Absa Group Limited
Pillar 3 risk management report
for the reporting period ended 31 December 2018

The Group's **reporting suite**

Integrated report and environmental, social and governance disclosures

2018 Integrated Report	**2018** Environ-mental, Social and Governance Review	**2018** Broad-Based Black Economic Empowerment (B-BBEE) Report	**2018** King IV Application Review	**2019** Notice of annual general meeting	**2018** Remu-neration Report

Scope and boundary

Activities of Absa Group including key banking and insurance subsidiaries.

These reports provide information regarding stakeholder relationships, material matters, risks and opportunities and our forward-looking strategy. B-BBEE applies to our South African operations.

Financial, risk and capital management disclosures

2018 Summarised annual consolidated financial statements	**2018** Annual consolidated and separate financial statements	**2018** Pillar 3 risk management report and Additional Tables	**2018** Financial results booklet and investor presentation

Scope and boundary

Absa Group including subsidiaries, associates and joint ventures.

Note 49.3 of the annual financial statements provides a list of material subsidiaries and consolidated structured entities.

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) 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the Regulations relating to Banks (Regulations), issued in terms of the Banks Act, 1990 (Act No. 94 of 1990), where not superseded by the revised Pillar 3 disclosure requirements.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 report is supplemented with additional disclosures, including the Group's financial results booklet and Pillar 3 additional disclosure tables.

Separation

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

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 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, and Group Risk and Capital Management committees.

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 absa.africa and on **absaafrica2018ar.co.za**. Comments or queries regarding these documents can be sent to **corporate.relations@absa.africa** or **groupsec@absa.co.za**

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 2018
B Not applicable to the Group
C Note 63 Consolidated and separate annual financial statements for the reporting period ended 31 December 2018

BCBS Pillar 3 disclosure requirements of sections and tables

A Additional disclosure tables Pillar 3 Risk management report for the reporting period ended 31 December 2018

B Not applicable to the Group

1. Summary of capital position, risk profile and RWA

Contents

1. Summary of capital position, risk profile and RWA

1.1 Risk and capital performance

Key metrics

Capital adequacy ratio
(page 82)

IFRS[1]	Normalised
16.1%	**15.4%**
December 2017: 16.1%	December 2017: 14.9%

Common equity tier 1 (CET1) ratio
(page 82)

IFRS[1]	Normalised
12.8%	**12.0%**
December 2017: 13.5%	December 2017: 12.1%

Economic Capital (EC) coverage
(page 87)

IFRS[1]	Normalised
1.6	**1.5**
December 2017: 1.4	December 2017: 1.3

Leverage ratio
(page 85)

IFRS[1]	Normalised
7.4%	**7.0%**
December 2017: 7.9%	December 2017: 7.2%

Liquidity coverage ratio (LCR)[2]
(page 80)

116.7%
December 2017: 107.5%

Net stable funding ratio (NSFR)[3]
(page 79)

110.1%
December 2017: N/A

Credit loss ratio (CLR)
(page 32)

0.73%
December 2017: 0.87%

Stage 3 ratio on gross loans and advances (%)
(page 32)

5.1%
December 2017: 5.6%

Stage 1 and stage 2 coverage ratio
(page 32)

1.0%
December 2017: 1.1%

Stage 3 coverage ratio
(page 32)

45.1%
December 2017: 43.7%

Operational risk losses
(page 92)

R535m
December 2017: R240m[4]

Review of current reporting period

- The Group maintained a strong capital adequacy position with capital buffers sufficient to withstand stressed conditions.
- The liquidity position remained healthy within liquidity risk appetite.
- The Group continued to invest in infrastructure, process engineering, people and technology in order to deliver improved operational resilience.
- Overall growth in loans and advances to customers of 12.3% is a reflection of positive momentum during the year.
- Loan growth was achieved without a material change in risk appetite, which together with the prolonged period of a low interest rate environment, resulted in an improved credit loss rate.
- The year-on-year increase in Stage 3 coverage was a function of material single name impairments in the wholesale portfolio and the performance regression in Vehicle and Asset Finance (VAF).

Priorities

The Group's operating environment is expected to remain 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.
- Tight control and management of separation and 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.
- Strengthened the employee value proposition to ensure the continued availability of risk professionals to enable the Group's strategy.
- Continued embedment of Risk Adjusted Performance Measurement approaches to ensure appropriate focus on achieving adequate levels of return in light of risks taken by the Group.
- Further enhancement of risk data aggregation and reporting capabilities at all levels of the organisation.
- Continued engagement with regulatory authorities and other stakeholders on upcoming regulatory changes.

[1] IFRS results includes the impact of the contribution amounts received as part of the Separation. All numbers include unappropriated profits.
[2] The LCR reflects an aggregation of the Absa Bank LCR and the LCR of the Absa Regional Operations. For this purpose, a simple average of the relevant 3 month-end data points is used in respect of the Absa Regional Operations. In respect of Absa Bank, the December 2017 LCR was determined using a simple average of the relevant 3 month-end data points. As at 31 December 2018, the Absa Bank LCR is calculated as a simple average of 90 calendar-day LCR observations.
[3] The net stable funding ratio, which became effective on 1 January 2018 (minimum regulatory requirement of 100%), was reported publicly with effect from 30 June 2018, therefore no comparatives are disclosed.
[4] The operational risk losses for 2017 includes a significant recovery on a payment related loss incurred in 2015.

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.

Current and emerging risks	Responses
Strategic, execution and business risks arising from external and internal drivers	
• Global uncertainty arising from international trade discussions and Brexit result in increased pressure on emerging markets. • Disruption through Fintechs and new digitally-led competitor banks impacting customer relevance. • The Separation combined with strategic organisational change increases business risk, reputational risk (specifically brand risk) and people risk.	• Monitor and manage risk strategy and appetite based on the on-going evaluation of the global and African developments to identify and mitigate risks as they arise, while enabling business to pursue opportunities. • Build and embed a winning brand with a focus on innovative business processes and products including diversification into new markets and customer segments. • Deliver scalable digital solutions that focus on customer needs. • Closely monitor and actively manage risks arising from the separation and organisational change.
Economies in the Group's presence countries continue to exhibit subdued growth amid global and domestic uncertainties	
• Subdued economic growth, high unemployment, increased inequality and low business and consumer confidence impacting South African markets. • Unfavourable macroeconomic performance with increasing debt burdens, rate hikes and fiscal shortfalls seen in presence countries. • Increasing cost and scarcity of capital, funding and liquidity across global markets. • Policy uncertainty in South Africa is a barrier to investment. Key risks include the mining charter, potential land expropriation, state owned entity uncertainty and economic disparities. • Political risk arising from elections and policy uncertainty has affected the economies in a number of presence countries.	• Monitor leading indicators to ensure economic risks are effectively managed, including: – hedging of interest rate risk and foreign exchange (FX) risk as appropriate, – proactively managing credit portfolio risks, – strengthening the Group's position in the presence countries that are growth markets while seeking opportunities to diversify into new markets. • Analyse specific scenarios to assess the impact of a South African sovereign downgrade. • 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.
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 monitoring and prevention to protect customers and the Group. • Threat detection and prevention of security breaches, disruptions and data mismanagement to protect customers.	• Artificial intelligence solutions development using global data to strengthen security measures and crime prevention. • Continue investment in technology platforms, processes and controls including monitoring, enhancements and prioritisation of key issues. • Ongoing employee education on the prevention of cyber related risks
New and emerging regulations and oversight	
• Increasing pace and evolving complexity of regulatory and statutory requirements across the Group's markets (e.g. National Credit Amendment Bill, Financial Sector Laws Amendment Bill, Protection of Personal Information Act, Financial Intelligence Centre Amendment Act, Financial Matters Amendment Bill, Conduct of Financial Institutions Act) requires ongoing co-ordinated approaches to address.	• Maintain a co-ordinated, comprehensive and forward-looking approach to evaluate, respond to and monitor regulatory change, through on-going improvement of the people, processes and systems across the Group. • Participate in regulatory and statutory advocacy groups across all presence countries.
Environmental risks impact on the Group's clients, organisation and operating environment	
• Adverse weather conditions resulting in extreme environmental events (e.g. drought, floods and fires) impacting community sustainability with credit and insurance risk implications. • Increased global stakeholder focus on sustainability of the investments and customers associated with corporates. • Complexity of data available to accurately model the implications of climate change.	• Continuously assess the suitability and strategic alignment of products and customer value propositions against changing environmental factors and the impact on the Group's risk profile. • Develop and enhance preventative and reactive credit and insurance risk models.

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.

