015
SME Corporate												
0.00 to <0.15	2 116	830	46	2 880	0.07	942	44	3.19	325	11	1	5
0.15 to <0.25	3 148	1 662	24	3 810	0.23	669	32	2.69	1 122	29	3	13
0.25 to <0.50	10 462	4 523	65	13 166	0.42	2 842	35	2.84	5 783	44	19	70
0.50 to <0.75	10 323	2 606	77	12 647	0.64	2 002	35	2.88	6 739	53	28	83
0.75 to <2.50	48 238	14 208	68	59 801	1.65	35 795	37	2.97	45 659	76	381	547
2.50 to <10.00	12 876	2 987	75	15 800	5.44	3 485	40	2.76	18 251	116	349	383
10.00 to <100.00	3 014	440	85	3 485	28.01	1 232	39	3.02	6 311	181	367	312
100.00 (Default)	4 385	211	16	4 439	100.00	836	43	2.70	3 888	88	2 100	2 100
Sub-total	94 562	27 467	66	116 028	6.38	47 803	37	2.90	88 078	76	3 248	3 513
Public sector entities												
0.00 to <0.15	1 261	-	100	1 261	0.01	10	25	1.00	23	2	-	-
0.15 to <0.25	325	263	1	515	0.22	6	15	1.01	60	12	-	-
0.25 to <0.50	10 337	4 346	43	12 291	0.38	20	25	2.36	4 161	34	12	37
0.50 to <0.75	111	147	76	222	0.61	8	25	1.00	75	34	-	-
0.75 to <2.50	249	33	53	280	1.94	104	33	3.30	237	84	2	2
2.50 to <10.00	1 915	230	7	1 926	3.91	6	25	1.68	1 429	74	18	27
10.00 to <100.00	-	-	-	-	19.00	1	25	1.00	-	85	-	-
100.00 (Default)	44	492	100	308	100.00	1	25	1.82	-	-	84	84
Sub-total	14 242	5 511	45	16 803	2.61	156	24	2.13	5 985	36	116	150

[1] Total asset class average weighted PD percentage includes defaulted EADs

[2] Post-model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2020											
PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post-CCF	Average PD[1]	Number of obligors	Average LGD	Average maturity	RWA	RWA density[2]	EL	Provisions
	Rm	Rm	%	Rm	%	#	%	%	Rm	%	Rm	Rm
Local government and municipalities												
0.00 to <0.15	3 269	227	27	3 347	0.16	41	22	3.78	889	27	1	9
0.15 to <0.25	2 228	728	89	2 556	0.25	15	11	3.60	377	15	1	2
0.25 to <0.50	2 456	723	15	2 568	0.28	32	12	2.82	398	16	1	3
0.50 to <0.75	5	2	97	7	0.69	7	49	1.12	5	66	-	-
0.75 to <2.50	68	183	15	97	2.66	133	47	1.92	115	118	1	-
2.50 to <10.00	3	1	73	4	3.73	2	45	1.31	4	115	-	-
10.00 to <100.00	357	-	50	368	30.00	1	10	1.00	205	56	11	3
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	8 386	1 864	45	8 947	1.47	231	16	3.31	1 993	22	15	17
Sovereign (including central government and central bank)												
0.00 to <0.15	83 539	1 384	15	84 115	0.01	30	31	3.58	7 172	9	4	1
0.15 to <0.25	98	70	16	110	0.25	2	30	2.20	36	33	-	-
0.25 to <0.50	5 878	33	85	5 903	0.35	19	30	4.17	3 202	54	6	5
0.50 to <0.75	-	-	-	-	0.55	1	58	1.00	-	100	-	-
0.75 to <2.50	148	29	84	169	2.37	42	50	4.16	288	170	2	4
2.50 to <10.00	336	103	-	362	5.33	6	29	3.75	421	116	5	11
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	89 999	1 619	17	90 659	0.06	100	31	3.62	11 119	12	17	21
Banks												
0.00 to <0.15	20 896	15 867	48	20 197	0.05	95	37	1.09	2 231	11	4	19
0.15 to <0.25	131	47	100	95	0.23	5	30	0.95	27	28	-	-
0.25 to <0.50	804	1 148	20	1 496	0.35	21	40	1.07	772	52	2	1
0.50 to <0.75	1	-	-	1	0.55	1	44	1.00	-	57	-	-
0.75 to <2.50	343	1 309	61	1 274	1.08	50	39	0.74	852	67	5	1
2.50 to <10.00	3 332	5 023	39	4 645	7.53	34	37	0.79	6 727	145	132	34
10.00 to <100.00	119	122	89	205	15.21	11	44	0.65	426	207	14	5
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	25 626	23 516	46	27 913	1.47	217	37	1.02	11 035	40	157	60
Securities firms												
0.00 to <0.15	586	2 064	73	2 034	0.05	15	39	1.47	205	10	-	-
0.15 to <0.25	1 228	477	21	396	0.24	7	44	1.02	142	36	-	1
0.25 to <0.50	510	350	48	772	0.40	11	34	1.00	279	36	1	2
0.50 to <0.75	2	1	82	3	0.60	3	43	1.01	2	58	-	-
0.75 to <2.50	984	110	22	695	1.15	34	29	2.19	451	65	2	3
2.50 to <10.00	214	1	100	215	3.79	7	35	1.00	256	120	3	5
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Sub-total	3 524	3 003	60	4 115	0.51	77	36	1.44	1 335	32	6	11

[1] Total asset class average weighted PD percentage includes defaulted EADs.
[2] PMAs not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2020											
PD scale	Original on-balance sheet gross exposure	Off-balance sheet exposures pre CCF	Average CCF	EAD post CRM and post-CCF	Average PD[1]	Number of obligors	Average LGD	Average maturity	RWA	RWA density[2]	EL	Pro-visions
	Rm	Rm	%	Rm	%	#	%	%	Rm	%	Rm	Rm
Retail mortgages (including any home equity line of credit)												
0.00 to <0.15	1 741	3 199	49	3 408	0.13	6 719	13	-	122	4	1	1
0.15 to <0.25	2 351	3 316	48	3 978	0.23	8 757	11	-	210	5	1	1
0.25 to <0.50	12 814	11 262	54	19 326	0.38	35 840	13	-	1 716	9	10	15
0.50 to <0.75	15 765	17 782	53	25 785	0.64	51 743	13	-	3 385	13	22	23
0.75 to <2.50	115 918	14 708	53	127 718	1.86	216 860	13	-	32 594	26	314	344
2.50 to <10.00	65 659	7 678	16	69 575	4.32	88 065	14	-	32 266	46	441	416
10.00 to <100.00	10 537	76	55	10 860	30.83	19 504	14	-	8 712	80	485	382
100.00 (Default)	24 848	97	-	24 849	100.00	41 194	21	-	2 605	10	6 129	6 129
Sub-total	249 633	58 118	48	285 499	11.85	468 682	14	-	81 610	29	7 403	7 311
Retail revolving credit												
0.00 to <0.15	853	7 678	52	6 629	0.11	413 683	55	-	262	4	4	11
0.15 to <0.25	820	2 803	51	2 622	0.23	148 742	59	-	194	7	4	6
0.25 to <0.50	3 196	5 609	52	6 791	0.39	350 044	58	-	769	11	15	33
0.50 to <0.75	2 284	2 381	52	3 857	0.64	176 011	58	-	645	17	14	13
0.75 to <2.50	11 868	6 590	54	16 880	1.65	738 542	56	-	5 473	32	153	388
2.50 to <10.00	18 965	16 024	63	26 068	5.44	606 286	58	-	20 250	78	820	1 936
10.00 to <100.00	3 464	346	59	4 003	28.14	202 033	56	-	5 942	148	630	1 670
100.00 (Default)	8 746	196	2	8 754	100.00	232 562	73	-	6 655	76	6 150	6 150
Sub-total	50 196	41 627	56	75 604	15.40	2 867 903	59	-	40 190	53	7 790	10 207
SME Retail												
0.00 to <0.15	1 638	1 984	82	3 815	0.06	110 433	61	-	200	5	1	109
0.15 to <0.25	492	279	96	789	0.23	4 425	41	-	152	19	1	5
0.25 to <0.50	1 434	1 129	86	2 774	0.38	37 049	60	-	777	28	6	51
0.50 to <0.75	812	253	85	1 126	0.65	5 069	55	-	438	39	4	10
0.75 to <2.50	7 179	2 615	79	10 345	1.65	58 269	50	-	5 205	50	90	78
2.50 to <10.00	3 997	1 004	91	5 169	5.77	32 480	65	-	5 031	97	195	96
10.00 to <100.00	1 514	214	90	1 783	26.69	6 494	69	-	3 179	178	329	71
100.00 (Default)	1 448	7	64	1 356	100.0	15 984	55	-	818	60	707	707
Sub-total	18 514	7 485	83	27 157	8.55	270 203	57	-	15 800	58	1 333	1 127
Retail – other												
0.00 to <0.15	1 191	705	68	3 830	0.15	17 394	27	-	319	8	1	4
0.15 to <0.25	177	198	24	304	0.20	5 623	65	-	85	28	-	-
0.25 to <0.50	2 033	226	57	2 319	0.42	21 003	40	-	646	28	4	9
0.50 to <0.75	2 458	51	66	2 535	0.66	21 513	40	-	898	35	7	1
0.75 to <2.50	24 390	1 120	62	25 595	1.82	171 224	39	-	13 004	51	168	310
2.50 to <10.00	49 453	236	66	49 686	5.85	346 853	41	-	32 852	66	1 181	1 574
10.00 to <100.00	17 043	66	18	17 086	18.91	129 603	42	-	15 903	93	1 394	1 898
100.00 (Default)	14 851	19	-	14 856	100.00	153 131	53	-	2 912	20	7 702	7 702
Sub-total	111 596	2 621	60	116 211	18.50	866 344	42	-	66 619	57	10 457	11 498
Total (all portfolios)	938 682	314 848	44	1 097 105	8.00	4 527 198	31	2.00	475 841	43	33 275	37 423

[1] Total asset class average weighted PD percentage includes defaulted EADs.
[2] PMAs not included.

4. Credit risk

Effect on RWA of credit derivatives used as CRM techniques [CR7]

The bank makes limited use of credit derivatives to mitigate credit risk in the banking book.

		a	b	a	b
		2021		2020	
		Pre-credit derivatives RWA Rm	Actual RWA Rm	Pre-credit derivatives RWA Rm	Actual RWA Rm
1	Corporate	109 748	109 726	127 561	127 455
2	Specialised lending	27 506	27 252	24 622	24 622
3	SME Corporate	84 494	84 494	88 078	88 078
4	PSEs	6 159	6 157	5 985	5 985
5	Local government and municipalities	4 783	4 783	1 993	1 993
6	Sovereign (including central government and central bank)	11 394	11 394	11 119	11 119
7	Banks	15 124	14 934	11 035	11 035
8	Securities firms	647	647	1 335	1 335
9	Retail mortgages (including any home equity line of credit)	90 544	90 544	81 610	81 610
10	Retail revolving credit	37 332	37 332	40 190	40 190
11	SME Retail	13 419	13 419	15 800	15 800
12	Retail - other	73 674	73 674	66 619	66 619
13	**Total**	**474 824**	**474 356**	475 947	475 841

RWA flow statements of credit risk exposures under IRB [CR8]

		a	a
		31 Dec 2021	30 Sep 2021
		RWA amounts Rm	RWA amounts Rm
1	RWA as at end of previous quarter	474 696	463 354
2	Asset size	8 002	12 133
3	Asset quality	(532)	(2 149)
4	Model updates	(15 195)	-
5	Methodology and policy	-	-
6	Acquisitions and disposals	-	-
7	Foreign exchange movements	1 186	1 358
8	Other[1]	9 258	-
9	RWA as at end of reporting period	477 415	474 696

[1] Other reflects RWA growth on non-performing loans due to misalignment of the definition of default between IFRS 9 impairment and regulatory capital models.

4. Credit risk

IRB: Backtesting of PD per portfolio [CR9]

The tables below provide backtesting results to validate the reliability of the Bank's IRB PD models. In particular, the tables compare the long-run average PD used in AIRB capital calculations with the realised default rate observed over a five-year period, per Basel asset class. The average historical default rate is calculated as the number of defaults in a given year, divided by the number of obligors that were performing at the start of that year (averaged over five years).

	a	b	c	d	e	f	g
	2021						
				Number of obligors			
PD range	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of previous year #	End of the year #	Defaulted obligors in the year #	Average historical annual default rate %
Corporate							
0 to <0.15	AAA, AA, A, BBB+	0.11	0.08	243	205	-	0.08
0.15 to <0.25	BBB, BBB-	0.22	0.17	132	134	-	0.19
0.25 to <0.50	BBB-, BB+	0.36	0.32	425	444	-	0.11
0.50 to <0.75	BB+, BB	0.58	0.56	220	269	-	0.18
0.75 to <2.50	BB, BB-, B+	1.51	1.18	2 677	3 494	1	0.21
2.50 to <10.00	B+, B, B-	5.39	2.06	314	237	3	0.50
10.00 to <100.0	CCC/C	25.27	18.27	94	83	1	0.44
100.00 (Default)	100.00 (Default)	100.00	100.00	49	45	26	100.00
0 to < 100.0	AAA to CCC/C	0.75	1.32	4 105	4 866	5	0.29
Specialised lending							
0 to <0.15	AAA, AA, A, BBB+	0.16	0.14	71	49	-	-
0.15 to <0.25	BBB, BBB-	0.25	0.22	89	74	-	-
0.25 to <0.50	BBB-, BB+	0.39	0.36	124	128	-	-
0.50 to <0.75	BB+, BB	0.60	0.46	51	59	-	-
0.75 to <2.50	BB, BB-, B+	1.49	1.18	839	864	-	-
2.50 to <10.00	B+, B, B-	5.78	2.03	77	51	1	0.15
10.00 to <100.0	CCC/C	31.00	8.85	42	28	3	1.97
100.00 (Default)	100.00 (Default)	100.00	100.00	35	43	12	100.00
0 to < 100.0	AAA to CCC/C	1.36	1.17	1 293	1 253	4	0.25
SME Corporate							
0 to <0.25	AAA, AA, A, BBB+, BBB, BBB-	0.13	0.18	1 611	1 673	1	0.59
0.25 to <0.50	BBB-, BB+	0.42	0.35	2 842	3 129	3	0.43
0.50 to <0.75	BB+, BB	0.63	0.58	2 002	2 839	5	0.31
0.75 to <2.50	BB, BB-, B+	1.59	1.22	35 795	36 550	20	0.42
2.50 to <10.00	B+, B, B-	5.07	2.25	3 485	1 909	63	0.20
10.00to <100.0	CCC/C	30.00	10.09	1 232	1 496	78	2.57
100.00 (Default)	100.00 (Default)	100.00	100.00	836	1 039	516	100.00
0 to < 100.0	AAA to CCC/C	2.60	1.41	46 967	47 596	170	0.34
Sovereigns							
0 to <0.15	AAA, AA, A, BBB+	0.01	0.08	30	35	-	-
0.15 to <0.25	BBB, BBB-	0.23	0.23	2	1	-	-
0.25 to <0.50	BBB-, BB+	0.40	0.26	19	18	-	-
0.50 to <0.75	BB+, BB	-	0.51	1	-	-	-
0.75 to <2.50	BB, BB-, B+	2.44	1.21	42	40	-	-
2.50 to <10.00	B+, B, B-	4.45	2.41	6	5	-	-
10.00 to <100.0	CCC/C	-	-	-	-	-	-
100.00 (Default)	100.00 (Default)	100.00	100.00	-	-	-	100.00
0 to < 100.0	AAA to CCC/C	0.05	0.69	100	99	-	-

4. Credit risk

	a	b	c	d	e	f	g
	2021						
				Number of obligors			
PD range	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of previous year #	End of the year #	Defaulted obligors in the year #	Average historical annual default rate %
Banks							
0 to <0.15	AAA, AA, A, BBB+	0.05	0.05	95	96	-	-
0.15 to <0.25	BBB, BBB-	0.23	0.06	5	8	-	-
0.25 to <0.50	BBB-, BB+	0.44	0.09	21	16	-	-
0.50 to <0.75	BB+, BB	0.54	0.53	1	5	-	-
0.75 to <2.50	BB, BB-, B+	1.56	0.61	50	69	-	-
2.50 to <10.00	B+, B, B-	7.32	0.41	34	33	-	-
10.00 to <100.0	CCC/C	15.82	0.93	11	8	-	-
100.00 (Default)	100.00 (Default)	100.00	100.00	-	-	-	100.00
0 to < 100.0	**AAA to CCC/C**	**1.39**	**0.31**	**217**	**235**	**-**	**-**
Retail mortgages							
0.25 to <0.50	AAA, AA, A, BBB+, BBB, BBB-, BB+	0.28	0.31	51 316	110 850	97	0.13
0.50 to <0.75	BB+, BB	0.65	0.64	51 743	42 392	190	0.25
0.75 to <2.50	BB, BB-, B+	1.73	1.59	216 860	177 339	2 481	1.10
2.50 to <10.00	B+, B, B-	5.34	3.75	88 065	81 569	4 388	2.85
10.00 to <100.0	CCC/C	26.89	30.23	19 504	12 689	5 377	23.69
100.00 (Default)	100.00 (Default)	100.00	100.00	41 194	43 200	-	100.00
0 to < 100.0	**AAA to CCC/C**	**3.06**	**2.43**	**427 488**	**424 839**	**12 533**	**2.59**
Retail revolving credit							
0.25 to <0.50	AAA, AA, A, BBB+, BBB, BBB-, BB+	0.26	0.22	912 469	904 040	9 609	0.64
0.50 to <0.75	BB+, BB	0.65	0.62	176 011	191 396	3 059	1.28
0.75 to <2.50	BB, BB-, B+	1.60	1.42	738 542	729 986	19 968	2.81
2.50 to <10.00	B+, B, B-	5.03	5.15	606 286	621 083	63 618	9.35
10.00 to <100.0	CCC/C	27.31	22.84	202 033	187 706	69 460	25.96
100.00 (Default)	100.00 (Default)	100.00	100.00	232 562	211 837	-	100.00
0 to < 100.0	**AAA to CCC/C**	**4.00**	**3.36**	**2 635 341**	**2 634 211**	**165 714**	**6.63**
SME retail							
0 to <0.0.25	AAA, AA, A, BBB+, BBB, BBB-	0.07	0.05	114 858	98 246	163	0.20
0.25 to <0.50	BBB-, BB+	0.39	0.31	37 049	32 017	66	0.19
0.50 to <0.75	BB+, BB	0.63	0.50	5 069	9 277	22	0.62
0.75 to <2.50	BB, BB-, B+	1.57	1.19	58 269	55 578	95	0.61
2.50 to <10.00	B+, B, B-	5.96	2.44	32 480	44 102	380	1.16
10.00 to <100.0	CCC/C	25.91	14.38	6 494	5 798	178	5.05
100.00 (Default)	100.00 (Default)	100.00	100.00	15 984	11 105	15 151	100.00
0 to < 100.0	**AAA to CCC/C**	**3.58**	**1.13**	**254 219**	**245 018**	**904**	**0.53**

