Absa Group Limited

Pillar 3 risk management report

for the reporting period ended 31 December 2019

The Group's reporting suite

2019 Integrated Report

The Group's integrated report is the primary report for investors. It is supplemented with various online disclosures which meet the diverse information needs of the Group's stakeholders.

Financial and risk disclosures

- 2019 Annual Consolidated and Separate Financial Statements
- 2019 Summarised Annual Consolidated and Separate Financial Statements
- 2019 Pillar 3 Risk Management Report
- 2019 Pillar 3 Risk Management Report – Additional Tables
- 2019 Financial Results Booklet, Results and Presentation

Environmental, social and governance disclosures

- 2019 Environmental, Social and Governance Report
- 2019 Remuneration Report
- 2019 Broad-Based Black Economic Empowerment Report

Shareholder information

- 2020 Notice of Annual General Meeting
- Form of Proxy

Separation

Barclays PLC (Barclays) executed the sell-down of its controlling interest. The 'Separation' refers to the programme of activities which is disengaging the businesses from one another.

Introduction

The Pillar 3 risk management report provides a comprehensive view of the Group's 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the Regulations relating to Banks (Regulations), issued in terms of the Banks Act, 1990 (Act No. 94 of 1990), where not superseded by the Pillar 3 disclosure requirements.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 by pillar 3 additional disclosure tables and the full reporting suite listed alongside.

Assurance

The Group applies a risk-based, combined assurance approach over its operations. Internal controls, management assurance, compliance and internal audit reviews, as well as services of independent external service providers support the accuracy of disclosures within the published reports. In line with their respective mandates, specific reports are reviewed and recommended to the Board for approval by the Disclosure, Social and Ethics, Remuneration, Directors' Affairs, Group Audit and Compliance, Information Technology, and Group Risk and Capital Management committees.

For 2019, PwC conducted limited assurance on the total energy use and carbon emissions indicators. Empowerdex verified our Broad-Based Black Economic Empowerment (B-BBEE) performance. Ernst & Young Inc. have audited the annual financial statements. The scope and conclusions of these can be found in the Limited Assurance Report, the Group's B-BBEE certificate and the Group's annual financial statements, all of which are available on the Group's website www.absa.africa

Management and the members of the Group Risk and Capital Management Committee (GRCMC) reviewed the Pillar 3 report. For the reporting period, the Board is satisfied that the Group's risk and capital management processes operated effectively, that business activities have been managed within the Board-approved risk appetite, and that the Group is adequately capitalised and funded to support the execution of its strategy. The information in this report is unaudited. Further details of the basis of preparation is available in section 2 of this report.

All of the reports listed are available on **www.absa.africa**. Comments or queries regarding these documents can be sent to **groupsec@absa.africa**

Contents

BCBS Pillar 3 disclosure requirements of sections and tables

References to disclosure requirements have been designated by a [|

A Additional disclosure tables Pillar 3 Risk management report for the reporting period ended 31 December 2019
B Not applicable to the Group
C Note 63 Consolidated and separate annual financial statements for the reporting period ended 31 December 2019
D Integrated report for the reporting period ended 31 December 2019

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1. Summary of capital position, risk profile and RWA

1. Summary of capital position, risk profile and RWA

1.1 Risk and capital performance

Key metrics

Common equity tier 1 (CET 1) ratio

IFRS[1]	Normalised
12.1%	**11.8%**
2018: 12.8%	2018: 12.0%

Economic capital (EC) coverage

IFRS[1]	Normalised
1.5	**1.5**
2018: 1.6	2018: 1.5

Leverage ratio

IFRS[1]	Normalised
7.2%	**7.0%**
2018: 7.4%	2018: 7.0%

Liquidity coverage ratio (LCR)[2]

134.4%

2018: 109.9%[3]

Net stable funding ratio (NSFR)

112.7%

2018: 110.2%[3]

Credit loss ratio (CLR)

0.80%

2018: 0.73%

Stage 3 ratio on gross loans and advances (%)

4.7%

2018: 5.1%

Stage 1 and stage 2 coverage ratio

1.1%

2018: 1.1%[4]

Stage 3 coverage ratio

43.7%

2018: 45.1%

Operational risk losses

R824m

2018: R535m

Review of current reporting period

- The Group maintained a capital position with capital buffers sufficient to withstand stressed conditions.
- The liquidity position remained healthy and within liquidity risk appetite (LRA).
- The Group continued to invest in infrastructure, process engineering, people and technology in order to deliver improved operational resilience.
- Notwithstanding ongoing political and economic headwinds, book growth in loans and advances to customers reflected positive momentum during the year.
- The growth was relatively broad based across the portfolios and accounted for an increase in the credit loss rate that is still tracking at the lower end of the Group's through-the-cycle range. Focused portfolio reviews and concerted collections strategies were a strong underpin to the growth story.
- Operational risk losses increased primarily due to heightened fraud and transaction processing related losses.

Priorities

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

- Ongoing alignment of risk objectives with the Group's strategy to create shared growth for clients and communities in an efficient, responsible and sustainable way.
- Maintain tight control of the finalisation of separation and management of execution risks by delivering a structured programme of work supported by ongoing monitoring of risks and independent quality assurance.
- Continued improvement of control, efficiency and operational resilience across critical processes including collections, cybersecurity and fraud, data management, disaster recovery and financial crime.
- Continued engagement with regulatory authorities and other stakeholders on upcoming regulatory changes, to ensure the most appropriate outcomes for the banking sector and broader economy.
- Assess and evaluate the quantitative and qualitative implications of the implementation of Basel III enhancements published by the Basel Committee on Banking Supervision (BCBS) in December 2017; and the proposed amendments to the Regulations relating to Banks.

[1] IFRS results includes the impact of the contribution amounts received as part of the separation from Barclays PLC. All numbers include unappropriated profits.
[2] The Group LCR reflects an aggregation of the Absa Bank LCR and the LCR of ARO. For this purpose, a simple average of the relevant 3-month-end data points is used in respect of ARO. In respect of Absa Bank, the LCR was calculated as a simple average of 90 calendar-day LCR observations.
[3] The December 2018 Group LCR and NSFR were restated to reflect a change in certain assumptions.
[4] Restatement due to exclusion of fair value loans from the denominator.

1. Summary of capital position, risk profile and RWA

1.2 Current and emerging risks

The Group identifies and assesses both external and internal risks, determines the appropriate response, and monitors the effectiveness of the implemented response. The following table outlines the existing and potential risks to the Group's strategic ambitions and reflects its response to these risks.

Additionally, the outbreak of the COVID-19 pandemic has dramatically increased the risks that we collectively face as a global community and will likely materially damage the economic prospects. While the Group will continue to drive the execution of the strategic objectives, the Group will need to take into account the impact of the situation as it unfolds and prudently manage risk appetite. For the Group Chairman and Chief Executive response, refer to the Integrated Report.

Current and emerging risks	Responses
Strategic, execution and business risks arising from external and internal drivers	
• Global uncertainty arising from international trade discussions and other market drivers result in increased pressure on emerging markets. • Disruption through Fintechs and new digitally-led competitor banks affect customer relevance. • Nearing completion of the separation combined with large ongoing strategic change projects results in increased business risk, change risk and people risk.	• Monitor and manage risk strategy and appetite based on the ongoing evaluation of the global and regional developments to identify and mitigate risks as they arise, while enabling business to pursue opportunities. • Deliver scalable digital solutions that focus on customer needs. Continuously build and embed a winning brand with a focus on innovative business processes and products including diversification into new markets and customer segments. • Closely monitor and actively manage risks arising from the completion of separation and strategic change projects.
Economies in the Group's presence countries continue to exhibit subdued growth amid global and domestic uncertainties	
• Continued subdued economic growth, high unemployment, increased inequality and low business and consumer confidence impacting South African markets. • Inconsistent supply of electricity impacting stakeholders through lost business, increased emergency energy costs and potential job losses. • Unfavourable macroeconomic environments with increasing debt burdens and limited fiscal space in presence countries. • Increasing cost and scarcity of capital, funding and liquidity across global markets. • Policy uncertainty in South Africa (e.g. mining charter, potential land reform, challenges experienced with state owned entities and economic disparities) creates a barrier to investment. • Broader socio-political challenges impacting negatively on colleague turnover and skills retention.	• Monitor leading indicators to ensure economic risks are effectively managed, including: ∘ proactively managing credit portfolio risks; ∘ hedging of interest rate risk and foreign exchange risk as appropriate; ∘ strengthening the Group's position in the presence countries that are growth markets while seeking opportunities to diversify into new markets; and ∘ managing cost growth in response to subdued macroeconomic environments. • Analyse specific scenarios to assess the impact of a South African sovereign downgrade or potential external financial support. • Engage with communities and support initiatives as part of the Group's commitment to play a role in society. • Participate in industry advocacy groups to contribute to new and innovative ways to solve social challenges. • Ongoing succession planning to ensure the required depth and strength of colleague skills are retained.
Technology and the pace of change impact competitiveness and operational risk	
• Ever increasing sophistication of cybercrime, fraud risk and financial crime requires continuous improvement of detection, monitoring and prevention to protect customers and the Group. • Threat detection and prevention of security breaches, disruptions and data mismanagement to protect customers.	• Continue investment in technology platforms, processes and controls including monitoring, enhancements and prioritisation of key issues. • Develop artificial intelligence (AI) solutions using global data to strengthen security measures and crime prevention. • Drive awareness with employees and customers on the prevention of cyber related risks.

1. Summary of capital position, risk profile and RWA

Current and emerging risks	Responses
New and emerging regulations and oversight	
• Increasing pace and evolving complexity of regulatory and statutory requirements across the Group's markets require ongoing co-ordinated approaches to address, including: ∘ Basel III: Finalising post-crisis reforms' standard (Basel III enhancements), including the fundamental review of the trading book (FRTB). ∘ National Credit Amendment Act. ∘ Financial Sector Laws Amendment Bill. ∘ Protection of personal information legislation. ∘ Financial Matters Amendment Bill. ∘ Conduct of Financial Institutions Bill. ∘ Financial Advisory and Intermediary Services Act.	• Maintain a co-ordinated, comprehensive and forward-looking approach to evaluate, respond to and monitor regulatory change, through ongoing improvement of processes and systems, supported by people, across the Group. • Participate in regulatory and statutory advocacy groups across all presence countries. • Instil a culture of sound regulatory compliance across the Group.
Environmental risks impact on the Group's clients, organisation and operating environment	
• Adverse effects of climate change and its impact on communities, clients and the Group's credit and insurance businesses. • Complexity of modelling the implications of climate change and incorporation into the Group's strategy and operations. • Increasing stakeholder focus on corporates' impact on the environment and operational sustainability. • Diminished ability of the Group, its clients and staff to operate in a resilient manner due to health-related pandemics e.g. the COVID-19.	• Became a founding signatory to UNEP Financial Initiative Principles for Responsible Banking. • Approved a sustainability policy and a coal financing standard. • Assess the suitability and strategic alignment of products and customer value propositions with changing environmental factors and the impact on the Group's risk profile. • Develop and enhance credit and insurance risk models to incorporate environmental risk. • Build relationships with clients whose environmental impact is aligned with the Group's strategy and risk appetite. • Stress test the Group's ability to withstand a potential economic downturn due to the COVID-19, and improve business continuity responses to accommodate the effects of pandemics.

1. Summary of capital position, risk profile and RWA

1.3 Overview of RWA [OV1]

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

		a		b	c
	Group	31 December 2019 RWA Rm	31 December 2018 RWA Rm	30 September 2019 RWA Rm	31 December 2019 Minimum capital requirements[1] Rm
1	Credit risk (excluding counterparty credit risk (CCR))	**632 682**	593 992	644 552	**72 758**
2	Of which: standardised approach (SA)	**183 801**	176 051	197 289	**21 137**
3	Of which: foundation internal rating-based (FIRB) approach	**–**	–	–	**–**
4	Of which: supervisory slotting approach	**–**	–	–	**–**
5	Of which: advanced internal ratings based (AIRB) approach	**448 881**	417 941	447 263	**51 621**
6	CCR	**15 703**	14 268	15 713	**1 806**
7	Of which: SA-CCR[3]	**15 703**	14 268	15 713	**1806**
8	Of which: internal model method (IMM)	**–**	–	–	**–**
9	Of which: other CCR	**–**	–	–	**–**
10	Credit valuation adjustment (CVA)	**12 092**	7 400	8 030	**1 391**
11	Equity positions under the simple risk weight approach	**4 252**	4 171	3 879	**489**
12	Equity investments in funds – look-through approach	**7 761**	6 990	7 600	**893**
13	Equity investments in funds – mandate-based approach	**–**	–	–	**–**
14	Equity investments in funds – fall-back approach	**–**	–	–	**–**
15	Settlement risk	**817**	874	1 605	**94**
16	Securitisation exposures in banking book	**232**	24	28	**26**
17	Of which: securitisation IRB ratings-based approach (SEC-IRBA)	**232**	24	28	**26**
18	Of which: securitisation external RBA (SEC-ERBA) IAA	**–**	–	–	**–**
19	Of which: securitisation SA (SEC-SA)	**–**	–	–	**–**
20	Market risk	**39 231**	37 007	43 254	**4 512**
21	Of which: SA	**18 540**	15 818	21 275	**2 132**
22	Of which: internal model approaches (IMA)	**20 691**	21 189	21 979	**2 380**
23	Capital charge for switch between trading book and banking book	**–**	–	–	**–**
24	Operational risk	**102 915**	90 156	97 483	**11 835**
	Non-customer assets	**27 331**	24 637	29 615	**3 143**
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	**17 957**	16 483	16 935	**2 065**
26	Floor adjustment[3]	**9 433**	22 590	16 048	**1 085**
27	**Total** (1+6+10+11+12+13+14+15+16+20+23+24+25+26+ non-customer assets)	**870 406**	818 591	884 742	**100 097**

The Group's RWAs increased by R51.8bn to R870.4bn (December 2018: R818.6bn), mainly driven by increases in credit risk.

- **Credit risk:** RWA increased by R45.9bn year-on-year due to enterprise-wide asset growth in line with strategy and risk appetite. Included in this RWA increase are movements in CCR of R1.4bn and in CVA of R4.7bn primarily due to market movements on FX instruments.
- **Traded market risk:** RWA increased by R2.2bn principally due to higher risk taking by the Absa Regional Operations (ARO) in line with the Group's strategy to grow this business.

[1] The 2019 minimum regulatory capital requirement is calculated at 11.5% (2018: 11.13%), include the capital conservation buffer, which was phased in between 1 January 2016 and 1 January 2019 but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the domestically systemically important bank (D-SIB) add-on.

[2] SA-CCR amount is calculated using the current exposure method (CEM).

[3] Includes the operational risk floor.

1. Summary of capital position, risk profile and RWA

		a		b	c
	Absa Bank Limited[1]	31 December 2019 RWA Rm	31 December 2018 RWA Rm	30 September 2019 RWA Rm	31 December 2019 Minimum capital requirements[2] Rm
1	Credit risk (excluding counterparty credit risk (CCR))	**444 506**	416 843	443 390	**51 118**
2	Of which: standardised approach (SA)	**9 083**	10 792	9 226	**1 045**
3	Of which: foundation internal rating-based (FIRB) approach	**–**	–	–	**–**
4	Of which: supervisory slotting approach	**–**	–	–	**–**
5	Of which: advanced internal ratings based (AIRB) approach	**435 423**	406 051	434 164	**50 073**
6	CCR	**14 546**	13 499	14 630	**1 673**
7	Of which: SA-CCR[3]	**14 546**	13 499	14 630	**1 673**
8	Of which: IMM	**–**	–	–	**–**
9	Of which: other CCR	**–**	–	–	**–**
10	Credit valuation adjustment (CVA)	**12 092**	7 400	8 030	**1 391**
11	Equity positions under the simple risk weigh approach	**1 865**	1 769	1 815	**215**
12	Equity investments in funds – look-through approach	**367**	353	353	**42**
13	Equity investments in funds – mandate-based approach	**–**	–	–	**–**
14	Equity investments in funds – fall-back approach	**–**	–	–	**–**
15	Settlement risk	**765**	783	1 510	**88**
16	Securitisation exposures in banking book	**232**	24	28	**26**
17	Of which: securitisation IRB ratings-based approach (SEC-IRBA)	**232**	24	28	**26**
18	Of which: securitisation external RBA (SEC-ERB) IAA	**–**	–	–	**–**
19	Of which: securitisation SA (SEC-SA)	**–**	–	–	**–**
20	Traded market risk	**25 874**	29 187	29 455	**2 976**
21	Of which: SA	**5 183**	7 998	7 476	**596**
22	Of which: IMA	**20 691**	21 189	21 979	**2 380**
23	Capital charge for switch between trading book and banking book	**–**	–	–	**–**
24	Operational risk	**63 105**	56 424	59 186	**7 257**
	Non-customer assets	**20 381**	18 364	22 008	**2 344**
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	**5 077**	4 287	4 710	**584**
26	Floor adjustment[4]	**13 090**	20 570	18 524	**1 505**
27	**Total** (1+6+10+11+12+13+14+15+16+20+23+24+25+26+ non-customer assets)	**601 900**	569 503	603 639	**69 219**

The Bank's RWAs increased by R32.4bn to R601.9bn (December 2018: R569.5bn), mainly driven by increases in credit risk.

- **Credit risk:** RWA increased by R33.7bn year-on-year due to enterprise-wide asset growth in line with strategy and risk appetite. Included in this RWA increase are movements in CCR of R1.0bn and in CVA of R4.7bn primarily due to market movements on FX instruments.
- **Traded market risk:** The R3.3bn reduction of RWA was driven by business reducing risk held over the illiquid year-end period.

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

[2] The 2019 minimum regulatory capital requirement is calculated at 11.5% (2018: 11.13%), include the capital conservation buffer, which was phased in between 1 January 2016 and 1 January 2019 but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the domestically systemically important bank (D-SIB) add-on.

[3] SA-CCR amount is calculated using the CEM.

[4] Includes the operational risk floor.

2. Basis of preparation

2. Basis of preparation

2.1 Scope of consolidation

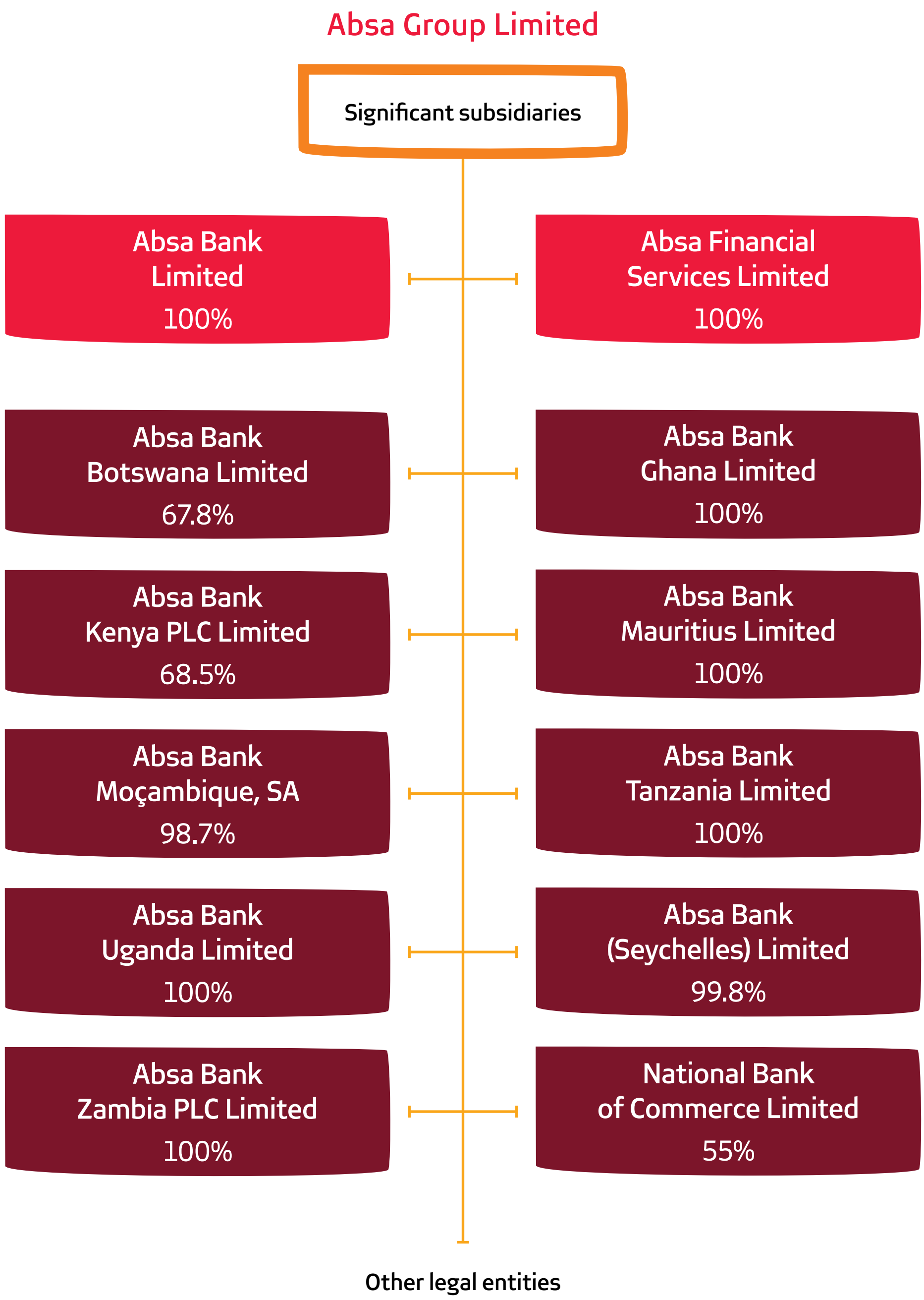
In November 2019, the Absa Group Limited's Barclays-branded subsidiaries in Mozambique and Uganda were renamed as 'Absa'. On 10 February 2020, the remaining seven African countries – Botswana, Ghana, Kenya, Mauritius, Seychelles, Tanzania and Zambia – were rebranded, completing the name change across the continent.

The renaming of all the subsidiaries marks another substantial milestone in Absa's separation from Barclays PLC, a three-year process scheduled for completion by mid-2020.

The Group's registered head office is in Johannesburg, South Africa with majority shareholding in banks in Botswana, Ghana, Kenya, Mauritius, Mozambique, the Seychelles, South Africa, Tanzania (Absa Bank in Tanzania and National Bank of Commerce), Uganda and Zambia. The Group also has representative offices in Namibia and Nigeria. In 2018, the Group launched its international presence in London operating as Absa Securities UK, with plans to open a representative office in New York in the near future.

Disclosure in this report is presented on a consolidated basis for the Group. The consolidation is similar to that used for reporting to the South African Reserve Bank (SARB). Insurance entities have been deconsolidated for regulatory reporting purposes.

The legal structure below outlines the holdings of the Group.



2. Basis of preparation

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, 1990 (Act No. 94 of 1990), where not superseded by the revised Pillar 3 disclosure requirements.

The information in this report is unaudited.

For the reporting period, 31 December 2019 (compared to 31 December 2018), the Board is satisfied that the Group's risk and capital management processes operated effectively, that business activities have been managed within the Board-approved risk appetite, and that the Group is adequately capitalised and funded to support the execution of its strategy.

2.3 Preparation, validation and sign-off

This report was prepared in line with the requirements of the Board-approved Public Disclosure Policy that sets out responsibilities in the preparation, validation and sign-off of the report. All data submissions were attested to by the Chief Risk Officers (CROs). Review and challenge was performed centrally within Group Risk to ensure that the disclosures 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), Group Chief Risk Officer (GCRO), Group Financial Director, and the 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	• CEM and AIRB
• CVA	• SA for CVA
• Securities financing	• Comprehensive approach
• Edcon retail portfolio	• SA
• 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	• SA for all risk types
Traded market risk	
• General position risks for trading book positions	• Internal model approach (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, except for:

- The adoption of IFRS16 leases as explained in the Financial results booklet (p56-57); and
- Changes to the Group's operating segments and business portfolio changes.

2. Basis of preparation

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)	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.