	Group	a **31 December 2018 RWA Rm**	31 December 2017 RWA Rm	b 30 September 2018[1] RWA Rm	c **31 December 2018 Minimum capital requirements[2]**
1	Credit risk (excluding counterparty credit risk (CCR))	**583 272**	527 466	552 823	**64 889**
2	Of which: standardised approach (SA)	176 051	144 558	163 888	19 586
3	Of which: foundation internal rating-based (FIRB) approach	–	–	–	–
4	Of which: supervisory slotting approach	–	–	–	–
5	Of which: advanced internal ratings based (AIRB) approach	407 221	382 908	388 935	45 303
6	CCR	**14 268**	16 892	15 010	**1 587**
7	Of which: SA-CCR[3]	14 268	16 892	15 010	1 587
8	Of which: internal model method (IMM)	–	–	–	–
9	Of which: other CCR	–	–	–	–
10	Credit valuation adjustment (CVA)	**7 400**	21 234	7 932	**823**
11	Equity positions under the simple risk weigh approach	**4 171**	4 756	3 977	**464**
12	Equity investments in funds – look-through approach	**6 990**	4 951	7 511	**778**
13	Equity investments in funds – mandate-based approach	**–**	–	–	**–**
14	Equity investments in funds – fall-back approach	**–**	–	–	**–**
15	Settlement risk	**874**	1 130	1 021	**97**
16	Securitisation exposures in banking book	**24**	460	420	**3**
17	Of which: IRB ratings based approach (SEC-IRBA)	24	460	420	3
18	Of which: securitisation external RBA (SEC-ERBA), including internal assessment approach (IAA)	–	–	–	–
19	Of which: securitisation SA (SEC-SA)	–	–	–	–
20	Market risk	**37 007**	24 761	36 806	**4 117**
21	Of which: SA	15 818	7 689	15 028	1 760
22	Of which: internal model approaches (IMA)	21 189	17 072	21 778	2 357
23	Capital charge for switch between trading book and banking book	**–**	–	–	**–**
24	Operational risk	**90 156**	87 674	88 731	**10 030**
	Non-customer assets	**24 637**	24 167	23 746	**2 740**
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	**16 483**	5 345	15 207	**1 834**
	IFRS9 transitional adjustment	**10 720**	–	10 720	**1 193**
26	Floor adjustment[4]	**22 590**	18 056	20 164	**2 513**
27	**Total** (1+6+10+11+12+13+14+15+16+20+23+24+25+26+ non customer assets + IFRS9 transitional adjustment)	**818 592**	736 892	784 068	**91 068**

Key drivers of change in RWA consumption year-on-year were as follows:

- **Credit risk:** The increase of R55.8bn is attributable to increases in the IRB portfolios of R24.3bn and standardised portfolios of R31.5bn respectively. The primary driver for the increase in the South African (IRB) portfolios is exposure growth in Retail and Business Banking (RBB) and Corporate and Investment Bank (CIB). In addition to the balance sheet growth, R6.0bn of the reported increase is a result of model updates. The R31.5bn increase in the standardised portfolios is a result of balance sheet growth of R16.5bn and foreign exchange movements of R15.0bn.
- **CCR & CVA:** The decreases in CCR of R2.6bn and in CVA of R13.8bn are due to a refined maturity calculation methodology and market volatility.
- **Equity risk:** The increase of R1.5bn is due to enhancements to the classification of equity investments.
- **Market risk:** The increase of R12.2bn is primarily as a result of increased inventory held in South Africa and in the respective African countries in support of the Absa Regional Operations growth strategy resulting in higher SA RWAs, as well as increased market volatility.
- **Operational risk[3]:** The increase of R7.0bn is due to increased operating income translating to an increased capital requirement under the standardised approach (TSA) in the Absa Regional Operations, and the application of the TSA floor in the advanced measurement approach (AMA) entities.
- **Threshold items:** The increase of R11.1bn is due to the phased in implementation of IFRS9, resulting in additional deferred tax assets.
- **IFRS9 transitional adjustment:** The adjustment of R10.7bn represents the portion of release of RWA on non-performing loans (NPLs). This will be phased in over the transition period of three years.

[1] These numbers have been restated Reporting changes overview on the inside front cover of the Absa Group results booklet for the year ended 31 December 2018.
[2] The 2018 minimum regulatory capital requirement is calculated at 11.13%, which includes the capital conservation buffer but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the D-SIB add-on.
[3] SA-CCR amount is calculated using the current exposure method (CEM).
[4] Includes the operational risk floor.

1. Summary of capital position, risk profile and RWA

	Absa Bank[1]	a 31 December 2018 RWA Rm	31 December 2017 RWA Rm	b 30 September 2018[2] RWA Rm	c 31 December 2018 Minimum capital requirements[3] Rm
1	Credit risk (excluding counterparty credit risk (CCR))	**405 515**	384 998	384 778	**45 114**
2	Of which: standardised approach (SA)	10 792	12 882	10 958	1 201
3	Of which: foundation internal rating-based (FIRB) approach	–	–	–	–
4	Of which: supervisory slotting approach	–	–	–	–
5	Of which: AIRB	394 723	372 116	373 820	43 913
6	CCR	**13 499**	16 668	14 548	**1 502**
7	Of which: SA-CCR[4]	13 499	16 668	14 548	1 502
8	Of which: IMM	–	–	–	–
9	Of which: other CCR	–	–	–	–
10	Credit valuation adjustment (CVA)	**7 400**	21 234	7 932	**823**
11	Equity positions under the simple risk weigh approach	**1769**	2 333	1 688	**197**
12	Equity investments in funds – look-through approach	**353**	374	358	**39**
13	Equity investments in funds – mandate-based approach	**–**	–	–	**–**
14	Equity investments in funds – fall-back approach	**–**	–	–	**–**
15	Settlement risk	**783**	1 069	959	**87**
16	Securitisation exposures in banking book	**24**	460	420	**3**
17	Of which: SEC-IRBA	24	460	420	3
18	Of which: SEC-IRB-IAA	–	–	–	–
19	Of which: SEC-SA	–	–	–	–
20	Market risk	**29 187**	20 633	28 594	**3 247**
21	Of which: SA	7 998	3 561	6 816	890
22	Of which: IMA	21 189	17 072	21 778	2 357
23	Capital charge for switch between trading book and banking book	**–**	–	–	**–**
24	Operational risk	**56 424**	59 070	57 414	**6 277**
	Non-customer assets	**18 364**	18 688	17 756	**2 043**
25	Amounts below the thresholds for deduction (subject to 250% risk weight)	**4 287**	521	3 188	**477**
	IFRS9 transitional adjustment	**11 328**	–	11 328	**1 260**
26	Floor adjustment[5]	**20 570**	16 151	18 270	**2 288**
27	**Total** (1+6+10+11+12+13+14+15+16+20+23+24+25+26+ non customer assets + IFRS9 transitional adjustment)	**569 503**	542 199	547 233	**63 357**

Key drivers of change in RWA consumption year-on-year were as follows:

- **Credit risk:** The increase of R20.5bn is due to balance sheet growth in CIB and RBB (14.5bn) and model updates (6.0bn).
- **CCR & CVA:** The decreases in CCR of R3.2bn and in CVA of R13.8bn are due to refinements in methodology and market volatility.
- **Market risk:** The increase of R8.6bn is primarily as a result of increased inventory held in South Africa in support of the Absa Regional Operations growth strategy resulting in higher SA RWAs, as well as increased market volatility.
- **Operational risk[3]:** The increase of R1.8bn is driven by higher operating income from entities, resulting in a higher AMA capital requirement.
- **Threshold items:** The increase of R3.8bn is due to the phased in implementation of IFRS9, resulting in additional deferred tax assets.
- **IFRS9 transitional adjustment:** The adjustment of R11.3bn represents the portion of release of RWA on NPLs. This will be phased in over the transition period of three years.

[1] Absa Bank Limited includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.
[2] These numbers have been restated Reporting changes overview on the inside front cover of the Absa Group results booklet for the year ended 31 December 2018.
[3] The 2018 minimum regulatory capital requirement is calculated at 11.13%, which includes the capital conservation buffer but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the D-SIB add-on.
[4] SA-CCR amount is calculated using the CEM.
[5] Includes the operational risk floor.