4. Credit risk

	a	b	c	d	e	f	g
	2021						
				Number of obligors			
PD range	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of previous year #	End of the year #	Defaulted obligors in the year #	Average historical annual default rate %
Retail - other							
0 to <0.50	AAA, AA, A, BBB+, BBB, BBB-, BB+	0.26	0.27	44 020	44 581	722	1.57
0.50 to <0.75	BB+, BB	0.65	0.64	21 513	15 199	450	1.46
0.75 to <2.50	BB, BB-, B+	1.79	1.60	171 224	160 008	4 038	2.42
2.50 to <10.00	B+, B, B-	5.51	5.16	346 853	365 056	22 655	5.71
10.00 to <100.0	CCC/C	19.93	19.37	129 603	131 728	37 910	22.15
100.00 (Default)	100.00 (Default)	100.00	100.00	153 131	130 818	38	100.00
0 to < 100.0	**AAA to CCC/C**	**6.48**	**6.58**	**713 213**	**716 572**	**65 775**	**8.50**

	a	b	c	d	e	f	g
	2020[1]						
				Number of obligors			
PD range	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of previous year #	End of the year #	Defaulted obligors in the year #	Average historical annual default rate %
Corporate							
0 to <0.15	AAA, AA, A, BBB+	0.11	0.10	212	243	-	0.08
0.15 to <0.25	BBB, BBB-	0.23	0.19	179	132	-	0.33
0.25 to <0.50	BBB-, BB+	0.36	0.33	480	425	-	0.11
0.50 to <0.75	BB+, BB	0.57	0.57	233	220	-	0.18
0.75 to <2.50	BB, BB-, B+	1.52	1.09	2 779	2 677	1	0.26
2.50 to <10.00	B+, B, B-	5.41	1.61	293	314	-	0.62
10.00 to <100.0	CCC/C	22.53	12.15	101	94	-	1.01
100.00 (Default)	100.00 (Default)	100.00	100.00	40	49	20	100.00
0 to < 100.0	AAA to CCC/C	0.84	1.19	4 277	4 105	1	0.38
Specialised lending							
0 to <0.15	AAA, AA, A, BBB+	0.15	0.08	45	71	-	-
0.15 to <0.25	BBB, BBB-	0.23	0.22	91	89	-	-
0.25 to <0.50	BBB-, BB+	0.35	0.36	115	124	-	-
0.50 to <0.75	BB+, BB	0.59	0.47	59	51	-	-
0.75 to <2.50	BB, BB-, B+	1.46	1.17	850	839	-	-
2.50 to <10.00	B+, B, B-	6.01	2.13	69	77	2	0.38
10.00 to <100.0	CCC/C	19.64	11.57	38	42	1	2.69
100.00 (Default)	100.00 (Default)	100.00	100.00	34	35	11	100.00
0 to < 100.0	AAA to CCC/C	1.43	1.34	1 267	1 293	3	0.45

[1] Restated to reflect changes made to PD bucket aggregation and refinements made to the calculation of number of obligors and average historical annual default rates.

4. Credit risk

	a	b	c	d	e	f	g
				2020[1]			
				Number of obligors			
	External rating equivalent	Weighted average PD	Arithmetic average PD by obligors	End of previous year	End of the year	Defaulted obligors in the year	Average historical annual default rate
PD range		%	%	#	#	#	%
SME Corporate							
0 to <0.25	AAA, AA, A, BBB+, BBB, BBB-	0.16	0.16	1 092	1 611	4	0.46
0.25 to <0.50	BBB-, BB+	0.42	0.35	2 917	2 842	9	0.39
0.50 to <0.75	BB+, BB	0.64	0.58	1 916	2 002	2	0.35
0.75 to <2.50	BB, BB-, B+	1.65	1.21	34 784	35 795	8	0.40
2.50 to <10.00	B+, B, B-	5.44	2.11	2 851	3 485	82	0.33
10.00to <100.0	CCC/C	28.01	10.66	1 022	1 232	44	2.64
100.00 (Default)	100.00 (Default)	100.00	100.00	652	836	359	100.00
0 to < 100.0	AAA to CCC/C	2.66	1.41	44 582	46 967	149	0.42
Sovereigns							
0 to <0.15	AAA, AA, A, BBB+	0.01	0.01	42	30	-	-
0.15 to <0.25	BBB, BBB-	0.25	0.21	7	2	-	-
0.25 to <0.50	BBB-, BB+	0.35	0.25	20	19	-	-
0.50 to <0.75	BB+, BB	0.55	0.67	5	1	-	-
0.75 to <2.50	BB, BB-, B+	2.37	1.00	19	42	-	-
2.50 to <10.00	B+, B, B-	5.33	1.88	8	6	-	-
10.00 to <100.0	CCC/C	10.00	10.37	-	-	-	-
100.00 (Default)	100.00 (Default)	100.00	100.00	-	-	-	100.00
0 to < 100.0	AAA to CCC/C	0.06	0.59	101	100	-	-
Banks							
0 to <0.15	AAA, AA, A, BBB+	0.05	0.05	87	95	-	-
0.15 to <0.25	BBB, BBB-	0.23	0.18	7	5	-	-
0.25 to <0.50	BBB-, BB+	0.35	0.08	12	21	-	-
0.50 to <0.75	BB+, BB	0.55	0.53	2	1	-	-
0.75 to <2.50	BB, BB-, B+	1.08	0.50	49	50	-	-
2.50 to <10.00	B+, B, B-	7.53	0.42	41	34	-	-
10.00 to <100.0	CCC/C	15.21	1.12	8	11	-	-
100.00 (Default)	100.00 (Default)	100.00	100.00	-	-	-	100.00
0 to < 100.0	AAA to CCC/C	1.47	0.27	206	217	-	-
Retail mortgages							
0.25 to <0.50	AAA, AA, A, BBB+, BBB, BBB-, BB+	0.32	0.32	41 941	51 316	64	0.48
0.50 to <0.75	BB+, BB	0.64	0.64	43 665	51 743	129	0.70
0.75 to <2.50	BB, BB-, B+	1.86	1.54	234 387	216 860	2 171	1.73
2.50 to <10.00	B+, B, B-	4.32	3.76	100 584	88 065	5 666	4.65
10.00 to <100.0	CCC/C	30.83	30.42	17 205	19 504	5 739	27.04
100.00 (Default)	100.00 (Default)	100.00	100.00	35 476	41 194	-	100.00
0 to < 100.0	AAA to CCC/C	3.44	3.06	437 782	427 488	13 769	3.19

[1] Restated to reflect changes made to PD bucket aggregation and refinements made to the calculation of number of obligors and average historical annual default rates.

4. Credit risk

	a	b	c	d	e	f	g
				2020[1]			
				Number of obligors			
	External rating equivalent	Weighted average PD	Arithmetic average PD by obligors	End of previous year	End of the year	Defaulted obligors in the year	Average historical annual default rate
PD range		%	%	#	#	#	%
Retail revolving credit							
0.25 to <0.50	AAA, AA, A, BBB+, BBB, BBB-, BB+	0.25	0.22	867 426	912 469	7 837	0.71
0.50 to <0.75	BB+, BB	0.64	0.61	193 198	176 011	2 190	1.47
0.75 to <2.50	BB, BB-, B+	1.65	1.42	791 293	738 542	17 846	3.13
2.50 to <10.00	B+, B, B-	5.44	5.11	654 071	606 286	64 429	9.92
10.00 to <100.0	CCC/C	28.14	22.58	229 299	202 033	74 250	27.52
100.00 (Default)	100.00 (Default)	100.00	100.00	201 895	232 562	-	100.00
0 to < 100.0	AAA to CCC/C	4.32	3.42	2 735 287	2 635 341	166 552	6.76
SME retail							
0 to <0.0.25	AAA, AA, A, BBB+, BBB, BBB-	0.09	0.05	109 062	114 858	182	0.18
0.25 to <0.50	BBB-, BB+	0.38	0.32	43 792	37 049	90	0.16
0.50 to <0.75	BB+, BB	0.65	0.56	11 312	5 069	18	0.56
0.75 to <2.50	BB, BB-, B+	1.65	1.21	62 884	58 269	171	0.58
2.50 to <10.00	B+, B, B-	5.77	2.23	18 200	32 480	469	1.10
10.00 to <100.0	CCC/C	26.69	16.27	5 042	6 494	299	4.91
100.00 (Default)	100.00 (Default)	100.00	100.00	12 223	15 984	20 071	100.00
0 to < 100.0	AAA to CCC/C	3.75	1.06	250 292	254 219	1 229	0.49
Retail - other							
0 to <0.50	AAA, AA, A, BBB+, BBB, BBB-, BB+	0.25	0.26	43 385	44 020	736	2.09
0.50 to <0.75	BB+, BB	0.66	0.63	29 778	21 513	555	1.75
0.75 to <2.50	BB, BB-, B+	1.82	1.63	174 902	171 224	4 692	2.80
2.50 to <10.00	B+, B, B-	5.85	5.39	395 420	346 853	29 887	7.20
10.00 to <100.0	CCC/C	18.91	20.98	135 636	129 603	47 500	22.53
100.00 (Default)	100.00 (Default)	100.00	100.00	108 282	153 131	51	100.00
0 to < 100.0	AAA to CCC/C	6.55	6.86	779 121	713 213	83 370	8.67

4.7 Counterparty credit risk (CCR) [CCRA]

CCR arises from the risk of losses due to a counterparty defaulting before meeting all their financial and contractual obligations on bilateral derivatives or securities financing transactions (SFTs). This includes failure to pay a regular cash flow, make a specific payment or deliver an asset. The credit risk relating to a derivative or SFT changes due to movement in underlying market variables. The loss to the Group is the cost of replacing or closing out the contract.

- **CCR measurement:** The CEM was replaced with the SA-CCR on 1 January 2021 which measures exposure at default for counterparty credit risk. SA-CCR consists of two components which is replacement cost and potential future exposure (PFE) calculated per hedging set for each primary asset class.
- **Limit approval:** The principle of 'no limit, no trade' is strictly applied and all limits are to be approved by the risk sanctioning unit. All CCR limits are considered uncommitted and are revocable at any time. Break clauses are used to establish early termination rights.
- **Risk mitigants:** Cash and/or financial securities can be accepted to offset the exposure to trading positions which lead to CCR.
- **Exposure monitoring:** CCR activities are monitored through the management of limit excesses and failed trades.
- **Stress testing:** Stress testing is used to assess exposures to obligors or obligor groups and potential Bank losses under stress scenarios. Stress scenarios range from extreme but plausible events to less extreme but more probable stressed market conditions.

[1] Restated to reflect changes made to PD bucket aggregation and refinements made to the calculation of number of obligors and average historical annual default rates.

4. Credit risk

Wrong way risk (incorporated in the CCR profile) arises when there is adverse (positive) correlation between the obligor's PD and the Group's exposure to the obligor. Right way risk arises when an obligor's exposure is negatively correlated with the PD.

The table below provides a view of the Group's regulatory CCR exposure, effectiveness of CRM techniques and RWA consumption. The table excludes CVA charges (table [CCR2]) and exposures cleared through central counterparties (CCPs) (table [CCR8]).

Analysis of CCR exposure by approach [CCR1]

		a	b	c	d	e	f
		2021					
		Replacement cost Rm	PFE Rm	Effective expected positive exposure (EEPE) Rm	Alpha used for computing regulatory EAD Rm	EAD post-CRM Rm	RWA Rm
1	SA-CCR (for derivatives)	8 774	13 141		1.4	30 622	12 239
2	IMM (for derivatives and SFTs)			-	-	-	-
3	Simple approach for CRM (for SFTs)					-	-
4	Comprehensive approach for CRM (for SFTs)					9 864	2 660
5	VaR for SFTs					-	-
6	**Total**						**14 899**

		a	b	c	d	e	f
		2020[1]					
		Replacement cost Rm	PFE Rm	Effective expected positive exposure (EEPE) Rm	Alpha used for computing regulatory EAD Rm	EAD post-CRM Rm	RWA Rm
1	CEM (for derivatives)	36 003	23 173		1.4	44 471	14 286
2	IMM (for derivatives and SFTs)			-	-	-	-
3	Simple approach for CRM (for SFTs)					-	-
4	Comprehensive approach for CRM (for SFTs)					8 385	3 581
5	VaR for SFTs					-	-
6	Total						17 867

CVA accounts for the risk of mark-to-market losses on over-the-counter (OTC) derivatives due to credit quality fluctuations on the derivative counterparty. A CVA capital charge is required under Basel III rules. The Group uses the SA for the calculation of CVA capital.

CVA capital charge [CCR2]

		a	b	a	b
		2021		2020[1]	
		EAD post-CRM Rm	RWA Rm	EAD post-CRM Rm	RWA Rm
	Total portfolios subject to the Advanced CVA capital charge				
1	i. VaR component (including the 3×multiplier)		-		-
2	ii. sVaR component (including the 3×multiplier)		-		-
3	All portfolios subject to the Standardised CVA capital charge	30 622	10 203	43 379	14 663
4	**Total subject to the CVA capital charge**	**30 622**	**10 203**	43 379	14 663

[1] Restated to reflect refinements made to the elimination of intergroup exposures.

4. Credit risk

The table below provides a view of all relevant parameters used for the calculation of CCR capital requirements under the Group's AIRB models. The table excludes CVA charges and exposures cleared through a CCP.

IRB – CCR exposures by portfolio and PD scale [CCR4]

	a	b	c	d	e	f	g
	2021						
PD scale	EAD post-CRM Rm	Average PD %	Number of obligors	Average LGD %	Average Maturity Yrs	RWA Rm	RWA density %
Corporate/SME Corporate							
0. 00 to <0.15	3 854	0.12	48	26	1.40	522	14
0.15 to <0.25	3 290	0.24	34	26	3.72	1 214	37
0.25 to <0.50	5 257	0.37	94	37	1.60	2 211	42
0.50 to <0.75	496	0.56	31	34	2.66	293	59
0.75 to <2.50	2 279	1.44	260	36	2.04	1 801	79
2.50 to <10.00	148	4.58	35	32	1.49	145	98
10.00 to <100.00	71	17.93	2	5	1.0	18	26
100.00 (Default)	143	100.0	4	20	2.04	387	270
Sub-total	15 538	1.48	508	31	2.10	6 591	42
Banks/Securities firms							
0. 00 to <0.15	17 241	0.05	37	42	1.03	2 574	15
0.15 to <0.25	1 972	0.20	5	44	0.52	540	27
0.25 to <0.50	1 361	0.41	11	45	1.16	725	53
0.50 to <0.75	-	0.72	2	44	0.19	-	55
0.75 to <2.50	2 249	1.44	40	42	1.03	1 890	84
2.50 to <10.00	740	7.0	8	44	0.45	1 104	149
10.00 to <100.00	-	20.65	1	40	1.0	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	23 563	0.43	104	43	0.98	6 833	29
Total (all portfolios)	39 101	0.85	612	38	1.42	13 424	34

4. Credit risk

	a	b	c	d	e	f	g
				2020			
PD scale	EAD post-CRM Rm	Average PD %	Number of obligors	Average LGD %	Average Maturity Yrs	RWA Rm	RWA density %
Corporate/SME Corporate							
0.00 to <0.15	6 963	0.07	37	30	1.50	920	13
0.15 to <0.25	3 733	0.23	34	27	3.22	1 261	34
0.25 to <0.50	3 872	0.34	97	29	1.79	1 317	34
0.50 to <0.75	10 978	0.61	35	26	1.30	4 106	37
0.75 to <2.50	1 118	1.60	333	40	1.20	919	82
2.50 to <10.00	485	5.15	37	39	1.14	597	123
10.00 to <100.00	185	18.03	7	11	1.00	104	56
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	27 334	0.62	580	28	1.68	9 224	34
Banks/Securities firms							
0.00 to <0.15	17 711	0.04	32	40	1.49	2 963	17
0.15 to <0.25	86	0.21	8	44	2.61	51	59
0.25 to <0.50	3 255	0.37	22	42	1.49	1 456	45
0.50 to <0.75	-	0.74	1	44	1.0	-	66
0.75 to <2.50	1 142	1.54	37	44	1.11	1 036	91
2.50 to <10.00	1 483	7.91	14	43	0.76	2 372	160
10.00 to <100.00	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-
Sub-total	23 677	0.65	114	41	1.30	7 878	33
Total (all portfolios)	51 011	0.64	694	34	1.50	17 102	34

The table below provides a breakdown of the types of collateral posted or received by the Group to support or reduce the CCR exposure related to derivatives and SFTs, including transactions cleared through a CCP. The Group relies mainly on cash and government bonds as collateral for derivative and securities financing contracts. The value of collateral used in each leg of SFTs is depicted on a gross basis.