2.6.1 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, while the financial statement carrying values reflect the requirements of IFRS.

	a	b	c	d	e	f			g
	2019 Carrying values of items								
	Carrying values as reported in published financial statements Rm	Carrying values under scope of regulatory consolidation Rm	Subject to credit risk framework Rm	Subject to CCR framework Rm	Subject to securitisation framework Rm	Subject to market risk framework Rm	Equity Investment Risk Rm	Other Assets Rm	Not subject to capital requirements or subject to deduction from capital Rm
Assets									
Cash, cash balances and balances with central banks	52 532	47 791	4 061	–	–	–	–	43 980	–
Investment securities	116 747	113 287	109 422	–	–	–	3 722	–	–
Loans and advances to banks	59 745	58 385	28 642	25 550	–	25 550	–	–	–
Trading portfolio assets	158 348	158 344	–	56 091	–	153 522	–	–	–
Hedging portfolio assets	3 358	3 358	–	2 429	–	2 429	–	–	–
Other assets	30 343	29 349	–	–	–	–	–	12 450	–
Current tax assets	1 682	1 600	–	–	–	–	–	–	–
Non-current assets held for sale	3 992	3 862	–	–	–	–	–	21	–
Loans and advances to customers	916 978	916 978	901 019	43 222	–	43 222	–	–	–
Reinsurance assets	886	433	–	–	–	–	–	–	–
Investments linked to investment contracts	20 042	–	–	–	–	–	–	–	–
Investments in associates and joint ventures	1 648	1 648	–	–	–	–	–	–	5 292
Investment properties	513	263	–	–	–	–	–	263	–
Property and equipment	18 620	18 542	–	–	–	–	–	18 668	–
Goodwill and intangible assets	10 300	9 997	–	–	–	–	–	29	9 997
Deferred tax assets	3 441	3 321	–	–	–	–	–	–	3 321
Total assets	1 399 175	1 367 158	1 043 144	127 292	–	224 723	3 722	75 411	18 610

2. Basis of preparation

	a	b	c	d	e	f			g
	2019								
	Carrying values of items								
	Carrying values as reported in published financial statements Rm	Carrying values under scope of regulatory consolidation Rm	Subject to credit risk framework Rm	Subject to CCR framework Rm	Subject to securitisation framework Rm	Subject to market risk framework Rm	Equity Investment Risk Rm	Other Assets Rm	Not subject to capital require* ments or subject to deduction from capital Rm
Liabilities									
Deposits from banks	117 423	117 423	–	–	–	–	–	–	117 423
Trading portfolio liabilities	59 224	59 224	–	21 871	–	59 224	–	–	37 353
Hedging portfolio liabilities	1 379	1 379	–	–	–	–	–	–	1 379
Other liabilities	46 355	45 179	–	–	–	–	–	–	45 179
Provisions	4 064	3 958	–	–	–	–	–	–	3 958
Current tax liabilities	172	186	–	–	–	–	–	–	186
Non-current liabilities held for sale	112	–	–	–	–	–	–	–	–
Deposits due to customers	826 293	826 294	–	–	–	–	–	–	826 293
Debt securities in issue	159 794	159 795	–	–	–	–	–	–	159 794
Liabilities under investment contracts	29 700	7 506	–	–	–	–	–	–	7 506
Policyholder liabilities under insurance contracts	4 331	–	–	–	–	–	–	–	–
Borrowed funds	21 418	21 418	–	–	–	–	–	–	21 418
Deferred tax liabilities	227	85	–	–	–	–	–	–	85
Total liabilities	1 270 492	1 242 447	–	21 871	–	59 224	–	–	1 220 574

Column b: The regulatory scope of consolidation excludes balances related to the Group's insurance entities, while 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 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
		2019						
		Items subject to						
		Total Rm	Credit risk framework Rm	Securitisation framework Rm	CCR framework Rm	Market risk framework Rm	Equity investment risk Rm	Other assets Rm
1	**Asset carrying value amount under scope of regulatory consolidation (as per template LI1)**	1 348 548	1 043 143	–	127 290	224 723	3 722	75 411
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	21 956	–	–	21 871	59 224	–	–
3	**Total net amount under regulatory scope of consolidation**	1 326 592	1 043 143	–	105 419	165 499	3 722	75 411
4	Off-balance sheet amounts	–	374 172	–	–	–	–	–
5	Differences in valuations	–	(2 756)	–	(65 993)	–	–	–
6	Differences due to consideration of provisions	–	(24 745)	–	–	–	–	–
7	Credit conversion factor (CCF)	–	(152 727)	–	–	–	–	–
8	Significant Investments not subject to RWA	–	–	–	–	–	(740)	–
9	**Exposure amounts considered for regulatory purposes**	1 326 592	1 237 087	–	39 426	165 499	2 982	75 411

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, which contribute to regulatory credit risk framework.
- **Line 5:** Differences in valuations under the credit risk framework relates to differences in treatment between risk and finance as a result of 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 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 43 and exposures post CCF and CRM in table CR4 on page 39.
- 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 55.
- Equity investment risk total corresponds to the sum of exposure amount in table CR10 on page 62.

2.6.3 Prudent valuation adjustments (PVA)[1] [PV1]

The total PVA adjustment for 2019 amounted to R208m (2018: R201m), of which R127m related to the South African operation and R81m to ARO.

The Group has a robust independent valuation control framework which is responsible for ensuring that positions held at fair value are valued at exit price as evidenced by independent market data and in accordance with IFRS. However, PVA requires banks to consider additional adjustments over and above IFRS that would lead to a prudent valuation, specifically considering liquidity and concentration risk.

The Basel III requirement to disclose a breakdown of the PVA adjustment in the Pillar 3 return came into effect for the reporting period ended 31 December 2018. The Prudential Authority (PA) has actively engaged the industry through the Banking Association of South Africa throughout 2018/9. Whilst the requirements for prudent valuation calculation and disclosure have been part of the Banking regulations for some time, the PA is still in the process of consulting on the PVA directive and have advised banks to delay the reporting of table PV1 and associated disclosures until this is finalised.

The following PVAs are fully adjusted for within the financial statements and are therefore not included in the PVA number disclosed above:

- Model uncertainty
- Unearned credit spreads
- Early termination costs

The majority of the PVA adjustment stems from close-out uncertainty, primarily as a result of a wider bid-offer adjustment being applied in the calculation of close-out costs as a result of liquidity, quote observability and factoring in concentrated positions.

3. Overview of risk management

3. Overview of risk management

3.1 Approach to risk management [OVA]

The Group maintains an active approach towards managing both current and emerging risks through the continued operating effectiveness of its Board approved Enterprise Risk Management Framework (ERMF). This approach is underpinned by:

- A robust and aligned governance structure at Group, country and business level.
- Well-defined material risk categories known as principal risks.
- A 'three lines of defence' model, with clear accountability for managing, overseeing and independently assuring risks.
- Comprehensive processes to evaluate, respond to, and monitor risks.
- A sound architecture that sets out the appropriate risk practices, tools, techniques and organisational arrangements.

3.2 Enterprise Risk Management Framework

Risk strategy and appetite

The strategy is set within the parameters of an agreed risk appetite. The risk strategy is developed alongside the Group's strategy. The risk appetite defines the nature and amount of risk the Group is willing to take to achieve strategic objectives.

Risk management framework

The Group's approach to managing risk is outlined in the ERMF. The following foundations underpin the ERMF:

1. A robust and consistent governance structure at Group, country and business level.
2. Well defined material risk categories known as principal risks.
3. A 'three lines of defence' model with clear accountability for managing and overseeing.
4. A comprehensive process to evaluate, respond to and monitor risks.
5. A robust risk operating model which provides clear roles and responsibilities.

Ten principal risks

Financial: Credit, Traded Market, Treasury, Insurance, Business

Non-financial: Operational, Conduct, Model, Technology (incl. cyber and change), Legal

Risk operating model

The Group applies a 'three lines of defence' model to govern risk across all businesses and functions.

1st line
Process and control owners in customer facing segments and Group functions who are responsible for managing end-to-end risks and controls in their businesses.

2nd line
Independent risk, compliance, legal and control functions who formulate risk and control policies, and review the first line's adherence to these.

3rd line
Internal audit function tests and reviews controls to determine that the first and second lines execute their responsibilities effectively and consistently.

Evaluate, respond, monitor

This is a structured and practical risk management approach to identify and assess the risk, determine the appropriate response, and then monitor the effectiveness of the response and the changes to the risk profile.

Evaluate
Individuals, teams and departments, including those responsible for delivering the objective under review, identify and assess the potential risks.

Respond
The appropriate risk response ensures that risks are managed within risk appetite. This includes:
- risk mitigation;
- risk transfer; and
- ceasing certain activities.

Monitor
Ensure that risk profiles remain within agreed appetite levels, verify that controls are working as intended, and challenge or promote re-evaluation of the risks.

The role of risk management is to evaluate, respond to, and monitor risks in the execution of the Group's strategy. The business strategy is supported by an effective ERMF.

The approach to managing risk is outlined in the ERMF, which provides the basis for setting policies and standards, and establishing appropriate risk practices throughout the Group. It also defines the risk management process and sets out the activities, tools, techniques and organisational arrangements to ensure that material risks can be identified and managed. It ensures that appropriate responses are in place to protect the Group and its stakeholders. The Group's Risk function performs review and challenge, and retains independence in analysis and decision-making, underpinned by regular reporting to the GRCMC.

The ERMF sets out the principal risks, and assigns clear ownership and accountability for these risks. The ERMF defines credit, traded market, treasury, insurance, business, operational, conduct, model, technology and legal risks as principal risks in recognition of their significance to the Group's strategic ambitions.

The GCRO is the owner of the ERMF.

3. Overview of risk management

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 wealth businesses by implementing the Group's strategy which focuses on opportunities for growth and considers the matters believed to be material to long-term sustainability. The Group's strategy 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 is set at the start of the strategic planning process to ensure that the business strategy is achievable within risk appetite, and that 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 with respect 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, with reference given 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 in pursuit of 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 (BU).

Absa Group quantitative risk appetite metrics	Definition
Common equity tier 1 Adequacy ratio (%) (CET1)	The Group aims to have sufficient capital supply to remain within risk appetite and above minimum regulatory CET 1 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	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.
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.
Liquidity coverage ratio (%) (LCR)	The Group has sufficient high-quality liquid assets to survive a significant stress over a 30-day period.
Net stable funding ratio (%) (NSFR)	The Group maintains a stable funding profile where available stable funding (ASF) is adequate to meet its required stable funding (RSF).

3. Overview of risk management

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 because of 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 pro-actively monitoring and responding to material deviations from planned outcomes in a timely manner. 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, train and develop 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.
Data and Technology	• Maintain robust systems and recovery capabilities in order to minimise disruptions to operations due to incidents relating to technology infrastructure, third party service providers, cyber security, 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 that 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 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 that 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 high-quality liquid assets 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, whilst 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 Board approved risk appetite for earnings volatility under business as usual and stressed conditions.
Conduct **Legal** **Reputation**	• Minimise the risk that harm is caused to our customers, or to 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 carrying out activities on behalf of the Group. • Always comply with regulatory requirements and other laws to which the Group and its subsidiaries are bound. • Maintain business activities and processes which uphold the Group's reputation, brand and franchise value.

3. Overview of risk management

Risk theme	Qualitative Statement
Environmental	• Continuously assess 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 BUs are defined to align strategy execution and to support the Group's defined risk appetite.

3.3.2 Stress testing

Stress testing and scenario analysis are key elements of the Group's integrated planning and risk management processes. Through the use of stress testing and scenario analysis, the Group is able to assess the performance and resilience of the Group's business in the expected economic environment and also evaluate the potential impact of adverse economic conditions, using and applying the information in the process of setting risk appetite.

Stress testing is conducted across all legal entities, BUs, risk types, as well as at Group level. This is supported by a framework, policies, and procedures, adhering to internal and external stakeholder requirements, and benchmarked against best practice.

The stress testing results are reviewed by management and the Board and have been incorporated into the Group's internal capital adequacy assessment process (ICAAP) and the recovery and resolution plan. Additionally, the Group performs *ad hoc* stress tests for internal and regulatory purposes, aimed at informing strategic and risk decisions. These are based on stress scenarios at varying and sufficient degrees of severity and applying various projection techniques.

The following types of stress tests are performed:

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 affected 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
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*
Reverse and business model stress testing	Assists the Group in understanding key risks and scenarios that may put business strategies and continuance as 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 the use of any recovery actions.	Largely top-down approaches used.	Annually

3. Overview of risk management

3.4 Risk process

The risk management process is structured in three steps, being 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 the business decision-making process.
- 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	• Clearly identifying the objective or objectives being assessed. • Identifying 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, competitive landscape), internal environment (people, process, infrastructure), and touch-points 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, lessons learnt and challenging assumptions and dependencies by developing contrary views, positions and exercise expert judgement. • Analysing the root causes of identified events and circumstances, the underlying sources of risk, and the cause and effect relationships. • Calibrating and measuring the risks in terms of impact, probability, and speed of onset. Use of models must adhere to set principles. • Investigating the relationships and interactions between risks, compounding effects, correlations, concentrations, and aggregations. • Where possible, assessing risks based on inherent and residual risks. • Ranking risks and taking an overall portfolio view of them to determine priorities.
Respond	• Complying with all relevant laws and regulations. • Focusing on the priority risks first. • Looking for a single response that might mitigate more than one risk, and extend or replicate existing controls if appropriate, implementing a sustainable solution. • Embedding controls into the business activity/process and automating controls wherever possible. • Considering any unintended consequences, e.g. mitigating actions taken to control one risk could introduce other risks or undermine existing controls. • Considering the implications of control failures, and whether secondary or latent controls should be deployed to mitigate risk of control failure in the case of material risks. • Significant risk events undergo an independent root cause analysis
Monitor	• Focusing on progress towards objectives, using key performance indicators (KPIs) to identify those objectives which require further attention. • Analysing the current and evolving risk profile and risk trends, use of key risk indicators (KRIs) to understand changes in the risk environment; maintain watch for new risks that might impact objectives (e.g. horizon scanning and use of scenario analysis); and monitoring changes in risk materiality, frequency and impact, and the appropriateness of existing responses. New risk evaluations should be initiated if necessary, that will be reflected in the risk universe of the Group. • Ensuring that risks are being maintained within risk appetite, 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 that standards have been implemented, and that appropriate resources are being deployed. Monitoring includes assurance, control testing, and conformance reviews. • The Group applies a combined assurance model with an objective 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. Overview of risk management

3.5 Risk architecture

3.5.1. Risk culture

Absa has defined a code of conduct whose objective is to define the way we think, work and act at Absa to ensure that we deliver against our purpose of helping people to bring their possibilities to life.

The code of conduct sets out the conduct guard rails and provides guidance to all Absa colleagues on the way of working across our business globally. It constitutes a reference point covering all aspects of colleagues' working relationships, specifically (but not exclusively) with other Absa employees, customers and clients, governments and regulators, business partners, suppliers, competitors and the broader community. It clearly expresses the behavioural expectations Absa has of its employees in conducting its daily operations.

The code of conduct sets out the ethical and professional attitudes and behaviours expected of the Group and its employees. All colleagues are required to act in accordance with behaviours consistent with the Group's values. Such behaviours include, but are not limited to:

- Respecting our customers and their needs.
- Respecting our colleagues and their needs.
- Respecting the role of Compliance, Risk and Audit colleagues who are partners and provide challenge to the businesses.
- Speaking up if we believe decisions are not right or could potentially harm our stakeholders.
- Disclosing all relevant information and discussing conduct risks in an open, honest and factual manner.
- Making fair and balanced decisions.
- Sharing and learning from mistakes and near misses.
- Taking individual accountability by promptly communicating and escalating instances of inappropriate judgement that could cause detriment to our stakeholders.
- Always acting in a way, which protects the interests of our stakeholders.
- Exercising a duty of care when providing banking services to our stakeholders.
- Promoting an 'identify and address' culture to mitigate potential loss to stakeholders.
- Putting customers at the centre of all decisions.
- Ensuring the Group's performance and reputation is not negatively impacted.
- Collaborating with relevant colleagues and stakeholders to ensure end to end consideration is given to anything implemented.

Leaders embracing, advocating and displaying the code is critical in achieving the desired culture. The Group continues to drive its values, with specific oversight over leadership's role in risk and control management, evaluated in the management control approach (MCA) assessment.

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 colleagues have a specific responsibility for ensuring the group operates within its risk appetite. These responsibilities are defined in terms of the role of the employee in the 'three lines of defence'.

Three lines of defence		
1st line of defence	2nd line of defence	3rd line of defence
Business Units	Risk and Compliance Functions	Internal Audit
• Develop and implement standards and procedures. • Propose and agree risk appetite and supporting limits with the 2nd line of defence. • Identify and manage risks in business activities, in line with the approved appetite and agreed limits. • Implement and maintain controls.	• Framework and policy development and conformance. • Independent review and challenge of BU 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.	• 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.
All lines of defence support coordinated, effective and efficient combined assurance.		

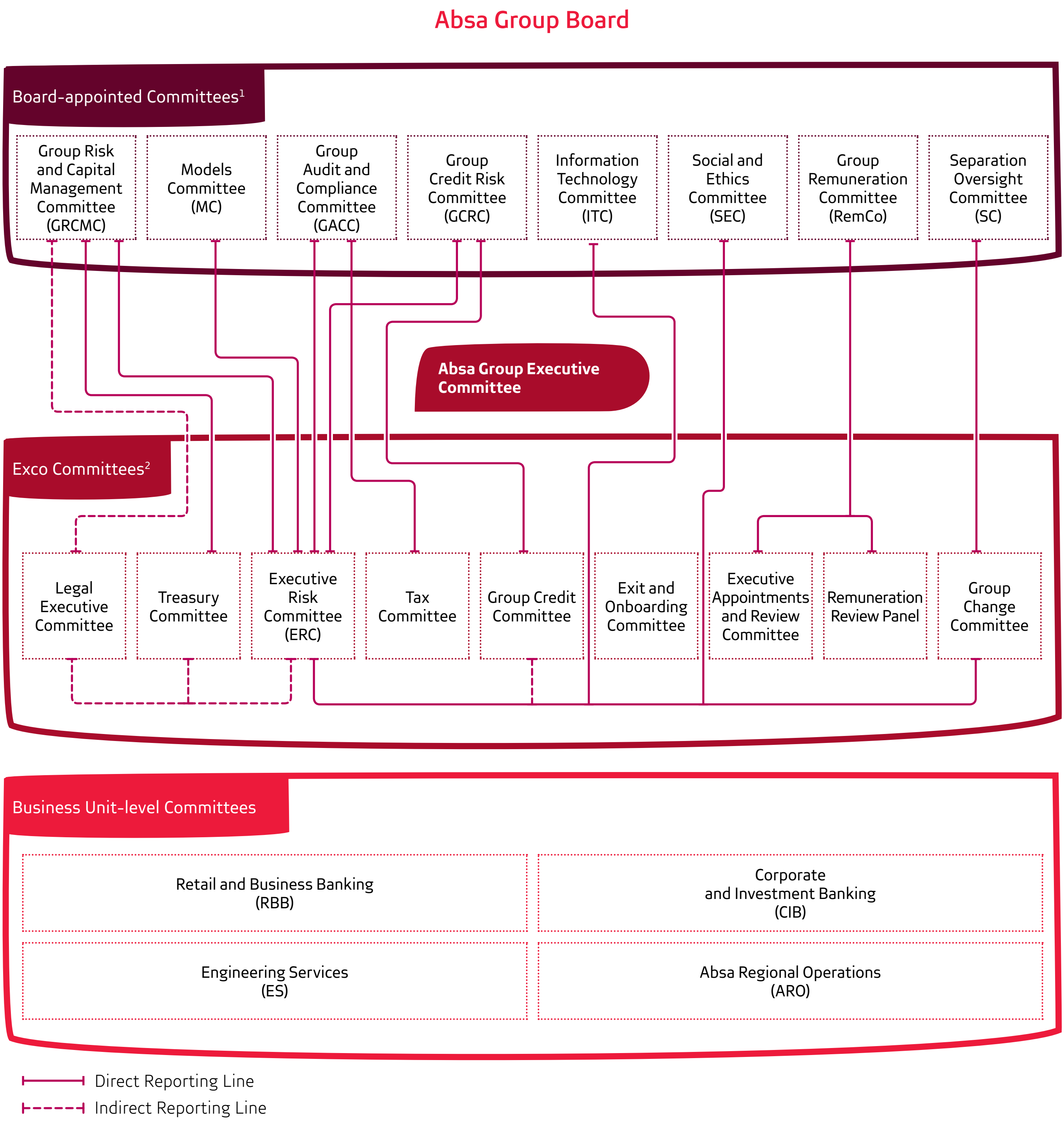
Regardless of their function, all teams who manage processes in the Group are responsible for designing, implementing, remediating, monitoring and testing the controls for those processes.

3. Overview of risk management

3.5.3 Governance

The Group Board is supported by several committees at Board, Executive, and Business level. The below diagram depicts the risk-related committees. ARO risk governance structures are compatible with Group and compliant to in-country regulations.

Risk governance structure



[1] Other Board appointed committees in place are the Directors' Affairs Committee and the Board Finance Committee
[2] Other Exco appointed committees in place are the Regulatory Investigations Oversight Committee and the Group Investment Committee.

3. Overview of risk management

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

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.	• Credit risk • Traded market risk • Treasury risk • Insurance risk • Business risk • Operational risk • Conduct risk • Model risk • Technology risk • Legal 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
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.	• Technology 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 (including reputational risk) • Operational risk
Group Remuneration Committee (RemCo)	Remuneration and incentive arrangements, policy and disclosures, executive appointments and succession.	• Operational risk
Separation Oversight Committee (SC)	Oversight of the execution of the Separation. Specific decisions in relation to the Separation activities rest with the relevant Board committees, in accordance with their respective mandates. This Committee will remain in place until the completion of the Separation.	• Technology risk • Operational risk • Legal risk • Conduct risk

3.5.4 Combined assurance

The Group applies a combined assurance approach, which requires coordinated assurance activity across the three lines of defence. The objective of combined assurance is to optimise overall assurance to enable a holistic and integrated view of the risk and control environment to be delivered to Management, the Executive and Board. The Group seeks to have a greater level of process automation and a higher proportion of preventative controls, wherever possible.

The combined assurance strategy is a risk-based approach, which focuses on those aspects that are most material to the Group. The Group's combined assurance model is aligned to King IV requirements.

Each business is expected to drive the coordination of assurance activities across the three lines of defence by implementing effective governance and oversight processes. The aim is for each business to demonstrate adequate coverage over critical process assessments (CPAs), material control issue remediation, strategic change initiatives, as well as senior management, Board and regulatory requests. In addition, businesses are expected to demonstrate appropriate remedial responses to the identification of unacceptable residual risk exposure and control issues.

Combined Assurance coverage and output is reported and tracked at the business and functional levels, and is reported to the Absa Group Executive Risk Committee (ERC) and the GACC.

3. Overview of risk management

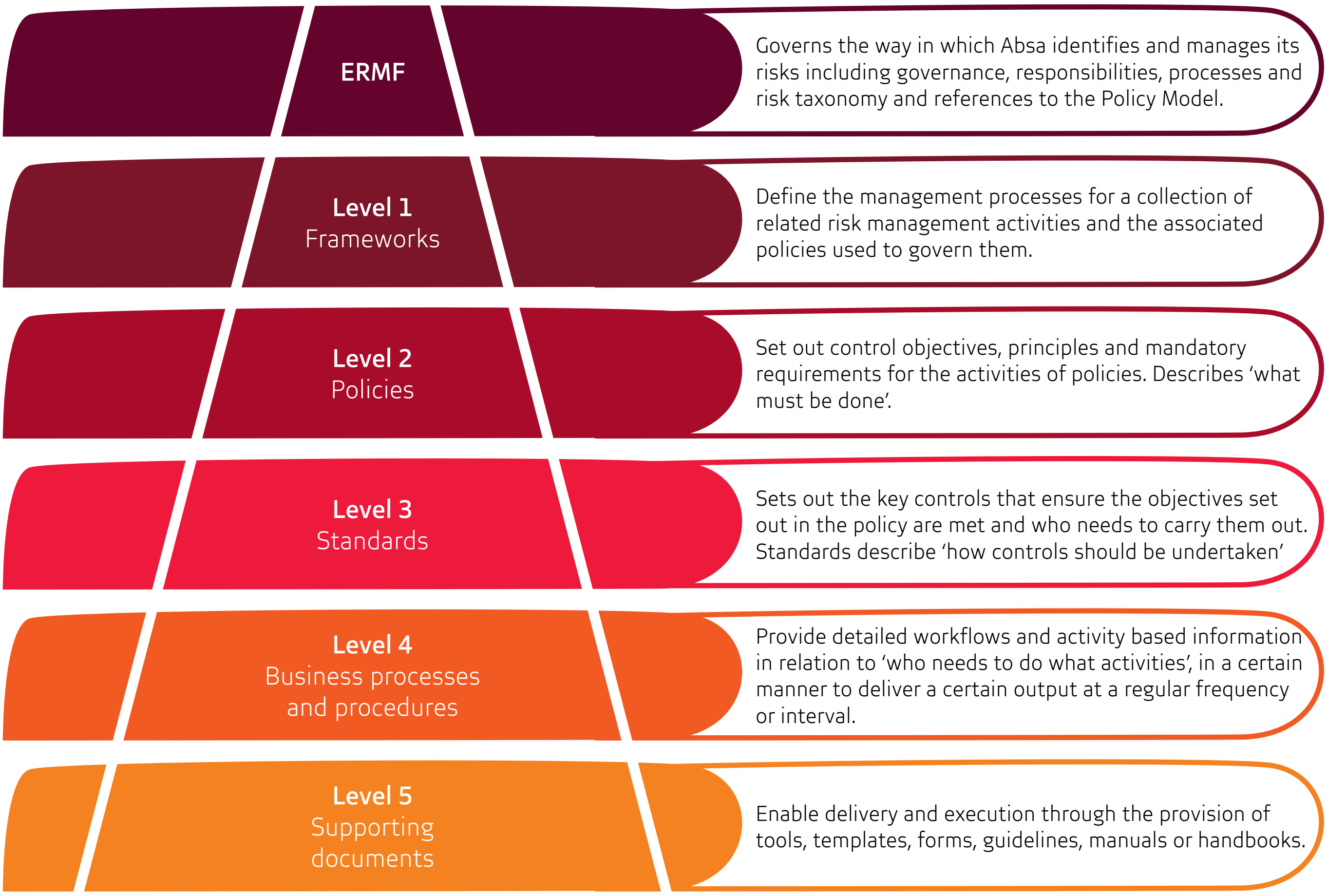
3.5.5 Frameworks, policies and standards

The Group has a policy hierarchy in place, which delivers broad, consistent Group requirements through:

- 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 and risk oversight across the businesses and improved 'line of sight' to all levels of management.

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



- **Frameworks:** Risk Frameworks include enterprise wide ERMF, Risk Appetite and Stress Testing as well as the ten Principal Risks, these describe the high-level Group-wide approach for a specific risk and are mandatory for each of the principal risks identified within the ERMF. Frameworks also outline the risk and policy taxonomy that enables the proper management and governance over the principal risk.
- **Policies:** Policies set out the control objectives, principles and other core requirements for the activities of the organisation. Policies explain 'what' businesses, functions and legal entities need to do, rather than 'how' they need to do it.
- **Standards:** Standards set out the key controls that ensure the objectives within the policy are met, and who needs to carry them out. Standards describe 'how' the Policy requirements will be met in a particular entity, business or function.

Ownership and Approval

All frameworks and policies are owned by Group functions. Standards, processes and procedures are owned by functions or businesses.

Principal Risk Frameworks are approved by the Group Board or mandated Board sub-committee. Policies are approved either by committees or individuals, as determined by the PROs. Standards are approved by policy owners or other individuals mandated by the policy owner. Processes and procedures are owned and approved by their respective businesses and functions.

Frameworks, policies and standards are subject as a minimum to an annual review, unless explicitly waived for appropriate reasons by the relevant PROs.

3. Overview of risk management

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 understanding of customers and clients. Internal data is owned and managed by the respective BUs 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 policies and standards.

3.5.6.2 Risk reporting

The objective of risk reporting is to provide timely, 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 process flow from the BU and risk type risk committees through 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 – both 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.