2. Basis of preparation

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2. Basis of preparation

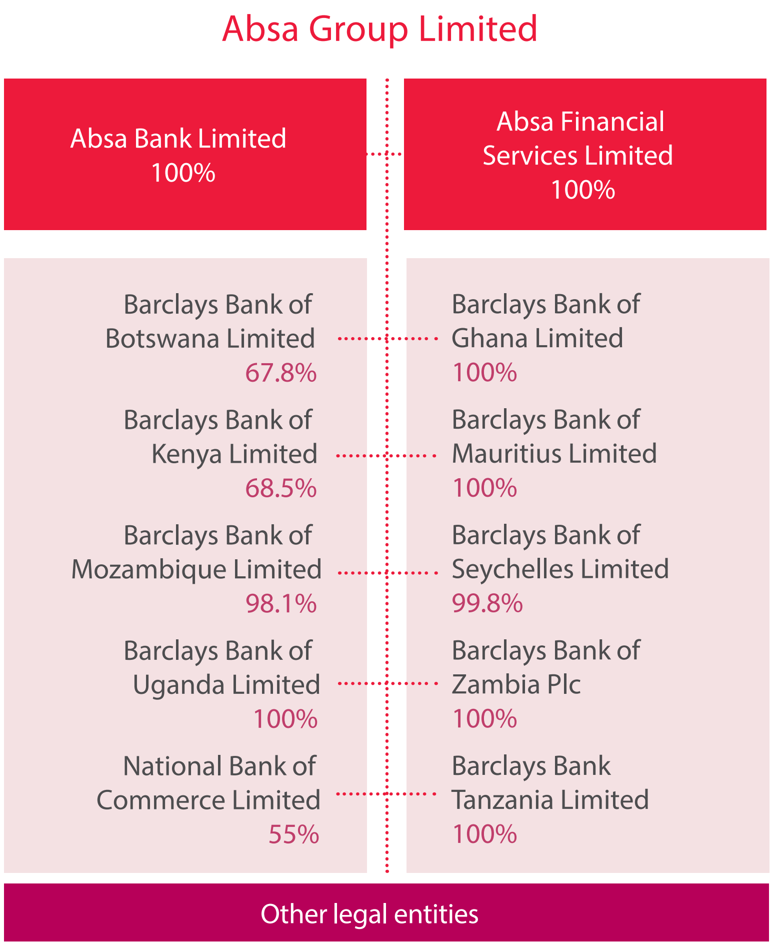
2.1 Scope of consolidation

The holding company name changed from Barclays Africa Group Limited to Absa Group Limited in July 2018. The subsidiary banks on the continent will change their name over the transition period, which ends by mid-2020. This is the first step in the Group's journey to ultimately having one brand, Absa, across all operations (subject to regulatory approval).

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 (Absa Bank), Tanzania (Barclays Bank Tanzania and National Bank of Commerce), Uganda and Zambia. The Group also has representative offices in Namibia and Nigeria.

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 regulatory capital (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, December 2018 (compared to December 2017), 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. 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	• Current exposure method (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 (Absa Regional Operations)	
• All entities	• SA for all risk types
Traded market risk	
• General position risks for trading book positions	• IMA
• Issuer-specific risks for trading book positions	• SA
Operational risk	
• Operational risk – majority of the Group's divisions	• Advanced measurement approach (AMA)
• Certain joint ventures and associates and Absa Regional Operations legal entities	• Basic indicator approach (BIA) or TSA
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 IFRS9 financial instruments and IFRS15 Revenue from contracts with customers as explained in the reporting changes section pages 148 to 178 Absa Group results booklet for the year ended 2018.
- 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 following approach is followed:

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 scopes 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
	2018								
			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 and balances with central bank	46 929	42 850	–	–	–	–	–	42 869	–
Investment securities	135 420	131 998	128 352	–	–	–	3 603	–	–
Loans and advances to banks	53 140	50 830	29 537	15 122	–	15 122	–	–	–
Trading portfolio assets	128 569	128 562	–	38 274	–	122 309	–	–	–
Hedging portfolio assets	2 411	2 411	–	–	–	–	–	4	–
Other assets	30 642	29 810	–	–	–	–	–	13 191	–
Current tax assets (Income tax receivable)	819	699	–	–	–	–	–	699	–
Non-current assets held for sale	239	239	–	–	–	–	–	96	–
Loans and advances to customers	841 720	841 720	840 256	29 414	–	29 414	–	–	–
Reinsurance assets	618	–	–	–	–	–	–	–	–
Investments linked to investment contracts	18 481	–	–	–	–	–	–	–	–
Investments in associates and joint ventures	1 310	3 924	–	–	–	–	–	–	3 924
Investment properties	508	251	–	–	–	–	–	251	–
Property and equipment	15 835	15 758	–	–	–	–	–	15 758	–
Goodwill and intangible assets	8 672	8 401	–	–	–	–	–	–	8 401
Deferred tax assets	3 431	3 261	–	–	–	–	–	3 253	3 261
Total assets	**1 288 744**	**1 260 714**	**998 145**	**82 810**	**–**	**166 845**	**3 603**	**76 122**	**15 586**

Refer to the following page for column descriptions.

2. Basis of preparation

	a	b	c	d	e	f			g
	2018								
			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
Liabilities									
Deposits from banks	121 421	121 421	–	–	–	–	–	–	121 421
Trading portfolio liabilities	51 632	51 632	–	33 262	–	51 632	–	–	18 370
Hedging portfolio liabilities	1 343	1 343	–	–	–	–	–	–	1 343
Other liabilities	36 662	35 259	–	–	–	–	–	–	35 259
Provisions	4 017	3 933	–	–	–	–	–	–	3 933
Current tax liabilities	236	197	–	–	–	–	–	–	197
Non-current liabilities held for sale	124	124	–	–	–	–	–	–	124
Deposits due to customers	736 305	736 305	–	–	–	–	–	–	736 305
Debt securities in issue	160 971	160 971	–	–	–	–	–	–	160 971
Liabilities under investment contracts	29 674	8 973	–	–	–	–	–	–	8 973
Policyholder liabilities under insurance contracts	4 168	–	–	–	–	–	–	–	–
Borrowed funds	20 225	20 225	–	–	–	–	–	–	20 225
Deferred tax liabilities	360	234	–	–	–	–	–	–	234
Total liabilities	**1 167 138**	**1 140 617**	**–**	**33 262**	**–**	**51 632**	**–**	**–**	**1 107 355**

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
		2018						
				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)**	**1 245 265**	**998 145**	**–**	**82 810**	**166 845**	**3 603**	**72 399**
2	Liabilities carrying value amount under regulatory scope of consolidation (as per template LI1)	33 496	–	–	33 262	51 632	–	–
3	**Total net amount under regulatory scope of consolidation**	**1 211 769**	**998 145**	**–**	**49 548**	**115 213**	**3 603**	**72 399**
4	Off-balance sheet amounts	–	377 084	–	–	–	–	–
5	Differences in valuations	–	6 684	–	(11 235)	–	–	–
6	Differences due to consideration of provisions	–	(24 157)	–	–	–	–	–
7	Credit conversion factor (CCF)	–	(169 083)	–	–	–	–	–
8	Significant Investments not subject to RWA	–	–	–	–	–	(818)	–
9	**Exposure amounts considered for regulatory purposes**	**1 211 769**	**1 188 673**	**–**	**38 313**	**115 213**	**2 785**	**72 399**

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 45 and exposures post CCF and CRM in table CR4 on page 41.
- Securitisation framework total corresponds to the sum of securitisation exposures where the Group acted as originator and sponsor in table SEC1 on page 61.
- CCR framework total corresponds to the sum of EAD post CRM under the different approaches in table CCR1 on page 57.
- Equity investment risk total corresponds to the sum of exposure amount in table CR10 on page 73.

2. Basis of preparation

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

The total PVA adjustment for 2018 amounted to R201.3m (2017: R0), of which R143.5m related to the South African operation and R57.8m to the Absa Regional Operations.

Whilst the requirements for prudent valuation calculation and disclosure have been part of the Banking regulations for some time, little guidance was provided on how to determine the different components referenced in the regulations. 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 III 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. The PA has published draft guidance, but no formal guidance had been received as at the reporting date. The draft guidance note was used as a basis to calculate the PVA adjustment.

The following prudent valuation adjustments 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.

[1] As per guidance received from the Prudential Authority, the PV1 table is not required for December 2018. Further guidance on the reporting timeline for this table is expected in Q1 2019.