Composition of collateral for CCR exposure [CCR5]

	a	b	c	d	e	f
			2021			
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
	Segregated Rm	Unsegregated Rm	Segregated Rm	Unsegregated Rm	Rm	Rm
Cash – domestic currency	-	6 950	-	1 260	73 376	49 159
Cash – other currencies	-	5 620	-	5 652	154	30 503
Domestic sovereign debt	-	-	-	-	38 208	61 779
Other sovereign debt	-	-	-	-	376	-
Government agency debt	-	-	-	-	-	-
Corporate bonds	-	2 499	-	109	32 307	8 463
Equity securities	-	-	-	-	-	-
Other collateral	-	-	-	-	-	-
Total	-	15 069	-	7 021	144 421	149 904

4. Credit risk

	a	b	c	d	e	f
	2020					
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
	Segregated	Unsegregated	Segregated	Unsegregated		
	Rm	Rm	Rm	Rm	Rm	Rm
Cash – domestic currency	-	6 424	-	740	49 907	54 764
Cash – other currencies	-	4 497	-	7 979	2 637	20 375
Domestic sovereign debt	-	-	-	-	55 965	44 887
Other sovereign debt	-	-	-	-	288	2
Government agency debt	-	-	-	-	-	-
Corporate bonds	-	2 574	-	1 456	24 187	2 051
Equity securities	-	-	-	-	-	-
Other collateral	-	-	-	-	-	-
Total	-	13 495	-	10 175	132 984	122 079

The table below illustrates the extent of the Group's exposures to credit derivative transactions in the trading book broken down between protection bought and protection sold positions.

Credit derivatives exposures [CCR6]

	a	b	a	b
	2021		2020	
	Protection bought	Protection sold	Protection bought	Protection sold
	Rm	Rm	Rm	Rm
Notionals				
Single-name credit default swaps	1 260	4 027	4 714	2 425
Index credit default swaps	-	-	-	-
Total return swaps	16 514	15 125	15 859	15 492
Credit options	-	-	-	-
Other credit derivatives	-	-	-	-
Total notionals	17 774	19 152	20 573	17 917
Fair values				
Positive fair value (asset)	340	335	424	688
Negative fair value (liability)	(741)	(265)	(447)	(299)

4. Credit risk

The table below provides a comprehensive picture of the Group's exposure to qualifying CCPs. The Group has no exposure to non-qualifying CCPs. The table includes exposures due to operations, margins posted and contributions to default funds.

Exposures to CCPs [CCR8]

		a	b	a	b
		2021		2020	
		EAD post-CRM Rm	RWA Rm	EAD post-CRM Rm	RWA
1	**Exposures to qualifying central counterparty (QCCPs) (total)**		1 355		2 343
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	-	-	-	-
3	i. OTC derivatives	-	-	-	-
4	ii. Exchange-traded derivatives	7 168	854	9 467	2 219
5	iii. SFTs	-	-	-	-
6	iv. Netting sets where cross-product netting has been approved	-	-	-	-
7	Segregated initial margin	-		-	
8	Non-segregated initial margin	10 851	314	5 224	118
9	Pre-funded default fund contributions	55	187	55	6
10	Unfunded default fund contributions	-	-	-	-
11	**Exposures to non-QCCPs (total)**		-		-
12	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	-	-	-	-
13	i. OTC derivatives	-	-	-	-
14	ii. Exchange-traded derivatives	-	-	-	-
15	iii. SFTs	-	-	-	-
16	iv. Netting sets where cross-product netting has been approved	-	-	-	-
17	Segregated initial margin	-		-	
18	Non-segregated initial margin	-	-	-	-
19	Pre-funded default fund contributions	-	-	-	-
20	Unfunded default fund contributions	-	-	-	-

4. Credit risk

4.8 Securitisation [SECA]

Securitisation is the financial practice of pooling various types of contractual debt such as residential and commercial mortgages, vehicle loans, or credit card debt obligations and selling their related cash flows to third party investors as securities in the form of note or bond issuances. Risk arises from the extent of credit enhancement provided to absorb losses from defaults on the underlying loans to support the required rating.

The Group currently does not undertake any securitisation transactions apart from the SARB committed liquidity facility (CLF) which is a non-market securitisation transaction. Under this facility, home loans are sold into a special purpose vehicle structure, notes are issued to Absa Bank to fund this acquisition, and the senior notes are ceded to the SARB as collateral for the CLF.

Securitisation exposures in the banking book [SEC1]

		a	b	c	e	f	g
		2021					
		Bank acts as originator			Bank acts as sponsor		
		Traditional Rm	Synthetic Rm	Sub-total Rm	Traditional Rm	Synthetic Rm	Sub-total Rm
1	Retail (total)	-	-	-	816	-	816
2	Residential mortgage	-	-	-	816	-	816
6	Wholesale (total)	-	-	-	-	-	-

		a	b	c	e	f	g
		2020					
		Bank acts as originator			Bank acts as sponsor		
		Traditional Rm	Synthetic Rm	Sub-total Rm	Traditional Rm	Synthetic Rm	Sub-total Rm
1	Retail (total)	-	-	-	930	-	930
2	Residential mortgage	-	-	-	930	-	930
6	Wholesale (total)	-	-	-	-	-	-

4. Credit risk

Securitisation exposures in the banking book and associated RC requirements – bank acting as originator or as sponsor [SEC3]

		a	b	c	d	e
		2021 Exposure values (by risk-weight (RW) bands)				
		≤20% RW Rm	>20% to 50% RW Rm	50% to 100% RW Rm	>100% to <1 250% RW Rm	1 250% RW Rm
1	**Total exposures**	–	–	–	816	–
2	Traditional securitisation	–	–	–	816	–
3	Of which securitisation	–	–	–	816	–
4	Of which retail underlying	–	–	–	816	–
5	Of which wholesale	–	–	–	–	–
6	Of which re-securitisation	–	–	–	–	–
7	Of which senior	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–
9	Synthetic securitisation	–	–	–	–	–
10	Of which securitisation	–	–	–	–	–
11	Of which retail underlying	–	–	–	–	–
12	Of which wholesale	–	–	–	–	–
13	Of which re-securitisation	–	–	–	–	–
14	Of which senior	–	–	–	–	–
15	Of which non-senior	–	–	–	–	–

		a	b	c	d	e
		2020 Exposure values (by risk-weight (RW) bands)				
		≤20% RW Rm	>20% to 50% RW Rm	50% to 100% RW Rm	>100% to <1 250% RW Rm	1 250% RW Rm
1	Total exposures	–	–	–	930	–
2	Traditional securitisation	–	–	–	930	–
3	Of which securitisation	–	–	–	930	–
4	Of which retail underlying	–	–	–	930	–
5	Of which wholesale	–	–	–	–	–
6	Of which re-securitisation	–	–	–	–	–
7	Of which senior	–	–	–	–	–
8	Of which non-senior	–	–	–	–	–
9	Synthetic securitisation	–	–	–	–	–
10	Of which securitisation	–	–	–	–	–
11	Of which retail underlying	–	–	–	–	–
12	Of which wholesale	–	–	–	–	–
13	Of which re-securitisation	–	–	–	–	–
14	Of which senior	–	–	–	–	–
15	Of which non-senior	–	–	–	–	–

4. Credit risk

f	g	h	i	j	k	l	m	n	o	p	q
					2021						
Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
IRB RBA[1] (incl. IAA[2]) Rm	IRB SFA[3] Rm	SA[4]/SSFA[5] Rm	1 250% Rm	IRB RBA (incl. IAA) Rm	IRB SFA Rm	SA/SSFA Rm	1 250% Rm	IRB RBA (incl. IAA) Rm	IRB SFA Rm	SA/SSFA Rm	1 250% Rm
816	**-**	**-**	**-**	**3 937**	**-**	**-**	**-**	**315**	**-**	**-**	**-**
816	-	-	-	3 937	-	-	-	315	-	-	-
816	-	-	-	3 937	-	-	-	315	-	-	-
816	-	-	-	3 937	-	-	-	315	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

f	g	h	i	j	k	l	m	n	o	p	q
					2020						
Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
IRB RBA[1] (incl. IAA[2]) Rm	IRB SFA[3] Rm	SA[4]/SSFA[5] Rm	1 250% Rm	IRB RBA (incl. IAA) Rm	IRB SFA Rm	SA/SSFA Rm	1 250% Rm	IRB RBA (incl. IAA) Rm	IRB SFA Rm	SA/SSFA Rm	1 250% Rm
930	-	-	-	4 451	-	-	-	356	-	-	-
930	-	-	-	4 451	-	-	-	356	-	-	-
930	-	-	-	4 451	-	-	-	356	-	-	-
930	-	-	-	4 451	-	-	-	356	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
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-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

[1] RBA: ratings-based approach
[2] IAA: Internal assessment approach
[3] SFA: supervisory formula approach
[4] SA: standardised approach
[5] SSFA: simplified supervisory formula approach

4. Credit risk

4.9 Equity investment risk

Equity investment risk refers to the risk of adverse changes in the value of listed and unlisted equity investments. These investments are longer-term investments held in the banking book for non-trading purposes.

The Group's governance of equity investments is based on the following fundamental principles:

- A formal approval governance process.
- Key functional specialists reviewing investment proposals.
- Adequate monitoring and control after the investment decision has been implemented.
- Implementation of best practice standards based on current market trends, hurdle rates and benchmarks.

Criteria considered for transactions cover a comprehensive set of financial, commercial, legal and technical (where required) considerations. The performance of these investments is monitored relative to the portfolio's objectives.

The Group uses the simple risk-weight regulatory approach for the calculation of RC on its equity investment portfolio.

Equities under the simple risk-weight method [CR10]

	2021				
	On-balance sheet amount Rm	Off-balance sheet amount Rm	Risk weight %	Exposure amount Rm	RWA Rm
Exchange-traded equity exposures	496		300	496	1 611
Private equity exposures	2 731		400	2 731	11 585
Total	**3 227**			**3 227**	**13 196**

	2020				
	On-balance sheet amount Rm	Off-balance sheet amount Rm	Risk weight %	Exposure amount Rm	RWA Rm
Exchange-traded equity exposures	322		300	322	1 025
Private equity exposures	2 433		400	2 432	10 317
Total	2 755			2 754	11 342

5. Traded market risk

5. Traded market risk

Traded market risk is the risk of the Group's earnings or capital being adversely impacted due to changes in the level or volatility of prices affecting the positions in its active trading activities across the Group. This includes but is not limited to changes in interest rates, credit spreads, commodity prices, equity prices and foreign exchange levels.

5.1 Review of current reporting period

Key risk metrics	2021	2020
Average traded market risk – 99% value at risk (VaR) (Rm)	51.9	62.9
Traded market risk EC (Rbn)	6.5	3.9
Traded market risk RWA (Rbn)	39.2	40.1

- Reduction in the average VaR was principally due to reduced overnight risk being held across the markets trading portfolio. The business remained cautious considering concerns about the economic uncertainty arising from historically high asset prices and low interest rates, alongside increasing inflation and COVID-19-related pandemic concerns.
- EC increased primarily due to the model enhancements introduced at the beginning of the 2021 period, specifically relating to the implementation of an internal model default risk charge to replace the regulatory specific risk add-on used in 2020. The changes made to the default risk component, captures issuer concentration risk, with enhanced sensitivity to tail risk events, thereby providing a more accurate reflection of the potential adverse impact on the Group's earnings, due to changes in market risk factors, during a stressed event.
- The marginal reduction in RWA was due to a decrease in the internal model VaR and stressed value at risk (sVaR) metrics as a result of reduced overnight risk. This was offset by an increase in the ARO portfolio risk to facilitate client demand which saw some recovery after the extensive COVID-19 restrictions in place in 2020.

5.2 Priorities

- Monitor and manage daily risk-taking and loss thresholds in volatile markets, which continue to face a number of events that could cause a significant economic impact in a short period.
- Manage capital demand within the Group's risk appetite in markets with reduced liquidity through close engagement with business, limit monitoring and return on capital analyses.
- Conduct business and product impact assessments and engagement with industry and regulatory forums to assess the impact of the Basel Standard: Minimum Capital Requirements for market risk, (also known as the Fundamental Review of the Trading Book (FRTB)), issued in January 2019.
- Maintaining the momentum of the FRTB project to prepare the Group for meeting the regulatory implementation deadline of 1 January 2024 in South Africa.

5.3 General information about market risk [MRA and MRB]

5.3.1 Risk identification and management

The Market Risk Principal Risk officer reports to the GCRO and is responsible for establishing the Market Risk framework and overseeing market risk across the Group. The market risk teams are responsible for the setting and monitoring of market risk limits for the business units, in line with the Group risk appetite and Market Risk Framework and report to the business unit CRO for Traded Market risk and the Treasury Risk officer for non-traded market risk. These teams ensure that risks remain within set limits, including VaR, sensitivity, loss threshold and stress testing. Aggregate limits and thresholds are reviewed and set at the Group level and allocated to business units at least annually. The first line of defence for market risk management resides with the respective business unit heads. Governance committees include the Traded Market risk committee (TMRC) and the Group Non – traded Market Risk committee (GNTMRC).

Traded market risk management objectives are to:

- Embed appropriate models to measure risk.
- Ensure risk is managed within the Group's risk appetite by monitoring risk against the limit and appetite framework.
- Understand risk sensitivity and the impact of volatility on the portfolio.
- Understand concentration risk, risk correlations and basis risk across the portfolio.
- Utilise stress testing and empirical analytics to supplement model-based risk management.

The Group aims to manage traded market risk in a way that limits earnings volatility and ensures risk utilisation is within the Group's allocated risk appetite. The Group takes on market risk to support the needs of its customers to facilitate market liquidity as a market maker and leverage short-term market mispricing. Market risk is controlled by risk management frameworks, polices and standards, supported by daily limit monitoring.

Several techniques are used to measure and control traded market risk. These include:

- VaR-based measures including sVaR, supported by model backtesting.
- Tail metrics.
- Position and sensitivity metrics.
- Stress testing.
- EAD risk monitoring.
- Standardised general and specific risk.
- EC and EaR.
- Valuation control, independent price and bid-offer testing conducted by the independent valuation control team within product control.

5. Traded market risk

A limit structure is in place for each of the above metrics. These are set and reviewed at least annually to control the Group's trading activities, in line with the allocated risk appetite. The criteria for allocating risk limits to businesses include relevant market analysis, market liquidity and business strategy.

VaR[1]

VaR is an estimate of the potential loss that may arise from unfavourable market movements if current positions were to be held unchanged for one business day.

The Group uses an internal VaR model based on the historical simulation method to derive the quantitative market risk measures under normal conditions. The VaR model utilises a two-year data history of unweighted historical price and rate data and a holding period of one day with a confidence interval of 99%. Market and position data inputs are updated daily. The model uses both absolute and relative approaches to simulating potential movements in risk factors. The model is approved by the PA to calculate the RC for all trading book exposures, including foreign exchange and commodity risk in the banking book. The approval covers general position risk across interest rate, foreign exchange, commodity, equity and traded credit products risks. VaR is scaled up to the 10-day holding period (via a scalar assuming no autocorrelation to increase the holding period time horizon). The PA assign a model multiplier to be used in the calculation of RC.

The historical simulation methodology can be split into three parts:

- Calculate hypothetical daily profit or loss for each position over the most recent two years, using observed daily market moves.
- Sum of all hypothetical profits or losses for day one across all positions, giving one total profit or loss. Repeated for all other days in the two-year history.
- VaR is the 99th percentile loss selected from the resultant two-year historically simulated strip of daily hypothetical net profits and losses.

While VaR is an important market risk measurement and control tool, it has a number of known limitations, namely:

- The historical simulation assumes that the past is a good representation of the future[2], which might not always be the case.
- The assumed time horizon does not fully capture the market risk of positions that cannot be closed out or hedged within this time horizon.
- The VaR may underestimate the severity of potential losses.
- The VaR is based on positions at the close of the business day. The intra-day risk or the risk from a position being bought and sold on the same day is not captured.
- Prudent valuation practices are used in the VaR calculation when it is difficult to obtain historical rates/price information.

Because of these limitations, tail risk metrics, stress testing and position and sensitivity measures are used to complement VaR in the management of traded market risk.

Backtesting[1]

The performance of the model is regularly assessed for continuous suitability. The main technique employed is backtesting, which counts the number of days where the daily trading losses exceed the corresponding VaR estimate. Backtesting measures the daily losses against VaR assuming a one-day holding period and a 99% level of confidence. Backtesting reports are monitored daily. Daily losses in excess of the VaR figure are likely to occur, on average, up to five times over the two-year period.

The Group conducts backtesting of the VaR risk measurement model against:

- The theoretical profit and loss representing the change in the value of the portfolio assuming that the portfolio holdings remain constant for the holding period.
- The actual profit and loss representing the actual daily trading outcome from price moves only (excluding fees, commissions, provisions, net interest income (NII) and the time value of money), as required for regulatory backtesting purposes.

Stressed value at risk (sVaR)[1]

The sVaR is an estimate of the potential loss arising from a 12-month period of significant financial stress. The sVaR internal model is approved by the PA to calculate the RC for all trading book exposures, including certain banking book exposures. The PA assign a sVaR model multiplier to be used in the calculation of RC. The sVaR methodology is the same as that used to calculate VaR but is based on inputs calibrated to historical data from the chosen 12-month stress period. A regular process is applied to assess the stress period most relevant to the Bank's portfolio in accordance with the approved methodology. The sVaR RC requirement is calculated daily and is disclosed for the reporting period. Regulatory coverage and reporting of sVaR follows the same approach as VaR (refer to the disclosure above). The sVaR historical period remained 2008/2009.