3.5.6.3 Risk data aggregation and risk reporting (RDARR)

The Basel Committee published the regulations pertaining to the principles for RDARR in 2013. In February 2015, the PA published its directive requiring domestic systemically important banks (D-SIBs) to be fully compliant by 1 January 2017. In line with the local industry trend, the Group has received dispensation from the PA extending the date of full compliance to 1 January 2021. The Group has implemented a programme to ensure full compliance with RDARR (BCBS239) principles with reserved funding and dedicated resourcing. A full integrated program plan has been compiled and execution is nearing completion, managed through integrated change governance.

3.5.7 Models

Model risk has been identified as a principal risk to be managed under the ERMF, with specific guidelines set out in the Group Model Risk Policy (GMRP) and relevant standards covering model ownership, model development, model approval, model implementation, model monitoring and model validation.

3.5.8 Technology

Technology is a building block for the Group's risk management practices, and to this end solutions are focused on:

- Data collection and storage.
- Risk analysis and modelling.
- Risk assessment, monitoring and control.
- Risk reporting and communication.

The Group's risk technologies are sourced primarily from third party suppliers. Long-term strategic relationships are in place with many of the established industry brands.

In addition to enabling the effective management of risk, these technologies present opportunities for digitisation of components of core business processes, e.g. credit assessment in a vehicle finance loan. Any such opportunities are explored and implemented collaboratively across the Group through the integrated change governance process.

The Group's investment in risk management related technology continues to prioritise AI led diagnostics, cyber security, 'Big Data' analytics and reporting.

3. Overview of risk management

3.6 Principal risks

The ERMF includes those risks taken by the Group that are foreseeable and material enough to merit establishing specific group-wide control frameworks. These are grouped into ten principal risks , which 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]
- Non-financial principal risks
  - Operational risk
  - Conduct risk[1]
  - Model risk
  - Technology risk[1]
  - Legal risk[1]

The ERMF is reviewed and approved annually by the Board, on recommendation by the GRCMC. In its latest design review, the ERMF was amended to define technology and business risks as principal risks in recognition of their significance to the Group's strategic ambitions. This includes the addition of environmental risk to manage group-wide environmental, social, and governance risks under conduct risk.

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 constraints of 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 as well as many aspects of conduct risk.

Credit risk, traded market risk, treasury risk, business risk and insurance risk 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 to which the Group is subject. For example, the Group is also subject to political and regulatory risks in the jurisdictions in which it operates. While these may be consequential and are assessed from time to time in the planning and decision-making of the Group, they are not considered principal risks. These other risks are, however, subject to this framework and oversight by Risk Management.

The GCRO is accountable for ensuring that 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 likewise accountable for conduct risk, and the Group General Counsel for legal risk

[1] For more information on the ten principal risks, separate sections are dedicated to credit, market, treasury, operational and model risks. For details on insurance, business, conduct, technology and legal 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 metrics[1]	2019	2018
CLR (%)	0.80	0.73
Stage 3 ratio on gross loans and advances (%)	4.7	5.1
Stage 3 coverage ratio (%)	43.7	45.1
Stage 1 and stage 2 coverage ratio (%)	1.1	1.1[2]
Total coverage ratio (%)	3.3	3.5[2]
Weighted average probability of default (PD) (%)[3]	2.4	2.3
Weighted average loss given default (LGD) (%)[3]	30.5	30.6
Total credit risk RWA (Rbn)	672.7	626.8[4]
Primary credit risk RWA, excluding CCR RWA (Rbn)	632.9[5]	594.0[5]
Counterparty credit risk (CCR) RWA[6] (Rbn)	27.8	21.7
Equity risk RWA (Rbn)	12.0	11.1

Key metrics – Corporate	2019	2018
CLR (%)	0.11	0.33
Stage 3 ratio on gross loans and advances (%)	1.2	1.7
Stage 3 coverage ratio (%)	42.0	55.6
Stage 1 and stage 2 coverage ratio (%)	0.3	0.3
Total coverage ratio (%)	0.9	1.4
Weighted average PD (%)[3]	0.8	0.8
Weighted average LGD (%)[3]	31.3	32.5

Key metrics – RBB	2019	2018
CLR (%)	1.27	0.99
Stage 3 ratio on gross loans and advances (%)	7.3	7.7
Stage 3 coverage ratio (%)	43.8	43.8
Stage 1 and stage 2 coverage ratio (%)	1.6	1.6
Total coverage ratio (%)	4.6	4.8
Weighted average PD (%)[3]	3.6	3.6
Weighted average LGD (%)[3]	29.9	29.0

- Book growth of 8.6% was achieved in 2019, notwithstanding ongoing political and economic headwinds. The growth trajectory was relatively broad based across portfolios per risk appetite in accordance with the Group strategy. Underpinning the growth and credit performance were concerted and focused portfolio reviews and collection strategies.
- The 2019 CLR increased to 0.80% (2018: 0.73%) largely attributable to the observed growth in the Retail and Business Banking (RBB) book, specifically the Credit Card portfolio and to a lesser extent Personal Loans. Given the portfolio growth and as the age construct of the portfolio changes, the portfolio risk skews to that of newer vintages thus increasing the expected loss rates per IFRS9. This was offset in Corporate and Investment Banking in the form of lower single name impairments in 2019.
- Stage 3 ratio on gross loans and advances improved to 4.7% (2018: 5.1%) in the period under review. Book growth, the write-off of a large single name in CIB, and regulatory write-offs in ARO had a bearing on this ratio, as well as benefits realised from the collections strategy.
- Total coverage was lower at 3.3% (2018: 3.5%[2]) following higher write-offs in 2019, as well as lower early arrears in VAF and a higher cure rate overall. Rigorous monitoring of the portfolio performance to ensure early detection of a change in the portfolio risk shape continued to apply and coverage will be reassessed accordingly.
- Primary credit risk RWA increased by R39.0bn (7.4% increase) year-on-year due to enterprise-wide asset growth in line with the Group strategy and risk appetite.
- CCR and CVA RWA consumption increased by R6.1bn year-on-year largely due to market moves on FX instruments.

[1] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.
[2] Restatement due to exclusion of fair value loans from the denominator.
[3] The percentages include only portfolios subject to the IRB approaches.
[4] During the annual review of the ERMF in 2019, equity risk was moved under credit risk. The restatement was made for comparative purposes.
[5] Includes IFRS9 transitional adjustment
[6] CCR RWA includes CVA

4. Credit risk

4.2 Priorities

- Monitor the macroeconomic, political and regulatory environment to identify and address emerging credit risk at an early stage and consider ongoing potential tail risk events in the near to medium term. The possible impact of a negative outlook, the Moody's threat of a downgrade to 'junk status' and an ostensible inability to resolve State Owned Company issues will likely remain exacerbating factors.
- Maintain a diversified credit portfolio in terms of key concentration dimensions such as individual counterparties, geographies, industries, products and collateral in accordance with the Group's strategy and risk appetite.
- Ensure a fully capacitated and well skilled team of qualified credit professionals is maintained.
- Retain focus on regulatory changes, including the rollout of a SA-CCR, new regulatory large exposure rules 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

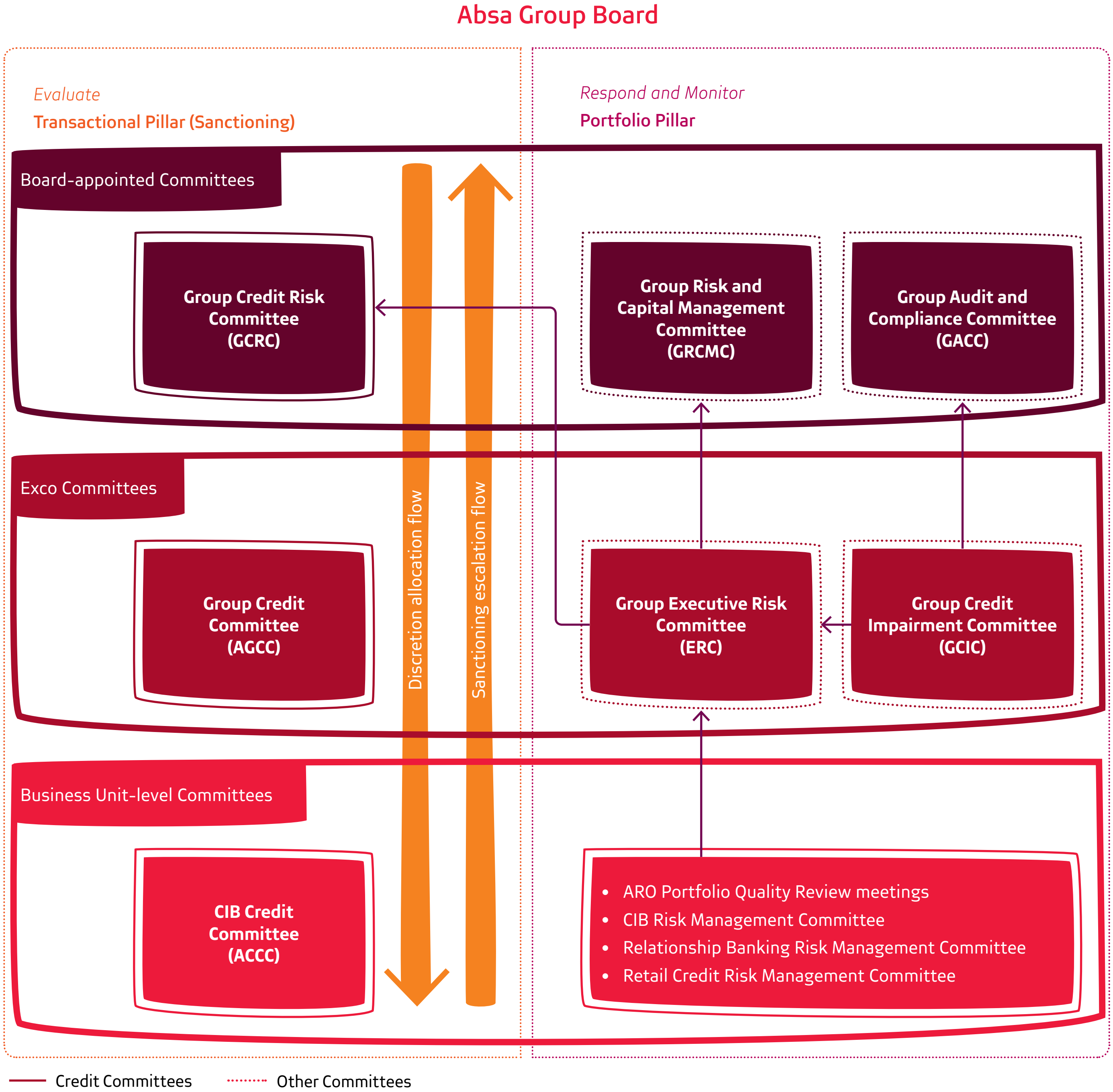
Credit risk is managed as a principal risk in accordance with the ERMF and the Credit Risk Management Framework (CRMF) and its associated policies. Incorporated in the CRMF are the key responsibilities across the three lines of defence, and the credit risk management accountabilities and responsibilities of various stakeholders through to the GCRC. Group credit policies augment the framework and contain detailed control objectives that must be met.

The management of credit risk is performed in accordance with the Group's 'three lines of defence' model depicted on page 18, which designates the relationship between the Credit Risk function, Compliance and Internal Audit. The Credit Risk functions embedded in the BUs are responsible for providing oversight on the risk-taking activities of business areas, providing the first line of defence. The Group Credit Risk function under the PRO for credit risk is responsible for credit policies and the provision of independent credit risk assurance services, the credit mandate as delegated by the Board, serving as a clear second line of defence, along with the Group Compliance function. Internal Audit is positioned in the third line of defence.

4. Credit risk

4.3.2 Governance

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



- **Credit oversight:** The GCRC is the primary Board sub-committee responsible for credit risk oversight covering the overall health of the credit portfolio, emerging risks and material concentrations within the credit portfolios. At a BU level, credit portfolio quality review (PQR) meetings are responsible for the detailed oversight and management of BU credit portfolios.
- **Sanctioning:** The GCRC is the ultimate 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[1]), irrespective of risk grade. The committee is also mandated to approve material country risk limits[2], with reference to the risk appetite of the Group as approved by the Board.
- **Risk oversight:** The ERC is the Group's most senior executive management committee responsible for exercising Absa Exco's collective responsibility for the risks of the Group by reviewing the enterprise-wide risk profile of Absa, which includes credit as a principal risk.

[1] A large exposure is defined in policy as being the aggregate financing limits to a counterparty, connected counterparties or a group of connected clients, under the credit risk regulatory scope of consolidation, which in aggregate exceeds 10% of the Absa Group qualifying capital and reserves, irrespective of default grade.

[2] Country Risk Limits are limits set for 1) cross border lending from a balance sheet other than the country of risk of the client, 2) intra-group funding in support of Absa subsidiaries and between subsidiaries, as well as 3) capital invested in the Absa Group subsidiaries excluding South Africa.

4. Credit risk

4.3.3 Reporting

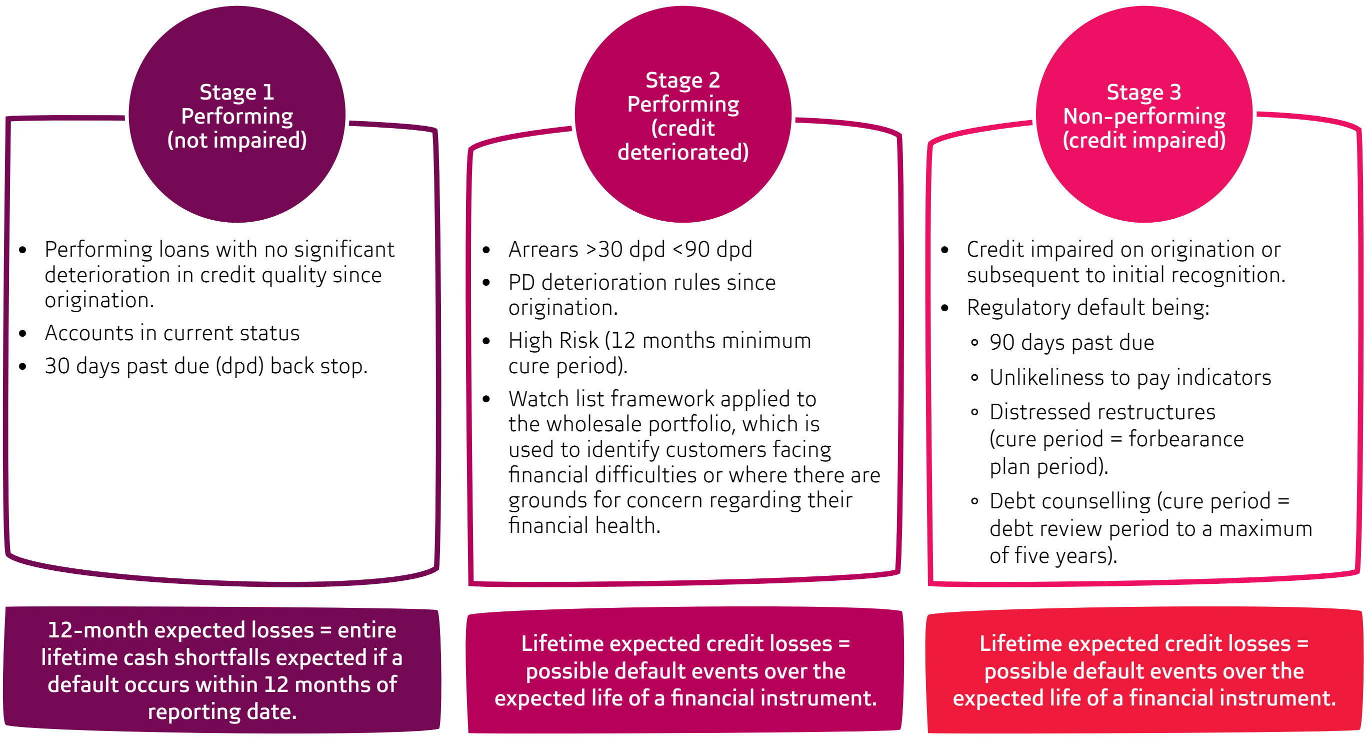
The Group Chief Credit Officer (GCCO) is responsible for the following Board-level reporting:

- To provide GCRC with an aggregated overview of the Bank's credit portfolio, including an evaluation of the performance of the various credit portfolios, emerging risks, and material concentrations, incorporating agreed management actions as appropriate. Risk consumption is measured against agreed credit risk appetite metrics in relation to plan and a trigger and limit framework.
- To provide GRCMC with a summarised aggregated report of the credit exposures and portfolios and any specific points of discussion emerging out of the GCRC review.
- To provide a summary review of the Group's aggregate impairment position to GACC.

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.



4. Credit risk

The tables below depict the credit quality of assets. [CR1]

		a	b	c	d
		2019			
		Gross carrying values [1,2] of			
		Defaulted exposures[3] Rm	Non-defaulted exposures Rm	Allowances/ impairments Rm	Net values (a+b-c) Rm
1	Loans	**46 994**	**960 352**	**29 761**	**977 585**
2	Debt Securities	**–**	**116 975**	**–**	**116 975**
3	Off-balance sheet exposures	**–**	**241 412**	**–**	**241 412**
4	**Total**	**46 994**	**1 318 739**	**29 761**	**1 335 972**

		a	b	c	d
		2018			
		Gross carrying values[1, 2] of			
		Defaulted exposures[3] Rm	Non-defaulted exposures Rm	Allowances/ impairments Rm	Net values (a+b-c) Rm
1	Loans	47 167	852 425	30 190	869 402
2	Debt Securities	–	128 352	–	128 352
3	Off-balance sheet exposures	–	260 490	–	260 490
4	**Total**	47 167	1 241 267	30 190	1 258 244

Refer to section 4.1 (Review of current reporting period) for commentary in respect of the year-on-year movement.

The table below depicts the statutory non-performing loans (NPLs) and debt securities and the main drivers of the change. [CR2]

		a	a
		2019 Defaulted exposures Rm	2018 Defaulted exposures Rm
1	Defaulted loans and debt securities at end of the previous reporting period	**47 167**	30 890
2	Loans and debt securities that have defaulted since the last reporting period	**23 327**	29 922
3	Returned to non-defaulted status	**(7 417)**	(8 824)
4	Amounts written off	**(8 932)**	(7 499)
5	Other changes	**(7 151)**	2 678
6	**Defaulted loans and debt securities at end of the reporting period**	**46 994**	47 167

- Loans and debt securities that have defaulted since the last reporting period is lower than the prior year due to lower defaults in Mortgages as a consequence of the quality of new business booked and payment optimization initiatives in collections.
- Returned to non-defaulted status is lower than the prior year due to lower recoveries in the Absa Regional Operations Wholesale portfolio during the review period.
- Amounts written off are higher than the prior year due to the write-off of a large single name.
- Other changes include security realised and/or closed and movements on interest in suspense accruing to the loan balance and provided for in the impairment allowance. The reclassification of the Edcon loan book from loans and advances to customers to non-current assets held for sale, as required by IFRS5, occurred in October 2019 when management took the decision to sell the loan book.

Note 63.2 Absa Group consolidated and separate financial statements for the reporting period ended 31 December 2019 for an ageing analysis of accounting past due exposures.

[1] Carrying values excludes net carrying amount of R70.0bn (2018: R46.0bn) relating to loans and advances to customers and to banks relating to reverse repos which are included as part of counterparty risk for credit risk reporting purposes.

[2] Carrying values excludes net carrying amount of R11.5bn (2018: R2.5bn) relating to Internal as well as structural assets and Rnil (2018: R1.9bn) relating to securitisation balances.

[3] The defaulted exposures are expressed in terms of statutory NPL.

4. Credit risk

In the tables below, total exposure represents both drawn and undrawn credit exposure in the banking book portfolios.

Restructured exposures (impaired versus not impaired) [CRB(ii)|

	2019 Gross carrying values of			2018 Gross carrying values of		
	Total Rm	Impaired[1] Rm	Not Impaired Rm	Total Rm	Impaired[1] Rm	Not Impaired Rm
Total restructured exposures	**14 862**	**11 733**	**3 129**	14 827	10 815	4 012

The increase in impaired restructured exposures is due to an increase in debt counselling largely because of industry trend and the growth strategy in RBB to regain market share. Other contributing factors include the broader economic climate and stress on the client base.

Exposures by geography [CRB(iii)|

	2019			
	Total exposure Rm	Non-performing loans Rm	Specific impairments Rm	Write-offs Rm
South Africa	**1 131 047**	**41 387**	**17 267**	**7 597**
Other African countries	**264 080**	**5 607**	**3 248**	**1 335**
Europe	**24 942**	**–**	**–**	**–**
North America	**7 547**	**–**	**–**	**–**
Asia	**5 644**	**–**	**–**	**–**
South America	**615**	**–**	**–**	**–**
Other	**5 552**	**–**	**–**	**–**
Total	**1 439 427**	**46 994**	**20 515**	**8 932**

	2018			
	Total exposure Rm	Non-performing loans Rm	Specific impairments Rm	Write-offs Rm
South Africa	1 100 812	41 133	17 874	5 730
Other African countries	263 099	6 034	3 409	1 769
Europe	18 458	–	–	–
North America	8 870	–	–	–
Asia	6 373	–	–	–
South America	498	–	–	–
Other	6 918	–	–	–
Total	1 405 028	47 167	21 283	7 499

[1] Regulatory definition of impaired.

4. Credit risk

Exposures by industry [CRB(iv)]

	2019		
	Total exposure Rm	NPLs Rm	Specific impairments Rm
Agriculture, hunting, forestry and fishing	48 810	1 622	708
Business services	97 455	3 319	1 449
Community, social and personal services	82 994	74	32
Construction	18 285	751	328
Electricity, gas and water supply	36 503	9	4
Financial intermediation and insurance	139 512	182	79
Manufacturing	89 909	1 551	677
Mining and quarrying	36 125	73	32
Other	91 728	355	155
Private households	541 674	35 284	15 403
Real estate	102 955	1 619	707
Transport, storage and communication	47 387	639	279
Wholesale and retail trade, repair of specified items, hotels and restaurants	106 090	1 516	662
Total	**1 439 427**	**46 994**	**20 515**

	2018		
	Total exposure Rm	NPLs Rm	Specific impairments Rm
Agriculture, hunting, forestry and fishing	46 144	1 614	386
Business services	62 396	2 661	1 462
Community, social and personal services	102 759	42	11
Construction	17 152	462	241
Electricity, gas and water supply	43 487	9	105
Financial intermediation and insurance	132 518	151	423
Manufacturing	100 347	1 794	511
Mining and quarrying	35 567	55	17
Other	121 685	718	821
Private households	509 502	34 756	14 776
Real estate	74 619	1 672	680
Transport, storage and communication	48 146	306	125
Wholesale and retail trade, repair of specified items, hotels and restaurants	110 706	2 927	1 725
Total	1 405 028	47 167	21 283

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

	2019				
	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	61 438	38 475	2 679	19 715	569
Corporate	426 949	105 682	32 612	261 694	26 961
Local governments and municipalities	11 109	2 156	9	3 652	5 292
Public sector entities (PSEs)	26 754	7 601	1 118	9 463	8 572
Retail – other	135 477	12 724	3 297	83 353	36 103
Retail mortgages (including any home equity line of credit)	300 599	32 519	1 020	18 362	248 698
Retail revolving credit	108 959	80 116	5 001	23 842	–
Securities firms	8 044	1 084	228	6 729	3
SME Corporate	160 092	83 563	12 572	45 107	18 850
SME Retail	24 824	14 911	539	4 704	4 670
Sovereign (including central government and central bank)	122 500	35 881	18 960	33 283	34 376
Specialised lending – income producing real estate	24 403	11 613	1 770	9 132	1 888
Specialised lending – project finance (PF)	28 279	1 434	1 817	15 106	9 922
Total	**1 439 427**	**427 759**	**81 622**	**534 142**	**395 904**

4. Credit risk

	2018				
	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	67 593	44 550	4 785	16 595	1 662
Corporate	400 891	108 162	32 004	236 219	24 506
Local governments and municipalities	9 883	1 676	3	5 515	2 688
PSEs	29 713	5 815	1 351	14 929	7 618
Retail – other	123 960	10 590	4 008	77 381	31 980
Retail mortgages (including any home equity line of credit)	287 953	33 853	578	15 719	237 803
Retail revolving credit	98 678	98 678	–	–	–
Securities firms	13 501	2 694	532	10 275	–
SME Corporate	151 029	78 160	11 520	44 582	16 767
SME Retail	24 279	14 062	640	4 685	4 891
Sovereign (including central government and central bank)	139 681	48 718	22 981	31 212	36 770
Specialised lending – income producing real estate	25 112	1 638	986	9 098	13 390
Specialised lending – PF	32 756	1 255	550	21 249	9 702
Total	1 405 028	449 850	79 940	487 459	387 779

4.3.5 Measuring and managing credit concentrations

Credit risk is accountable for the management of concentrations, or pools of exposures, whose collective performance has the potential to affect the Group negatively even if each individual transaction within 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:

- **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 inform risk appetite guideline levels to single counterparties or group 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 to be of significance.
- **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 macro-economic (jurisdiction risk) or environmental factors.

4.4 Credit risk mitigation (CRM) [CRC]

CRM is the technique 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. Credit risk

4.4.1 Valuation of collateral

The Group uses a number of 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 refreshed on a regular basis, 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 is assessed. These valuations and capital at risk are reviewed regularly to ensure impairments remain adequate.
- In the retail portfolio, mortgage asset valuations are updated using an AVM, while 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 is focused 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 relying heavily on the Group's collateral and document management systems. For larger wholesale exposures and capital market transactions, collateral is managed jointly 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 remain compliant 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 table below depicts the extent to which collateral and financial guarantees are used by the Group to secure exposures and reduce capital requirements.

		a	b	c	d	e
		2019				
		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	421 885	537 537	537 537	18 732	16 859
2	Debt securities	109 422	–	–	–	–
3	**Total**	531 307	537 537	537 537	18 732	16 859
4	Of which defaulted	20 054	26 940	–	–	–

		a	b	c	d	e
		2018				
		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	376 010	505 103	505 103	18 479	16 631
2	Debt securities	128 352	–	–	–	–
3	**Total**	504 362	505 103	505 103	18 479	16 631
4	Of which defaulted	14 526	32 641	32 641	–	–

Overall growth of gross loans and advances to customers is reflected in the year-on-year movement.