3. Overview of risk management

Contents

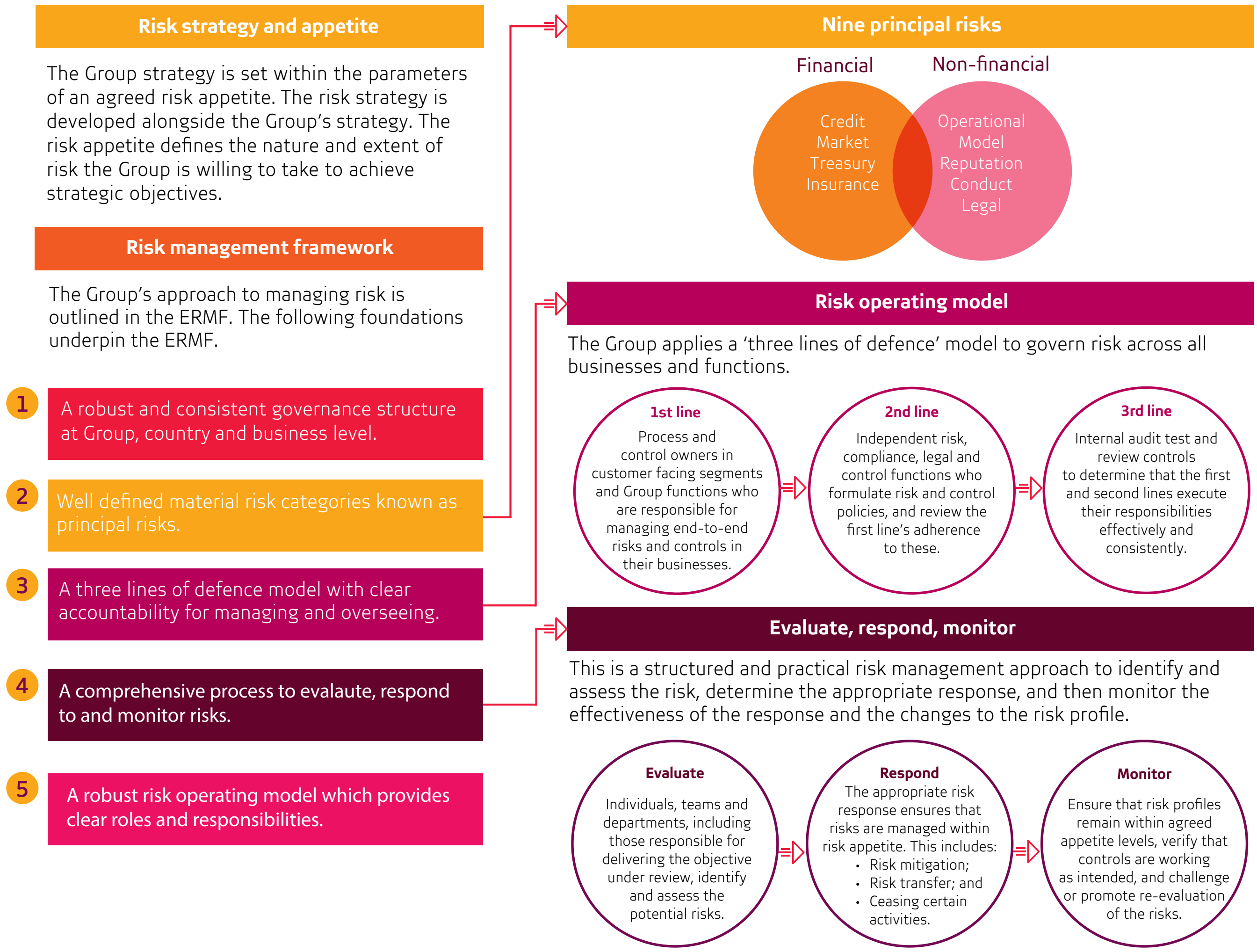
3. Overview of risk management

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 (refer section 3.4), 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



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.

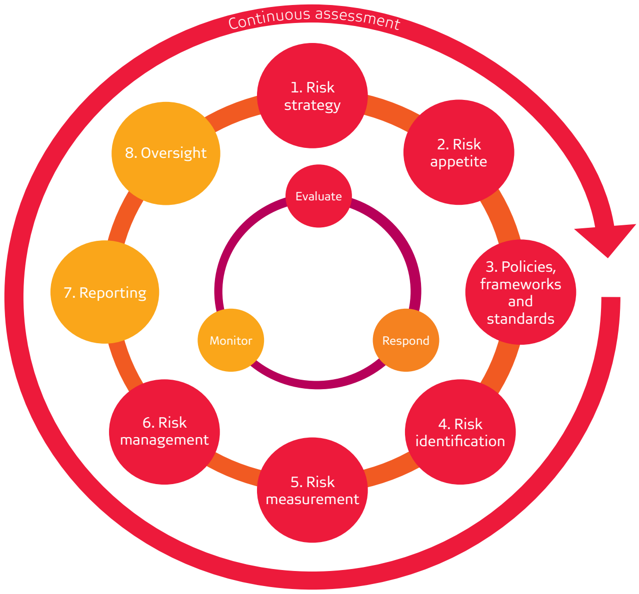
The ERMF sets out the principal risks, and assigns clear ownership and accountability for these risks. The ERMF defines credit, market, treasury, insurance, operational, model, conduct, reputation and legal risks as principal risks in recognition of their significance to the Group's strategic ambitions.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

Quantitative risk appetite metrics	Definition
Total RC coverage	The extent to which the Group is adequately capitalised on a regulatory basis for both its banking and insurance businesses.
CET1 ratio (%)	The extent to which the Group is adequately capitalised with CET1.
EC coverage	The extent to which the Group is adequately capitalised on an economic basis.
Accounting earnings-at-risk (EaR) (%)	Percentage of profit before tax potentially lost over a 12 month period.
Loan loss rate (bps)	Level of credit losses in the Group's credit portfolios.
LCR (%) (Basel III)	The Group's sufficiency of high-quality liquid assets relative to total net cash outflows over a 30 day period.
Leverage ratio (%) (Basel III)	Level of leverage in the Group per unit of qualifying Tier 1 RC.

Qualitative risk appetite

Risk principles provide a high level perspective on how the Group thinks about risk and reward. The Group's risk principles state that:

- The Group takes on only those risks that it understands, has the skills to monitor and manage, and can price for appropriately. This is to ensure that expected reward exceeds minimum risk-adjusted return for shareholders.
- The Group prefers risks that are capital efficient. In assessing capital efficiency, the impact of diversification or concentration on the existing risk profile is considered.
- The Group considers risk by legal entity and BU taking into account the available risk budget in the BU and in aggregate at the Group level.
- The Group avoids risks where it exposes itself to volatile or potentially extreme adverse outcomes.

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. Overview of risk management

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, funding capital implications).	Based on a range of plausible macroeconomic scenarios ranging from mild to severe stresses.	Largely bottom-up approaches, with specific risks being effected 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 in 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 staff 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, 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 on the basis of 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. • 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. • 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 provide partnership and 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 at all decisions.
- Insuring the Group's performance and reputation is not negatively impaired.
- 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 segments 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**
• Establish and operate proper governance. • 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 the activities and critical processes in which they are engaged, in line with the approved appetite and agreed limits.	• 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. • Primary responsibility for managing regulatory relationships for risk, and overseeing delivery of commitments. • 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. • The focus of Internal Audit is on the critical processes of the Group.
All lines of defence support effective and efficient combined assurance.		

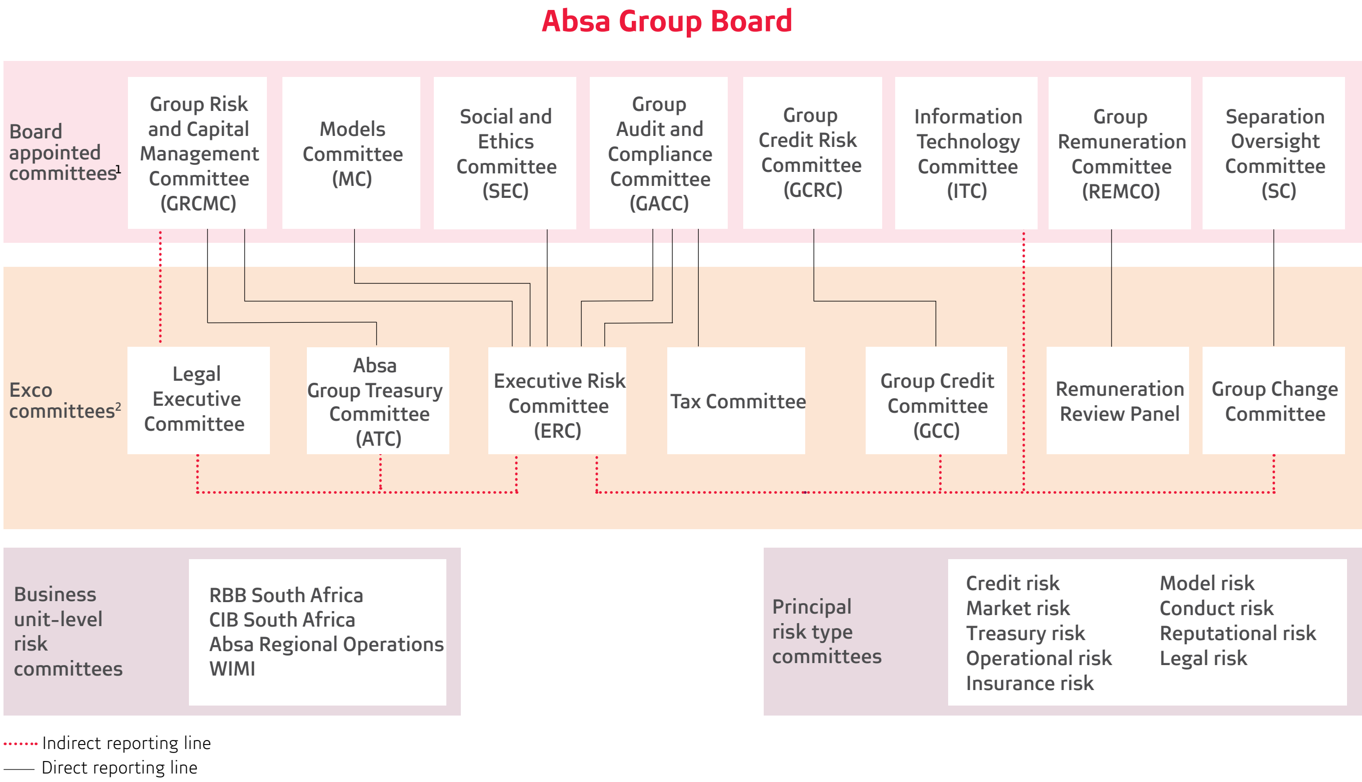
Regardless of their function, all teams who manage processes in the Group are responsible for designing, implementing, remediating, monitoring and testing the controls for those processes.