Stress testing

Stress testing provides an indication of the potential size of losses that could occur in extreme conditions. Stress testing assists in identifying risk concentrations across business lines and assists senior management in making capital planning decisions. The Group performs two main types of stress/scenario testing:

- Risk factor stress testing is conducted by applying historical stress moves to each of the main risk categories (interest rate, equity, foreign exchange, commodity and credit spread risks) and is an estimate of potential losses that might arise from extreme market moves or scenarios to key liquid and illiquid risk factors.
- The trading book is subjected to multi-factor scenarios that simulate past periods of significant market disturbance and hypothetical extreme, yet plausible, events that may impact the market risk exposure across liquid and illiquid risk factors at the same time.

These are reported based on the concurrent aggregation of all risk factors including cross-risk factor effects. Scenarios are reviewed at least annually. A full revaluation approach is applied to undertake stress testing for South Africa's trading books and a sensitivity-based approach is used for ARO. The results are monitored against approved limits and thresholds.

Tail risk metrics

Tail risk metrics highlight the risk beyond the percentile selected for VaR. The two tail risk metrics chosen for daily monitoring, using the current portfolio and two years of unweighted historical market moves, are:

[1] In line with regulatory requirements for public disclosures on the IMA, the sections on VaR, backtesting, tail metrics and sVaR specifically relate to the internal model used for the calculation of South Africa market risk RC.

[2] It is assumed the distribution of historical returns is the same as the distribution of future returns.

5. Traded market risk

- The average of the worst three hypothetical losses from the historical simulation.
- Expected shortfall (also referred to as expected tail loss). This is the average of all hypothetical losses from the historical simulation beyond the 99th percentile used for the VaR.

Risk sensitivities and exposures

The risk sensitivity reporting covers non-statistical measures for calculating and monitoring risk sensitivities and exposures as well as gross notional limits, issuer risk limits and concentration exposure where appropriate. All asset classes and product types have risk sensitivity reporting and limit monitoring. These limits are aligned to VaR limits, but do not bear a direct linear relationship.

Standardised approach

General risk for ARO is quantified using standardised rules. In particular, the maturity method is used to quantify general interest rate risk. In addition, the regulatory SA is used to calculate RC for any new products awaiting regulatory IMA approval in South Africa.

Issuer-specific risk is currently reported in accordance with the regulatory SA calculated as a standalone charge.

Aggregation for capital calculation purposes

The Group uses the IMA to calculate capital for all products for which the PA granted approval. New products, or products for which PA approval has not been obtained, are capitalised under the SA for general risk.

Specific risk is calculated using the SA for all entities.

RC is calculated as a simple summation of the IMA and SA capital charges. No diversification between the methodologies is permitted.

5.3.2 Governance

5.3.2.1 Structure

Traded market risk is structured by asset class for South Africa and geographically for ARO with assigned analysts responsible for ensuring trading activity occurs within approved limits and that VaR results are accurate. The PRO for traded market risk is responsible for oversight of all traded market risk across the Group.

The traded market risk function interacts daily with the product control group (reporting into the CIB Chief Financial Officer and responsible for daily profit and loss, profit and loss attribution and independent price testing), the front office traders and desk heads and credit risk or country risk analysts (where appropriate). Daily reports are sent to the CIB CRO and front office detailing limit utilisation, limit breaches, VaR/sVaR and commentary, where relevant.

The TMRC provides oversight of the Group's traded market risk profile and reports into the ERC. The TMRC has the capacity and mandate to act as a forum where committee members ensure that both risk coverage and limit frameworks remain appropriate.

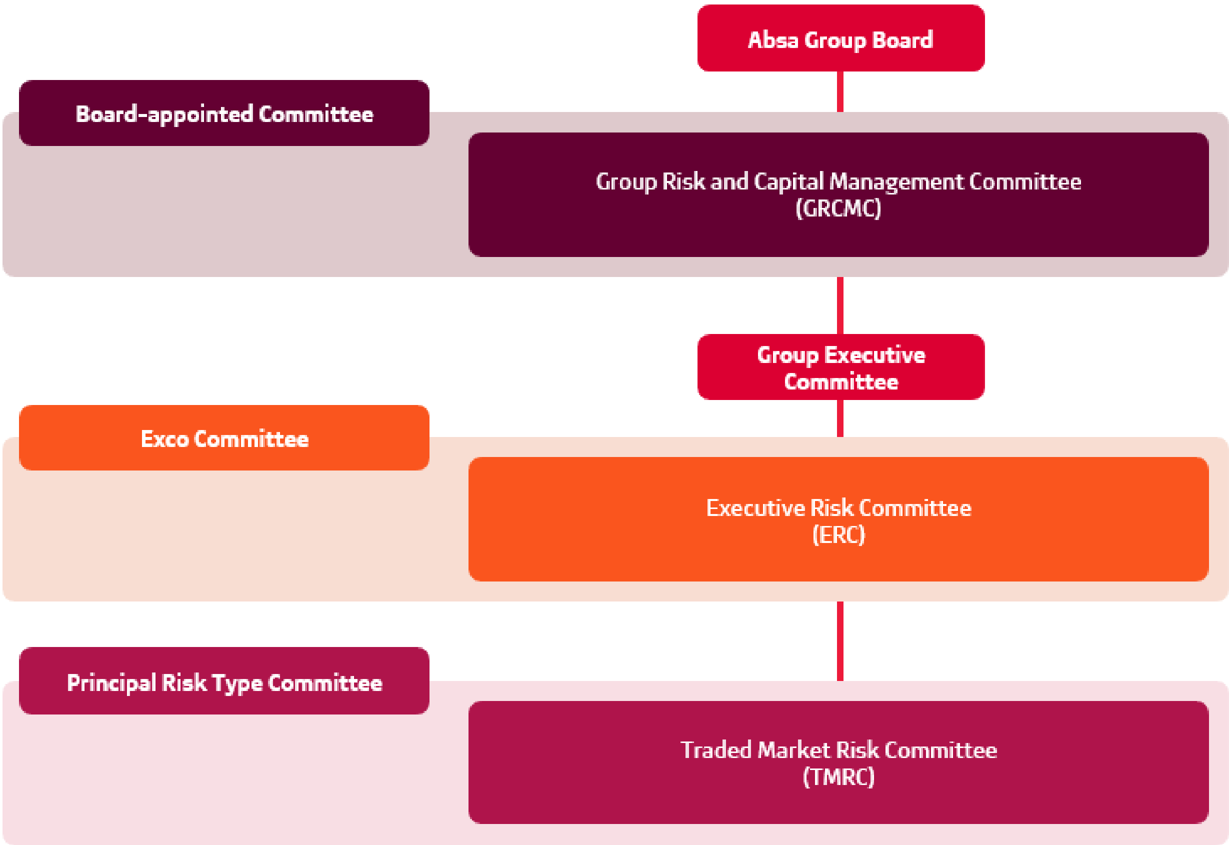
The GCRO presents the Group's traded market risk profile, alongside the other risk types as specified by the ERMF, to the GRCMC.

5.3.2.2 Committees

Traded market risk committees operate at business unit and group-level. These committees set secondary limits and review actual exposure from positions, risks, stresses, EC, EaR, RWA and capital across all asset classes against these limits. A risk summary is then presented at the TMRC including the risk profile report tabled at the GRCMC meeting.

5. Traded market risk

The key committees involved in the governance of market risk are depicted below:



5.3.3 Reporting

5.3.3.1 Risk reporting: Traded market risk

The Group's market risk function produces several daily and monthly market risk reports. The reports detail the positions, sensitivities and exposures, stress testing losses, VaR/sVaR, RWA and capital across all asset classes for the trading book. A risk summary is also presented at the TMRC and other governance committee meetings, as required, including the risk profile report tabled at the GRCMC meeting.

Market risk under SA [MR1]

		2021[a] RWA Rm	2020[a] RWA Rm
	Outright products		
1	Interest rate risk (general and specific)[1]	18 435	16 686
2	Equity risk (general and specific)	113	35
3	Foreign exchange risk	807	1 208
4	Commodity risk	-	-
	Options		
5	Simplified approach	-	-
6	Delta-plus method	338	213
7	Scenario approach	-	-
8	Securitisation	-	-
9	Total	19 693	18 142

[1] General and specific risks are calculated separately as standalone charges without diversification.

5. Traded market risk

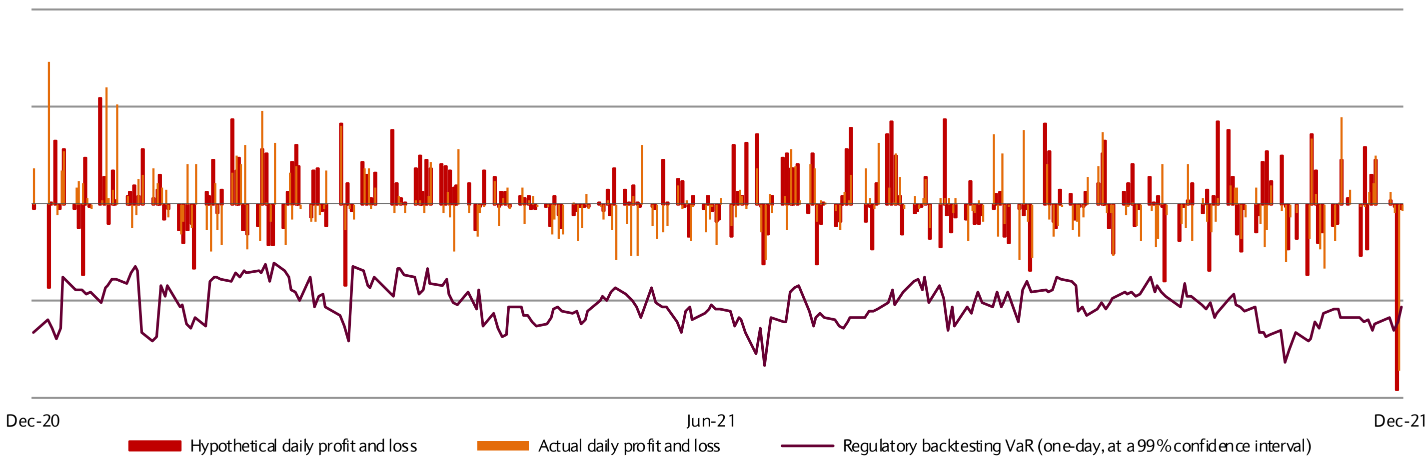
Traded market risk under the IMA

This section relates to the trading books for which IMA approval is in place for the current and previous reporting period.

Comparison of VaR estimates with trading revenues

The following graph compares the total VaR estimates over a one-day holding period at a 99% confidence level with the daily revenues generated by the trading units. Actual profit and loss include fair value adjustments and reserves, which relate to instruments held at fair value according to IFRS 13, but excludes new deals, intra-day trading profit and loss, commissions and fees. Hypothetical profit and loss is calculated by the risk system holding positions static and revaluing them using the change in market rates, prices and volatilities across two days.

The Group's trading book revenue backtested against regulatory VaR (Rm) [MR4]



Profit and loss remained volatile over the period, as the markets faced increasing asset prices alongside inflationary, growth and numerous Covid pandemic concerns. One hypothetical and one actual backtesting breach was reported over the period.

RWA flow statements of market risk exposures under IMA [MR2]

		a	b	c	d	e	f
		2021					
		VaR Rm	sVaR Rm	IRC[1] Rm	CRM Rm	Other Rm	Total RWA Rm
1	RWA at previous quarter end	7 814	11 905	-	-	-	19 719
2	Movements in risk levels	430	(660)	-	-	-	(229)
3	Model updates/changes	-	-	-	-	-	-
4	Methodology and policy	-	-	-	-	-	-
5	Acquisitions and (disposals)	-	-	-	-	-	-
6	Other	-	-	-	-	-	-
7	RWA at end of reporting period	8 244	11 245	-	-	-	19 490

[1]IRC: incremental risk charge.

5. Traded market risk

		a	b	c	d	e	f
				2020			
		VaR	sVaR	IRC	CRM	Other	Total RWA
		Rm	Rm	Rm	Rm	Rm	Rm
1	RWA at previous quarter end	8 601	14 585	-	-	-	23 186
2	Movements in risk levels	(596)	(382)	-	-	-	(978)
3	Model updates/changes	(59)	(181)	-	-	-	(240)
4	Methodology and policy	-	-	-	-	-	-
5	Acquisitions and (disposals)	-	-	-	-	-	-
6	Other	-	-	-	-	-	-
7	RWA at end of reporting period	7 946	14 022	-	-	-	21 968

IMA values for trading portfolios [MR3]

		a	a
		2021	2020
		Rm	Rm
VaR (10 day 99%)[1]			
1	Maximum value	264	345
2	Average value	164	199
3	Minimum value	97	104
4	Period end	168	210
Stressed VaR (10 day 99%)[1]			
5	Maximum value	385	502
6	Average value	249	335
7	Minimum value	152	202
8	Period end	206	330
Incremental risk charge (IRC) (99.9%)			
9	Maximum value	-	-
10	Average value	-	-
11	Minimum value	-	-
12	Period end	-	-
Comprehensive risk capital charge (99.9%)			
13	Maximum value	-	-
14	Average value	-	-
15	Minimum value	-	-
16	Period end	-	-
17	Floor (standardised measurement method)	-	-

[1] One-day VaR scaled to 10 days by multiplying the one-day VaR by square root of 10. The same approach is applied for sVaR.

5. Traded market risk

5.3.4 Additional disclosures

5.3.4.1 Analysis of market risk exposure

The following table reflects the VaR and expected shortfall statistics for trading book activities as measured by the IMA for general trading position risk:

Trading book management VaR summary[1]

	2021				2020			
	Average Rm	High[2] Rm	Low[2] Rm	At the reporting date Rm	Average Rm	High[2] Rm	Low[2] Rm	At the reporting date Rm
Interest rate risk	57	175	26	63	45	87	28	42
Foreign exchange risk	22	59	5	14	23	54	7	48
Equity risk	11	31	3	17	32	81	4	5
Commodity risk	1	5	-	1	1	4	-	1
Inflation risk	36	118	13	44	18	76	6	17
Credit spread risk	10	12	8	9	8	10	4	8
Diversification effect	(85)	-	-	(94)	(65)	(204)	(15)	(56)
Total VaR[3]	52	83	31	54	62	109	33	65
Expected shortfall	81	222	42	70	91	50	150	97
Regulatory VaR[4]	52	83	31	53	63	109	33	66
Regulatory sVaR[3]	79	122	48	65	106	159	64	104

The reduction in the average 99% dVaR, was principally due to an increase in diversification effects, as the business remained defensively positioned, given the economic uncertainty arising from historic high asset prices and low interest rates, alongside increasing inflation and COVID-19 pandemic concerns.

[1] VaR at 99% confidence level and a two-year historical time series for businesses with IMA approval.

[2] The high and low VaR figures reported for each category did not necessarily occur on the same day as the high (and low) total VaR. Consequently, a diversification effect number for the high (and low) VaR figures would not be meaningful and is therefore omitted.

[3] The analysis includes trading books for which internal model approval was obtained.

[4] Regulatory VaR and sVaR are reported with a one-day holding period at a 99% confidence level. The sVaR period is subject to quarterly reviews for appropriateness.

6. Treasury risk

6. Treasury risk

Treasury risk is the risk and related constraints, which supports the effective management of the Group's financial resources, inter alia capital, liquidity and funding, that are critical to meeting the Group's strategic objectives. As such it comprises liquidity risk, capital risk, and interest rate risk in the banking book (IRRBB).

6.1 Overview of treasury risk management and key prudential metrics

The approach to managing treasury risk is aligned to the principles defined in the Enterprise Risk Management Framework. The second line of defence is responsible for preparing the policies that detail responsibilities, activities and governance arrangements for managing and mitigating treasury risk. It also sets the risk appetite and monitors the treasury risk profile for Group Treasury and first line of defence activities.

The Group Treasury Committee/ARO Treasury Committee review and approve the treasury risk appetite at least annually. In addition, treasury risk appetite statements classified as Board level are submitted to the Group GRCMC for review and recommended to the Board for final approval. The ERC reviews and approves allocations of treasury risk appetite to risk types, legal entities and business areas.

Risk metrics are forecast as part of the annual integrated planning cycle or when necessary to ensure that the Group has adequate financial resources to support its strategic objectives. The metrics are monitored dynamically and in line with the nature of each of the underlying risks. Capital and liquidity buffers are informed by internal stress tests conducted by finance, treasury and risk functions to test the resilience of business, capital and funding plans against adverse events and scenarios, together with daily monitoring of active portfolios (e.g. the liquid asset portfolio and structural hedge).

Risk management and mitigation activities are monitored by the appropriate executive oversight committee and include:

- Proactive management of the amount, tenor and composition of capital and funding for strategy execution.
- Daily monitoring of active portfolios (e.g. the liquid asset portfolio and structural hedge).
- Execution of hedging strategies to manage earnings volatility due to changes in interest rates.