4. Credit risk

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 table that follows 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
		2019					
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
		On-balance sheet amount Rm	Off-balance sheet amount Rm	On-balance sheet amount Rm	Off-balance sheet amount Rm	RWA Rm	RWA density %
1	Corporate	32 377	21 143	32 241	10 701	46 670	109
2	SME Corporate	36 058	12 945	34 807	8 347	44 894	104
3	PSEs	3 957	1 561	3 950	950	2 655	54
4	Local governments and municipalities	–	–	–	–	–	–
5	Sovereign (including central government and central bank)	51 549	1 295	51 548	564	39 937	77
6	Banks	28 662	1 722	28 646	1 237	7 671	26
7	Securities firms	–	–	–	–	–	–
8	Residential mortgages (including any home equity line of credit)	9 567	–	9 384	–	3 933	42
9	Retail – revolving credit	6 775	11 958	6 153	3 146	6 964	75
10	Retail – other	30 049	22	29 023	10	21 788	75
11	SME retail	754	3	737	1	593	80
12	**Total**	**199 748**	**50 649**	**196 489**	**24 956**	**175 105**	**79**

		a	b	c	d	e	f
		2018					
		Exposures before CCF and CRM		Exposures post-CCF and CRM		RWA and RWA density	
		On-balance sheet amount Rm	Off-balance sheet amount Rm	On-balance sheet amount Rm	Off-balance sheet amount Rm	RWA Rm	RWA density %
1	Corporate	28 934	22 635	28 290	10 090	41 334	106
2	SME Corporate	29 782	24 268	28 194	11 231	42 548	104
3	PSEs	3 971	1 554	3 885	872	2 782	57
4	Local governments and municipalities	–	–	–	–	–	–
5	Sovereign (including central government and central bank)	50 253	682	50 254	136	45 037	89
6	Banks	27 944	776	27 944	390	2 981	11
7	Securities firms	–	–	–	–	–	–
8	Residential mortgages (including any home equity line of credit)	8 196	–	8 027	–	3 293	41
9	Retail – revolving credit	7 870	11 831	7 072	2 983	7 584	76
10	Retail – other	28 517	–	27 044	–	20 620	75
11	SME retail	1 537	226	1 472	118	1 245	76
12	**Total**	187 004	61 972	182 182	25 820	167 424	80

4. Credit risk

The table that follows provides an analysis, per Basel asset class, of the risk weights applied to standardised exposures.

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

		a	b	c	d	e	f	g	h	i	j	k
		December 2019										
		Risk weight										
		0%	>0% – 10%	>10% – 20%	>20% – 35%	>35% – 50%	>50% – 75%	>75% – 100%	>100% – 150%	>150%	Others	Total credit exposures amount (post-CCF and post-CRM)
	Asset classes											
1	Corporate	–	–	–	–	6	–	35 473	7 462	–	–	42 941
2	SME Corporate	1 356	–	29	–	573	–	34 381	6 814	–	–	43 153
3	PSEs	–	–	–	–	4 695	–	–	205	–	–	4 900
4	Local governments and municipalities	–	–	–	–	–	–	–	–	–	–	–
5	Sovereign (including central government and central bank)	8 792	–	3 913	–	5 794	–	28 326	5 288	–	–	52 113
6	Banks	9 737	–	13 291	–	3 893	–	2 753	209	–	–	29 883
7	Securities firms	–	–	–	–	–	–	–	–	–	–	–
8	Residential mortgages (including any home equity line of credit)	–	–	–	–	8 986	98	301	–	–	–	9 385
9	Retail – revolving credit	–	–	–	–	57	9 092	141	8	–	–	9 298
10	Retail – other	–	–	–	–	219	28 692	45	77	–	–	29 033
11	SME retail	–	–	–	–	6	655	36	42	–	–	739
12	**Total**	19 885	–	17 233	–	24 229	38 537	101 456	20 105	–	–	221 445

		a	b	c	d	e	f	g	h	i	j	k
		December 2018										
		Risk weight										
		0%	>0% – 10%	>10% – 20%	>20% – 35%	>35% – 50%	>50% – 75%	>75% – 100%	>100% – 150%	>150%	Others	Total credit exposures amount (post-CCF and post-CRM)
	Asset classes											
1	Corporate	–	–	–	–	7	–	33 743	4 630	–	–	38 380
2	SME Corporate	370	–	32	–	373	–	34 072	4 576	–	–	39 423
3	PSEs	–	–	–	–	4 482	–	–	275	–	–	4 757
4	Local governments and municipalities	–	–	–	–	–	–	–	–	–	–	–
5	Sovereign (including central government and central bank)	48	–	3 223	–	8 436	–	35 698	2 984	–	–	50 389
6	Banks	18 447	–	7 472	–	1 869	–	532	14	–	–	28 334
7	Securities firms	–	–	–	–	–	–	–	–	–	–	–
8	Residential mortgages (including any home equity line of credit)	–	–	–	1 437	120	5 607	864	–	–	–	8 028
9	Retail – revolving credit	–	–	–	–	229	9 679	144	4	–	–	10 056
10	Retail – other	–	–	–	–	248	26 712	84	–	–	–	27 044
11	SME retail	–	–	–	–	7	1 503	81	–	–	–	1 591
12	**Total**	18 865	–	10 727	1 437	15 771	43 501	105 218	12 483	–	–	208 002

4. Credit risk

4.6 Credit risk under the internal ratings based (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 that are 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.

Key risk parameters used in credit risk measurement

EAD Exposure at default	PD Probability of default	LGD Loss given default	M Maturity	Correlation 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 Exposure at default	PD Probability of default	LGD Loss given default	M Maturity	Correlation 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.				

4. Credit risk

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 make use of model outputs to describe the Group's credit risk profile.

4. Credit risk

The tables that follow 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
	2019											
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[1,2] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[3] %	EL Rm	Pro-visions Rm
Corporate												
0.00 to <0.15	92 245	58 286	21	105 628	0.10	212	33	1.71	18 551	18	35	39
0.15 to <0.25	14 764	10 147	11	18 958	0.23	179	24	2.11	4 356	23	10	22
0.25 to <0.50	48 014	42 916	19	61 728	0.35	480	34	2.05	26 402	43	72	71
0.50 to <0.75	12 077	5 720	28	14 894	0.58	233	32	1.87	7 368	49	27	29
0.75 to <2.50	45 077	26 179	31	53 645	1.46	2 779	35	2.10	43 275	81	276	230
2.50 to <10.00	8 601	2 995	48	9 839	4.97	293	35	1.73	11 394	116	175	144
10.00 to <100.00	3 523	783	85	3 954	17.60	101	34	1.10	6 700	169	239	177
100.00 (Default)	1 787	315	76	1 928	100.00	40	36	1.18	1 736	90	642	642
Sub-total	226 088	147 341	23	270 574	1.61	4 317	33	1.89	119 782	44	1 476	1 354
Specialised lending												
0.00 to <0.15	1 648	1 648	1	1 920	0.15	45	24	3.17	381	20	1	4
0.15 to <0.25	11 010	3 329	5	11 871	0.22	91	25	4.37	4 551	38	7	7
0.25 to <0.50	9 479	1 580	5	9 776	0.40	115	26	3.74	4 651	48	11	18
0.50 to <0.75	2 385	466	–	2 415	0.60	59	18	3.12	822	34	3	3
0.75 to <2.50	10 933	3 169	2	11 390	1.48	850	21	3.33	5 932	52	36	31
2.50 to <10.00	2 651	1 005	–	2 680	5.27	69	33	3.52	3 236	121	47	39
10.00 to <100.00	1 478	662	–	1 782	23.02	38	22	1.79	2 109	118	93	81
100.00 (Default)	1 209	28	1	1 216	100.00	34	48	3.81	711	58	596	596
Sub-total	40 793	11 887	3	43 050	4.69	1 301	25	3.65	22 393	52	794	779
SME corporate												
0.00 to <0.15	918	392	55	1 178	0.12	260	38	2.62	265	23	–	2
0.15 to <0.25	3 037	1 083	36	3 017	0.23	832	32	3.25	1 033	34	2	7
0.25 to <0.50	12 558	4 184	59	16 111	0.41	2 917	33	2.49	6 628	41	22	39
0.50 to <0.75	7 894	2 205	63	9 543	0.64	1 916	35	3.03	5 214	55	21	37
0.75 to <2.50	49 082	12 458	67	58 681	1.73	34 784	36	2.92	44 737	76	364	301
2.50 to <10.00	9 498	1 769	73	11 225	5.26	2 851	39	2.76	12 129	108	233	191
10.00 to <100.00	2 482	354	78	2 838	27.02	1 022	36	2.96	4 706	166	274	222
100.00 (Default)	3 092	82	51	3 144	100.00	652	38	2.79	2 480	79	1 348	1 348
Sub-total	88 561	22 527	64	105 737	5.34	45 234	36	2.85	77 192	73	2 264	2 147
Public sector entities												
0.00 to <0.15	2 948	827	3	3 152	0.16	22	25	2.09	660	21	1	1
0.15 to <0.25	10 687	4 648	16	11 364	0.22	14	24	2.70	3 145	28	6	6
0.25 to <0.50	4	91	45	63	0.33	10	18	1.07	11	18	–	–
0.50 to <0.75	1 193	95	100	1 242	0.61	8	25	1.00	423	34	2	1
0.75 to <2.50	164	8	85	175	2.67	97	56	4.84	276	157	3	2
2.50 to <10.00	474	97	207	536	3.96	10	22	0.82	335	62	5	4
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	15 470	5 766	19	16 532	0.39	161	25	2.41	4 850	29	17	14

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

[2] From December 2018, defaulted accounts are included in the total EAD weighted average PD to standardise reporting.

[3] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2019											
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[1,2] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[3] %	EL Rm	Provisions Rm
Local government and municipalities												
0.00 to <0.15	5 084	1 971	37	5 490	0.15	33	15	3.42	807	15	1	4
0.15 to <0.25	1 864	923	1	2 469	0.25	11	11	3.33	345	14	1	1
0.25 to <0.50	23	489	1	30	0.38	9	45	1.28	15	48	–	–
0.50 to <0.75	–	–	100	–	0.62	2	45	1.00	–	–	–	–
0.75 to <2.50	497	256	27	582	2.72	163	44	3.73	823	141	7	5
2.50 to <10.00	–	1	100	1	5.41	2	45	1.00	1	142	–	4
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	7 468	3 640	22	8 572	0.35	220	16	3.41	1 991	23	9	14
Sovereign (including central government and central bank)												
0.00 to <0.15	63 473	3 256	19	65 049	0.01	42	30	3.22	4 610	7	2	2
0.15 to <0.25	280	60	35	303	0.24	7	38	2.91	137	45	–	1
0.25 to <0.50	1 790	16	100	1 801	0.28	20	30	3.35	761	42	1	5
0.50 to <0.75	–	20	78	15	0.72	5	30	1.00	7	44	–	–
0.75 to <2.50	145	–	100	145	2.59	19	54	4.98	286	196	2	2
2.50 to <10.00	361	255	–	393	5.50	8	27	4.07	440	112	6	6
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	66 049	3 607	19	67 706	0.06	101	30	3.23	6 241	9	11	16
Banks												
0.00 to <0.15	12 118	12 097	66	14 055	0.03	87	33	1.03	889	6	1	3
0.15 to <0.25	241	530	100	694	0.23	7	27	1.02	188	27	–	1
0.25 to <0.50	251	455	22	328	0.39	12	41	1.02	154	47	1	1
0.50 to <0.75	11	1	100	13	0.55	2	44	0.97	9	72	–	–
0.75 to <2.50	185	689	91	654	1.84	49	42	0.89	577	88	5	2
2.50 to <10.00	2 603	1 765	99	4 012	6.81	41	38	0.83	5 379	134	104	36
10.00 to <100.00	35	74	106	76	23.51	8	44	0.88	174	228	8	2
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	15 444	15 611	71	19 832	1.57	206	34	0.99	7 370	37	119	45
Securities firms												
0.00 to <0.15	946	2 364	65	1 994	0.04	22	19	1.12	109	5	–	–
0.15 to <0.25	2 241	234	43	2 291	0.24	10	30	1.72	650	28	2	2
0.25 to <0.50	21	1 513	6	91	0.29	11	24	1.00	20	22	–	–
0.50 to <0.75	6	–	59	6	0.60	7	38	3.04	5	71	–	–
0.75 to <2.50	595	119	22	615	0.95	33	30	1.00	344	56	2	1
2.50 to <10.00	3	2	87	4	4.00	5	58	1.03	7	166	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	3 812	4 232	41	5 001	0.26	88	26	1.38	1 135	23	4	3

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

[2] From December 2018, defaulted accounts are included in the total EAD weighted average PD to standardise reporting.

[3] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2019											
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, 2] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[3] %	EL Rm	Provisions Rm
Retail mortgages (including any home equity line of credit)												
0.00 to <0.15	1 004	1 444	52	1 822	0.11	3 249	14	–	67	4	–	–
0.15 to <0.25	2 075	3 451	48	3 760	0.23	8 298	11	–	193	5	1	1
0.25 to <0.50	10 165	10 688	54	16 304	0.37	30 394	14	–	1 451	9	8	6
0.50 to <0.75	14 292	14 669	54	22 812	0.63	43 665	14	–	3 042	13	20	4
0.75 to <2.50	114 464	18 274	52	127 775	1.82	234 387	13	–	30 809	24	293	174
2.50 to <10.00	67 225	4 890	81	71 148	4.46	100 584	14	–	31 929	45	444	183
10.00 to <100.00	8 421	49	58	8 682	30.95	17 205	14	–	6 591	76	358	139
100.00 (Default)	20 363	86	–	20 363	100.00	35 476	21	–	2 763	14	4 852	4 852
Sub-total	238 009	53 551	55	272 666	10.55	473 258	14	–	76 845	28	5 976	5 359
Retail revolving credit												
0.00 to <0.15	643	7 044	52	5 962	0.10	414 308	57	–	220	4	3	6
0.15 to <0.25	733	2 459	52	2 395	0.23	147 904	58	–	177	7	3	3
0.25 to <0.50	2 751	4 789	52	5 835	0.39	305 214	58	–	662	11	13	20
0.50 to <0.75	2 072	2 231	53	3 598	0.64	193 198	57	–	591	16	13	9
0.75 to <2.50	11 397	6 607	57	16 356	1.65	791 293	56	–	5 340	33	152	270
2.50 to <10.00	20 621	17 367	63	28 199	5.32	654 071	58	–	21 446	76	862	1 556
10.00 to <100.00	3 432	379	58	4 013	26.90	229 299	56	–	5 885	147	600	1 072
100.00 (Default)	7 028	141	–	7 028	100.00	201 895	74	–	3 975	57	4 900	4 900
Sub-total	48 677	41 017	57	73 386	13.54	2 937 182	59	–	38 296	52	6 546	7 836
SME Retail												
0.00 to <0.15	236	1 298	77	1 772	0.06	98 740	73	–	120	7	1	146
0.15 to <0.25	327	252	67	516	0.22	10 322	31	–	70	14	–	1
0.25 to <0.50	886	1 154	85	2 213	0.39	43 792	61	–	599	27	5	67
0.50 to <0.75	1 092	553	88	1 749	0.63	11 312	52	–	671	38	6	11
0.75 to <2.50	9 117	2 886	80	12 602	1.60	62 884	50	–	6 441	51	107	86
2.50 to <10.00	3 488	563	96	4 211	5.66	18 200	70	–	4 372	104	169	71
10.00 to <100.00	1 054	116	86	1 206	26.48	5 042	66	–	2 043	169	207	53
100.00 (Default)	1 037	7	48	964	100.00	12 223	54	–	371	39	521	521
Sub-total	17 237	6 829	82	25 233	6.91	262 515	57	–	14 687	58	1 016	956
Retail – other												
0.00 to <0.15	1 348	959	72	4 226	0.15	19 916	25	–	354	8	2	2
0.15 to <0.25	201	185	32	336	0.22	5 492	62	–	96	29	–	–
0.25 to <0.50	1 667	183	69	1 920	0.45	17 977	41	–	563	29	4	2
0.50 to <0.75	3 337	83	32	3 428	0.66	29 778	38	–	1 158	34	9	2
0.75 to <2.50	26 102	1 115	60	27 268	1.95	174 902	38	–	13 641	50	199	148
2.50 to <10.00	47 074	115	34	47 164	5.20	395 420	41	–	31 908	68	1 088	846
10.00 to <100.00	13 554	41	12	13 584	20.74	135 636	45	–	13 907	102	1 288	980
100.00 (Default)	9 417	24	28	9 425	100.00	108 282	51	–	6 002	64	3 965	4 238
Sub-total	102 700	2 705	60	107 351	14.22	887 403	41	–	67 629	63	6 555	6 218
Total (all portfolios)	870 308	318 713	39	1 015 640	6.71	4 611 986	31	2.39	438 411	43	24 787	24 741

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

[2] From December 2018, defaulted accounts are included in the total EAD weighted average PD to standardise reporting.

[3] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
						2018						
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, 2] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[3] %	EL Rm	Pro-visions Rm
Corporate												
0.00 to <0.15	96 151	52 833	16	107 863	0.10	349	35	2.0	20 761	19	38	35
0.15 to <0.25	18 951	14 816	15	25 519	0.22	131	27	1.99	6 170	24	16	20
0.25 to <0.50	32 467	34 608	14	41 335	0.36	380	34	2.28	17 138	41	51	46
0.50 to <0.75	7 224	7 307	21	9 682	0.62	201	36	2.29	5 642	58	22	20
0.75 to <2.50	40 266	28 676	23	51 199	1.47	1 705	38	2.03	42 287	83	282	213
2.50 to <10.00	6 461	1 944	49	7 497	4.77	275	36	2.05	8 744	117	129	96
10.00 to <100.00	1 855	1 936	28	2 396	33.49	68	35	1.81	4 663	195	285	187
100.00 (Default)	2 711	2	58	2 712	100.00	27	29	2.03	2 346	87	2 009	2 009
Sub-total	206 086	142 122	18	248 203	2.01	3 136	35	2.06	107 751	43	2 832	2 626
Specialised lending												
0.00 to <0.15	2 838	2 012	–	3 057	0.15	46	28	3.58	842	28	1	5
0.15 to <0.25	7 435	1 828	2	7 793	0.23	84	26	5.73	3 199	41	5	8
0.25 to <0.50	11 726	4 659	3	12 360	0.40	135	29	6.60	6 784	55	15	23
0.50 to <0.75	4 030	377	1	4 092	0.65	76	19	3.99	1 524	37	5	11
0.75 to <2.50	11 777	5 561	6	12 660	1.69	827	26	3.76	8 387	66	58	66
2.50 to <10.00	1 935	960	1	2 195	5.66	67	28	3.19	2 174	99	36	30
10.00 to <100.00	1 143	417	–	1 144	19.29	18	22	2.66	1 313	115	45	44
100.00 (Default)	1 141	29	1	1 141	100.00	36	51	4.84	616	54	646	646
Sub-total	42 025	15 843	3	44 442	4.05	1 289	27	4.87	24 839	56	811	833
SME Corporate												
0.00 to <0.15	691	537	30	934	0.12	139	26	2.14	127	14	–	–
0.15 to <0.25	807	306	63	1 033	0.23	272	34	3.66	318	31	1	3
0.25 to <0.50	11 949	4 148	65	15 346	0.41	2 634	34	3.90	6 424	42	22	46
0.50 to <0.75	7 260	2 321	59	8 936	0.63	1 718	36	4.43	4 963	56	20	37
0.75 to <2.50	41 888	10 544	71	50 649	1.75	34 218	35	4.20	37 082	73	303	297
2.50 to <10.00	10 025	2 179	74	11 983	5.22	3 032	40	3.59	13 056	109	251	213
10.00 to <100.00	2 057	235	86	2 326	26.03	789	35	4.41	3 806	164	208	184
100.00 (Default)	3 082	66	40	3 099	100.00	678	38	3.35	2 259	73	1 475	1 475
Sub-total	77 759	20 336	67	94 306	5.66	43 480	35	4.05	68 035	72	2 280	2 255
Public sector entities												
0.00 to <0.15	5 855	3 254	10	6 923	0.15	18	25	2.25	1 401	20	3	3
0.15 to <0.25	9 106	3 508	6	9 307	0.21	7	24	3.05	2 534	27	5	5
0.25 to <0.50	264	387	64	531	0.44	22	24	1.14	151	28	1	–
0.50 to <0.75	–	175	82	145	0.72	4	25	1.07	54	38	–	–
0.75 to <2.50	669	344	90	985	2.69	108	32	1.63	811	82	9	6
2.50 to <10.00	59	567	53	374	4.96	7	25	2.93	329	88	5	2
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	15 953	8 235	18	18 265	0.43	166	25	2.60	5 280	29	23	16

[1] Total asset class average weighted PD % includes defaulted EADs
[2] From December 2018, defaulted accounts are included in the total EAD weighted average PD to standardise reporting.
[3] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2018											
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, 2] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[3] %	EL Rm	Pro-visions Rm
Local government and municipalities												
0.00 to <0.15	3 135	3 380	10	3 487	0.12	52	19	3.82	538	15	1	5
0.15 to <0.25	1 038	1 593	40	1 718	0.25	19	11	2.92	238	14	–	1
0.25 to <0.50	15	15	79	27	0.43	10	45	1.89	15	53	–	–
0.50 to <0.75	–	–	100	–	0.62	2	45	0.75	–	51	–	–
0.75 to <2.50	448	255	18	499	1.73	123	26	5.59	339	68	3	2
2.50 to <10.00	–	2	88	2	4.94	3	55	1.57	3	143	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	4 636	5 245	19	5 733	0.30	209	18	3.69	1 133	20	4	8
Sovereign (including central government and central bank)												
0.00 to <0.15	81 969	1 754	34	82 971	0.01	29	31	6.33	6 106	7	3	1
0.15 to <0.25	2 490	97	38	2 526	0.23	9	30	3.08	905	36	2	4
0.25 to <0.50	95	24	66	114	0.38	7	54	9.80	99	86	–	1
0.50 to <0.75	–	1	100	1	0.70	1	5	1.0	–	6	–	–
0.75 to <2.50	–	1 758	1	15	1.87	11	36	1.08	12	79	–	–
2.50 to <10.00	332	225	–	374	5.40	2	24	4.28	362	97	5	5
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	84 886	3 859	17	86 001	0.04	59	31	6.23	7 484	9	10	11
Banks												
0.00 to <0.15	15 005	8 163	37	13 660	0.05	94	29	1.15	1 298	10	2	3
0.15 to <0.25	2 570	1 571	57	3 465	0.23	16	26	1.31	875	25	2	1
0.25 to <0.50	50	305	94	337	0.29	6	43	0.37	108	32	–	–
0.50 to <0.75	–	20	69	14	0.54	6	44	1.0	8	56	–	–
0.75 to <2.50	465	355	51	683	1.51	42	44	1.66	656	96	5	2
2.50 to <10.00	4 892	5 392	84	9 481	6.38	26	42	1.05	9 479	100	255	57
10.00 to <100.00	15	68	92	78	18.14	5	44	0.38	171	219	6	1
100.00 (Default)	3	–	–	3	100.00	1	44	1.0	–	–	3	3
Sub-total	23 000	15 874	57	27 721	2.34	196	34	1.14	12 595	45	273	67
Securities firms												
0.00 to <0.15	3 540	130	39	3 579	0.04	24	20	1.41	186	5	–	–
0.15 to <0.25	2 253	200	25	2 303	0.25	7	31	2.07	759	33	2	2
0.25 to <0.50	2 276	4 486	2	2 568	0.35	10	22	1.33	585	23	2	1
0.50 to <0.75	–	155	50	77	0.60	2	21	1.0	22	28	–	–
0.75 to <2.50	367	91	66	427	1.63	26	44	1.0	390	91	3	2
2.50 to <10.00	3	1	50	3	4.00	4	44	1.07	4	126	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	8 439	5 063	6	8 957	0.26	73	25	1.54	1 946	22	7	5

[1] Total asset class average weighted PD % includes defaulted EADs
[2] From December 2018, defaulted accounts are included in the total EAD weighted average PD to standardise reporting.
[3] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
						2018						
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, 2] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[3] %	EL Rm	Pro-visions Rm
Retail mortgages (including any home equity line of credit)												
0.00 to <0.15	1 107	1 574	56	2 080	0.12	3 481	15	–	88	4	–	–
0.15 to <0.25	2 189	3 472	48	3 891	0.23	8 986	11	–	202	5	1	1
0.25 to <0.50	10 793	10 925	54	17 054	0.38	32 806	14	–	1 546	9	9	7
0.50 to <0.75	14 896	16 333	53	24 152	0.65	48 424	13	–	3 223	13	21	21
0.75 to <2.50	108 702	14 584	53	120 149	1.81	229 628	12	–	28 328	24	269	154
2.50 to <10.00	61 550	4 506	78	65 207	4.27	98 549	13	–	26 973	41	368	166
10.00 to <100.00	8 923	77	63	9 212	29.73	19 588	13	–	6 675	72	343	151
100.00 (Default)	20 027	100	–	20 027	100.00	36 579	21	–	193	1	4 731	4 731
Sub-total	228 187	51 571	55	261 772	10.68	478 041	13	–	67 228	26	5 742	5 231
Retail revolving credit												
0.00 to <0.15	442	5 908	52	5 144	0.10	385 569	56	–	184	4	3	6
0.15 to <0.25	640	2 432	51	2 182	0.22	135 278	58	–	157	7	3	3
0.25 to <0.50	2 496	4 957	52	5 745	0.39	319 704	58	–	641	11	13	21
0.50 to <0.75	1 786	2 064	53	3 179	0.65	175 089	57	–	522	16	12	7
0.75 to <2.50	9 478	5 933	57	13 927	1.63	773 107	56	–	4 480	32	127	231
2.50 to <10.00	17 934	15 681	63	24 832	5.24	646 264	57	–	18 501	75	740	1 387
10.00 to <100.00	2 661	369	57	3 157	27.48	222 514	55	–	4 563	145	477	848
100.00 (Default)	6 074	122	–	6 074	100.00	201 428	74	–	3 951	65	4 219	4 219
Sub-total	41 511	37 466	57	64 240	13.27	2 858 953	58	–	32 999	51	5 594	6 722