3. Overview of risk management

3.5.3 Governance

The Group Board is supported by a number of committees at Board, Executive, and Business level. The below diagram depicts the risk-related committees.

Risk governance structure



1 In addition, other Board appointed committees in place are the Directors' Affairs Committee and the Board Finance Committee.
2 In addition, 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, capital, funding and liquidity management.	• Credit risk • Market risk • Treasury risk • Insurance risk • Operational risk • Model risk • Conduct risk • Reputation risk • Legal risk
Models Committee (MC)	Approval of material models and model governance oversight.	• Model 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 • Reputation risk
Group Audit and Compliance Committee (GACC) (includes Disclosure Committee)	Internal controls, compliance, internal and external audit, accounting and external reporting.	• Operational risk
Information Technology Committee (ITC)	IT systems, data, architecture and innovation, resilience and return on investment.	• 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
Group Remuneration Committee (RemCo)	Remuneration and incentive arrangements, policy and disclosures, executive appointments and succession.	• All principal risks
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 (approximately three years).	• All principal risks

3.5.4 Combined assurance

The Group applies a combined assurance approach, which requires co-ordinated 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 the 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 defense 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 ERC and the GACC.

3. Overview of risk management

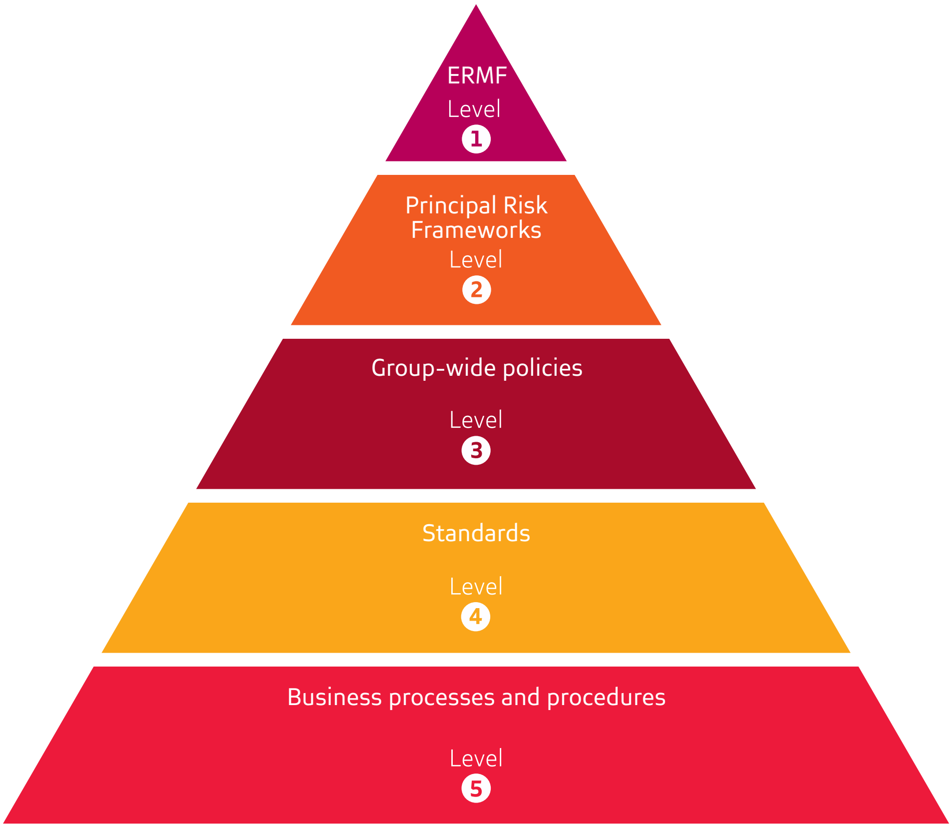
3.5.5 Frameworks, policies and standards

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.



- **Principal Risk Frameworks:** Principal Risk Frameworks 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. Third parties may include public and private sector corporate clients, bureaus and other data providers. 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 is 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 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 underway, 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 artificial intelligence 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 nine principal risks[1], which account for the vast majority of the total risk faced by the Group.

- Financial principal risks
  - Credit risk
  - Market risk
  - Treasury risk
  - Insurance risk[1]
- Non-financial principal risks
  - Operational risk
  - Model risk
  - Conduct risk[1]
  - Reputation 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 treasury, insurance, model, reputation and legal risks as principal risks in recognition of their significance to the Group's strategic ambitions.

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, market risk, treasury 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 financial principal risks, operational risk and model risk 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 reputation risk, and the Group General Counsel for legal risk.

[1] For more information on the nine principal risks, separate sections are dedicated to credit, market, treasury, operational and model risks. Risk management section of the Absa Group results booklet for the year ended 31 December 2018 for details on insurance, conduct, reputation and legal risks.

4. Credit risk

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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]	**December 2018**	December 2017
Growth in gross loans and advances to customers (%)	**12.3**	3.9
CLR (%)	**0.73**	0.87
Stage 3 ratio on gross loans and advances (%)[2]	**5.1**	5.6
Stage 3 coverage ratio (%)[2]	**45.1**	43.7
Stage 1 and stage 2 coverage ratio (%)[2]	**1.0**	1.1
Total coverage ratio (%)	**3.3**	3.5[5]
Weighted average probability of default (PD) (%)[3]	**2.3**	2.3
Weighted average loss-given-default (LGD) (%)[3]	**30.6**	30.6
Total credit RWA (Rbn)	**605.0**	566.0
Credit RWA, excluding CCR (Rbn)	583.3	527.9
CCR RWA[4] (Rbn)	21.7	38.1
Credit RWA as a percentage of EAD (%)	**42.2**	45.3

Key metrics – Wholesale	**December 2018**	December 2017
Growth in gross loans and advances to customers (%)	**22.1**	6.9
CLR (%)	**0.33**	0.37
Stage 3 ratio on gross loans and advances (%)[2]	**2.6**	3.1
Stage 3 coverage ratio (%)[2]	**52.7[4]**	48.8
Stage 1 and stage 2 coverage ratio (%)[2]	**0.6**	0.7
Total coverage ratio (%)	**1.9**	2.2
Weighted average PD (%)[3]	**1.1**	1.0
Weighted average LGD (%)[3]	**33.1**	34.2
Credit RWA as a percentage of EAD (%)	**44.1**	48.0

Key metrics – Retail	**December 2018**	December 2017
Growth in gross loans and advances to customers (%)	**6.5**	1.5
CLR (%)	**1.10**	1.29
Stage 3 ratio on gross loans and advances (%)[2]	**7.6**	7.8
Stage 3 coverage ratio (%)[2]	**42.6**	38.7
Stage 1 and stage 2 coverage ratio (%)[2]	**1.6**	1.5
Total coverage ratio (%)	**4.7**	4.4
Weighted average PD (%)[3]	**4.0**	3.9
Weighted average LGD (%)[3]	**27.2**	26.1
Credit RWA as a percentage of EAD (%)	**39.7**	42.1

1 Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.
2 Current year figures have been prepared in accordance with IFRS9 reporting standards. December 2017 numbers are rebased to reflect the impact of IFRS9. Stage 1 and 2 coverage includes loans and advances at fair value.
3 The percentages include only portfolios subject to the internal ratings based (IRB) approaches.
4 CCR RWA includes CVA.
5 December 2017 numbers are rebased to reflect the impact of the 2018 implementation of IFRS9.