6. Treasury risk

6.1.1 Key BCBS metrics (at consolidated Group level) [KM1]

		a	b	c	d	e
		31 December 2021[1]	30 September 2021[1]	30 June 2021[1]	31 March 2021[1]	31 December 2020
Available capital (Rm)						
1	CET1 transitional basis	114 080	108 822	107 437	103 041	102 496
1a	Fully loaded ECL accounting model	114 080	108 822	107 437	103 041	101 632
2	Tier 1 transitional basis	131 059	125 163	123 508	111 990	111 803
2a	Fully loaded ECL accounting model Tier 1	131 059	125 163	123 508	111 990	110 939
3	Total capital transitional basis	153 534	148 281	147 781	136 908	137 454
3a	Fully loaded ECL accounting model total capital	153 534	148 281	147 781	136 908	136 590
RWA (Rm)						
4	Total RWA transitional basis	931 524	916 711	891 769	904 628	915 061
4a	Fully loaded RWA	931 524	916 711	891 769	904 628	911 488
Risk-based capital ratios as a percentage of RWA (%)						
5	CET1 ratio transitional basis	12.2	11.9	12.1	11.4	11.2
5a	Fully loaded ECL accounting model CET1	12.2	11.9	12.1	11.4	11.2
6	Tier 1 ratio transitional basis	14.1	13.7	13.9	12.4	12.2
6a	Fully loaded ECL accounting model Tier 1 ratio	14.1	13.7	13.9	12.4	12.2
7	Total capital ratio transitional basis	16.5	16.2	16.6	15.1	15.0
7a	Fully loaded ECL accounting model total capital ratio	16.5	16.2	16.6	15.1	15.0
Additional CET1 buffer requirements as a percentage of RWA (%)						
8	Capital conservation buffer requirement (2.5% from 2019)	2.5	2.5	2.5	2.5	2.5
9	Countercyclical buffer requirement[2]	-	-	-	-	-
10	Bank G-SIB and/or D-SIB additional requirements	1.0	1.0	1.0	0.5	0.5
11	Total of bank CET1 specific buffer requirements (Row 8 + row 9 + row 10)	3.5	3.5	3.5	3.0	3.0
12	CET1 available after meeting the bank's minimum capital requirements	4.2	3.9	4.1	3.9	3.7
Basel III leverage ratio						
13	Total Basel III leverage ratio exposure measure (Rm)	1 716 289	1 697 416	1 645 788	1 614 976	1 560 437
14	Basel III leverage ratio (%) (row 2 / row 13) transitional basis	7.6	7.4	7.5	6.9	7.2
14a	Fully loaded ECL accounting model Basel III leverage ratio (%) (row 2a / row13)	7.6	7.4	7.5	6.9	7.1
LCR						
15	Total high-quality liquid assets (HQLA) (Rm)	206 880	196 248	214 589	206 410	213 637
16	Total net cash outflow (Rm)	177 075	166 010	173 009	175 300	177 135
17	LCR (%)	116.8	118.2	124.0	117.7	120.6
NSFR						
18	Total ASF (Rm)	1 003 080	987 128	962 485	942 574	935 190
19	Total RSF (Rm)	863 640	828 853	813 629	812 689	807 517
20	NSFR (%)	116.1	119.1	118.3	116.0	115.8

[1] The four-year transition period for phasing in the RC impact of IFRS 9, as afforded by Directive 5 issued by the PA has been concluded at the end of the 2020 financial year, therefore there is no longer a difference between capital and leverage position of the Group on a fully loaded and transitional basis.

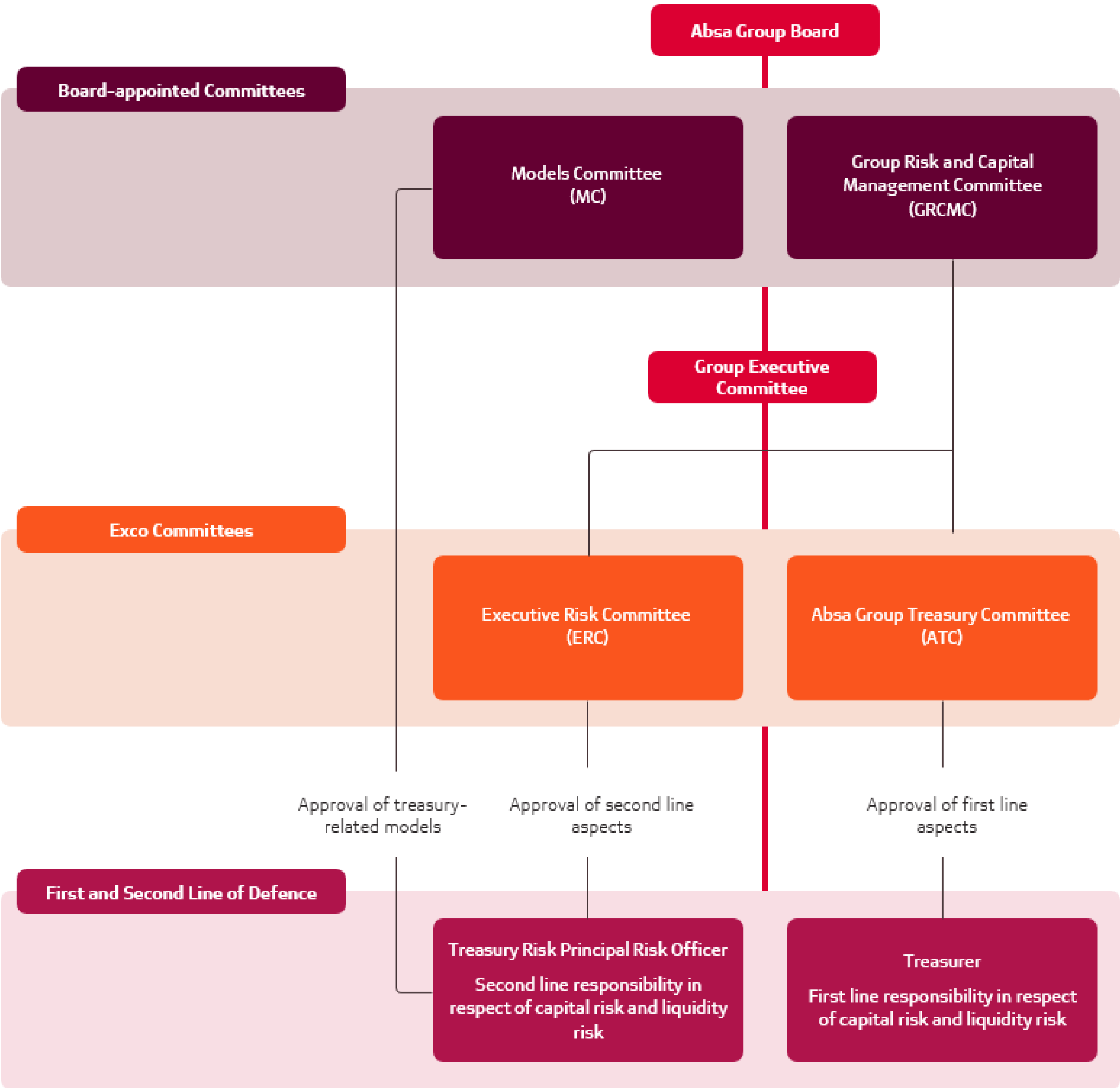
[2] The countercyclical buffer in South Africa is currently zero.

6. Treasury risk

6.1.2 Governance

A set of policies and standards, with an overarching framework, is used with the ERMF to manage and govern treasury risks. The Treasury Risk Framework includes key control objectives that must be met. The liquidity, capital risk and interest rate risk in the banking book policies outline a minimum set of standards and requirements that should be maintained for the management of these risks, encompassing planning, limit setting, stress testing, contingency and recovery planning.

The committee structure used to govern decisions relating to treasury risk is outlined below:



6. Treasury risk

6.2 Liquidity risk

Liquidity risk is the risk that the Group is unable to meet its contractual or contingent liquidity obligations or that it does not have the appropriate amount, tenor and composition of funding to support its assets.

6.2.1 Review of the current reporting period

Key risk metrics	2021	2020
Sources of liquidity (Rbn)	301.2	260.1
NSFR (%)	116.1	115.8
LCR (%)[1]	116.8	120.6
Loan-to-deposit ratio[2] (%)	84.2	86.2
Loans and advances to customers and banks (Rbn)	1 060.6	1 034.6
South Africa	925.1	891.4
ARO	135.5	143.2
Deposits from customers and banks (including debt securities) (Rbn)	1 258.9	1 199.9
South Africa	1 076.7	1 020.5
ARO	182.2	179.4

- Liquidity risk position:
  - The Group's liquidity risk position was healthy, with liquidity metrics in line with risk appetite and above the minimum regulatory requirements.
  - Strong core deposit growth benefitted from the closure of the Absa Money Market Unit Fund in July 2021, with a significant portion of customers electing to migrate to Absa investment products, , strengthening the Group's liquidity and funding profile.
  - The Group maintained an appropriate high-quality liquid asset (HQLA) buffer in excess of the minimum regulatory requirements, noting that the SARB's committed liquidity facility, which qualified as HQLA, was fully phased out on 1 December 2021.
  - The foreign currency liquidity position of the Group remained robust, with adequate diversified United States dollar (USD) funding available to support the USD asset base and planned asset growth.
  - All banking subsidiaries are self-sufficient in terms of local currency liquidity, with limited reliance on Absa Bank for USD working capital support required from the Group.
- Long-term balance sheet structure:
  - The Group continued to strengthen and diversify its funding sources to maintain a sustainable funding structure.
  - Debt capital market issuances for 2021 comprised US$500m Additional Tier 1 (AT1) and R3bn senior debt, with overall reliance on wholesale funding remaining subdued given the strong growth in core deposits.
  - The cost of wholesale funding stabilised in 2021, remaining at levels lower than pre-COVID-19 pandemic levels.
- Short-term balance sheet structure and liquidity buffers:
  - The Group's sources of liquidity increased to R301.2bn (December 2020: R260.1bn), amounting to 28.0% (December 2020: 27.3%) of deposits due to customers demonstrating the strength of the Group's diverse liquidity resources. The diverse liquidity resources increased year-on-year as the Group invested in alternative forms of unencumbered liquid assets that are not eligible as regulatory HQLA.
  - The Bank continued to maintain a diversified HQLA portfolio, thereby maintaining a 90-day average HQLA at R206.9bn (December 2020: R213.6bn).
  - Loan growth was mainly funded by faster growth in customer deposits, ensuring a sustainable and diverse funding base.
  - The Group consistently maintained an LCR buffer above 100% during 2021, despite the relief measures provided by the SARB through the reduction of the minimum LCR from 100% to 80% effective 1 April 2020. The LCR minimum requirement will revert to 100% on 1 April 2022.
  - The Group used its internal liquidity stress metric framework to determine the amount of HQLA required to be held to meet internally defined stress requirements.
- Diversification:
  - The Group had a well-diversified deposit base and concentration risk was managed within appropriate internal and regulatory guidelines.
  - Sources of funding were managed to maintain a wide diversity of depositors, products, tenors and currencies.

[1] The Group LCR reflects an aggregation of the Bank LCR and the ARO LCR. For this purpose, a simple average of the relevant three month-end data points is used in ARO, noting that the ARO LCR is capped at 80% per the minimum regulatory requirements. For the Bank, the LCR was calculated as a simple average of 90 calendar-day LCR observations. The LCR ratio continues to be measured and reported on the standard regulatory basis of a 100%, the regulatory minimum was however temporarily reduced to 80%

[2] The methodology used to calculate the loan-to-deposit ratio includes loans and advances to banks and is based on average balances and not spot balances as disclosed per the Group financial statements.

6. Treasury risk

6.2.2 Priorities

- Preserve the Group's liquidity position in line with risk appetite.
- Focus on growing core retail, relationship bank, corporate and public sector deposits.
- Manage the funding and HQLA position in line with the Board-approved framework and ensure compliance with regulatory requirements.
- Continue to lengthen and diversify the funding base to support asset growth and other strategic initiatives while optimising funding costs.
- Collaborate with the regulatory authorities and other stakeholders on the SARB's approach to resolution planning, depositor insurance schemes and the monetary policy implementation framework in South Africa.

6.2.3 General information about liquidity risk [LIQA]

Liquidity risk is monitored at Group level under a single comprehensive Treasury Risk Framework. The Treasury Risk Framework was designed to deliver an appropriate tenor structure and composition of funding consistent with the risk appetite set by the Board. This framework is delivered through a combination of policy formation, review and governance, analysis, stress testing, limit setting and monitoring.

6.2.3.1 Risk identification and management

The efficient management of liquidity is essential for safeguarding the Group's depositors, preserving market confidence and maintaining the Group's reputation. The Group considers sustainable access to appropriate liquidity for each of its entities to be extremely important. Liquidity risk is managed under the Liquidity Risk Policy in line with the Treasury Risk Framework to:

- Maintain liquidity resources that are sufficient in amount and quality together with a funding profile that is appropriate to meet the risk appetite as expressed by the Board.
- Maintain market confidence.
- Set limits to manage liquidity risk within and across lines of business and legal entities.
- Price liquidity costs accurately and incorporate these into product pricing and performance measurement.
- Monitor early warning indicators (EWIs) to immediately identify the emergence of increased liquidity risk or vulnerabilities including events that would impair access to liquidity resources.
- Fully project over an appropriate set of time horizons cash flows arising from assets, liabilities and off-balance sheet items.
- Maintain a recovery plan that incorporates a contingent funding plan (CFP) that is comprehensive and proportionate to the nature, scale and complexity of the business and regularly tested to ensure it is operationally robust.

The liquidity risk management processes are summarised in the table below:

Funding planning	Liquidity risk monitoring	Execution and intra-day liquidity risk	Contingent funding planning	Regulatory compliance
• Funding plan • Concentration risk • Customer behaviour • Pricing liquidity risk through funds transfer pricing	• Treasury framework and policies • Internal liquidity stress metric (ILSM) • Stress testing • Limits and metrics • Intra-day liquidity risk monitoring • Monitoring other contingent liquidity risks • New product review • Debt buyback monitoring	• Liquidity buffers • Funding execution • Daily clearing and settlement • Contingent liquidity risks in transaction documentation	• EWIs • Liquidity simulations • Contingency planning and Recovery planning	• Cash reserving • Liquid assets • Regulatory reporting • LCR • NSFR

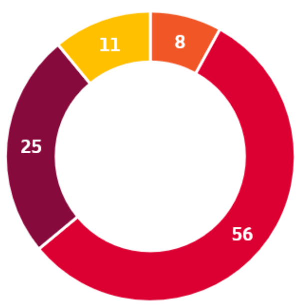
6. Treasury risk

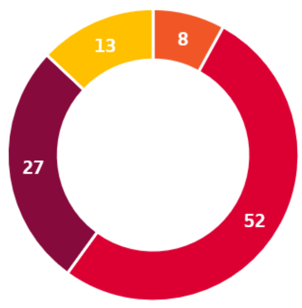
Funding structure

Funding is sourced from a variety of depositors representing a diversity of economic sectors, with a wide range of products and maturities.

Funding sources by product

The graphs below show the Group's funding sources:





NSFR

The NSFR aims to promote the resilience in the banking sector by requiring banks to maintain a stable funding profile in relation to the composition of their assets and off-balance sheet activities on an ongoing structural basis.

	Absa Group		Absa Bank	
	2021	2020	2021	2020
	NSFR Rm	NSFR Rm	NSFR Rm	NSFR[1] Rm
ASF (Rm)	1 003 080	935 190	821 369	777 110
RSF (Rm)	863 640	807 517	745 948	710 852
Actual NSFR (%)	116.1	115.8	110.1	109.3
Required NSFR (%)	100	100	100	100

Diversification

The Group maintained a well-diversified deposit base. Concentration risk is managed within appropriate guidelines. Sources of funding were managed to maintain a diversity of depositors, products, tenors and currencies.

The Group's foreign currency funding position remains robust, with diversified funding facilities from international banks and appropriate tenors to meet term asset growth.

Each geographic entity in the Group is required to ensure funding diversification is taken into account in its business planning process and to maintain a funding plan. This takes into account market conditions and the changes in factors that affect the entity's ability to raise funds.

Stress and scenario testing

Under the Treasury Risk Framework, the Group established the ILSM, which sets the level of liquidity risk the Group chooses to take to achieve its business objectives and in meeting its regulatory requirements. It is measured with reference to the anticipated stressed net contractual and contingent outflows for a variety of stress scenarios and is used to determine the appropriate size of the liquidity pool, along with the LCR.

Each entity in the Group undertakes a range of stress tests appropriate to its business. Stress tests consider both name-specific and market-wide scenarios. The results of the stress tests are used to determine the liquid asset buffer, to develop the CFP which is a component of the Group's recovery plan. Stress testing results are also considered when setting limits for the management of liquidity risk and the business planning process.

As part of stress and scenario testing, the relevant liquid assets portfolio serves as the main source of liquidity under stress. Liquidity value is also assigned to unsecured funding lines, readily marketable investment securities and price-sensitive overnight loans.

Contingency funding planning

Each banking entity in the Group maintains its own CFP, which includes, inter alia:

- The roles and responsibilities of senior management in a crisis.
- Authorities for invoking the plan.
- Communications strategy.
- An analysis of a realistic range of market-wide and Group-specific liquidity stress tests.
- Scenario analyses and the extent to which each stress test and scenario can be mitigated by the management of the balance sheet.
- A range of EWIs, which assist in informing management when deciding whether the CFP should be invoked.

Each banking entity in the Group must establish local processes and procedures to manage local liquidity stresses that are consistent with the Group's plan. The CFPs set out the specific requirements to be undertaken locally in a crisis. This could include monetising the liquidity pool, slowing the extension of credit, increasing the tenor of funding and securitising or selling assets. For the Bank the CFP was merged with the recovery plan.

6. Treasury risk

6.2.3.2 Reporting

Short-term liquidity stress

The Group's sources of liquidity

	2021 Rm	2020 Rm
Total Group sources of liquidity	301 156	260 137
HQLA[1]	188 022	192 892
Other liquid assets (ARO)	80 349	54 575
Other sources of liquidity	32 785	12 670

LCR[2]

The LCR aims to ensure banks maintain an adequate stock of HQLA to survive a significant stress scenario lasting 30 days. The table below represents the average LCR for the quarter:

	Group		Bank	
	2021 Rm	2020 Rm	2021 Rm	2020 Rm
HQLA (Rm)	206 880	213 637	182 584	194 495
Net cash outflows (Rm)	177 075	177 135	146 705	153 208
LCR (%)	116.8	120.6	124.5	126.9
Required LCR (%)	80	80	80	80

HQLA

Each bank holds a stock of HQLA to meet any unexpected liquidity outflows. In the majority of locations, local regulators impose rules on the quantum of reserve liquidity to be held.