[1] Total asset class average weighted PD % includes defaulted EADs
[2] From December 2018, defaulted accounts are included in the total EAD weighted average PD to standardise reporting.
[3] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	2018											
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, 2] %	Number of obligors #	Average LGD %	Average maturity %	RWA Rm	RWA density[3] %	EL Rm	Pro-visions Rm
SME Retail												
0.00 to <0.15	139	1 092	74	1 498	0.04	97 764	78	–	45	3	–	87
0.15 to <0.25	39	44	100	93	0.20	198	65	–	26	28	–	–
0.25 to <0.50	405	781	83	1 361	0.38	30 856	75	–	287	21	4	38
0.50 to <0.75	226	280	83	569	0.62	3 565	75	–	173	30	3	4
0.75 to <2.50	8 732	3 743	81	12 964	1.77	76 384	47	–	5 712	44	111	72
2.50 to <10.00	4 206	724	94	5 096	5.25	23 539	61	–	4 514	89	169	63
10.00 to <100.00	899	112	87	1 054	26.81	5 335	63	–	1 794	170	174	38
100.00 (Default)	1 082	11	46	1 035	100.00	5 775	48	–	609	59	526	526
Sub-total	15 728	6 787	82	23 670	7.70	243 416	55	–	13 160	56	987	828
Retail – other												
0.00 to <0.15	1 200	1 013	72	4 126	0.17	16 652	25	–	355	9	2	3
0.15 to <0.25	207	169	30	324	0.22	7 317	54	–	80	25	–	–
0.25 to <0.50	1 804	170	82	2 051	0.47	19 755	38	–	574	28	4	2
0.50 to <0.75	2 598	97	31	2 666	0.66	25 281	38	–	905	34	7	2
0.75 to <2.50	25 406	1 081	56	26 547	1.98	180 923	37	–	13 081	49	193	147
2.50 to <10.00	39 984	132	36	40 091	5.62	368 634	42	–	27 034	67	993	703
10.00 to <100.00	12 653	33	4	12 674	20.60	132 031	44	–	12 906	102	1 191	962
100.00 (Default)	8 879	16	16	8 882	100.00	100 836	50	–	5 874	66	3 733	3 733
Sub-total	92 731	2 711	60	97 361	14.69	851 429	41	–	60 809	62	6 123	5 552
Total (all portfolios)	840 941	315 112	35	980 671	6.68	4 480 447	31	3.30	403 259	41	24 686	24 154

[1] Total asset class average weighted PD % includes defaulted EADs
[2] From December 2018, defaulted accounts are included in the total EAD weighted average PD to standardise reporting.
[3] Post model adjustments (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
		2019		2018	
		Pre-credit derivatives RWA Rm	Actual RWA Rm	Pre-credit derivatives RWA Rm	Actual RWA Rm
1	Corporate	120 075	119 783	107 800	107 751
2	Specialised lending	22 393	22 393	24 905	24 838
3	SME Corporate	77 193	77 193	68 036	68 035
4	PSEs	4 850	4 850	5 420	5 282
5	Local government and municipalities	1 990	1 990	1 132	1 132
6	Sovereign (including central government and central bank)	6 240	6 240	7 484	7 484
7	Banks	7 371	7 371	12 930	12 594
8	Securities firms	1 134	1 134	1 947	1 947
9	Retail mortgages (including any home equity line of credit)	76 844	76 844	67 226	67 226
10	Retail revolving credit	38 296	38 296	33 001	33 001
11	SME Retail	14 687	14 687	13 159	13 159
12	Retail – other	67 629	67 628	60 810	60 810
13	**Total**	**438 702**	**438 409**	403 850	403 259

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

		a	a
		2019 RWA amounts Rm	2018 RWA amounts Rm
1	**RWA as at end of previous reporting period**	**407 221**	382 908
2	Asset size	14 521	30 918
3	Asset quality	–	–
4	Model updates	19 632	6 481
5	Methodology and policy	–	–
6	Acquisitions and disposals	–	–
7	Foreign exchange movements	–	–
8	Other	–	(13 086)
9	**RWA as at end of reporting period**	**441 374**	407 221

4. Credit risk

IRB: Backtesting of PD per portfolio [CR9]

The tables that follow 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).

The tables below evidence that the PD models can rank order risk and that no material understatement of actual default rates is observed.

	a	b	c	d	e	f	g
	2019						
				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+	0.10	–	349	–	–	0.49
0.15 to <0.25	BBB, BBB–	0.23	0.37	131	179	–	0.48
0.25 to <0.50	BBB–, BB+	0.35	0.37	380	480	1	0.13
0.50 to <0.75	BB+, BB	0.58	0.61	201	233	–	0.69
0.75 to <2.50	BB, BB–, B+	1.46	1.35	1 705	2 779	7	0.54
2.50 to <10.00	B+, B, B–	4.97	3.54	275	293	7	1.21
10.00 to <100.0	CCC/C	17.60	35.05	68	–	4	3.97
100.00 (Default)	100.00 (Default)	100.00	100.00	27	40	–	7.74
0 to < 100.0	AAA to CCC/C	0.89	1.30	3 136	4 004	19	0.54
Special lending							
0 to <0.15	AAA, AA, A, BBB+	0.15	–	46	–	–	–
0.15 to <0.25	BBB, BBB–	0.22	0.21	84	91	–	–
0.25 to <0.50	BBB–, BB+	0.40	0.35	135	115	2	–
0.50 to <0.75	BB+, BB	0.60	0.60	76	59	1	0.34
0.75 to <2.50	BB, BB–, B+	1.48	1.47	827	850	1	0.65
2.50 to <10.00	B+, B, B–	5.27	3.10	67	69	5	2.41
10.00 to <100.0	CCC/C	23.02	23.05	18	–	1	45.60
100.00 (Default)	100.00 (Default)	100.00	100.00	36	34	–	1.11
0 to < 100.0	AAA to CCC/C	1.88	1.32	1 289	1 218	10	0.62
SME Corporate							
0 to <0.15	AAA, AA, A, BBB+	0.12	–	139	–	–	0.60
0.15 to <0.25	BBB, BBB–	0.23	0.22	272	832	1	0.47
0.25 to <0.50	BBB–, BB+	0.41	0.37	2 634	2 917	19	0.80
0.50 to <0.75	BB+, BB	0.64	0.60	1 718	1 916	12	1.04
0.75 to <2.50	BB, BB–, B+	1.73	1.40	34 218	34 784	93	1.50
2.50 to <10.00	B+, B, B–	5.26	6.15	3 032	2 851	206	1.30
10.00 to <100.0	CCC/C	27.02	25.13	789	–	74	7.47
100.00 (Default)	100.00 (Default)	100.00	100.00	678	652	–	0.71
0 to < 100.0	AAA to CCC/C	2.44	1.58	43 480	43 952	405	1.40
Sovereigns							
0 to <0.15	AAA, AA, A, BBB+	0.01	–	29	–	–	–
0.15 to <0.25	BBB, BBB–	0.24	0.22	9	7	–	–
0.25 to <0.50	BBB–, BB+	0.28	0.39	7	20	–	–
0.50 to <0.75	BB+, BB	0.72	0.70	1	5	–	–
0.75 to <2.50	BB, BB–, B+	2.59	1.73	11	19	–	–
2.50 to <10.00	B+, B, B–	5.50	3.30	2	8	–	–
10.00 to <100.0	CCC/C	10.00	10.00	–	–	–	–
0 to < 100.0	AAA to CCC/C	0.06	1.22	59	59	–	–

4. Credit risk

	a	b	c	d	e	f	g
	2019						
				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+	0.03	–	94	–	–	–
0.15 to <0.25	BBB, BBB–	0.23	0.18	16	7	–	–
0.25 to <0.50	BBB–, BB+	0.39	0.30	6	12	–	–
0.50 to <0.75	BB+, BB	0.55	0.60	6	2	–	–
0.75 to <2.50	BB, BB–, B+	1.84	1.44	42	49	–	–
2.50 to <10.00	B+, B, B–	6.81	4.64	26	41	–	–
10.00 to <100.0	CCC/C	23.51	15.00	5	–	–	1.00
100.00 (Default)	100.00 (Default)	100.00	100.00	1	–	–	20.00
0 to < 100.0	AAA to CCC/C	0.99	2.41	196	111	–	–
Retail mortgages							
0 to <0.25	AAA, AA, A, BBB+,BBB, BBB–	–	0.29	12 467	11 547	16	0.08
0.25 to <0.50	BBB–, BB+	0.37	0.37	32 806	30 394	37	0.13
0.50 to <0.75	BB+, BB	0.63	0.65	48 424	43 665	93	0.23
0.75 to <2.50	BB, BB–, B+	1.82	1.60	229 628	234 387	1 593	1.00
2.50 to <10.00	B+, B, B–	4.46	3.71	98 549	100 584	3 285	2.57
10.00 to <100.0	CCC/C	30.95	29.14	19 588	17 205	4 290	17.30
100.00 (Default)	100.00 (Default)	100.00	100.00	36 579	35 476	–	–
0 to < 100.0	AAA to CCC/C	3.33	2.95	478 041	473 258	9 314	1.84
Retail revolving credit							
0 to <0.25	AAA, AA, A, BBB+	–	0.28	520 847	562 212	2 181	0.27
0.25 to <0.50	BBB–, BB+	0.39	0.36	319 704	305 214	2 782	0.74
0.50 to <0.75	BB+, BB	0.64	0.61	175 089	193 198	2 420	1.23
0.75 to <2.50	BB, BB–, B+	1.65	1.44	773 107	791 293	17 240	2.72
2.50 to <10.00	B+, B, B–	5.32	5.11	646 264	654 071	62 829	9.43
10.00 to <100.0	CCC/C	26.90	23.16	222 514	229 299	68 271	19.87
100.00 (Default)	100.00 (Default)	100.00	100.00	201 428	201 895	–	–
0 to < 100.0	AAA to CCC/C	4.38	3.72	2 858 953	2 937 182	155 723	4.93
SME retail							
0 to <0.0.25	AAA, AA, A, BBB+, BBB, BBB–	–	–	97 962	109 062	–	–
0.25 to <0.50	BBB–, BB+	0.39	0.34	30 856	43 792	4 726	6.86
0.50 to <0.75	BB+, BB	0.63	0.61	3 565	11 312	431	6.97
0.75 to <2.50	BB, BB–, B+	1.60	1.52	76 384	62 884	3 254	4.40
2.50 to <10.00	B+, B, B–	5.66	3.70	23 539	18 200	2 488	8.33
10.00 to <100.0	CCC/C	26.48	24.78	5 335	5 042	532	15.99
100.00 (Default)	100.00 (Default)	100.00	100.00	5 775	12 223	–	0.26
0 to < 100.0	AAA to CCC/C	3.22	1.24	243 416	262 515	11 431	3.55
Retail – other							
0 to <0.50	AAA to BB+	–	0.22	43 724	43 385	397	1.00
0.50 to <0.75	BB+, BB	0.66	0.59	25 281	29 778	334	1.02
0.75 to <2.50	BB, BB–, B+	1.95	1.57	180 923	174 902	2 945	1.84
2.50 to <10.00	B+, B, B–	5.20	5.05	368 634	395 420	17 020	4.86
10.00 to <100.0	CCC/C	20.74	20.02	132 031	135 636	38 095	16.23
100.00 (Default)	100.00 (Default)	100.00	100.00	100 836	108 282	–	–
0 to < 100.0	AAA to CCC/C	5.96	6.44	851 429	887 403	58 791	5.80

4. Credit risk

	a	b	c	d	e	f	g
				2018			
				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+	0.08	0.08	203	349	–	0.06
0.15 to <0.25	BBB, BBB-	0.19	0.19	135	131	1	0.21
0.25 to <0.50	BBB-, BB+	0.34	0.37	324	380	–	0.16
0.50 to <0.75	BB+, BB	0.59	0.61	168	201	–	0.86
0.75 to <2.50	BB, BB-, B+	1.30	1.35	1 056	1 705	5	0.59
2.50 to <10.00	B+, B, B-	3.84	3.54	122	275	9	1.21
10.00 to <100.0	CCC/C	32.48	35.05	21	68	2	4.35
100.00 (Default)	100.00 (Default)	100.00	100.00	19	27	–	–
0 to < 100.0	AAA to CCC/C	0.96	1.90	2 048	3 136	17	0.77
Special lending							
0 to <0.15	AAA, AA, A, BBB+	0.12	0.12	43	46	–	–
0.15 to <0.25	BBB, BBB-	0.21	0.21	75	84	–	–
0.25 to <0.50	BBB-, BB+	0.33	0.35	133	135	–	–
0.50 to <0.75	BB+, BB	0.57	0.60	60	76	1	0.20
0.75 to <2.50	BB, BB-, B+	1.48	1.47	819	827	–	0.81
2.50 to <10.00	B+, B, B-	3.83	3.10	42	67	3	2.89
10.00 to <100.0	CCC/C	17.21	23.05	18	18	6	49.86
100.00 (Default)	100.00 (Default)	100.00	100.00	56	36	–	–
0 to < 100.0	AAA to CCC/C	1.51	2.12	1 246	1 289	10	1.94
SME Corporate							
0 to <0.15	AAA, AA, A, BBB+	0.08	0.07	129	139	–	0.06
0.15 to <0.25	BBB, BBB-	0.20	0.22	186	272	–	0.19
0.25 to <0.50	BBB-, BB+	0.39	0.37	2 188	2 634	7	0.41
0.50 to <0.75	BB+, BB	0.60	0.60	1 302	1 718	17	0.92
0.75 to <2.50	BB, BB-, B+	1.36	1.40	22 197	34 218	64	1.60
2.50 to <10.00	B+, B, B-	3.98	3.25	1 349	3 032	187	1.49
10.00 to <100.0	CCC/C	24.35	25.13	309	789	55	7.84
100.00 (Default)	100.00 (Default)	100.00	100.00	565	678	–	–
0 to < 100.0	AAA to CCC/C	2.43	2.73	28 225	43 480	330	1.52
Sovereigns							
0 to <0.15	AAA, AA, A, BBB+	0.01	0.01	38	29	–	–
0.15 to <0.25	BBB, BBB–	0.23	0.22	11	9	–	–
0.25 to <0.50	BBB–, BB+	0.38	0.39	7	7	–	–
0.50 to <0.75	BB+, BB	0.70	0.70	3	1	–	–
0.75 to <2.50	BB, BB–, B+	1.87	1.73	21	11	–	–
2.50 to <10.00	B+, B, B–	5.40	3.30	4	2	–	–
10.00 to <100.0	CCC/C	10.00	10.00	1	–	–	–
0 to < 100.0	AAA to CCC/C	0.03	0.25	85	59	–	–

4. Credit risk

	a	b	c	d	e	f	g
				2018			
				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	0.07	73	94	–	–
0.15 to <0.25	BBB, BBB-	0.22	0.18	3	16	–	–
0.25 to <0.50	BBB-, BB+	0.33	0.30	10	6	–	2.00
0.50 to <0.75	BB+, BB	0.53	0.60	4	6	–	–
0.75 to <2.50	BB, BB-, B+	1.40	1.44	29	42	–	–
2.50 to <10.00	B+, B, B-	5.98	4.64	20	26	1	1.56
10.00 to <100.0	CCC/C	10.74	15.00	7	5	–	–
100.00 (Default)	100.00 (Default)	100.00	100.00	–	1	–	–
0 to < 100.0	AAA to CCC/C	1.29	0.37	146	196	1	0.08
Retail mortgages							
0 to <0.25	AAA, AA, A, BBB+,BBB, BBB-	0.15	0.15	12 903	12 467	15	0.09
0.25 to <0.50	BBB-, BB+	0.36	0.37	32 144	32 806	46	0.13
0.50 to <0.75	BB+, BB	0.65	0.65	58 311	48 424	112	0.23
0.75 to <2.50	BB, BB-, B+	1.54	1.60	241 400	229 628	1 720	1.00
2.50 to <10.00	B+, B, B-	3.74	3.71	74 905	98 549	2 801	2.46
10.00 to <100.0	CCC/C	27.53	29.14	24 375	19 588	4 697	20.74
100.00 (Default)	100.00 (Default)	100.00	100.00	37 262	36 579	–	–
0 to < 100.0	AAA to CCC/C	3.28	3.37	481 300	478 041	9 391	2.09
Retail revolving credit							
0 to <0.25	AAA, AA, A, BBB+	0.13	0.13	490 123	520 847	2 042	0.35
0.25 to <0.50	BBB-, BB+	0.36	0.36	326 724	319 704	2 837	0.71
0.50 to <0.75	BB+, BB	0.61	0.61	186 944	175 089	2 849	1.19
0.75 to <2.50	BB, BB-, B+	1.45	1.44	756 010	773 107	20 282	2.63
2.50 to <10.00	B+, B, B-	4.83	5.11	665 171	646 264	76 256	9.20
10.00 to <100.0	CCC/C	23.53	23.16	228 582	222 514	66 704	25.34
100.00 (Default)	100.00 (Default)	100.00	100.00	233 489	201 428	–	–
0 to < 100.0	AAA to CCC/C	4.21	4.21	2 887 043	2 858 953	170 970	5.30
SME retail							
0 to <0.0.25	AAA, AA, A, BBB+, BBB, BBB-	0.04	0.04	98 576	97 962	3	0.21
0.25 to <0.50	BBB-, BB+	0.38	0.34	28 386	30 856	117	0.39
0.50 to <0.75	BB+, BB	0.61	0.61	4 276	3 565	395	0.64
0.75 to <2.50	BB, BB-, B+	1.45	1.52	73 901	76 384	2 279	3.54
2.50 to <10.00	B+, B, B-	4.16	3.70	25 221	23 539	4 335	4.97
10.00 to <100.0	CCC/C	24.72	24.78	4 518	5 335	382	16.78
100.00 (Default)	100.00 (Default)	100.00	100.00	3 186	5 775	–	–
0 to < 100.0	AAA to CCC/C	3.48	1.77	238 064	243 416	7 511	3.44
Retail – other							
0 to <0.50	AAA to BB+	0.19	0.20	833 089	43 724	488	1.09
0.50 to <0.75	BB+, BB	0.61	0.59	22 836	25 281	335	0.87
0.75 to <2.50	BB, BB-, B+	1.63	1.57	176 338	180 923	2 757	1.67
2.50 to <10.00	B+, B, B-	4.83	5.05	363 792	368 634	17 361	4.53
10.00 to <100.0	CCC/C	18.98	20.02	137 583	132 031	33 003	18.84
100.00 (Default)	100.00 (Default)	100.00	100.00	94 174	100 836	–	–
0 to < 100.0	AAA to CCC/C	6.13	7.49	1 627 812	851 429	53 944	6.29

- No defaults were observed in the Sovereign asset class in 2018.
- One default was observed in the Banks asset class within ARO.

4. Credit risk

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 that relates to a derivative or SFT changes due to movement in underlying market variables. The loss to the bank is the cost of replacing or closing out the contract.

- **CCR Measurement:** The Group uses two principal CCR exposure measures: Current Exposure (CEM) and Potential Future Exposure (PFE). Both of these exposure measures must be measured, at a minimum, on a daily basis. PFE's are measured at a 98% confidence level.
- **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 counterparty credit risk.
- **Exposure monitoring:** The monitoring of CCR activities is done 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.

The table that follows 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
		2019					
		Replacement cost Rm	PFE Rm	Effective expected positive exposure (EEPE)	Alpha used for computing regulatory EAD Rm	EAD post-CRM Rm	RWA Rm
1	CEM (for derivatives)	21 880	20 625		1.40	34 067	11 412
2	IMM (for derivatives and SFTs)			–	–	–	–
3	Simple approach for CRM (for SFTs)					–	–
4	Comprehensive approach for CRM (for SFTs)					5 359	1 800
5	VaR for SFTs					–	–
6	**Total**						13 212

		a	b	c	d	e	f
		2018					
		Replacement cost Rm	PFE Rm	EEPE Rm	Alpha used for computing regulatory EAD Rm	EAD post-CRM Rm	RWA Rm
1	CEM (for derivatives)	21 028	21 196		1.40	32 400	11 143
2	IMM (for derivatives and SFTs)			–	–	–	–
3	Simple approach for CRM (for SFTs)					–	–
4	Comprehensive approach for CRM (for SFTs)					5 913	1 803
5	VaR for SFTs					–	–
6	**Total**						12 946

4. Credit risk

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
		2019		2018	
		EAD post-CRM Rm	RWA Rm	EAD post-CRM Rm	RWA Rm
	Total portfolios subject to the Advanced CVA capital charge				
1	VaR component (including the 3×multiplier)		–		–
2	sVaR component (including the 3×multiplier)		–		–
3	All portfolios subject to the Standardised CVA capital charge	32 829	12 092	32 400	7 735
4	**Total subject to the CVA capital charge**	32 829	12 092	32 400	7 735

The table that follows 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. Since collateral is taken into account in the EAD estimate of CCR transactions, an unsecured LGD is used in capital formulas.

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

	a	b	c	d	e	f	g
	2019						
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	3 179	0.10	56	37	1.52	622	20
0.15 to <0.25	1 469	0.23	38	28	3.88	587	40
0.25 to <0.50	2 346	0.38	98	37	2.07	1 164	50
0.50 to <0.75	9 220	0.61	22	25	1.54	3 551	39
0.75 to <2.50	1 785	1.44	304	41	1.64	1 499	84
2.50 to <10.00	152	5.71	41	39	1.89	203	134
10.00 to <100.00	36	24.52	11	33	1.03	64	178
100.00 (Default)	–	–	–	–	–	–	–
Sub-total	18 187	0.63	570	31	1.81	7 690	42
Banks/Securities firms							
0.00 to <0.15	16 570	0.07	38	41	1.18	3 064	18
0.15 to <0.25	79	0.23	11	34	2.15	38	48
0.25 to <0.50	1 284	0.37	15	37	1.72	605	47
0.50 to <0.75	217	0.60	4	44	0.62	119	55
0.75 to <2.50	1 371	2.01	29	44	0.62	1 278	93
2.50 to <10.00	481	5.34	18	28	0.66	417	87
10.00 to <100.00	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–
Sub-total	20 002	0.35	115	41	1.16	5 521	28
Total (all portfolios)	38 189	0.48	685	36	1.47	13 211	35

4. Credit risk

	a	b	c	d	e	f	g
				2018			
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	3 343	0.09	75	37	1.66	677	20
0.15 to <0.25	840	0.22	39	28	2.84	273	33
0.25 to <0.50	6 644	0.46	102	27	1.87	2 456	37
0.50 to <0.75	209	0.60	34	43	1.29	110	53
0.75 to <2.50	2 268	1.49	312	42	2.86	2 002	88
2.50 to <10.00	54	5.72	39	34	1.73	62	115
10.00 to <100.00	49	17.80	9	65	1.56	161	329
100.00 (Default)	–	–	–	–	–	–	–
Sub-total	13 407	0.61	610	32	2.03	5 741	43
Banks/Securities firms							
0.00 to <0.15	20 309	0.07	47	43	1.09	3 729	18
0.15 to <0.25	341	0.23	8	44	1.76	154	45
0.25 to <0.50	1 036	0.37	9	36	2.17	495	48
0.50 to <0.75	125	0.60	7	44	0.99	74	60
0.75 to <2.50	1 386	1.55	29	44	1.04	1 313	95
2.50 to <10.00	776	5.14	18	44	0.31	1 005	130
10.00 to <100.00	–	20.32	2	44	1.00	–	78
100.00 (Default)	–	–	–	–	–	–	–
Sub-total	23 973	0.34	120	43	1.12	6 770	28
Total (all portfolios)	37 380	0.44	730	39	1.45	12 511	33

RWA increased as a result of market volatility and specifically exchange rate fluctuations.

The table that follows 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
	2019					
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral			
	Segregated Rm	Unsegregated Rm	Segregated Rm	Unsegregated Rm	Fair value of collateral received Rm	Fair value of posted collateral Rm
Cash – domestic currency	–	4 390	–	1 264	56 507	51 873
Cash – other currencies	–	2 196	–	4 137	6 289	18 132
Domestic sovereign debt	–	–	–	–	51 240	53 003
Other sovereign debt	–	–	–	–	102	–
Government agency debt	–	–	–	–	–	–
Corporate bonds	–	2 006	–	983	25 023	5 566
Equity securities	–	–	–	–	–	–
Other collateral	–	–	–	–	–	–
Total	–	8 592	–	6 384	139 161	128 574

4. Credit risk

	a	b	c	d	e	f
	2018					
	Collateral used in derivative transactions				Collateral used in SFTs	
	Fair value of collateral received		Fair value of posted collateral			
	Segregated Rm	Unsegregated Rm	Segregated Rm	Unsegregated Rm	Fair value of collateral received Rm	Fair value of posted collateral Rm
Cash – domestic currency	–	4 974	–	380	56 924	31 598
Cash – other currencies	–	2 476	–	5 395	7 390	14 158
Domestic sovereign debt	–	–	–	–	28 653	53 325
Other sovereign debt	–	–	–	–	1 778	–
Government agency debt	–	–	–	–	–	–
Corporate bonds	–	2 374	–	984	9 457	274
Equity securities	–	–	–	–	–	–
Other collateral	–	–	–	–	–	–
Total	–	9 824	–	6 759	104 202	99 355

The table that follows 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
	2019		2018	
	Protection bought Rm	Protection sold Rm	Protection bought Rm	Protection sold[1] Rm
Notionals				
Single-name credit default swaps	**5 581**	**3 342**	4 299	4 908
Index credit default swaps	**–**	**–**	–	–
Total return swaps	**13 772**	**10 813**	20 382	13 729
Credit options	**–**	**–**	–	–
Other credit derivatives	**1 401**	**–**	2 878	–
Total notionals	**20 754**	**14 155**	27 559	18 637
Fair values				
Positive fair value (asset)	**2 434**	**202**	4 712	676
Negative fair value (liability)	**(259)**	**(547)**	(669)	(1 310)

The increase reported is a result of growth in business activity in this portfolio.