4. Credit risk

- Overall growth of gross loan and advances to customers of 12.3% was a reflection of positive momentum in the Group's core markets supported primarily by strong growth in South Africa as production improved and market share stabilised.
- IFRS9 implementation was effective from 1 January 2018. Pages 148 to 178 Absa Group results booklet for the year ended 31 December 2018.
- **Stage 3 ratio on gross loans and advances:** NPLs improved largely due to portfolio growth and lower defaults, offset by VAF performance related issues. Delinquencies in Absa Regional Operations were also down overall, benefiting from an investment in collection capabilities and proactive policy changes.
- **Stage 3 coverage:** The year-on-year increase in coverage reflected material single name impairments in the wholesale portfolio and impairments in the VAF portfolio.
- **CLR:** Loan growth was achieved without a material change in risk appetite, which together with the prolonged period of a low interest rate environment, resulted in an improved credit loss rate of 73bps (2017: 87bps). Key contributors to portfolio performance were Home Loans, the Store Card book and lower defaults in the Absa Regional Operations. This was offset by a higher VAF charge and large single name impairments in CIB.
- **Credit risk consumption of RWA:** The increase in credit risk RWA of R55.4bn was due to exposure growth and model updates in the South African portfolios, as well as weakening of the rand against foreign currencies and balance sheet growth in the Absa Regional Operations.
- **CCR consumption of RWA:** The decrease of R16.4bn was due to a refined maturity calculation methodology in addition to market volatility.

4.2 Priorities

- Closely monitor changes in the macroeconomic, political and regulatory environment to identify and manage risks at an early stage, with a focus on potential tail risk events.
- Maintain a credit portfolio that is diversified in terms of key concentration dimensions such as individual counterparties, geographies, industries, products and collateral, and ensure that concentration levels are in line with the Group's strategy and risk appetite.
- Maintain and further develop a team of qualified credit professionals.
- Retain focus on regulatory changes, including a proposed rollout of a standardised CCR capital approach, new regulatory large exposure rules and Basel III (finalising post crisis reforms in terms of the BCBS Standard) capital rules for credit risk.

4.3 General information about credit risk

4.3.1 Risk identification and risk management

The ERMF, owned by the GCRO and approved by the Board, details the various principal risks, their supporting frameworks and policies, the governance of these risks, the key responsibilities across the three lines of defence, the risk management accountabilities and responsibilities of the Group Exco members and the approach to measure implementation of the Framework. Credit risk is identified within the ERMF as a principal risk. The Credit Risk Framework sets out: the credit policies, the credit risk management methodology, the governance structure, and the implementation and measurement principles for the management of credit risk.

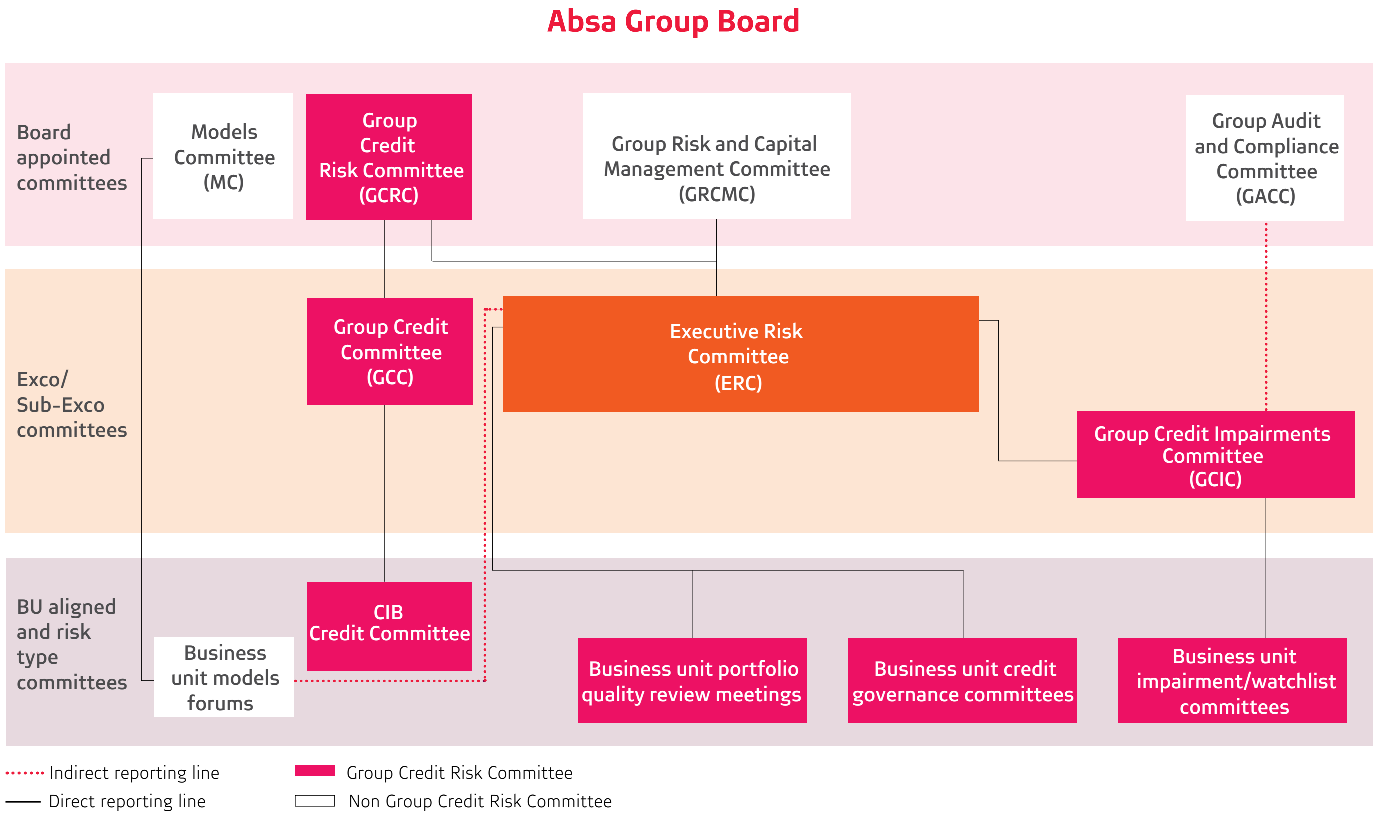
Group credit policies augment the framework and contain detailed control objectives that must be met.

The management of credit risk is done in accordance with the Group's three lines of defence model that is depicted on page 23. This depicts the relationship between the Credit Risk function, Compliance and Internal Audit. Both the Credit Risk function and Compliance are positioned in the second line of defence. The Credit Risk functions embedded in the BUs are responsible for providing oversight over the risk-taking activities of business areas. The Group Credit Risk function under the Principal Credit Risk Officer is responsible for credit policies and the provision of independent credit risk assurance services. 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 business unit 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 and an assessment of agreed management actions to modify behaviour and strategy in accordance with specific findings. At a BU level, credit portfolio quality review meetings are responsible for the 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 from time to time, and further delegates a mandate to the Absa Group Credit Committee.
- **Risk oversight:** The Exco Risk Committee (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, at an aggregate Group level and also at BU, country, or risk type level (as appropriate), which includes credit as a principal risk.
- **Model governance:** All models not in scope of the MC are approved by model approvers. The approver is typically the BU CRO or BU Chief Credit Officer (CCO) or Chief Financial Officer (CFO) in the case of Finance models or delegate. The CRO/CCO/CFO may choose to make use of an approval forum.

4.3.3 Reporting

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

- To provide GCRC with an overview of the Bank's credit portfolio, including an evaluation of the performance of the various credit portfolios, emerging risks, and material concentrations, and incorporating agreed management actions as appropriate.
- To provide GRCMC with a summarised 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 impairment position to GACC.

[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

4.3.4 Credit quality of assets

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

Stage 1 Performing (not impaired)

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

12 month expected losses = entire lifetime cash shortfalls expected if a default occurs within 12 months of reporting date.

Stage 2 Performing (credit deteriorated)

- Arrears >30 dpd <90 dpd
- PD deterioration rules since origination.
- High Risk (12 months minimum cure period).
- Watch list framework applied to the Wholesale portfolio, which is used to identify customers facing financial difficulties or where there are grounds for concern regarding their financial health.

Lifetime expected credit losses = possible default events over the expected life of a financial instrument.

Stage 3 Non-performing (credit impaired)

- Credit impaired on origination or subsequent to initial recognition.
- Regulatory default being:
  - 90 days past due
  - Unlikeliness to pay indicators
  - Distressed restructures (cure period = forbearance plan period).
  - Debt counselling (cure period = debt review period to a maximum of 5 years).