HQLA consists of cash and cash equivalents, deposits with central banks, government debt, and other qualifying instruments under the Basel III framework. Each entity in the Group maintains and demonstrates constant access to the relevant underlying asset market to avoid undue price movement if liquid assets need to be sold. Each operation ensures its buffer can be liquidated at short notice.

In compliance with the CLF phase-out, the Bank reduced reliance on the facility, with full phase-out effective 1 December 2021, maintaining average HQLA of R206.9bn (2020: R213.6bn).

[1] The values disclosed represent the spot values of HQLA.

[2] The Group LCR reflects an aggregation of the Bank LCR and the ARO LCR. For this purpose, a simple average of the relevant three month-end data points is used in ARO, noting that the ARO LCR is capped at 80% per the minimum regulatory requirements. For the Bank, the LCR was calculated as a simple average of 90 calendar-day LCR observations.

6. Treasury risk

Composition of liquid assets by country (%)

6.3 Capital risk

Capital risk is the risk that the Group has an insufficient level or inappropriate composition of capital to support its normal business activities and to remain within its Board-approved capital target ranges under normal operating conditions or above regulatory capital requirements under stressed conditions.

6.3.1 Review of the current reporting period

Key risk metrics	2021	2020
Total EC (Rbn)	104.6	94.5
Total RWA (Rbn)	931.5	915.1
CET1 capital adequacy ratio (%)[1]	12.8	11.2
EC coverage	1.5	1.5
Leverage ratio (%)[1]	7.9	7.2
Cost of equity (CoE) (%)[2]	14.5	14.0

- As at 31 December 2021, the Group's capital position was well above minimum regulatory requirements and above the top end of the current Board target range of 11.0% to 12.5%.
- Capital ratios improved year-on-year due to strong earnings generation, coupled with capital issuances and RWA enhancements achieved through model changes that were approved by the regulator. Capital buffers remained strong, consistently above minimum regulatory requirements.
- The SARB reduced the minimum capital requirement by removing the Pillar 2A requirement of 100bps of capital at a total capital level to accommodate the impact of current market conditions on bank capital ratios. The Pillar 2A requirement has been reinstated from 1 January 2022.
- The Group called Tier 2 bonds during the period amounting to R2.4bn.
- In May 2021, the Group issued additional Tier 1 instruments to the value of US$500m in offshore capital markets, providing itself with a strong Tier 1 and capital adequacy requirement (CAR) position and an optimised capital structure.
- All ARO entities were adequately capitalised, above local minimum regulatory requirements, throughout the period.
- The additional Tier 1 issuance and retained earnings supported the leverage ratio.
- The cost of equity increase was driven by the change in the long-term risk-free rate.

6.3.2 Priorities

- Create sustainable value for shareholders while maintaining sufficient capital supply for growth, with capital ratios within the Board-approved target range and above minimum levels of regulatory capital.
- The reinstatement of the Pillar 2A temporary capital relief will have no impact on the Group as the Board capital targets have continued to incorporate the full requirement.
- Monitor and assess upcoming regulatory developments that may affect the capital position. These include the Basel III enhancements, including FRTB; the proposed amendments to the regulations relating to banks; the resolution framework; and the financial conglomerate supervisory framework in South Africa.
- After the publication of the Financial Sector Laws Amendment Bill (FSLAB), prioritise the issuance of first loss after capital (Flac) instruments.
- Appropriately deploy and repatriate capital to and from subsidiaries.

[1] Includes unappropriated profits.

[2] The CoE is based on the capital asset pricing model.

6. Treasury risk

6.3.3 General information about capital risk

6.3.3.1 Risk identification and management

The Group's capital management strategy, which supports and aligns with the Group's strategy, is to create sustainable value for shareholders within approved risk appetite through effective financial resource management.

The Group's capital management objectives are to:

- Maintain an adequate level of capital resources in excess of regulatory requirements and within capital targets, by optimising capital resources and raising capital where required.
- Ensure efficient deployment of capital to legal entities in the Group.
- Assess, manage and efficiently implement regulatory changes to optimise capital usage.

Various processes play a role in ensuring that the Group's capital management objectives are met, including ICAAP, stress testing and recovery and resolution planning.

6.3.3.2 Reporting

Capital adequacy

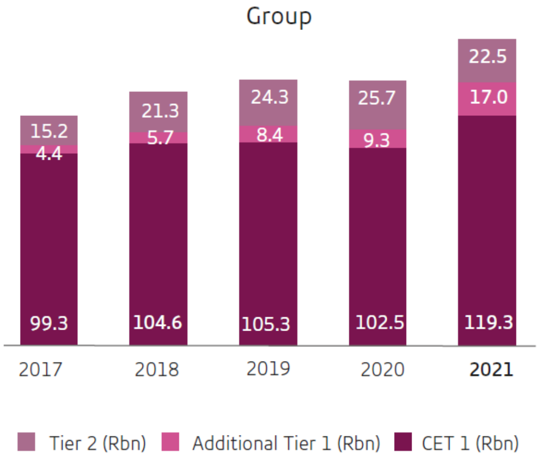
	Board target ranges[1]	Minimum RC requirements[2]	2021 Group performance	2020 Group performance	2021 Bank performance	2020 Bank performance
Statutory capital ratios (includes unappropriated profits) (%)						
CET1	11.0 – 12.5		12.8	12.1	12.4	11.9
Tier 1	>12.0		14.6	13.0	14.8	13.1
Total CAR	>14.5		17.0	15.8	17.9	16.7
Leverage	5.5 – 7.5		7.9	7.2	6.5	6.0
Regulatory capital ratios (excludes unappropriated profits) (%)						
CET1		8.0	12.2	11.6	11.9	11.5
Tier 1		9.5	14.1	12.5	14.3	12.7
Total CAR		11.5	16.5	15.3	17.5	16.3
Leverage		4.0	7.6	6.9	6.3	5.7

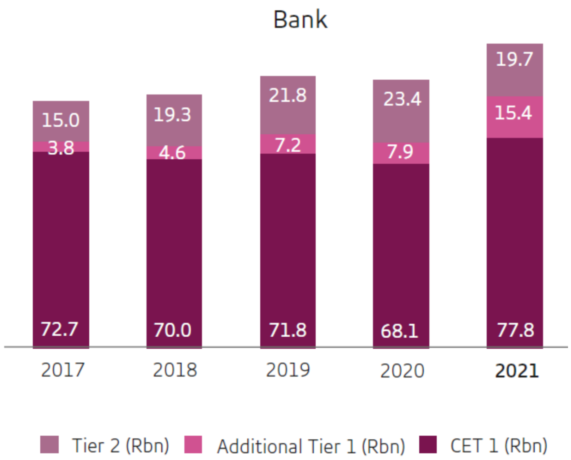
[1] Capital ratios (including unappropriated profits) are managed against Board capital target ranges. The Absa Bank Limited CET1 Board target range is 10.5% to 12.0%.

[2] The 2021 minimum total regulatory CAR of 11.5% includes the capital conservation buffer, Pillar 2A at 0% and the D-SIB add-on but excludes the bank-specific individual capital requirement (Pillar 2B add-on).

6. Treasury risk

Group qualifying capital (including unappropriated profits)





Group[1] 2017	2018	2019	2020	2021		Bank 2017	2018	2019	2020	2021
12.1	13.5	12.8	12.1	12.8	CET1 ratio (%)	11.6	13.4	12.3	11.9	12.4
14.8	16.1	16.1	15.8	17.0	Total capital adequacy ratio (%)	15.1	16.9	16.5	16.7	17.9

Capital adequacy ratios of legal entities

Operations	Regulator	2021 Total qualifying capital Rm	Tier 1 ratio %	Total capital adequacy %	Regulatory minimum %
Local entities (South Africa)					
Group	SARB				
Including unappropriated profits		158 717	14.6	17.0	
Excluding unappropriated profits		153 534	14.1	16.5	11.5[2]
Absa Bank[3]	SARB				
Including unappropriated profits		112 981	14.8	17.9	
Excluding unappropriated profits		109 998	14.3	17.5	11.5[3]
Foreign banking entities[4]					
Absa Bank Mozambique	Banco de Mozambique	1 822	20.0	19.6	12.0
Absa Bank Botswana	Bank of Botswana	4 389	12.5	18.7	12.5
Absa Bank Ghana	Bank of Ghana	4 189	16.2	18.2	13.0
Absa Bank Kenya	Central Bank of Kenya	8 072	14.8	17.4	14.5
Absa Bank Mauritius	Bank of Mauritius	6 270	17.3	21.1	13.4
National Bank of Commerce	Bank of Tanzania	1 959	17.1	19.1	14.5
Absa Bank Tanzania	Bank of Tanzania	954	20.3	21.9	14.5
Absa Bank Uganda	Bank of Uganda	2 421	21.1	24.1	15.5
Absa Bank Seychelles	Bank of Seychelles	799	13.5	18.3	12.0
Absa Bank Zambia	Bank of Zambia	1 583	11.2	14.8	10.0
Insurance entities					
Absa Life Limited	Prudential Authority	4 877		1.43xSCR[5]	1.0xSCR[6]
Absa Insurance Company Limited	Prudential Authority	1 159		1.48xSCR[6]	1.0x SCR[6]

[1] The historical normalised Group CET1 ratios were 11.8% in December 2019, 12% in December 2018 and 12.1% in December 2017 and the historical normalised Bank CET1 ratios were 11.4% in December 2019, 11.2% in December 2018 and 11.6% in December 2017.

[2] The 2021 minimum total regulatory capital adequacy requirement of 11.5% includes the capital conservation buffer, Pillar 2A at zero percent and the D-SIB add-on but excludes the bank specific individual capital requirement (Pillar 2B add-on).

[3] The Bank includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.

[4] The 2021 foreign banking entity disclosures are unaudited.

[5] Solvency capital requirement (SCR): calibrated to correspond to the VaR of an insurer's qualifying capital at a confidence level of 99.5% over a one-year period, as prescribed by the Solvency Assessment and Management (SAM) risk-based capital regime, which became effective on 1 July 2018.

6. Treasury risk

		2020			
Operations	Regulator	Total qualifying capital Rm	Tier 1 ratio %	Total capital adequacy %	Regulatory minimum %
Local entities (South Africa)					
Group	SARB				
Including unappropriated profits[1]		137 454	12.2	15.0	
Excluding unappropriated profits[2]		137 454	12.2	15.0	11.5[2]
Absa Bank[3]	SARB				
Including unappropriated profits[2]		99 410	11.9	15.6	
Excluding unappropriated profits[2]		99 410	11.9	15.6	11.5[3]
Foreign banking entities[4]					
Absa Bank Mozambique	Banco de Mozambique	1 280	18.3	18.3	12.0
Absa Bank Botswana	Bank of Botswana	4 103	13.1	19.3	12.5
Absa Bank Ghana	Bank of Ghana	3 745	17.2	19.2	11.5
Absa Bank Kenya	Central Bank of Kenya	6 973	14.7	17.5	14.5
Absa Bank Mauritius	Bank of Mauritius	6 256	19.0	20.1	14.0
National Bank of Commerce	Bank of Tanzania	1 756	15.6	17.6	14.5
Absa Bank Tanzania	Bank of Tanzania	837	17.6	19.0	14.5
Absa Bank Uganda	Bank of Uganda	2 061	21.5	24.8	15.5
Absa Bank Seychelles	Bank of Seychelles	426	13.0	17.6	12.0
Absa Bank Zambia	Bank of Zambia	1 380	12.3	18.1	10.0
Insurance entities					
Absa Life Limited	Prudential Authority	4 753		1.51xSCR[5]	1.0xSCR[6]
Absa Insurance Company Limited	Prudential Authority	1 133		1.65xSCR[6]	1.0x SCR[6]

Capital supply

Breakdown of qualifying capital

	2021		2020	
Group	Rm	%[6]	Rm	%[1]
CET1	114 080	12.2	102 496	11.2
Additional Tier 1 capital	16 979	1.8	9 307	1.0
Tier 1 capital	131 059	14.1	111 803	12.2
Tier 2 capital	22 475	2.4	25 651	2.8
Total qualifying capital (excluding unappropriated profits)	153 534	16.5	137 454	15.0
Qualifying capital (including unappropriated profits)				
CET1 including unappropriated profits	119 263	12.8	102 496	11.2
CET1	114 080	12.2	102 496	11.2
Unappropriated profits	5 183	0.6	-	-
Additional Tier 1 capital	16 979	1.8	9 307	1.0
Tier 1 capital	136 242	14.6	111 803	12.2
Tier 2 capital	22 475	2.4	25 651	2.8
Total qualifying capital (including unappropriated profits)	158 717	17.0	137 454	15.0

[1] Includes the contribution amounts received from Barclays PLC as part of the separation.

[2] The SARB 2020 minimum regulatory requirement of 11.5% (2019:12.5%) include the RSA minimum of 8% (2019: 8%), Pillar 2a of 0% (2019:1%),capital conservation buffer of 2.5% (2019: 2.5%) but exclude the bank-specific individual capital requirement (Pillar 2b add-on).SARB Directive 4/2020 now requires the D-SIB add on to be disclosed which amounts to 1% (2019: 1%).

[3] The Bank includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.

[4] The 2020 foreign banking entity disclosures are unaudited.

[5] Solvency capital requirement (SCR): calibrated to correspond to the VaR of an insurer's qualifying capital at a confidence level of 99.5% over a one-year period, as prescribed by the Solvency Assessment and Management (SAM) risk-based capital regime, which became effective on 1 July 2018.

[6] Percentage of capital to RWAs.

6. Treasury risk

Bank[1]	2021 Rm	2021 %[2]	2020 Rm	2020 %[1]
CET1	74 851	11.9	68 051	10.6
Additional Tier 1 capital	15 428	2.4	7 933	1.3
Tier 1 capital	90 279	14.3	75 984	11.9
Tier 2 capital	19 719	3.1	23 426	3.7
Total qualifying capital (excluding unappropriated profits)	109 998	17.5	99 410	15.6
Qualifying capital (including unappropriated profits)				
CET1 including unappropriated profits	77 834	12.4	68 051	10.6
CET1	74 851	11.9	68 051	10.6
Unappropriated profits	2 983	0.5	-	-
Additional Tier 1 capital	15 428	2.4	7 933	1.3
Tier 1 capital	93 262	14.8	75 984	11.9
Tier 2 capital	19 719	3.1	23 426	3.7
Total qualifying capital (including unappropriated profits)	112 981	17.9	99 410	15.6

Economic capital adequacy

EC provides a common basis on which to aggregate and compare different risks using a forward-looking, single measure of risk. It is a critical input into the internal capital adequacy assessment process (ICAAP) and in capital allocation decisions, which supports shareholder value creation. EC considers risk types that not only lead to potential operating losses but can also result in lower-than-expected earnings.

In the table below, EC demand is presented at a 99.9% confidence level, aligned to the ERMF principal risks. EC demand is compared to the available financial resources (AFR), also referred to as EC supply, to evaluate the total EC surplus. The Group ensures there is sufficient AFR to meet this minimum demand requirement under severe yet plausible stress conditions.

Economic capital	2021 Rm	2020 Rm
Credit risk[3]	64 391	54 609
Traded market risk	6 510	3 906
Non-traded market risk	7 815	9 065
Insurance risk	5 880	6 448
Business risk	5 999	5 932
Model risk	3 289	2 723
Operational risk[4]	10 701	11 804
Total EC requirement	104 585	94 487
IFRS total EC AFR	158 877	137 347
IFRS total EC surplus	54 291	42 860
IFRS EC coverage ratio	1.5	1.5

[1] Absa Bank Limited includes subsidiary undertakings, special-purpose entities, joint ventures, associates, and offshore holdings.
[2] Percentage of capital to RWAs.
[3] Credit risk includes equity risk, CCR, CVA and securitisation.
[4] Total operational risk includes fixed asset risk, non-customer assets and pension risk.

6. Treasury risk

6.4 Interest rate risk in the banking book (IRRBB)

IRRBB is the risk that the Group's current or projected financial condition and resilience might be adversely affected by changes in interest rate levels, yield curves and spreads. This risk arises in the banking book, due to re-pricing differences between assets, liabilities and equity, and also includes funding spread risk and foreign exchange rate risk.

6.4.1 Review of current reporting period

Key risk metrics	2021	2020
Banking book net interest income (NII) sensitivity for a 2% increase shock in interest rates (Rm)	1 216	1 202
South Africa	414	533
ARO	802	669
Banking book NII sensitivity for a 2% downward shock in interest rates (Rm)	(1 668)	(1 684)
South Africa	(700)	(857)
ARO	(968)	(827)
Non-traded market risk EC (Rbn)	7.8	9.1

- Overall, Group interest rate risk sensitivity remained broadly flat for the year. The Group continued to benefit from strong deposit growth. Risk positions continued to be actively managed with increased derivative hedging in South Africa, and together with regulatory methodology changes, NII risk sensitivity to rate cuts reduced in South Africa in 2021.
- The strategic structural hedging programme in South Africa has continued to support margin stability.
- South African risk reduction was broadly offset by an increase in ARO NII risk sensitivity, mainly due to continued deposit growth and methodology enhancements.
- The Group strategy remained focused on actively hedging its structural, fixed and margin risks to NII volatility and provided margin protection to business units through the interest rate cycle. The majority of the residual risk, reflecting as NII sensitivity, related to items unviable to hedge. These items included Prime to Johannesburg Interbank Average Rate (JIBAR) basis risk in South Africa and short-term reset risks.
- The recent increases in interest rates are however expected to continue to be the trend going forward. Overall, the Group NII will continue to increase as policy rates rise.
- Group EC demand reduced over the period due to a reduction in HQLA investments and an increase in hedging activity.

6.4.2 Priorities

- Continue active management of interest rate risk within risk appetite.
- Deliver margin stability through risk management processes, such as the structural hedge programme in South Africa, and through appropriate asset and liability management processes in ARO.
- Adopt the Basel Committee on Banking Supervision (BCBS) standard on interest rate risk in the banking book (IRRBB) due to be implemented in South Africa by June 2022, as well as ongoing modelling and process enhancements.
- Prepare for JIBAR benchmark reforms.