The table that follows 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
		2019		2018	
		EAD post-CRM Rm	RWA Rm	EAD post-CRM Rm	RWA
1	**Exposures to qualifying central counterparty (QCCPs) (total)**		**1 333**		986
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	**–**	**–**	–	–
3	i. OTC derivatives	**–**	**–**	–	–
4	ii. Exchange-traded derivatives	**5 355**	**1 308**	10 091	935
5	iii. SFTs	**–**	**–**	–	–
6	iv. Netting sets where cross-product netting has been approved	**–**	**–**	–	–
7	Segregated initial margin	**–**		–	
8	Non-segregated initial margin	**579**	**19**	1 865	45
9	Pre-funded default fund contributions	**55**	**6**	50	6
10	Unfunded default fund contributions	**–**	**–**	–	–

4. Credit risk

		a	b	a	b
		2019		2018	
		EAD post-CRM Rm	RWA Rm	EAD post-CRM Rm	RWA Rm
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	–	–	–	–

The decrease in trade exposure is attributed to a decrease in trade volatility as well as a decrease in trade exposure with the separation from Barclays PLC.

4.8 Securitisation [SECA]

Securitisation transactions are used as a means of raising long-term funding.

The Group currently does not undertake any securitisation transactions apart from the SARB committed liquidity facility (CLF) which is a non-market securitisation transaction. 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
		2019					
		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)	–	–	–	**219**	–	**219**
2	Residential mortgage	–	–	–	**219**	–	**219**
6	Wholesale (total)	–	–	–	–	–	–

		a	b	c	e	f	g
		2018					
		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)	–	–	–	189	–	189
2	Residential mortgage	–	–	–	189	–	189
6	Wholesale (total)	–	–	–	–	–	–

4. Credit risk

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

		2019 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**	**219**	–	–	–	–
2	Traditional securitisation	**219**	–	–	–	–
3	Of which securitisation	**219**	–	–	–	–
4	Of which retail underlying	**219**	–	–	–	–
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	–	–	–	–	–

		2018 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**	189	–	–	–	–
2	Traditional securitisation	189	–	–	–	–
3	Of which securitisation	189	–	–	–	–
4	Of which retail underlying	189	–	–	–	–
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	–	–	–	–	–

[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

2019 Exposure values (by regulatory approach)				2019 RWA (by regulatory approach)				2019 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
–	219	–	–	–	232	–	–	–	19	–	–
–	219	–	–	–	232	–	–	–	19	–	–
–	219	–	–	–	232	–	–	–	19	–	–
–	219	–	–	–	232	–	–	–	19	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
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–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

2018 Exposure values (by regulatory approach)				2018 RWA (by regulatory approach)				2018 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
–	189	–	–	–	24	–	–	–	2	–	–
–	189	–	–	–	24	–	–	–	2	–	–
–	189	–	–	–	24	–	–	–	2	–	–
–	189	–	–	–	24	–	–	–	2	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
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–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–

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 objectives of the portfolio.

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|

	2019				
	On-balance sheet amount Rm	Off-balance sheet amount Rm	Risk weight %	Exposure amount Rm	RWA Rm
Exchange-traded equity exposures	595		300	595	1 891
Private equity exposures	2 387		400	2 387	10 122
Total	**2 982**			**2 982**	**12 013**

	2018				
	On-balance sheet amount Rm	Off-balance sheet amount Rm	Risk weight %	Exposure amount Rm	RWA Rm
Exchange-traded equity exposures	567		300	567	1 803
Private equity exposures	2 218		400	2 218	9 357
Total	2 785			2 785	11 160

The higher RWA is due to increased listed investments in Absa Financial Services.

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 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[1]	December 2019	December 2018
Average traded market risk – 99% daily value at risk (DVaR) (Rm)[2]	**56.9**	51.4
Traded market risk RWA (Rbn)	**39.2**	37.0

- The increase in average DVaR was principally due to an increase in open risk as a lack of volume across markets created a challenging environment for the business to exit risk obtained through client facilitation.
- The increase of R2.2bn RWA was primarily as a result of an increase in local currency sovereign bonds held in the ARO markets business.

5.2 Priorities

- Continue to manage traded market risk and support the business growth strategy within the Group's risk appetite whilst operating in markets with reduced volume and liquidity.
- Perform business and product impact assessments and engage in industry and regulatory forums to assess the impact of the Basel Standard: Minimum Capital Requirements for market risk, or FRTB, issued in January 2019.
- Maintain the momentum generated on the FRTB project to ensure the Group is ready to meet the regulatory implementation date of 1 January 2023 in South Africa.

5.3 General information about market risk [MRA and MRB]

5.3.1 Risk identification and management

The first line of defence for market risk management resides with BU heads. An independent market risk team, which reports to the GCRO, is responsible for the oversight of the BUs ensuring that they remain within the set limits, including VaR, sensitivity, loss threshold and stress testing. Limits and thresholds are reviewed and set at the Group level and allocated to BUs at least annually. The Market Risk function ensures limit and threshold excesses are reviewed and managed in accordance with an action plan approved by Market Risk or brought back in line when they occur. Excesses and actions are reported to the Group Market Risk Committee (GMRC).

Traded market risk

Traded market risk management objectives are to:

- Embed appropriate models to measure risk.
- Ensure risk is managed within the Group's 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 appetite. Market Risk is taken by the Group to support the demands of the Group's clients, to facilitate market liquidity as a market maker and take advantage of short-term market mispricing. Market Risk is controlled by strong risk management frameworks, polices and standards, supported by daily limit monitoring.

A number of techniques are used to measure and control traded market risk on a daily basis. 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.

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.

[1] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.
[2] The value at risk (VaR) confidence interval used for internal risk management purposes was changed in April 2019 from 95% to 99% to align with regulatory reporting requirements. 95% VaR was R40.1m for the reporting period (December 2018: R28.3m)

5. Traded market risk

Daily value at risk[1] (DVaR)

DVaR 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 DVaR model based on the historical simulation method to derive the quantitative market risk measures under normal conditions. The DVaR 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%. The model is approved by the PA to calculate the RC for all trading book exposures, including FX and Commodity risk in the Banking Book. The approval covers general position risk across the following risk types: interest rate, foreign exchange, commodity, equity and traded credit products. VaR is scaled up to the 10-day holding period (via a scalar[2] assuming no autocorrelation to increase the holding period time horizon). The PA has assigned 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.
- DVaR is the 99th percentile loss selected from the resultant two year historically simulated strip of daily hypothetical net profit or loss. Daily losses in excess of the DVaR figure are likely to occur, on average, up to 5 times over the two-year period.

DVaR is an important market risk measurement and control tool. As such the performance of the model is regularly assessed for continued 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.

The VaR estimates have a number of known limitations namely:

- The historical simulation assumes that the past is a good representation of the future[3], 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 there is difficulty in obtaining historical rates/price information.
- VaR is not additive, e.g. two VaR amounts may not simply be combined from different parts of a business due to correlation and diversification.

As a result 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 Group conducts backtesting of the VaR risk measurement model against:

- The theoretical profit and loss (PnL) representing the change in the value of the portfolio under the assumption that the portfolio holdings remain constant for the holding period.
- The actual PnL 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 has assigned a sVaR model multiplier to be used in the calculation of RC. The sVaR methodology is the same as that used to calculate DVaR, 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 that is 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 disclosure above). The sVaR historical period remained 2008/2009.

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

[2] Based on the square root of time rule

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

5. Traded market risk

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 carried out by applying historical stress moves to each of the main risk categories (including interest rate, equity, foreign exchange, commodity, and credit spread risk) 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 DVaR. The two tail risk metrics chosen for daily monitoring, using the current portfolio and two years of unweighted historical market moves, are:

- 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 DVaR.

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 DVaR 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 which are awaiting regulatory IMA approval in South Africa.

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

5.3.2 Governance

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 assigned limits and that VaR results are accurate. The PRO for 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 PnL, PnL 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 GMRC is a monthly meeting at which a summary of the month's risk utilisation, limit breaches, independent valuation results and capital utilisation is reviewed. The committee is also responsible for approving the traded market risk policies.

5. Traded market risk

Committees

A number of BU and Group level market risk committees exist. 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 GMRC including the risk profile report which is tabled at the GRCMC.

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

5.3.3 Reporting

Risk reporting: Traded market risk

The Group's Market Risk function produces a number of 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 GMRC and other governance committees, as required, including the risk profile report tabled at the GRCMC.

Market risk under SA [MR1]

		a	a
		December 2019 RWA Rm	December 2018 RWA Rm
	Outright products		
1	Interest rate risk (general and specific)[1]	**17 213**	14 390
2	Equity risk (general and specific)	**372**	881
3	Foreign exchange risk	**955**	548
4	Commodity risk	**–**	–
	Options		
5	Simplified approach	**–**	–
6	Delta-plus method	**–**	–
7	Scenario approach	**–**	–
8	Securitisation	**–**	–
9	**Total**	**18 540**	15 819

Traded market risk standardised RWA increased by R2 721m (17%) from December 2018. The movement was driven by an increase in standardised specific risk exposure, primarily from interest rate risk on inventory held to facilitate client requirements for local currency denominated sovereign debt, in support of Absa's strategy to build out the ARO franchise.

[1] General and specific risk are calculated separately as stand-alone charges without diversification.

5. Traded market risk

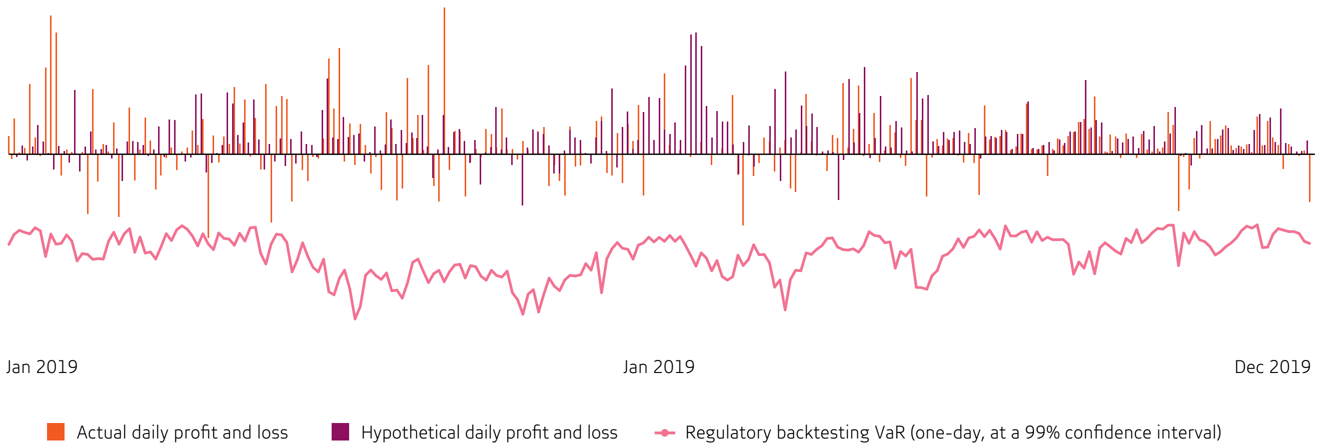
Traded market risk under the IMA

This section specifically relates to the trading books for which internal models approval have been 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. Revenue reported is actual 'clean' trading book PnL (excluding fees, commissions, NII, bid-ask spreads, price testing and other provisions, as required for regulatory backtesting purposes) as well as hypothetical PnL (which is computed in the risk system and is based on the assumption that the portfolio holdings remain constant). There were no actual or hypothetical losses that exceeded the VaR estimate during the current reporting period.

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



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

		a	b	c	d	e	f	
		2019						
		VaR Rm	sVaR Rm	IRC[1] Rm	CRM Rm	Other Rm	Total RWA Rm	Total capital requirement[2] Rm
1	RWA at previous quarter end (30 September 2019)	**7 705**	**14 274**	**–**	**–**	**–**	**21 979**	**2 363**
2	Movements in risk levels	**(1 334)**	**47**	**–**	**–**	**–**	**(1 288)**	**(138)**
3	Model updates/changes							
4	Methodology and policy							
5	Acquisitions and disposals)							
6	Other							
7	**RWA at end of reporting period (31 December 2019)**	6 370	14 321	–	–	–	20 691	2 224

- **VaR and sVaR:** VaR reduced primarily as a result of absolute levels of risk being reduced into year end, which is characterised by less liquidity. However, sVaR increased marginally as a result of a change in the portfolio risk composition resulting in a loss of diversification.

[1] IRC: incremental risk charge
[2] Calculated at 10.75% of RWA

5. Traded market risk

		a	b	c	d	e	f	
					2018			
		VaR Rm	sVaR Rm	IRC[1] Rm	CRM Rm	Other Rm	Total RWA Rm	Total capital requirement[2] Rm
1	RWA at previous quarter end (30 September 2018)	8 016	13 762	–	–	–	21 778	2 341
2	Movements in risk levels	(912)	325	–	–	–	(587)	(63)
3	Model updates/changes							
4	Methodology and policy							
5	Acquisitions and disposals)							
6	Other							
7	**RWA at end of reporting period (31 December 2018)**	7 104	14 087	–	–	–	21 191	2 278

IMA values for trading portfolios [MR3]

		a	a
		2019 Rm	2018 Rm
	VaR (10 day 99%)[3]		
1	Maximum value	**268**	282
2	Average value	**162**	151
3	Minimum value	**115**	83
4	Period end	**145**	136
	Stressed VaR (10 day 99%)[1]		
5	Maximum value	**540**	606
6	Average value	**313**	274
7	Minimum value	**188**	153
8	Period end	**319**	203
	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)	**–**	–

Traded market risk exposure, as measured by average 10 day 99% DVaR increased by 7% year-on-year. The increase in average DVaR was principally due to an increase in open risk as a lack of volume across markets created a challenging environment for the business to exit risk obtained through client facilitation.

[1] IRC: incremental risk charge
[2] Calculated at 10.75% of RWA
[3] 1 day VaR scaled to 10 days by multiplying the 1 day VaR by square root of 10, same approach for sVaR

5. Traded market risk

5.3.4 Additional disclosures

Analysis of market risk exposure

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

Trading book management DVaR summary[1]

	2019				2018[2]			
	Average Rm	High[3] 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	37.58	57.51	25.66	35.84	46.03	97.18	21.63	37.15
Foreign exchange risk	15.99	49.55	5.36	5.36	20.64	68.82	6.47	10.28
Equity risk	30.97	78.64	15.52	31.25	20.15	41.18	5.58	27.47
Commodity risk	1.09	4.02	0.23	1.03	1.00	2.94	0.34	0.80
Inflation risk	6.80	22.70	3.00	6.32	17.31	41.93	7.74	13.15
Credit spread risk	5.01	8.91	3.39	4.17	9.92	12.50	2.32	6.27
Diversification effect	(46.32)	(136.55)	(16.81)	(38.08)	(67.40)	(175.48)	(17.74)	(51.97)
Total DVaR[4]	51.12	84.78	36.35	45.89	47.65	89.07	26.33	43.15
Expected shortfall	65.96	118.83	39.46	51.50	60.01	126.15	32.08	59.32
Regulatory VaR[5]	51.12	84.78	36.35	45.89	47.65	89.07	26.33	43.15
Regulatory sVaR[3]	98.84	170.88	59.34	100.88	86.60	191.68	48.49	64.14

- Traded market risk exposure, as measured by average total DVaR, increased by 7% to R51.1m (2018: R47.7m) for the reporting period.
- The increase in average DVaR was principally due to an increase in open risk as a lack of volume across markets created a challenging environment for the business to exit risk obtained through client facilitation.

[1] DVaR at 95% confidence level and a 2-year historical time series for businesses with IMA approval
[2] Management revised the VaR confidence interval used for internal risk management purposes from 95% to 99% in April 2019 to align with regulatory reporting requirements. For comparative purposes, 95% VaR was R32.0m (December 2018: R31.6m)
[3] The high and low DVaR figures reported for each category did not necessarily occur on the same day as the high (and low) total DVaR. Consequently, a diversification effect number for the high (and low) DVaR figures would not be meaningful and is therefore omitted.
[4] The analysis includes trading books for which internal model approval has been obtained.
[5] Regulatory VaR and sVaR are reported with a one-day holding period at a 99% confidence level. The sVaR period is subject to quarterly review for appropriateness.

6. Treasury risk

6. Treasury risk

Treasury risk comprises liquidity risk, capital risk and interest rate risk in the banking book.

- **Liquidity risk:** The risk that the Group is unable to meet its contractual or contingent cash obligations or that it does not have the appropriate amount, tenor and composition of funding and liquidity to support its assets.
- **Capital risk:** The risk that the Group has an insufficient level or inappropriate composition of capital supply to support its normal business activities while remaining within its Board capital target ranges and above RC requirements.
- **Interest rate risk in the banking book (IRRBB):** The risk that the Group is exposed to capital or income volatility because of a mismatch between the interest rate exposures of its banking book assets and liabilities.

6.1 Overview of Treasury risk management and key prudential metrics

Treasury risk is the second line of defence whose role is to establish the limits and control framework under which Group Treasury and first line of defence activities are performed, being consistent with the risk appetite of the Group, and to monitor performance against these limits and constraints. Treasury risk proposes risk metrics and targets, triggers and limits which, together with qualitative risk appetite statements, collectively define the treasury risk appetite. Treasury risk is also responsible for defining the policies which detail responsibilities, activities and governance, and assessing conformance to these policies and controls.

The treasury risk appetite is reviewed and approved by the Absa Group Treasury Committee/ARO Treasury Committee at least annually. In addition, treasury risk appetite statements classified as board-level are submitted to the Group GRCMC for review and recommendation to the Board for final approval. Allocations of treasury risk appetite to risk types, legal entities and business areas are reviewed and approved by the ERC.

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 objective. The metrics are monitored on a dynamic basis 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 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); and
- Execution of hedging strategies to manage earnings volatility due to changes in interest rates.

In line with regulatory and accounting requirements, the capital and leverage position of Group and Bank in this document is reflected on a regulatory basis (which requires unappropriated profits to be excluded), and in accordance with IFRS accounting rules (which requires the impact of the contribution amounts received from Barclays PLC as part of the separation to be included). However, the capital and leverage position of the Group is also managed on a statutory, normalised basis (which includes unappropriated profits, and excludes the impact of the contribution amounts received from Barclays PLC). For reference, section 6.3 below provides key capital and leverage information on a statutory, normalised basis as at 31 December 2019.

6. Treasury risk

6.1.1 Key BCBS metrics (at consolidated group level)[1] [KM1]

In line with the requirements of IFRS9, which became effective on 1 January 2018, the Group moved from the recognition of credit losses on an incurred loss basis to an EL basis. The Group elected to utilise the transition period of three years for phasing in the RC impact of IFRS9, as afforded by Directive 5. The table below reflects the capital and leverage position of the Group on a fully loaded basis, as well as on a transitional basis.

	a	b	c	d	e
	31 December 2019	30 September 2019	30 June 2019	31 March 2019	31 December 2018
Available capital (Rm)					
1 CET1 transitional basis	**100 637**	100 115	95 034	95 984	92 829
1a Fully loaded ECL accounting model	**98 909**	98 387	93 306	94 256	90 237
2 Tier 1 transitional basis	**109 062**	107 216	102 101	101 341	98 547
2a Fully loaded ECL accounting model Tier 1	**107 334**	105 488	100 373	99 613	95 955
3 Total capital transitional basis	**133 411**	130 726	124 669	122 187	119 835
3a Fully loaded ECL accounting model total capital	**131 683**	128 998	122 941	120 459	117 243
RWA (Rm)					
4 Total risk-weighted assets (RWA) transitional basis	**870 406**	884 742	844 332	832 028	818 592
4a Fully loaded RWA	**863 260**	877 595	837 186	824 882	807 872
Risk-based capital ratios as a percentage of RWA (%)					
5 CET1 ratio transitional basis	**11.6**	11.3	11.3	11.5	11.3
5a Fully loaded ECL accounting model CET1	**11.5**	11.2	11.2	11.4	11.2
6 Tier 1 ratio transitional basis	**12.5**	12.1	12.1	12.2	12.0
6a Fully loaded ECL accounting model Tier 1 ratio	**12.4**	12.0	12.0	12.1	11.9
7 Total capital ratio transitional basis	**15.3**	14.8	14.8	14.7	14.6
7a Fully loaded ECL accounting model total capital ratio	**15.2**	14.7	14.7	14.6	14.5
Additional CET1 buffer requirements as a percentage of RWA (%)					
8 Capital conservation buffer requirement (2.5% from 2020)	**2.5**	2.5	2.5	2.5	1.9
9 Countercyclical buffer requirement[2]	**–**	–	–	–	–
10 Bank G-SIB and/or D-SIB additional requirements[3]	**–**	–	–	–	–
11 Total of bank CET1 specific buffer requirements (Row 8 + row 9 + row 10)	**2.5**	2.5	2.5	2.5	1.9
12 CET1 available after meeting the bank's minimum capital requirements	**4.1**	3.8	3.8	4.0	3.9
Basel III leverage ratio					
13 Total Basel III leverage ratio exposure measure (Rm)	**1 572 845**	1 638 103	1 597 486	1 586 022	1 494 861
14 Basel III leverage ratio (%) (row 2/row 13) transitional basis	**6.9**	6.5	6.4	6.4	6.6
14a Fully loaded ECL accounting model Basel III leverage ratio (%) (row 2a/row13)	**6.8**	6.4	6.3	6.3	6.4
Liquidity coverage ratio[4, 5]					
15 Total HQLA (Rm)	**182 093**	183 757	179 203	187 500	189 979
16 Total net cash outflow (Rm)	**135 510**	149 051	141 104	160 559	172 903
17 LCR (%)	**134.4**	123.3	127.0	116.8	109.9
Net stable funding ratio[5]					
18 Total available stable funding (ASF) (Rm)	**866 368**	868 808	834 432	827 614	808 351
19 Total required stable funding (RSF) (Rm)	**768 850**	769 183	749 331	750 073	733 786
20 NSFR (%)	**112.7**	113.0	111.4	110.3	110.2

[1] Numbers reported are on a regulatory basis and include the contribution amounts received from Barclays PLC as part of the separation.

[2] South Africa currently has a countercyclical buffer requirement of 0%.

[3] The D-SIB add on is not required to be disclosed.

[4] The Group LCR reflects an aggregation of the Absa Bank LCR and the LCR of ARO. For this purpose, a simple average of the relevant 3 month-end data points is used in respect of ARO. In respect of Absa Bank, the LCR was calculated as a simple average of 90 calendar-day LCR observations.

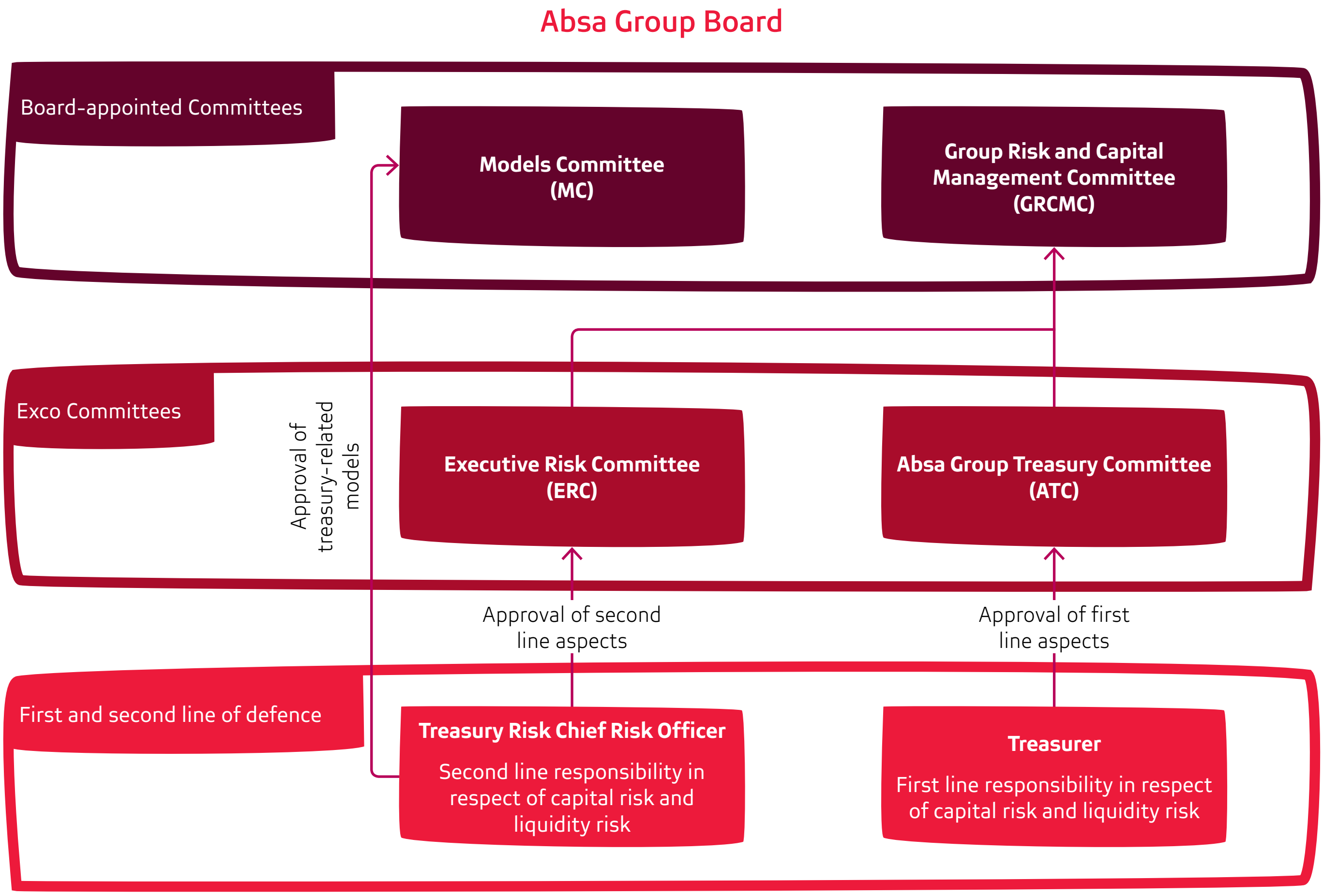
[5] The December 2018 Group LCR and NSFR was restated to reflect a change in certain assumptions.