Lifetime expected credit losses including consideration of cures and subsequent re-defaults.

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

		a	b	c	d
		December 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**

		a	b	c	d
		December 2017			
		Gross carrying values of			
		Defaulted exposures[3] Rm	Non-defaulted exposures Rm	Allowances / impairments Rm	Net values (a+b-c) Rm
1	Loans	30 890	789 470	18 874	801 486
2	Debt Securities	–	104 204	–	104 204
3	Off-balance sheet exposures	–	213 343	–	213 343
4	**Total**	**30 890**	**1 107 017**	**18 874**	**1 119 033**

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

[1] Carrying values excludes net carrying amount of R46.0 billion 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 R2.5 billion relating to Internal as well as structural assets and R1.9 billion relating to securitisation balances.
[3] The defaulted exposures are expressed in terms of statutory NPLs.

4. Credit risk

The table below depicts the statutory NPLs and debt securities and the main drivers of the change. [CR2]

		a **December 2018 Defaulted exposures Rm**	a December 2017 Defaulted exposures[1] Rm
1	Defaulted loans and debt securities at end of the previous reporting period	30 890	31 096
2	Loans and debt securities that have defaulted since the last reporting period	29 922	20 972
3	Returned to non-defaulted status	(8 824)	(9 597)
4	Amounts written off	(7 499)	(7 783)
5	Other changes	2 678	(3 798)
6	**Defaulted loans and debt securities at end of the reporting period**	**47 167**	30 890

- **Loans and debt securities that have defaulted since the last reporting period** include:
  - **Impact of IFRS9:**
    With the introduction of IFRS9 the definition of credit impaired was aligned with the regulatory definition of default, which has resulted in a larger population of credit exposures being classified within stage 3 compared to the NPLs population under IAS 39. Furthermore, within the retail portfolios, two additional requirements for the classification of default are applied. These have historically been included as criteria for determining whether default exists from a regulatory perspective, but not from an accounting perspective under IAS39:
    - o **Debt counselling and forbearance accounts (R6 043m),** which are up to date or in early arrears (that is, less than 90 days past due), were not previously classified as defaulted from an accounting perspective. Alignment between the accounting and regulatory definition of default has triggered the reclassification of a number of accounts from performing into stage 3. Page 36 note 4.2.3 Absa Group results booklet (for the year ended 31 December 2018).
    - o **Retail cure period of 12 months (R1 886m):** The Group has historically elected to apply a stringent regulatory cure period of 12 months to defaulted assets (regardless of the trigger of the default). No cure period was however applied to NPL assets under IAS 39. Alignment between the regulatory and accounting definitions of default, has resulted in a greater population of customers being included within stage 3, since the Group has not as yet observed 12 months of consecutive performance. Refer to page 36 note 4.2.3 Absa Group results booklet (for the year ended 31 December 2018).
  - **Performance related (R1 021m):**
    - o Increase in VAF legal book due to changes in court procedures relating to the collateral realisation process (R305m) and large names in CIB (R717m).
- **Returned to non-defaulted status** lower than prior year due to:
  - Lower cures in VAF and the everyday banking products due to suboptimal performance following the deployment of a new strategic collections system. This is offset by;
    - o Increase in Mortgages balances following the implementation of payment optimisation initiatives; and
    - o Increase in Absa Regional Operations retail accounts following improved credit and collection strategies and improved collection technologies.
- **Amounts written off** lower than prior period due to extension of secured products litigation processes as a result of changes in court procedures relating to collateral realisation.
- **Other changes** include security realised and/or closed and interest in suspense previously excluded from loans (2018: R4 928m). Under IFRS9 interest in suspense is included in the impairment allowance.

Note 63.2 Absa Group consolidated and separate financial statements for the reporting period ended 31 December 2018 for an ageing analysis of accounting past due exposures.

[1] The defaulted exposures are expressed in terms of statutory non-performing loans.

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)]

	2018 Gross carrying values of			2017 Gross carrying values of		
	Total Rm	**Impaired[1] Rm**	**Not Impaired Rm**	Total Rm	Impaired[1] Rm	Not Impaired Rm
Total restructured exposures	**14 827**	**10 815**	**4 012**	14 913	4 244	10 669

The increase in impaired restructured exposures is as a result of IFRS9 implementation. Debt counselling and forbearance accounts, which are up to date or in early arrears (that is, less than 90 days past due), were not previously classified as defaulted from an accounting perspective. Alignment between the accounting and regulatory definition of default has triggered the reclassification of a number of accounts from Performing loans into stage 3.

Exposures by geography [CRB(iii)]

	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**

	2017			
	Total exposure Rm	Non – performing loans Rm	Specific impairments Rm	Write-offs Rm
South Africa	1 007 908	26 148	11 245	6 372
Other African countries	189 266	4 742	2 636	1 411
Europe	21 886	–	–	–
North America	12 830	–	–	–
Asia	4 461	–	–	–
South America	235	–	–	–
Other	7 204	–	–	–
Total	**1 243 790**	**30 890**	**13 881**	**7 783**

[1] Regulatory definition of impaired

4. Credit risk

Exposures by industry [CRB(iv)]

	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**

	2017		
	Total exposure Rm	NPLs Rm	Specific impairments Rm
Agriculture, hunting, forestry and fishing	43 534	1 621	366
Business services	102 785	3 711	1 726
Community, social and personal services	100 146	37	4
Construction	18 290	1 167	301
Electricity, gas and water supply	20 751	8	2
Financial intermediation and insurance	105 031	417	131
Manufacturing	82 086	1 030	122
Mining and quarrying	21 480	256	156
Other	89 278	571	251
Private households	495 541	17 056	9 885
Real estate	63 212	2 064	503
Transport, storage and communication	39 246	132	42
Wholesale and retail trade, repair of specified items, hotels and restaurants	62 410	2 820	392
Total	**1 243 790**	**30 890**	**13 881**

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

	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
Public sector entities (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 – project finance (PF)	32 756	1 255	550	21 249	9 702
Total	**1 405 028**	**449 850**	**79 940**	**487 459**	**387 779**

4. Credit risk

	2017				
	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	63 951	12 678	33 444	16 031	1 798
Corporate	301 757	143 744	23 847	124 017	10 149
Local governments and municipalities	7 948	1 508	25	2 721	3 694
PSEs	26 576	9 347	1 370	9 379	6 480
Retail – other	108 496	8 600	3 931	78 675	17 290
Retail mortgages (including any home equity line of credit)	281 102	35 783	1 032	14 910	229 377
Retail revolving credit	98 349	98 349	–	–	–
Securities firms	11 262	5 859	309	5 094	–
SME Corporate	134 167	78 251	16 488	34 890	4 538
SME Retail	23 727	14 244	517	5 392	3 574
Sovereign (including central government and central bank)	136 613	46 171	26 251	36 159	28 032
Specialised lending – income producing real estate	20 149	165	29	8 049	11 906
Specialised lending – PF	29 693	3 828	3 486	13 576	8 803
Total	**1 243 790**	**458 527**	**110 729**	**348 893**	**325 641**

4.3.5 Measuring and managing credit concentrations

Credit risk management includes the management of concentrations, or pools of exposures, whose collective performance has the potential to affect a bank negatively even if each individual transaction within a pool is soundly underwritten. When exposures in a pool are sensitive to the same economic or business conditions, that sensitivity, if triggered, may cause the sum of the transactions to perform as if it were a single, large exposure.

The GCRC has the overall responsibility for the oversight of credit concentration risk in the Group and approves single name large exposures. 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 done in accordance with regulatory requirements, with GCRC fulfilling Board level responsibilities in terms of this requirement. 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, with risk appetite scaled according to PD.
- **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. Groups of exposures are considered according to sector/industry, collateral, maturity, product, and transactions with similar underwriting criteria.
- **Country risk:** Country risk involves the risk of default by obligors on their cross-border obligations due to implementation of capital controls (transfer risk) and/or a risk of loss occurring as a result of a country event (e.g. adverse political and legal changes, or macreconomic (jurisdiction risk) or environmental factors).

The Group maintains a well-diversified portfolio of credit assets. Concentrations exist in the following areas which flow from the Group's position and role in the South African economy:

- Private households, and specifically the home loans asset class due to the Group's position as a major retail bank in the South African market.
- Sovereign exposure largely due to the Group's liquid asset portfolio holdings.
- South Africa geographic exposure due to South Africa being the Group's home base.
- Banks, due to the Group's funding and trading (hedging activities), with trade activity subject to daily margining requirements.

4.4 Credit risk mitigation (CRM) [CRC]

CRM is the technique used to reduce 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 basis.

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 fit for purpose and consistent with accepted market practice.