6.4.3 General information about IRRBB [IRRBBA]

IRRBB is the risk that the Group's financial position might be adversely affected by changes in interest rate levels, yield curves and spreads. This risk arises in the banking book due to repricing differences between assets, liabilities and equity, originating from the provision of retail and wholesale banking products and services (considered core banking activities), together with certain rate-insensitive exposures in the balance sheet. This risk impacts both the earnings and economic value of the Group.

The Group's objective for the management of IRRBB is to ensure a higher degree of interest rate margin stability and reduced interest rate risk over an interest rate cycle. This is achieved by transferring the interest rate risk from the business to local treasury or Group Treasury, which is mandated to hedge material net exposures with the external market. This allows risk to be managed centrally and holistically for the Group.

These risk positions are managed mainly through the use of derivative instruments such as interest rate swap, or appropriate balance sheet optimisation. Residual interest rate risk may remain in treasury due to risks that are not viable to hedge in external markets. A limit framework is in place to ensure that the retained risk remains within approved risk appetite.

The techniques used to measure and monitor IRRBB include:

- Repricing profiles
- Annual earnings at risk (AEaR)/NII sensitivity
- VaR and other tail metrics
- Economic capital
- Economic value of equity (EVE) sensitivity
- Stress testing

VaR, supporting metrics and stresses are reported daily for Group Treasury and the ARO businesses, with the exception of two businesses where reporting is done monthly. The repricing profiles, AEaR, EVE sensitivity and stress results are reported monthly for both Group Treasury and ARO. Limits are set and monitored through the formal governance process.

6. Treasury risk

Repricing profiles

To generate repricing profiles, instruments are allocated to time periods with reference to the earlier of the next contractual interest rate repricing date and the maturity date. The repricing profiles considers the assumed behavioural profile of structural product balances.

AEaR/NII sensitivity

AEaR/NII sensitivity measures the sensitivity of NII over the next 12 months to a specified shock in interest rates. AEaR is monitored against approved internal limits. Foreign exchange risk arising on the banking book is transferred from business to treasury and hedged in the external market.

VaR

VaR calculated at a 95% confidence level is used for measuring IRRBB risk. The VaR is monitored against approved internal limits and is used as a complementary metric to AEaR. The VaR is supplemented by non-VaR, stress and tail metrics.

EVE sensitivity

EVE sensitivity measures the sensitivity of the present value of the banking book at a specific point in time to a specified shock to the yield curve. EVE sensitivity is measured against regulatory guidelines and not against approved internal limits.

Stress testing

Stress testing is tailored to each banking book and consists of a combination of stress scenarios and historical stress movements applied to the respective banking books.

Impact on earnings

The following table depicts the impact on AEaR/NII for 100 and 200bps up and down movements in market interest rates for the Group's banking books. Assuming no management action is taken in response to market interest rate movements, a hypothetical, immediate and sustained parallel decrease of 200 bps in all market interest rates would, at the reporting date, result in a pre-tax reduction in projected 12-month NII of R1.688bn (2020: R1.684bn). A similar increase would result in an increase in projected 12-month NII of R1.216bn (2020: R1.20bn). On this basis, AEaR expressed as sensitivity to a 200bps parallel decrease in all market interest rates decreased to 3.2% of the Group's NII

AEaR for 100 and 200bps changes in market interest rates

	2021			
	200 bps decrease	100 bps decrease	100 bps increase	200 bps increase
South Africa[1] (Rm)	(700)	(290)	209	414
ARO[2] (Rm)	(968)	(506)	401	802
Total (Rm)	(1 688)	(796)	610	1 216
Percentage of the Group's NII (%)	(3.2)	(1.5)	1.2	2.3
Percentage of the Group's equity (%)	(1.1)	(0.5)	0.4	0.8

	2020			
	200 bps decrease	100 bps decrease	100 bps increase	200 bps increase
South Africa[1] (Rm)	(857)	(438)	267	533
ARO[2] (Rm)	(827)	(399)	335	669
Total (Rm)	(1 684)	(837)	602	1 202
Percentage of the Group's NII (%)	(3.4)	(1.7)	1.2	2.5
Percentage of the Group's equity (%)	(1.3)	(0.6)	0.5	0.9

[1] Includes exposures held in the CIB banking book.

[2] ARO interest rate sensitivities are shown on a 100% (rather than actual) shareholding basis.

7. Operational risk

7. Operational risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

7.1 Review of current reporting period

Key risk metrics	2021	2020
Total operational risk losses as a percentage of gross income (%)	1.04	0.36
Total operational risk losses (Rm)[1]	893	292
Operational risk EC (Rbn)[2]	10.7	11.8
Total operational risk RWA (Rbn)	149.4	143.4
Operational risk (Rbn)	122.7	117.2
Non-customer assets (Rbn)	26.7	26.2

- Net operational risk losses of R893m (December 2020: R292m) were impacted by the riots in South Africa and increased fraud risk losses.
- The increase in RWA to R149.4bn (December 2020: R143.4bn), was attributable to growth in revenue and depreciation of the Rand against the currencies of the ARO countries.
- Key achievements in the period included:
  - Further development of fraud defences including behavioural analytics to identify internal fraud and enhancements to customer profile scoring and authentication.
  - Progress in addressing and preventing debit order abuse within the National Payment System through improved internal controls and migration of authenticated and non-authenticated early debit order transactions onto DebiCheck.
  - Improvements towards the management of processes, most notably in the embedment of critical process assessments.
  - Digitised the toolset used in the management and measurement of operational risk.
  - Enhanced the operational risk stress testing methodology and developed a new model.
  - Achieved compliance to BCBS239 - Risk Data Aggregation and Risk Reporting (RDARR) requirements.

7.2 Priorities

- Further strengthen the Group's fraud defences through continued investment in automation, analytics, and technologies.
- Further improve the process management infrastructure (people, process, technology) across the process value chain.
- Adoption and embedment of the digitised operational risk toolset.
- Implement the new standardised approach (NSA) in line with defined local guidelines.
- Implement artificial intelligence to enhance risk management capabilities.

7.3 General information about operational risk

Operational risk occurs in the natural course of business activity. Therefore, it is not possible to eliminate all operational risk exposure. Operational risk is recognised as a principal risk type and the Operational Risk Management Framework (ORMF) establishes a set of inter-related quantitative and qualitative tools and processes to identify, assess, measure, mitigate, monitor and remediate risks within a defined appetite.

The leveraging of operational processes and capabilities is pivotal to the achievement of the Group's strategy and objectives and the management of operational risk aims to ensure these processes and capabilities are safeguarded and resilient.

7.3.1 Approach to the management of operational risk

The Group's objectives in the management of operational risk are to:

- Articulate an appropriate level of risk appetite for operational risk, which supports the business strategy.
- Manage risk and control effectively, thus maintaining the operational risk profile within appetite.
- Embed a positive risk culture across the organisation.
- Minimise the impact of losses suffered in the normal course of business (expected losses) and to avoid or reduce the likelihood of suffering an extreme or unexpected loss.

The management of operational risk aligns to the three lines of defence model as set out in the ERMF with the primary responsibility (i.e. first line of defence) for the management of operational risk residing with the business and infrastructure functional units where the risk arises. The heads of these business and infrastructure functional units are required to implement appropriate organisational structures and processes in line with the ORMF to identify, assess, measure, mitigate, monitor and remediate risks in their respective areas within an agreed appetite. Business-aligned operational risk heads (second line of defence), reporting to the business unit CROs, are responsible for risk management of their respective portfolios within risk appetite in line with the ORMF.

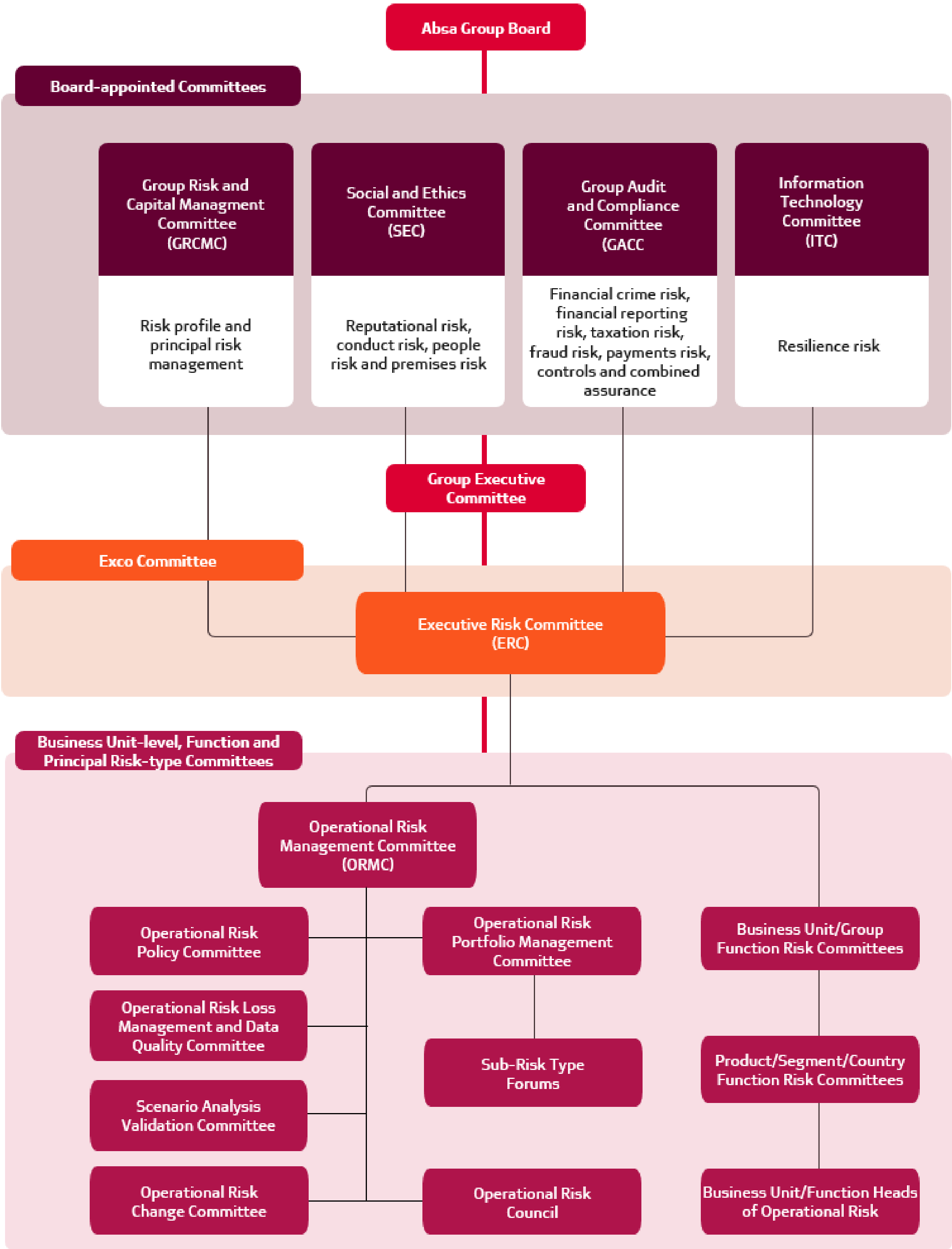
Enterprise-wide specialist risk type owners (second line of defence), reporting to PROs define the risk type strategy and framework and facilitate the group-wide governance to effectively enable risk type appetite, aggregation of risk type profiles, oversight and challenge processes. Group operational risk (second line of defence) is accountable for the Group-wide management of operational risk, establishing strategic direction and Group risk appetite, ownership of the ORMF and its supporting policies and enterprise-wide standards, and independent oversight over businesses and functions.

[1] Includes post period recoveries relating to a payment and fraud related risk event.
[2] Includes fixed asset risk, non-customer assets and pension risk.

7. Operational risk

7.3.2 Governance of operational risk

The key committees involved in the governance of operational risk are depicted below:



The GCRO appoints the Operational Risk PRO, who is accountable for the design, implementation and maintenance of an effective, efficient and regulatory compliant ORMF.

A Group Operational Risk Management Committee (ORMC) chaired by the PRO is in place providing an aggregation and challenge viewpoint of the Group's operational risk profile across the three lines of defence prior to submission to the ERC. Additionally, it serves as the vehicle to drive development, implementation and embedment of the framework, policies and Group-wide standards.

7. Operational risk

The GCRO presents the Group's operational risk profile, alongside the other risk types as specified by the ERMF, to the GRCMC, as well as the GACC.

Business and infrastructure functional unit risk committees monitor risk management and control effectiveness, with progress reporting to the ERC by the respective executive.

7.3.3 Management of operational risk

The suite of risks considered within the remit of operational risk include:

- Fraud
- Payment
- Process management
- People
- Premises
- Supplier
- Financial reporting
- Taxation
- Legal

While conduct, reputational, financial crime, sustainability and resilience (including technology, physical security, projects change, business continuity, data management, information security and change) risks are managed individually, they are eventually incorporated into operational risk for capital requirement measurement.

To address the wide remit of operational risk, the ORMF establishes a suite of management techniques applicable to its underlying risk types. These include:

3.6.1.1 Critical process assessments (CPAs)

CPA is an integrated assessment that enables the Group to focus on processes which are essential to executing on strategy and delivering for customers and stakeholders. This approach ensures that material risks and rewards are holistically understood and decisively managed, resulting in consistent monitoring of the operational risk profile in the context of business objectives and appetite. It requires the assessment of risks and controls in critical processes on an end-to-end basis, enabling a view across functions and supporting enablers, such as systems and suppliers. This approach promotes performance and service efficiencies through using key indicators that monitor risks, controls and process performance.

Further, a comprehensive understanding of all business enablers is obtained by considering all supporting dependencies and the end-to-end resilience of processes and capabilities. CPA enables management of the prioritised enablers and a focus on the most material risks and key controls. The outcome of CPA is a consolidated view of all material risks in the critical business processes and information on the drivers of risk, such as risk events, root causes, indicators, issues and management responses.

3.6.1.2 Internal risk events

An operational risk event is any circumstance where there is a potential or actual impact to the Group resulting from inadequately controlled or failed internal processes, people and systems, or from an external event. The definition includes situations where a loss could have been incurred, but a gain was realised, as well as incidents resulting in customer, legal, reputational, conduct or regulatory impacts. Operational losses incurred from internal risk events must be captured on the Group operational risk management system. Boundary events, such as operational risk materialising within credit risk, are also tracked. The analysis of internal risk events assists the Group in identifying areas of improvements to processes or controls, to reduce the likelihood of recurrence and/or magnitude of risk events.

The analysis of risk events assists the Group in identifying control deficiencies to prevent future losses. In addition, it aids monitoring of a changing risk.

3.6.1.3 External risk events

Applicable external loss information is regularly considered to support and inform risk identification, assessment and measurement, and provide management with insight into possible emerging risks. External data is used to provide insight into the magnitude of events/losses emanating from scenarios and risks which Absa has never experienced and are complex to quantify. The Group's primary source of external data is through membership of the Operational Risk Data Exchange (ORX), a non-profit association of international banks formed to share anonymous loss data information.

3.6.1.4 Risk mitigation

It is not always possible or cost effective to eliminate all operational risks, nor is this the objective of operational risk management. Achieving the correct balance of focus and effort is pivotal to the Group's operational risk management strategy. This is underpinned by a defined risk appetite, established governance and oversight structures, monitoring and escalation criteria, clarity of roles across the three lines of defence and clear direction and tone from the top driving a transparent and accountable risk culture in the organisation. Operational risk is managed in accordance with the Group Risk Appetite Framework that formalises and articulates how risk appetite is established, communicated, cascaded, governed, and monitored across the organization. It provides a common and consistent platform for how risk appetite is managed.

The mitigation of residual risks (i.e., risks post-consideration of existing controls), depending on their likelihood and impact, is achieved by one or a combination of the following responses:

- **Accept:** Maintain the control environment.
- **Mitigate the risk:** Implement actions and strategies to reduce the residual risk level to within acceptable levels.
- **Avoid the risk:** Do not take the risk and stop the related activity.
- **Transfer the risk:** This involves a third party sharing some part of the risk or taking over all the risk. This could be in the form of insurance, partnerships, outsourcing or joint ventures

3.6.1.5 Lessons learnt reviews

Lessons learnt is a targeted root cause analysis of significant risk events experienced in the Group with the outcomes of such reviews including:

- Establishing what went wrong.
- Early detection and prevention of systemic issues.
- Address of thematic concerns.
- Determining whether cultural, operating model, governance or risk practices may have contributed to the risk event.

7. Operational risk

This process enables sustained and shared learning across the organisation, promoting stronger risk management.

3.6.1.6 Key indicators

Key indicators are metrics used to monitor the Group's operational risk profile. They include measurable thresholds that reflect the risk appetite of the business and are designed to monitor risk, control and business factors that influence the operational risk profile. Key indicators serve as alerts to management when risk levels exceed acceptable ranges and drive timeous decision-making and actions.

7.3.4 Measurement of operational risk

The Group assesses its operational risk capital requirements using the AMA which involves estimating the potential range of losses that could be incurred in a year from operational risk events, using statistical distributions. The BIA or TSA is used in certain operations outside South Africa and joint ventures and associates where the Group is not able to apply the AMA model.

The potential frequency and severity of losses is estimated for each risk in the suite of operational risks (refer to 7.3.3) based on internal loss data, extreme scenarios (from the key risk scenario process) as well as external loss data from ORX. The capital calculation also considers the possibility of correlations between operational risk losses occurring in a year.

RC requirements are set to cover 99.9% of estimated unexpected losses with EC requirements covering estimated losses that exceed the expected losses.