6. Treasury risk

6.1.2 Governance

A set of policies and standards, with an overarching framework, is used in conjunction 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

6.2.1 Review of the current reporting period

Key risk metrics (Group) [1]	December 2019	December 2018
Sources of liquidity (Rbn)	233.3	217.7
NSFR (%)	112.7	110.2[3]
LCR (%)[2]	134.4	109.9[3]
Loan-to-deposit ratio (%)	87.5	88.9[4]
Loans and advances to customers and banks (Rbn)	945.0	838.8
South Africa	826.1	741.4
ARO	118.9	97.4
Deposits from customers and banks (including debt securities) (Rbn)	1 080.1	943.6
South Africa	928.1	814.0
ARO	152.0	129.6
Debt Capital Market Issuances (Rbn)[5]	14.3	8.7
Tier 1 Capital	3.1	1.2
Tier 2 Capital	1.6	1.5
Senior Debt	9.6	6.0

- Liquidity risk position:
  - The liquidity risk position of the Group remained healthy, in line with risk appetite, and above the minimum regulatory requirements, with sources of liquidity of R233.3bn (December 2018: R217.7bn), amounting to 28.2% (December 2018: 29.6%) of deposits due to customers.
  - Each geographic entity is required to be self-sufficient from a liquidity and funding perspective and is responsible for implementing appropriate processes and controls to ensure compliance with local LRA, regulatory limits and reporting requirements.
- Long-term balance sheet structure:
  - Strong loan growth over 2019 was funded by faster growth in customer deposits ensuring sustainability of funding.
  - Long-term funding was raised with appropriate tenor to support the growth in long-term assets, through a combination of funding instruments and capital market issuances.
  - Whilst short-term liquidity premiums have exhibited some volatility, overall funding spreads have declined over the course of 2019.
  - There were increased issuances in the debt capital market in 2019 to support growth in longer term assets and lengthen the contractual duration of funding.
- Short-term balance sheet structure and liquidity buffers:
  - The Group targets LCR above the minimum regulatory requirement, and consistently maintained a high-quality liquid assets (HQLA) buffer in excess of the regulatory minimum requirement of 100% during 2019.
  - The Groups' average HQLA was R182.1bn (December 2018: R190.0bn) which reduced slightly given the strong LCR position.
  - The Group has an internal LRA framework, which was used to determine the amount of HQLA the Group was required to hold in order to meet internally defined stress requirements.
  - The bank has access to a CLF from the SARB, which was included in HQLA. The CLF is being phased out by the SARB over three years, with effect from 1 December 2019. The bank will ensure compliance with the phase-out rules and replace this with alternative forms of HQLA.
- Diversification:
  - The Group has a well-diversified deposit base and concentration risk was managed within appropriate guidelines. Sources of funding were managed in order to maintain a wide diversity of depositor, product, tenor and currency.
  - The Group entered into a number of facilities with international banks during 2019 to support foreign currency funding requirements. Absa entered into bilateral foreign currency loans and syndicated loans of over $900m during 2019 in order to support lending activities.

[1] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.
[2] The Group LCR reflects an aggregation of the Absa Bank LCR and the LCR of ARO. For this purpose, a simple average of the relevant 3 month-end data points is used in respect of the ARO. In respect of Absa Bank, the LCR was calculated as a simple average of 90 calendar-day LCR observations.
[3] The December 2018 Group LCR and NSFR were restated to reflect a change in certain assumptions.
[4] The methodology used to calculate the loan-to-deposit ratio has been changed to include loans and advances to banks and is based on average balances. Comparative ratios have been restated.
[5] The Debt Capital Market issuances are reported gross of maturities

6. Treasury risk

6.2.2 Priorities

- Continue to focus on the growth of core retail, relationship bank, corporate and public sector deposits.
- Manage the funding and HQLA position in line with the Board-approved LRA framework and to ensure compliance with the regulatory requirements.
- Maintain adequate liquidity buffers to ensure the Group continues to remain compliant with the LCR while managing the phase-out of the CLF by the SARB.
- Continue to grow and diversify the funding base to support asset growth and other strategic initiatives while optimising funding cost and complying with the requirements of the NSFR.
- Continue to work with regulatory authorities and other stakeholders on the SARB's proposed approach to bank resolution, as outlined in the recent discussion paper published by the Financial Stability Department of the SARB entitled 'Ending too big to fail: South Africa's intended approach to bank resolution'.

6.2.3 General information about liquidity risk [LIQA]

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

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 brand. The Group considers sustainable access to appropriate liquidity for each of its entities to be extremely important. Liquidity risk is managed in line with the Treasury Risk Framework, in order to:

- Maintain liquidity resources that are sufficient in amount and quality together with a funding profile that is appropriate to meet the LRA as expressed by the Board.
- Maintain market confidence.
- Set limits to control liquidity risk within and across lines of business and legal entities.
- Price liquidity costs accurately and incorporate these into product pricing and performance measurement.
- Set Early Warning Indicators (EWIs) to identify immediately the emergence of increased liquidity risk or vulnerabilities including events that would impair access to liquidity resources.
- Project fully 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 that is regularly tested to ensure that 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 • Client behaviour • Pricing liquidity risk through funds transfer pricing	• Treasury framework and policies • LRA • 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	• CLF • EWIs • Liquidity simulations • Contingency planning and Recovery planning	• 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 over the last 12 months.

2019 (%) *2018 (%)*

Net Stable Funding Ratio (NSFR)
The objective of the NSFR is 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	
	2019	2018[1]	**2019**	2018[1]
ASF (Rm)	**866 368**	808 351	**715 846**	656 999
RSF (Rm)	**768 850**	733 786	**668 486**	632 800
Actual NSFR (%)	**113**	110	**107**	104
Required NSFR (%)	**100**	100	**100**	100

Diversification

The Group maintained a well-diversified deposit base and concentration risk is managed within appropriate guidelines. Sources of funding were managed in order to maintain a wide diversity of depositor, product, tenor and currency.

The Group entered into a number of facilities with international banks in 2019 to support foreign currency funding requirements. Absa entered into bilateral foreign currency loans and syndicated loans of over $900m during 2019 in order to support lending activities.

Each entity within the Group is required to ensure that 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 has established the LRA, which sets the level of liquidity risk the Group chooses to take in pursuit of 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, in conjunction with the LCR.

Each entity within 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, and the liquidity related components of the Group's Recovery plan. Stress testing results are also taken into account 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 within 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 managing the balance sheet.
- A range of EWIs, which assist in informing management when deciding whether the CFP should be invoked.

[1] The December 2018 NSFR was restated to reflect a change in certain assumptions.

6. Treasury risk

Each banking entity within the Group must establish local processes and procedures for managing 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 Absa Bank the CFP has been merged with the Recovery Plan.

Reporting

Short-term liquidity stress

The Group's sources of liquidity

	2019 Rm	2018 Rm
The Group sources of liquidity	**233 315**	217 690
HQLA[1]	**169 452**	157 307
Other liquid assets (ARO)	**48 537**	44 013
Other sources of liquidity	**15 326**	16 370

As at 31 December 2019, the Group's sources of liquidity amount to 28.2% of deposits due to customers.

Liquidity coverage ratio (LCR)[2]

The objective of the LCR is to ensure that banks maintain an adequate stock of HQLA to survive a significant stress scenario lasting 30 days. The LCR minimum requirement in 2018 of 90% increased by 10% on 1 January 2019 at which point the requirement reached a level of 100%. The Group targets an LCR above the minimum regulatory requirement and consistently maintained a buffer above the 100% requirement during 2019. The table below represents the average LCR for the quarter:

	Absa Group		Absa Bank	
	2019	2018[3]	2019	2018[3]
HQLA (Rm)	**182 093**	189 979	**163 381**	173 987
Net cash outflows (Rm)	**135 510**	172 903	**116 773**	155 133
LCR (%)	**134.4**	109.9	**139.9**	112.2
Required LCR (%)	**100**	90	**100**	90

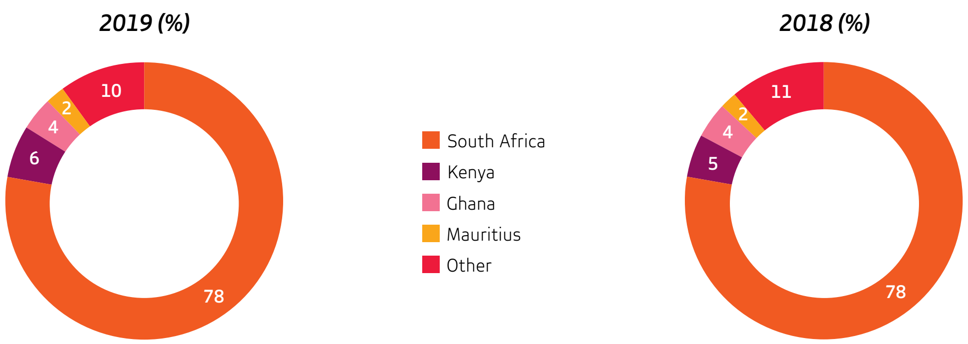
High quality liquid assets (HQLA)

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 within 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 that its buffer can be liquidated at short notice.

Absa Bank has access to a CLF from the SARB, which was included in the HQLA portfolio. The CLF is being phased out by the SARB over three years, with effect from 1 December 2019. The Bank will ensure compliance with the phase-out rules and replace this with alternative forms of HQLA.

Composition of liquid assets by country (%)



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

[2] The Group LCR reflects an aggregation of the Absa Bank LCR and the LCR of ARO. For this purpose, a simple average of the relevant 3 month-end data points is used in respect of the ARO. In respect of Absa Bank, the LCR was calculated as a simple average of 90 calendar-day LCR observations. The December 2018 Group LCR was restated post a change in certain assumptions.

[3] The December 2018 LCR was restated post a change in certain assumptions.

6. Treasury risk

6.3 Capital risk

6.3.1 *Review of the current reporting period*

Key risk metrics (Group)[1]	December 2019	December 2018
Total RWA (Rbn)	870.4	818.6
CET1 capital adequacy ratio (%)[2, 3]	11.8	12.0
Return on average RWA (RoRWA) (%)[3]	1.9	2.1
EC coverage[3]	1.5	1.5
Return on average EC (%)[3]	18.7	19.2
Return on equity (RoE) (%)[3]	15.8	16.8
Cost of equity (CoE) (%) [4]	13.75	14.00

- The Group's capital position was above minimum regulatory requirements as at 31 December 2019, with capital buffers sufficient to withstand stressed conditions.
- The CET1 ratio decreased marginally year-on-year reflecting RWA growth (which increased by 6.3% year-on-year), mainly due to balance sheet growth across the Group.
- The Group issued R3.1bn Basel III Additional Tier 1 capital instruments and R1.6bn Basel III compliant Tier 2 capital instruments which both qualify as RC at an Absa Group level.

6.3.2 *Priorities*

- Maintain an optimal mix of high-quality capital while continuing to generate sufficient capital to support profitable growth and a sustainable dividend.
- Continue to look for opportunities to increase the contribution of Additional Tier 1 capital instruments to the overall capital position of the Group.
- Continue to monitor and assess regulatory developments that may affect the capital position, such as Basel III enhancements published by BCBS in December 2017; and the proposed amendments to the Regulations relating to Banks.
- Contribute at an industry level to the development of a financial conglomerate supervisory framework in South Africa.

6.3.3 *General information about capital risk*

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 within 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.

[1] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.
[2] Includes unappropriated profits.
[3] Reported on a normalised basis.
[4] The CoE is based on the capital asset pricing model.

6. Treasury risk

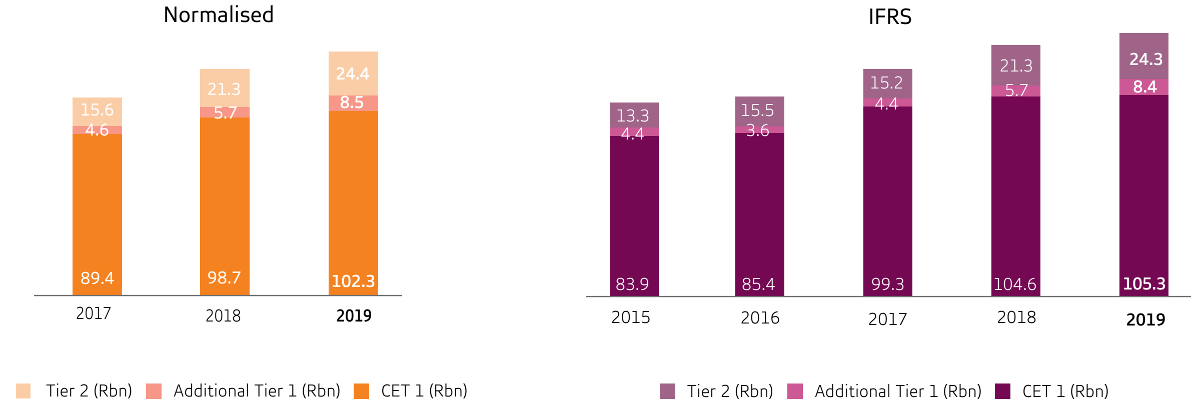
Reporting

Capital adequacy

Group capital adequacy

	Board target ranges[1] %	Minimum RC requirements[2] %	Normalised Group performance 2019	Normalised Group performance 2018	IFRS Group performance 2019	IFRS Group performance 2018
Statutory capital ratios (includes unappropriated profits) (%)						
CET1	11.00 – 12.00		**11.8**	12.0	**12.1**	12.8
Tier 1	12.00 – 13.00		**12.7**	12.8	**13.0**	13.5
Total capital adequacy requirement (CAR)	14.50 – 15.50		**15.5**	15.4	**15.8**	16.1
Leverage	5.00 – 7.00		**7.0**	7.0	**7.2**	7.4
RC ratios (excludes unappropriated profits) (%)						
CET1		7.5	**–**	–	**11.6**	11.3
Tier 1		9.3	**–**	–	**12.5**	12.0
Total CAR		11.5	**–**	–	**15.3**	14.6
Leverage		4.0	**–**	–	**6.9**	6.6

Absa Group qualifying capital (including unappropriated profits)



Normalised 2017	Normalised 2018	Normalised 2019		IFRS 2015	IFRS 2016	IFRS 2017	IFRS 2018	IFRS 2019
12.1	12.0	**11.8**	CET1 ratio (%)	11.9	12.1	13.5	12.8	**12.1**
14.9	15.4	**15.5**	Total capital adequacy ratio (%)	14.5	14.8	16.1	16.1	**15.8**

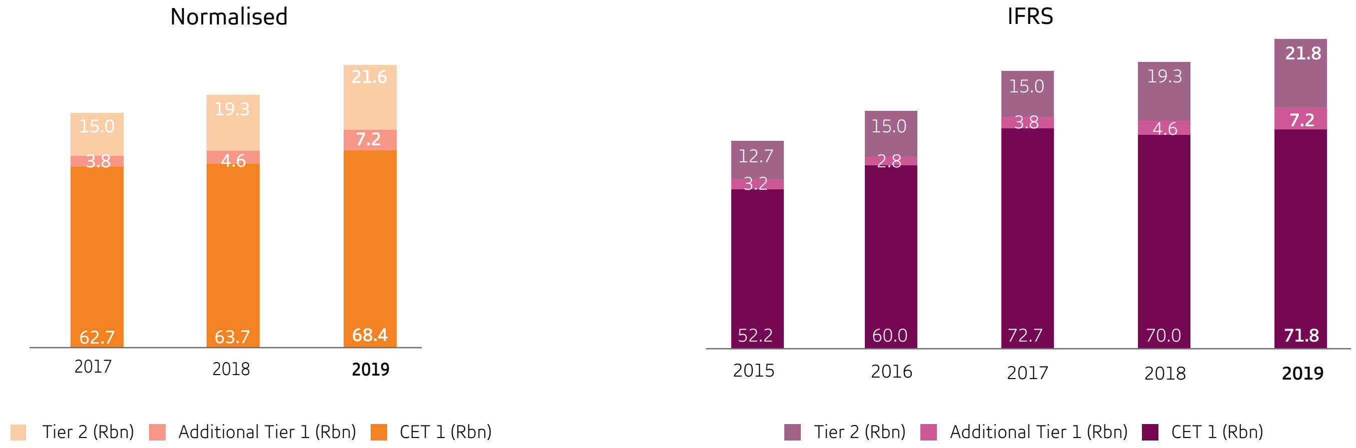
[1] Normalised capital ratios (including unappropriated profits) are managed against Board capital target ranges.
[2] The 2019 minimum RC requirements of 11.5% (2018: 11.13%) include the capital conservation buffer, which was phased in between 1 January 2016 and 1 January 2019 but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the D-SIB add-on.

6. Treasury risk

Absa Bank Limited capital adequacy[1]

	Board target ranges[2] %	Minimum RC requirements[3] %	Normalised performance 2019	Normalised Group performance 2018	IFRS performance 2019	IFRS Group performance 2018
Statutory capital ratios (includes unappropriated profits) (%)						
CET1	11.00 – 12.00		**11.4**	11.2	**11.9**	12.3
Tier 1	12.00 – 13.00		**12.6**	12.0	**13.1**	13.1
Total CAR	14.50 – 15.50		**16.2**	15.4	**16.7**	16.5
Leverage	5.00 – 7.00		**5.7**	5.3	**6.0**	5.7
RC ratios (excludes unappropriated profits) (%)						
CET1		7.5	**–**	–	**11.5**	11.4
Tier 1		9.3	**–**	–	**12.7**	12.2
Total CAR		11.5	**–**	–	**16.3**	15.6
Leverage		4.0	**–**	–	**5.7**	5.4

Absa Bank qualifying capital (including unappropriated profits)



Normalised 2017	Normalised 2018	Normalised 2019		IFRS 2015	IFRS 2016	IFRS 2017	IFRS 2018	IFRS 2019
11.6	11.2	**11.4**	CET1 ratio (%)	10.5	11.6	13.4	12.3	**11.9**
15.0	15.4	**16.2**	Total capital adequacy ratio (%)	13.8	15.1	16.9	16.5	**16.7**

[1] Absa Bank Limited includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.
[2] Normalised capital ratios (including unappropriated profits) are managed against Board capital target ranges
[3] The 2019 minimum RC requirements of 11.5% (2018: 11.13%) include the capital conservation buffer, which was phased in between 1 January 2016 and 1 January 2019 but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the D-SIB add-on.

6. Treasury risk

Capital adequacy ratios of legal entities

Operations	Regulator	2019 Total qualifying capital Rm	Tier 1 ratio %	Total capital adequacy %	Regulatory minimum %
Local entities (South Africa)					
Group	SARB	**138 038**	**13.3**	**15.8**	
Including unappropriated profits[1]		**133 411**	**12.5**	**15.3**	**11.5[2]**
Excluding unappropriated profits[1]					
Absa Bank[3]	SARB	**100 622**	**13.1**	**16.7**	
Including unappropriated profits[1]		**97 930**	**12.7**	**16.3**	**11.5[2]**
Excluding unappropriated profits[1]					
Foreign banking entities[4]					
Absa Bank of Mozambique	Banco de Mozambique	**1 325**	**19.5**	**19.5**	**11.0**
Absa Bank of Botswana	Bank of Botswana	**3 600**	**13.6**	**20.6**	**15.0**
Absa Bank of Ghana	Bank of Ghana	**3 679**	**16.3**	**23.8**	**13.0**
Absa Bank of Kenya	Central Bank of Kenya	**6 422**	**14.0**	**16.7**	**14.5**
Absa Bank of Mauritius	Bank of Mauritius	**6 046**	**15.6**	**16.6**	**13.4**
National Bank of Commerce	Bank of Tanzania	**1 530**	**16.8**	**18.8**	**14.5**
Absa Bank of Tanzania	Bank of Tanzania	**692**	**15.4**	**16.9**	**14.5**
Absa Bank of Uganda	Bank of Uganda	**1 792**	**19.2**	**22.5**	**15.5**
Absa Bank of Seychelles	Bank of Seychelles	**749**	**14.7**	**17.6**	**12.0**
Absa Bank of Zambia	Bank of Zambia	**1 499**	**13.8**	**19.3**	**10.0**
Insurance entities					
Absa Life Limited	PA[5]	**5 355**		**1.59xSCR[6]**	**1.0xSCR[7]**
Absa Insurance Company Limited	PA[5]	**1 153**		**1.90xSCR[7]**	**1.0x SCR[7]**

Operations	Regulator	2018 Total qualifying capital Rm	Tier 1 ratio %	Total capital adequacy %
Local entities (South Africa)				
Group	SARB			
Including unappropriated profits[1]		131 596	13.5	16.1
Excluding unappropriated profits[1]		119 835	12.0	14.6
Absa Bank[3]	SARB			
Including unappropriated profits[1]		93 842	13.1	16.5
Excluding unappropriated profits[1]		88 710	12.2	15.6
Foreign banking entities[4]				
Barclays Bank of Mozambique	Banco de Mozambique	1 434	17.5	23.1
Barclays Bank of Botswana	Bank of Botswana	3 434	12.7	19.8
Barclays Bank of Ghana	Bank of Ghana	3 494	14.8	21.9
Barclays Bank of Kenya	Central Bank of Kenya	6 177	14.9	16.8
Barclays Bank of Mauritius	Bank of Mauritius	5 462	18.1	19.3
National Bank of Commerce	Bank of Tanzania	1 435	14.7	16.7
Barclays Bank of Tanzania	Bank of Tanzania	604	14.7	16.7
Barclays Bank of Uganda	Bank of Uganda	1 554	16.7	20.1
Barclays Bank of Seychelles	Bank of Seychelles	666	15.0	18.9
Barclays Bank of Zambia	Bank of Zambia	1 708	17.7	23.8
Insurance entities				
Absa Life Limited	PA[5]	5 472		1.74xSCR[7]
Absa Insurance Company Limited	PA[5]	1 318		2.36xSCR[7]

[1] Includes the contribution amounts received from Barclays PLC as part of the separation.
[2] The SARB 2019 minimum regulatory requirement of 11.5% (2018:11.13%) include the RSA minimum of 8%, Pillar 2a of 1% (2018:1.25%) and capital conservation buffer of 2.5% (2018: 1.88%) but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the D-SIB add-on.
[3] Absa Bank Limited includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.
[4] The 2019 foreign banking entity disclosures are unaudited.
[5] Prudential Authority
[6] This is the pre-audit annual RC adequacy position and may be subject to change.
[7] 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

Capital supply

Breakdown of qualifying capital

Group	2019 Rm	2019 %[1]	2018 Rm	2018 %[1]
CET1	100 637	11.6	92 829	11.3
Additional Tier 1 capital	8 425	0.9	5 718	0.7
Tier 1 capital	109 062	12.5	98 547	12.0
Tier 2 capital	24 349	2.8	21 288	2.6
Total qualifying capital (excluding unappropriated profits)	133 411	15.3	119 835	14.6
Qualifying capital (including unappropriated profits)				
Tier 1 capital	113 689	13.0	110 308	13.5
CET1 (excluding unappropriated profits)	100 637	11.6	92 829	11.3
Unappropriated profits	4 627	0.5	11 761	1.5
Additional Tier 1	8 425	0.9	5 718	0.7
Tier 2 capital	24 349	2.8	21 288	2.6
Total qualifying capital (including unappropriated profits)	138 038	15.8	131 596	16.1
Normalised qualifying capital (including unappropriated profits)	135 170	15.5	125 718	15.4

Absa Bank[2]	2019 Rm	2019 %[1]	2018 Rm	2018 %[1]
CET1	69 118	11.5	64 827	11.4
Additional Tier 1 capital	7 188	1.2	4 599	0.8
Tier 1 capital	76 306	12.7	69 426	12.2
Tier 2 capital	21 785	3.6	19 284	3.4
Total qualifying capital (excluding unappropriated profits)	98 091	16.3	88 710	15.6
Qualifying capital (including unappropriated profits)				
Tier 1 capital	78 998	13.1	74 558	13.1
CET1 (excluding unappropriated profits)	69 118	11.5	64 827	11.4
Unappropriated profits	2 692	0.4	5 132	0.9
Additional Tier 1	7 188	1.2	4 599	0.8
Tier 2 capital	21 785	3.6	19 284	3.4
Total qualifying capital (including unappropriated profits)	100 783	16.7	93 842	16.5
Normalised qualifying capital (including unappropriated profits)	97 231	16.2	87 541	15.4

[1] Percentage of capital to RWAs.
[2] Absa Bank includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.

6. Treasury risk

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 ICAAP and in capital allocation decisions, which supports shareholder value creation. EC considers risk types, which 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), which is also referred to as EC supply, to evaluate the total EC surplus. The Group ensures that there are sufficient AFR in order to meet this minimum demand requirement under severe yet plausible stress conditions.

Economic capital[1]	2019 Rm	2018 Rm
Credit risk[2]	**58 598**	54 467
Traded market risk	**4 512**	3 139
Operational risk	**7 189**	6 658
Treasury risk	**5 560**	5 876
Business risk	**9 116**	8 824
Insurance risk	**3 807**	3 028
Total EC requirement	**88 782**	81 992
IFRS total EC AFR	**133 126**	127 914
IFRS total EC surplus	**44 344**	45 922
IFRS EC coverage ratio (times)	**1.5**	1.6
Normalised total EC AFR	**130 155**	121 850
Normalised total EC surplus	**41 373**	39 858
Normalised EC coverage ratio (times)	**1.5**	1.5

[1] EC demand and AFR reported on a spot basis.
[2] Credit risk includes equity risk, CCR and CVA.

6. Treasury risk

6.4 Interest rate risk in the banking book (IRRBB)

6.4.1 Review of current reporting period

Key risk metrics[1]	2019	2018
Banking book NII sensitivity for a 2% downward shock in interest rates (Rm)	**(3 805)**	(2 755)

- The increase in NII sensitivity was primarily due to balance sheet growth, structural growth in prime-linked assets funded by JIBAR-linked liabilities and risk modelling refinements. The Group remained positively exposed to an increase in interest rates on a net basis after hedging activities.
- The Group Treasury Committee and GRCMC evaluate IRRBB on an ongoing basis and take appropriate steps to mitigate the risk. The evaluation and risk mitigation is performed with consideration of the dynamic interest rate environments and balance sheets across the various jurisdictions that the Group operates

6.4.2 Priorities

- Continue to 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.
- Retain focus on regulatory changes, specifically preparing for the adoption of the BCBS standard on IRRBB, which is due to be implemented in South Africa by 1 June 2022.

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 re-pricing 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 within the balance sheet. This risk impacts both the earnings and economic value of the Group.

The Group's objective for managing 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. Interest rate risk may arise when some of the net position remains with treasury as a result of timing considerations. A limit framework is in place to ensure that the retained risk remains within approved risk appetite.

Key assumptions:

- Embedded optionality risk may also give rise to IRRBB which includes:
  - Prepayment risk arises in relation to transactions where an early settlement option is embedded in the product. This risk is managed by modelling the loans on a behaviouralised basis for both pricing and risk measurement. This treatment is also applied to non-maturing customer deposits.
  - Recruitment risk arises when the Group commits to providing a product at a predetermined price for a period into the future.

The techniques that are used to measure IRRBB include:

- Re-pricing profiles;
- Annual earnings at risk (AEaR)/NII sensitivity;
- DVaR and other tail metrics;
- Economic value of equity (EVE) sensitivity; and
- Stress testing

DVaR, supporting metrics and stresses are reported daily for Group Treasury and the Absa Regional Operations businesses, with the exception of two businesses where reporting is done on a monthly basis. The re-pricing profiles, AEaR, EVE sensitivity and stress results are reported monthly for both Group Treasury and the Absa Regional Operations. Limits are set and monitored through the formal governance process.

Re-pricing profiles

To generate re-pricing profiles, instruments are allocated to time periods with reference to the earlier of the next contractual interest rate re-pricing date and the maturity date. The re-pricing profiles take the assumed behavioural profile of structural product balances into account.

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.

[1] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.

6. Treasury risk

DVaR

DVaR calculated at a 95% confidence level is used for measuring IRRBB risk. The DVaR is monitored against approved internal limits and is used as a complementary metric to AEaR. The DVaR is supplemented by non-DVaR, 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 200 bps 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 R3.80bn (2018: R2.75bn). A similar increase would result in an increase in projected 12-month NII of R3.46bn (31 December 2018: R2.49bn). On this basis AEaR expressed as sensitivity to a 200bps parallel decrease in all market interest rates increased by 1.9% to 8.2% of the Group's NII.

AEaR for 100 and 200 bps changes in market interest rates

	2019			
	200 bps decrease	**100 bps decrease**	**100 bps increase**	**200 bps increase**
South Africa[1] (Rm)	**(3 171)**	**(1 415)**	**1 467**	**2 928**
ARO[2] (Rm)	**(634)**	**(317)**	**317**	**634**
Total (Rm)	**(3 805)**	**(1 732)**	**1 784**	**3 462**
Percentage of the Group's NII (%)	**(8.2)**	**(3.7)**	**3.8**	**7.7**
Percentage of the Group's equity (%)	**(3.0)**	**(1.3)**	**1.4**	**2.8**

	2018			
	200 bps decrease	100 bps decrease	100 bps increase	200 bps increase
South Africa[1] (Rm)	(2 148)	(912)	947	1 884
ARO[2] (Rm)	(607)	(304)	304	607
Total (Rm)	(2 755)	(1 216)	1 250	2 491
Percentage of the Group's NII (%)	(6.3)	(2.8)	2.9	5.7
Percentage of the Group's equity (%)	(2.2)	(1.0)	1.0	2.0

[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 due to failures in our processes, people and systems and from external events.

7.1 Review of current reporting period

Key risk metrics[1]	December 2019	December 2018
Total operational risk losses as a percentage of gross income (%)	**1.0**	0.7
Total operational risk losses (Rm)	**824**	535
Total operational risk RWA (Rbn)	**112.3**	112.7

- Operational risk losses as at 31 December 2019 were R824m, an increase of R289m (35.1%) year-on-year due primarily to an increase in fraud and transaction processing related losses.
- Key achievements in the period include:
  - Improved the Group's data management infrastructure and operating model.
  - Improved the Group's fraud defences, through deployment of technology, increased resourcing and refinement of the fraud operating model.
  - Revised the design of the Group's procurement operating model and infrastructure.

7.2 Priorities

- Continue to develop infrastructure, capability and control processes over key datasets, in line with the Group's data standards.
- Continue to strengthen fraud defences through investment in people, process improvements, analytics and technologies.
- Enhance the toolset used in the management of operational risk, with an emphasis on digitisation of risk management and measurement processes.

7.3 General information about operational risk

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

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 loss) 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 (i.e. second line of defence), reporting to the BU CROs, are responsible for the day-to-day management of their respective portfolios within risk appetite in line with the ORMF.

Enterprise-wide specialist risk type owners, reporting to the relevant group function (e.g. technology, finance), support the businesses and infrastructure functional units in managing the day-to-day risk activities including definition of control standards, oversight and challenge and aggregation of risk type profiles.

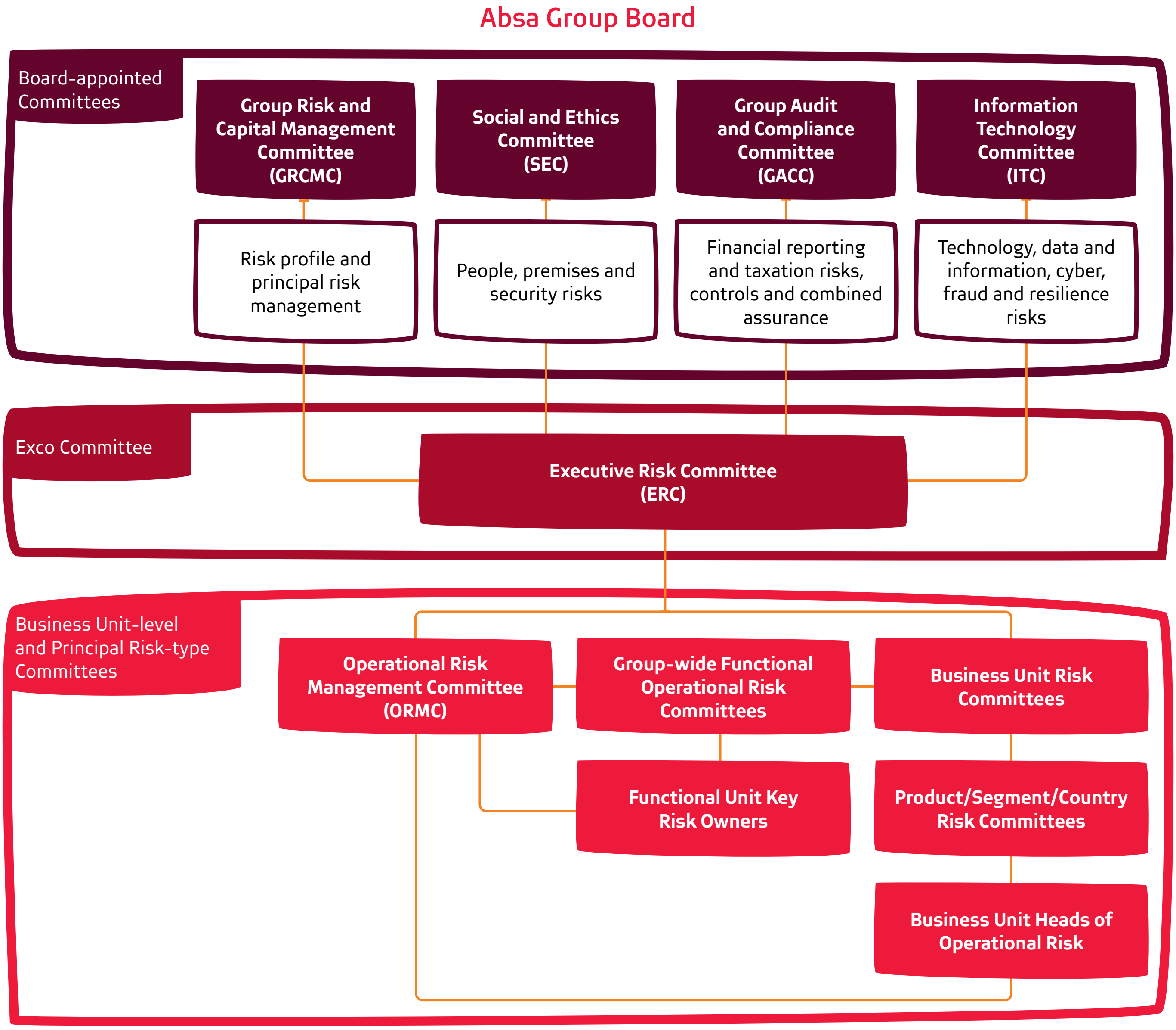
Group Operational Risk (second line of defence) is accountable for the group-wide management of operational risk, establishing strategic direction and risk appetite, ownership of the ORMF and its supporting policies and enterprise-wide standards, and independent oversight over businesses.

[1] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.

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 PRO for operational risk who is accountable for the design, implementation and maintenance of an effective, efficient and regulatory compliant ORMF.

7. Operational risk

A Group Operational Risk Management Committee (ORMC) chaired by the PRO of Group Operational Risk 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.

The ERC, chaired by the GCRO, is the senior management body responsible for the oversight and challenge of operational risk in the Group.

The GCRO presents the Group's operational risk profile, alongside the other risk types as specified in 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
- Data Management and Information
- Resilience
- People
- Payments
- Process Management
- Financial Reporting
- Taxation
- Premises
- Physical Security
- Supplier
- Legal
- Conduct
- Model
- Technology; including cyber, information security and change

Whilst legal, conduct, model and technology (including cyber, information security and change) risks are managed individually; they eventually incorporate into operational risk for capital requirement measurement.

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

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. Utilising key indicators which monitor risks, controls and process performance, this approach promotes performance and service efficiencies.

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.

7. Operational risk

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 factor. The definition includes situations in which a loss could have materialised, but in fact a gain was realised, as well as incidents resulting in customer detriment, reputational damage or regulatory impact. 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.

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. The Group is a member of the Operational Risk Data Exchange (ORX), a not-for-profit association of international banks formed to share anonymous loss data information.

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 and 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.

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; or
- **Transfer the risk:** This involves a third party sharing some part of the risk, or taking over all of the risk. This could be in the form of insurance, partnerships or joint ventures.

Lessons learnt reviews

Lessons learnt is targeted root cause analysis of significant risk events experienced within 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.

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

Key indicators

Key indicators are metrics that are 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 timely 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, informed by statistical distributions. In certain operations outside South Africa and joint ventures and associates where the Group is not able to apply the AMA model; the BIA or TSA is utilised.

The potential frequency and severity of losses is estimated for each of the risks within the suite of operational risks (refer 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.

7. Operational risk

Key risk scenarios

Key risk scenarios are a summary of the extreme potential risk exposure for each of the risks within 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 analyses 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.).

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

8.1 Review of current reporting period

- The Group continued to strengthen its capabilities to deliver robust models that support business decision making.
- A model risk appetite statement was implemented in 2019 to effectively monitor model risk across the Group.
- Focus was placed on implementing robust systems to manage model governance and the controls required.
- Performed a benchmarking exercise to assess the Group model risk capabilities against international peers.

8.2 Priorities

- Focus on improving the measurement of model risk across the Group.
- Continue focus on the enhancement of models that support the Group's business decision making.
- Enhancement of the model development and implementation technology platforms.
- Redevelop and/or recalibrate the wholesale RC PD, LGD and EAD models for consideration and approval by the regulator
- Strengthening the function's capabilities to address increasing quantities of models, including developing AI and machine learning models to align with external trends.

8.3 General information about model risk

8.3.1 Risk identification and management

Model risk has been identified as a principal risk to be managed under the ERMF, with specific guidelines set out in the Model Risk Management Framework, Model Risk Appetite Statement, GMRP and relevant standards covering model ownership, model development, model approval, model implementation, model monitoring and model validation.

A model is defined as 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 comprises inputs, parameters and calculations that produce outputs. A model is considered as an end-to-end concept, including the sourcing of inputs, the selection and specification of methodology, the calibration of parameters, the 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 a bank's reputation.

This definition implies that model risk occurs primarily due to:

- The model being a poor representation of the real-world phenomenon being modelled and producing inaccurate outputs.
- The model being used incorrectly or inappropriately.

For ease of identifying and mitigating the sources of model risk, the above two components of model risk are referred to as model uncertainty (uncertainty as to how well the model represents the real-world phenomenon) and operational uncertainty (uncertainty as to the use and implementation of the model).

The model uncertainty component may be mitigated, but never truly eliminated, as one does not know the correct underlying model for the phenomenon, nor can one be certain whether the data available for model testing is a correct, unbiased and complete representation of the underlying phenomenon covering all possible situations. Further, any statistical tools used to quantify model uncertainty (e.g. confidence intervals) are themselves sources of model uncertainty.

Model uncertainty is assessed in terms of how well the model represents the real-world phenomenon being modelled and whether the outputs of the model are likely to overstate or understate the observed real-world phenomenon.

The operational uncertainty component is managed through an appropriate set of controls regarding model implementation and use. In the case of models in scope of RDARR, an assessment of the RDARR controls is incorporated during the assessment of operational uncertainty of a model.

Both the model uncertainty and operational uncertainty components are managed concurrently as part of the model lifecycle controls prescribed in the GMRP and associated standards.

The elements of model risk are assessed through evaluating critical controls and framework compliance:

- The Group Model Database (GMD) which records the model inventory and tracks the elements of the model lifecycle.
- Model validation and approval, where the model performance is assessed relative to its objectives and for compliance with the governance framework.
- Model implementation controls.
- Model monitoring including back-testing.

8. Model risk

Risk Management

In support of the Model Risk Management Framework, model risk is governed and defined by the GMRP which also establishes requirements for assessing model risk for all models in use, assigns clear 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 standards addressing the requirements of the following:

- Model development and documentation.
- Model validation.
- Model materiality.
- GMD and workflow.
- Model monitoring.
- Model implementation.
- Model owner review.
- Post model adjustment.
- Vendor models.
- Machine learning.

Model risk is managed within approved risk appetite and defined limits. Risk appetite is defined as the level of risk that the Group is prepared to accept given available capacity whilst 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.

A Model Risk Management Framework is established and overseen by the PRO for model risk to manage model risk in accordance with the Group's model risk tolerance. In addition to policies and standards, the Model Risk Management Framework identifies risks and controls to establish a consistent approach to managing 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 second line of defence in relation to model risk comprises of model risk governance (MRG), the independent validation unit (IVU) methodology and implementation control oversight. MRG establishes 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 also performs conformance reviews to provide assurance around control effectiveness.

IVU is responsible for independently validating each model and assessing whether it is fit for purpose. Models are validated and approved prior to use.

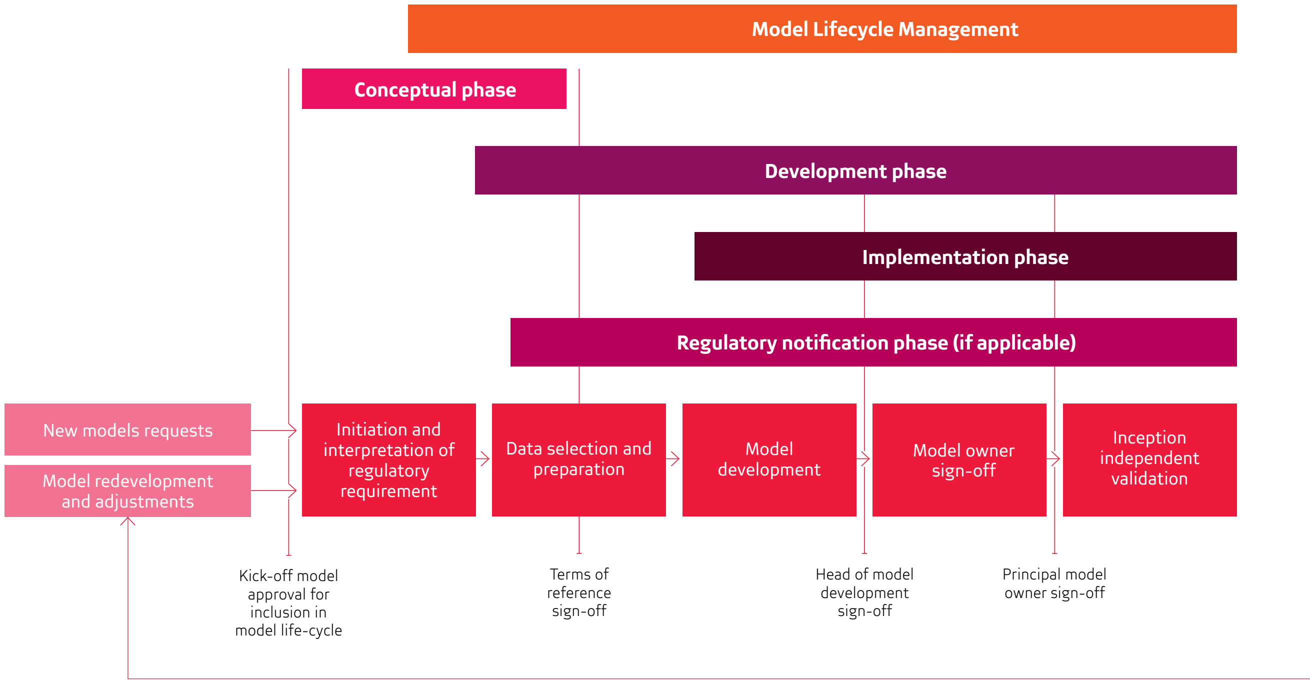
Methodology assist with developing and aligning methodology for regulatory and impairment models across the Group.

Implementation Control Oversight monitors the accuracy of model implementations for regulatory and impairment reporting purposes.

8. Model risk

8.3.2 Governance

Model risk is managed throughout the model lifecycle. The model lifecycle and associated controls are depicted in the diagram below. These controls are in line with the GMRP.

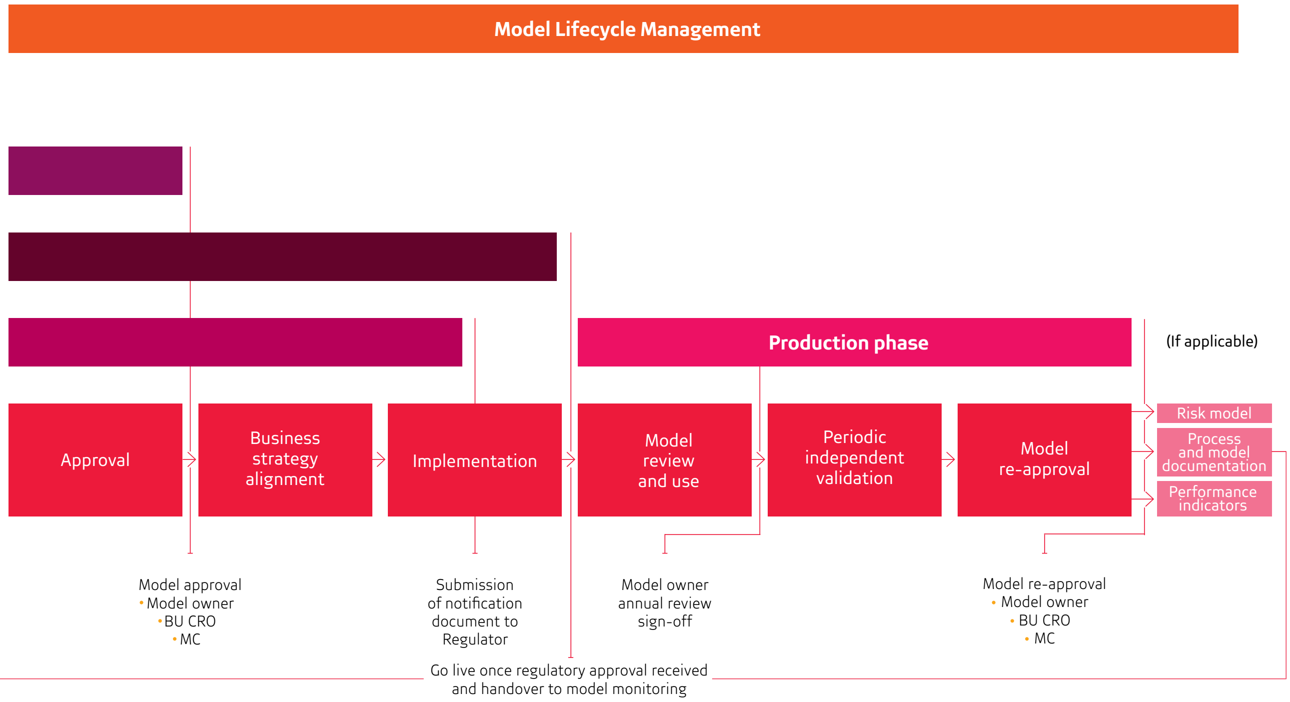


The GMRP sets out the accountabilities and controls pertaining to this risk, and relevant standards have been developed for risk types. The GMRP identifies Model Approvers based on the materiality of models. Material models are designated by the MC (Board Committee) for approval while models of lesser materiality are approved by the BU CROs through a model approval forum.

The scope of the GMRP includes models such as RC, EC, stress testing, impairment and scorecards for both the bank and insurance businesses. Model risk controls have been documented in KRAs and are tested on an annual basis.

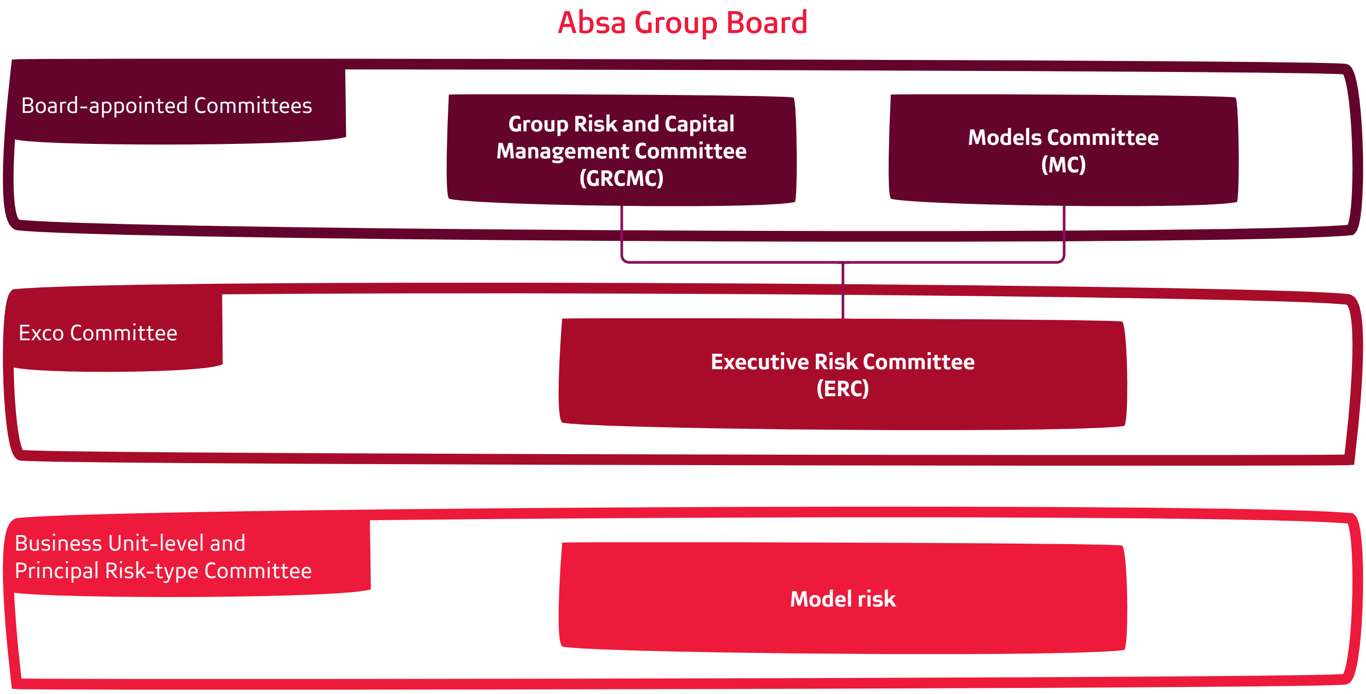
In accordance with the GMRP, model ownership vests with the businesses which use the output of models to quantify risk. The BU CRO takes responsibility for model approval and compliance with the policy.

8. Model risk


Model Lifecycle Management
Production phase
(If applicable)
Approval
Business strategy alignment
Implementation
Model review and use
Periodic independent validation
Model re-approval
Risk model
Process and model documentation
Performance indicators
Model approval
• Model owner
• BU CRO
• MC
Submission of notification document to Regulator
Model owner annual review sign-off
Model re-approval
• Model owner
• BU CRO
• MC
Go live once regulatory approval received and handover to model monitoring

8. Model risk

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



8.3.3 Reporting

A model risk report is produced on a monthly basis and submitted to a number of committees attended by senior management as well as to the MC and ERC. The report focuses on the following:

- 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.
- Model risk assessment (High, Medium, Low) including Model Uncertainty and Operational Uncertainty.
- Model Risk Appetite status.

The Group has approval to use the AIRB approach for all its South African credit portfolios with the exception of the Edcon retail portfolio (which was on the Standardized Approach until its sale to microlender RCS in Februay 2020), while all the ARO credit portfolios are on the Standardized Approach. The Group has PA approval for the use of the AMA for operational risk and the IMA for market risk.

The number of key credit models used with respect to PD, EAD and LGD in AIRB calculations is depicted below:

	2019			2018		
	PD #	LGD #	EAD #	PD #	LGD #	EAD #
Retail South Africa	8	8	8	8	8	8
Wholesale South Africa	13	4	2	13	4	2
Absa Regional Operations	–	–	–	–	–	–
Total	21	12	10	21	12	10

9. Abbreviations and acronyms

9. Abbreviations and acronyms

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

B	
Basel	Basel Capital Accord
BCBS	Basel Committee on Banking Supervision
BIA	basic indicator approach
bps	basis points
BU	business unit

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
CR	credit risk
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
DVaR	daily value at risk

E	
EAD	Exposure at default
EaR	earnings at risk
EC	economic capital
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
FX	foreign exchange

G	
GACC	Group Audit and Compliance 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
GMRC	Group Market Risk Committee
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 Standard(s)
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 indicators
KRA	key risk assessments
KRI	key risk indicator

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

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
TSA	the standard approach
TTC	through-the-cycle

V	
VAF	vehicle and asset finance
VaR	value at risk

Contact information

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