3.6.1.7 Key risk scenarios

Key risk scenarios are a summary of the extreme potential risk exposure for each risk in the suite of operational risks (refer 7.3.3) and includes quantitative and qualitative assessments of the potential frequency of risk events, the average size of losses and extreme scenarios. The assessments consider internal and external loss experiences, key indicators, CPAs and other relevant risk information.

Factors incorporated into the analysis of potential extreme scenarios include:

- The circumstances and contributing factors that could lead to an extreme event.
- The potential financial and non-financial impacts (e.g. reputational damage).
- The controls and other mitigants that seek to limit the likelihood of such an event occurring, and the actions that would be taken if the event were to occur (e.g. crisis management procedures, business continuity or disaster recovery plans, etc.).
- The Bank redeveloped its AMA model (approved by the PA in May 2020) used for the calculation of regulatory and economic capital.
- The new AMA model and accompanying scenario analysis approach offers the following enhancements:
  - Improved linkage between internal risk performance and capital being held.
  - Direct incorporation of loss data into the model.
  - Increased number of distributions for tail losses.
  - Explicit modelling of intra-risk dependencies through copulas (diversification benefit).

7.3.5 Insurance

The Group utilises insurance to mitigate certain operational risks. However, it is not used to offset operational risk capital requirements. The cover and associated cost are regularly reviewed and are presented annually to the GRCMC.

8. Model risk

8. Model risk

Model risk is the risk of potential adverse consequences from financial assessments or decisions based on incorrect or misused model outputs and reports.

8.1 Review of current reporting period

Key risk metrics	2021	2020
Model risk EC (Rbn)	3.3	2.7

- Continued to improve the accuracy and robustness of the models that support business decision making, impairment and regulatory credit capital calculations. These improvements resulted in more accurate quantification of default risk, impairments and regulatory credit capital demand.
- Received approval from the PA to implement eight new wholesale regulatory credit capital models and implemented six models.
- Redeveloped and implemented all retail credit impairment models and behavioural scorecards. The redevelopment of retail regulatory credit capital is scheduled for 2022.
- Continued to enhance the model risk control environment by refining the model risk appetite assessment, refreshing the relevant policies and standards, updating the quantitative tests and methodologies and enhancing the model risk management workflow system.
- No adverse model risk events took place during 2021.

8.2 Priorities

- Implement the new retail and wholesale credit risk models.
- Continue the redevelopment of models to improve their accuracy and robustness.
- Enhance and automate model performance monitoring, leading to an increase in frequency and consistency of model performance assessments and earlier detection of non-performance.
- Strengthen the Group's capabilities to manage the increasing quantity and complexity of models.
- Embed technological solutions, including the use of machine learning techniques and cloud-based computing, for independent validation and the general management of model risk.
- Reduce critical staff dependencies through pipeline development, succession planning, training and automation.
- Optimise the architecture and capabilities of the model development, validation and implementation technology platforms.

8.3 General information about model risk

8.3.1 Risk identification and management

A model is a quantitative method, system or approach that applies statistical, economic, financial or mathematical theories, techniques, parameters and assumptions to process input data into outputs. A model is an end-to-end concept, including the sourcing of inputs, selection and specification of methodology, calibration of parameters, implementation of the model and the usage of the outputs. The use of models invariably presents model risk, defined as the potential adverse consequences from financial assessments or decisions based on incorrect or misused model outputs and reports. Model risk may lead to financial loss, poor business and strategic decision-making, or damage to the Group's reputation.

Model risk is a principal risk managed under the Group's ERMF. The model risk PRO oversees the Model Risk Management Framework, established to manage model risk in accordance with the Group's tolerances. Through its policies and standards, the Model Risk Management Framework identifies risks and specifies controls in order to establish a consistent approach to the management of model risk across the Group. Compliance to controls is assessed through key risk assessments (KRAs) and control testing is conducted to provide assurance around the effective design and operation of controls.

The GMRP specifies the model lifecycle, together with the control activities to be conducted at each stage thereof; assigns stakeholder responsibilities and accountabilities for the management of model risk; mitigates model risk through controlled model design, development, implementation, use and change processes; and institutionalises independent validation and approval of models. The GMRP is supported by the following detailed standards:

- Model development and documentation
- Independent model validation
- Model materiality
- Model inventory and workflow
- Model performance monitoring
- Model implementation
- Model owner review
- Post model adjustment
- Vendor models
- Machine learning

The model risk appetite is defined as the level of risk that the Group is prepared to accept given available capacity while pursuing its business strategy and recognising a range of possible outcomes as business plans are implemented. As the Group does not actively seek model risk, its appetite is expressed in terms of risk tolerance thresholds and does not have a target range. The Group hold economic capital in respect of model risk, based on the outcome of the model risk appetite assessment against the risk tolerance thresholds.

The model risk second line of defence is comprised of the Model Governance and Control (MGC) team, the independent validation unit (IVU), the model methodology team and the model risk processing centre (MRPC).

The MGC team develops the framework, policy and standards to manage model risk, sets limits consistent with the Group's risk appetite and monitors performance of the model ownership areas against these limits. It performs regular conformance reviews to provide assurance around control effectiveness.

IVU is responsible for the independent validation of models, prior to the initial approval thereof and at regular intervals thereafter. The independent validation is an assessment of a model across multiple dimensions (e.g., performance, regulatory compliance, etc.), in the context of the model's objectives. The IVU also conducts the ongoing independent performance monitoring for behavioural scorecard, credit impairment and regulatory credit capital models.

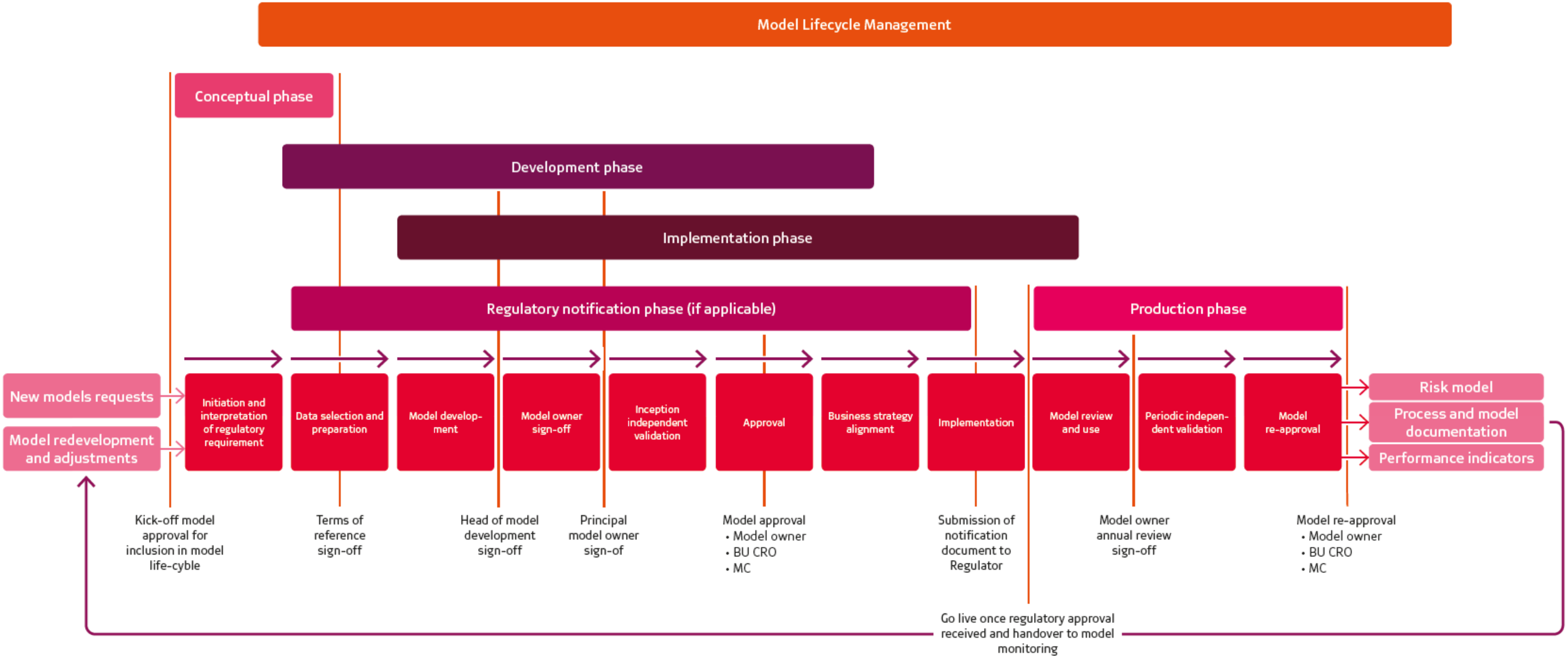
8. Model risk

The model methodology team assists with developing and aligning model methodology across the Group. It also facilitates the technical training of the modelling resources throughout the Group.

MRPC oversees model implementation controls, maintains a central implementation/processing environment for behavioural scorecard, credit impairment and regulatory credit capital models and executes these models within the impairment and regulatory credit capital reporting processes.

8.3.2 Governance

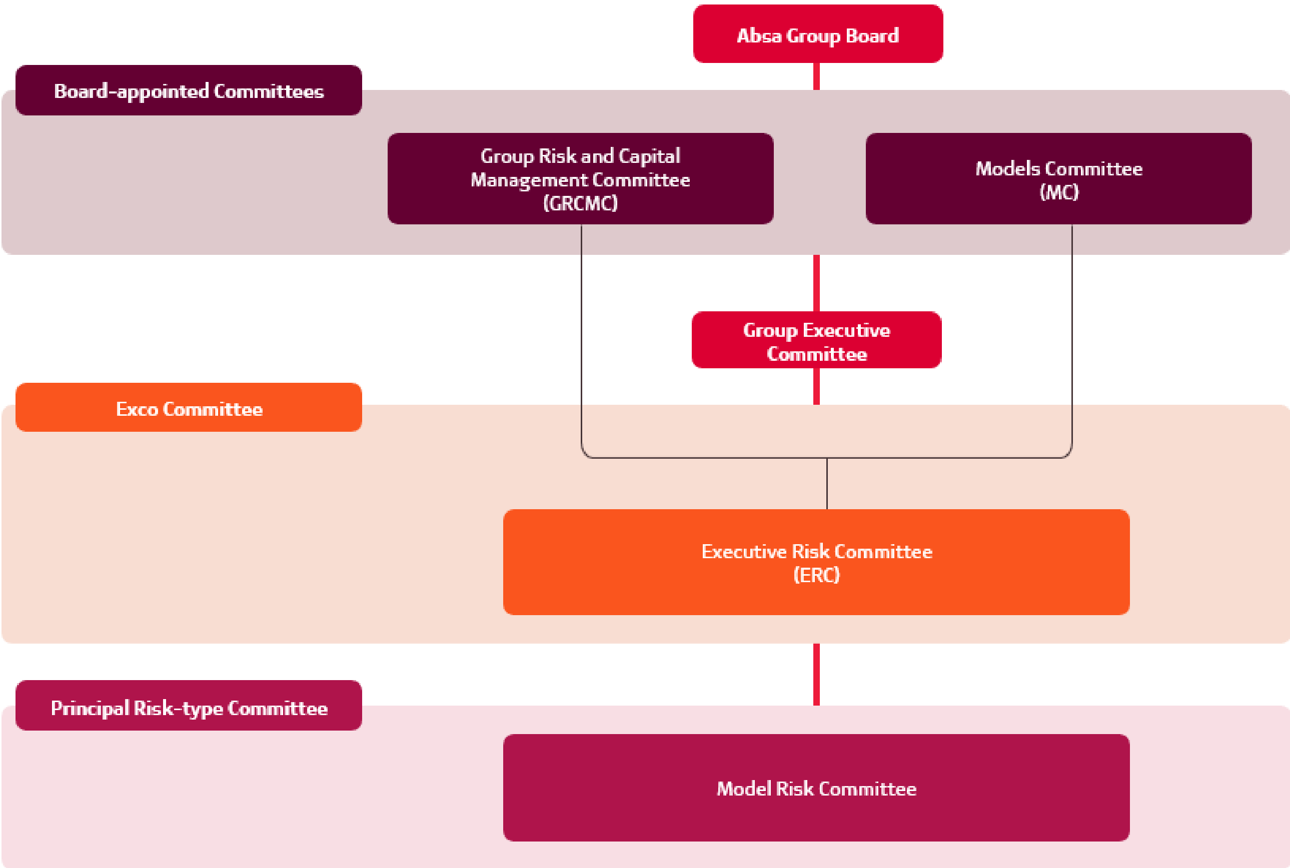
The model lifecycle and associated controls are depicted in the diagram below.



The model approvers are assigned based on the materiality of models. Material models are routed to the Group Models Committee (Board committee) for approval, and models of lesser materiality are approved by the business unit CROs through business unit model approval forums. Overall model ownership vests with the business units that use the output of models to quantify risk.

8. Model risk

The key committees involved in the governance of model risk are depicted below:



8.3.3 Reporting

A monthly model risk group and cluster report is produced by the MGC team and submitted to the committees and forums attended by senior management, the MC and the ERC. The report covers:

- Progress on regulatory and other model development.
- Adherence to policy and standards including any model related audit findings and control issues.
- Models in governance coverage, i.e., models monitored, reviewed and validated.
- Individual model's risk assessment (high, medium or low).
- Model risk appetite status.

Model development and implementation progress update reports are produced by the business units, to be tabled at the Model Risk Committee.

A report on the status of resolution of material control gaps and the existing dispensations, waivers and breaches is also tabled at the Model Risk Committee.

9. Abbreviations and acronyms

9. Abbreviations and acronyms

A	
ACCC	Absa CIB Credit Committee
AEaR	annual earnings at risk
AFR	available financial resources
AIRB	advanced internal ratings-based approach
AMA	advanced measurement approach
ARO	Absa Regional Operations
ASF	available stable funding
AVM	automated valuation model

B	
Bank	Absa Bank Limited
Basel	Basel Capital Accord
BCBS	Basel Committee on Banking Supervision
BIA	basic indicator approach
bps	basis points

C	
CAR	capital adequacy requirement
CCF	credit conversion factor
CCP	central counterparty
CCR	counterparty credit risk
CEM	current exposure method
CET1	common equity tier 1
CFP	contingent funding plan
CIB	Corporate and Investment Banking
CLF	committed liquidity facility
CLR	credit loss ratio
CoE	cost of equity
CPA	critical process assessment
CRM	credit risk mitigation
CRMF	Credit Risk Management Framework
CRO	Chief Risk Officer
CVA	credit valuation adjustment

D	
D-SIBs	domestic systemically important banks
dpd	days past due
DT	downturn

E	
EAD	exposure at default
EaR	earnings at risk
EC	economic capitalG
ECL	expected credit loss
Edcon	Edcon Store Card Portfolio
EEPE	effective expected positive exposure
EL	expected loss
ERC	Absa Group Executive Risk Committee
ERMF	Enterprise Risk Management Framework
EVE	economic value of equity
EWIs	early warning indicators
Exco	Executive Committee

F	
FIRB	foundation internal ratings-based
FRTB	fundamental review of the trading book

G	
GACC	Group Audit and Compliance Committee
GCC	Group Credit Committee
GCRC	Group Credit Risk Committee
GCCO	Group Chief Credit Officer
GCIC	Group Credit Impairment Committee
GCRO	Group Chief Risk Officer
GMD	Group model database
GMRP	Group model risk policy
GRCMC	Group Risk and Capital Management Committee
Group	Absa Group Limited
G-SIBs	global systemically important banks

H	
HQLA	high-quality liquid assets

I	
IAA	internal assessment approach
ICAAP	internal capital adequacy assessment process
IFRS	International Financial Reporting Standards
ILSM	internal liquidity stress metric
IMA	internal models approach
IMM	internal model method
IRB	internal ratings-based
IRBA	internal ratings-based approach
IRC	incremental risk charge
IRRBB	interest rate risk in the banking book
IT	information technology
ITC	Information Technology Committee
IVU	independent validation unit

K	
KCI	key control indicator
KPI	key performance indicator
KRA	key risk assessment
KRI	key risk indicator

L	
LCR	liquidity coverage ratio
LGD	loss given default
LR	long run

M	
M	maturity
MC	Models Committee
MCA	management control approach
MRG	model risk governance

N	
NII	net interest income
NPL	non-performing loan
NSFR	net stable funding ratio

9. Abbreviations and acronyms

O	
ORMC	Operational Risk Management Committee
ORMF	Operational Risk Management Framework
ORX	operational risk data exchange
OTC	over-the-counter
P	
PA	Prudential Authority
PD	probability of default
PF	project finance
PFE	potential future exposure
PIT	point-in-time
PMAs	post-model adjustments
PnL	profit and loss
PQR	portfolio quality review
PRO	principal risk officer
PSEs	public sector entities
PVA	prudent valuation adjustments
Q	
QCCP	qualifying central counterparty
R	
RBA	ratings-based approach
RBB	Retail and Business Banking
RC	regulatory capital
RDARR	risk data aggregation and risk reporting
RemCo	Group Remuneration Committee
RMC	Risk Management Committee
RoE	return on equity
RoRWA	return on average risk-weighted assets
RSF	required stable funding
RW	risk-weight
RWA	risk-weighted assets
S	
SA	standardised approach
SA-CCR	standardised approach for counterparty credit risk
SAM	Solvency Assessment and Management
SARB	South African Reserve Bank
SC	Separation Oversight Committee
SCR	solvency capital requirement
SEC	securitisation
SFA	supervisory formula approach
SFTs	securities financing transactions
SME	small and medium-sized enterprises
SSFA	simplified supervisory formula approach
sVaR	stressed value at risk
T	
TLAC	total loss-absorbing capacity
TMRC	Traded Market Risk Committee
TSA	the standard approach
TTC	through-the-cycle
V	
VAF	vehicle and asset finance
VaR	value at risk

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