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
		December 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	–	–

		a	b	c	d	e
		December 2017				
		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	344 163	457 324	457 324	18 874	16 061
2	Debt securities	104 204	–	–	–	–
3	**Total**	448 367	457 324	457 324	18 874	16 061
4	Of which defaulted	10 245	20 645	20 645	–	–

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 standardised credit risk approach for its Absa Regional Operations banking book portfolios (both wholesale and retail), and in South Africa for the Edcon retail portfolio. Due to the relative scarcity of data, the Absa Regional Operations 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 the Absa Regional Operations where the Group applies the SA. 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 Absa Regional Operations 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
		December 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**

		a	b	c	d	e	f
		December 2017					
		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	15 128	12 729	15 128	5 509	21 110	102
2	SME Corporate	30 964	13 507	30 964	8 349	39 691	101
3	PSEs	2 872	374	2 872	348	3 270	102
4	Local governments and municipalities	–	–	–	–	–	–
5	Sovereign (including central government and central bank)	40 882	1 659	40 882	1 467	38 065	90
6	Banks	23 770	519	23 770	281	5 354	22
7	Securities firms	–	–	–	–	–	–
8	Residential mortgages (including any home equity line of credit)	6 831	41	6 831	21	3 542	52
9	Retail – revolving credit	8 925	15 410	8 925	2 801	8 036	69
10	Retail – other	23 032	15	23 032	8	16 429	71
11	SME retail	–	–	–	–	–	–
12	**Total**	152 404	44 254	152 404	18 784	135 497	79

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 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**

		a	b	c	d	e	f	g	h	i	j	k
		December 2017 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	–	–	–	–	210	8	18 737	1 681	–	–	20 636
2	SME Corporate	–	–	–	–	336	16	36 048	2 914	–	–	39 314
3	PSEs	–	–	–	–	–	–	3 057	163	–	–	3 220
4	Local governments and municipalities	–	–	–	–	–	–	–	–	–	–	–
5	Sovereign (including central government and central bank)	1 167	–	2 222	–	6 106	–	29 431	3 426	–	–	42 352
6	Banks	12 435	–	4 831	–	5 034	–	1 531	226	–	–	24 057
7	Securities firms	–	–	–	–	–	–	–	–	–	–	–
8	Residential mortgages (including any home equity line of credit)	–	–	–	2 342	1 764	2 442	302	–	–	–	6 850
9	Retail – revolving credit	–	–	–	–	1 384	10 244	26	66	–	–	11 720
10	Retail – other	–	–	–	–	1 125	21 853	6	55	–	–	23 039
11	SME retail	–	–	–	–	–	–	–	–	–	–	–
12	**Total**	13 602	–	7 053	2 342	15 959	34 563	89 138	8 531	–	–	171 188

4. Credit risk

4.6 Credit risk under the internal ratings based (IRB) approach [CRE]

Refer to the model risk section 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 credit risk to which the Group is exposed from the level of individual facilities up to the total portfolio. 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 obligator/ 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 obligator/ facility default occur during the next (rolling) 12-month period.	Remaining time until the contractual 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

Expected loss (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
	December 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
						December 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
						December 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**	**Provisions 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**
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

	a	b	c	d	e	f	g	h	i	j	k	l
	December 2017											
PD scale	Original on-balance sheet gross exposure Rm	Off-balance sheet exposures pre CCF Rm	Average CCF %	EAD post CRM and post-CCF Rm	Average PD[1] %	Number of obligors	Average LGD %	Average maturity	RWA Rm	RWA density[2] %	EL Rm	Pro-visions Rm
Corporate												
0.00 to <0.15	69 584	35 628	18	82 745	0.11	203	38	1.73	17 958	22	33	47
0.15 to <0.25	22 055	12 096	14	27 231	0.23	135	32	1.68	7 807	29	20	19
0.25 to <0.50	25 179	18 928	20	32 972	0.36	324	34	1.78	13 675	41	40	30
0.50 to <0.75	5 978	2 927	40	7 388	0.61	168	38	2.22	4 749	64	17	12
0.75 to <2.50	35 185	28 478	23	45 207	1.64	1 056	37	2.13	39 561	88	273	155
2.50 to <10.00	6 792	5 379	21	8 454	5.86	122	39	1.70	11 574	137	202	114
10.00 to <100.00	203	2 405	15	574	30.97	21	39	1.62	1 210	211	71	20
100.00 (Default)	2 211	874	5	2 317	100.00	19	34	–	3 203	138	664	664
Sub-total	167 187	106 715	20	206 888	0.84	2 048	36	1.84	99 737	48	1 320	1 061
Specialised lending												
0.00 to <0.15	3 070	392	1	3 271	0.17	43	32	3.77	1 234	38	2	2
0.15 to <0.25	4 919	533	7	5 153	0.23	75	24	4.72	2 039	40	3	3
0.25 to <0.50	10 900	3 169	7	11 691	0.41	133	30	3.85	6 632	57	15	15
0.50 to <0.75	1 997	589	2	2 281	0.57	60	31	4.48	1 515	66	4	3
0.75 to <2.50	13 104	6 631	3	14 022	2.05	819	24	3.55	8 924	64	67	31
2.50 to <10.00	1 400	524	–	1 581	5.77	42	33	3.34	1 915	121	31	23
10.00 to <100.00	901	110	–	928	29.51	18	25	1.93	1 306	141	69	72
100.00 (Default)	1 178	423	–	1 183	100.00	56	42	–	119	10	576	576
Sub-total	37 469	12 371	4	40 110	1.88	1 246	28	3.82	23 684	59	767	725
SME Corporate												
0.00 to <0.15	432	253	56	623	0.13	129	45	1.79	142	23	–	–
0.15 to <0.25	406	179	71	556	0.22	186	32	2.82	168	30	–	–
0.25 to <0.50	7 428	2 645	81	9 936	0.41	2 188	36	2.94	4 517	45	15	12
0.50 to <0.75	4 965	1 408	78	6 279	0.64	1 302	35	3.06	3 492	56	14	12
0.75 to <2.50	37 449	15 696	37	44 796	1.80	22 197	34	3.11	33 059	74	273	193
2.50 to <10.00	10 476	2 568	68	12 591	5.23	1 349	39	2.68	13 608	108	255	215
10.00 to <100.00	1 827	261	76	2 079	25.83	309	34	2.80	3 242	156	176	127
100.00 (Default)	3 286	418	10	3 316	100.00	565	28	–	2 472	75	961	961
Sub-total	66 269	23 428	48	80 176	2.71	28 225	35	2.99	60 700	76	1 694	1 520
Public sector entities												
0.00 to <0.15	2 192	2 864	42	4 023	0.09	14	26	1.62	554	14	1	1
0.15 to <0.25	12 449	3 345	10	13 163	0.21	9	26	2.63	3 762	29	7	8
0.25 to <0.50	94	421	50	216	0.45	19	23	1.01	59	27	–	–
0.50 to <0.75	7	167	50	91	0.74	3	27	4.82	64	70	–	–
0.75 to <2.50	703	1 086	44	1 267	1.46	104	30	1.81	818	65	6	1
2.50 to <10.00	–	–	100	–	4.42	4	45	1.00	–	103	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	15 445	7 883	29	18 760	0.28	153	26	2.35	5 257	28	14	10

[1] Total asset class average weighted PD % includes defaulted EADs.
[2] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	December 2017											
PD scale	Original on-balance sheet gross exposure Rm	Off-balance sheet exposures pre CCF Rm	Average CCF %	EAD post CRM and post-CCF Rm	Average PD[1] %	Number of obligors	Average LGD %	Average maturity	RWA Rm	RWA density[2] %	EL Rm	Provisions Rm
SME Corporate												
0.00 to <0.15	432	253	56	623	0.13	129	45	1.79	142	23	–	–
0.15 to <0.25	406	179	71	556	0.22	186	32	2.82	168	30	–	–
0.25 to <0.50	7 428	2 645	81	9 936	0.41	2 188	36	2.94	4 517	45	15	12
0.50 to <0.75	4 965	1 408	78	6 279	0.64	1 302	35	3.06	3 492	56	14	12
0.75 to <2.50	37 449	15 696	37	44 796	1.80	22 197	34	3.11	33 059	74	273	193
2.50 to <10.00	10 476	2 568	68	12 591	5.23	1 349	39	2.68	13 608	108	255	215
10.00 to <100.00	1 827	261	76	2 079	25.83	309	34	2.80	3 242	156	176	127
100.00 (Default)	3 286	418	10	3 316	100.00	565	28	–	2 472	75	961	961
Sub-total	66 269	23 428	48	80 176	2.71	28 225	35	2.99	60 700	76	1 694	1 520
Public sector entities												
0.00 to <0.15	2 192	2 864	42	4 023	0.09	14	26	1.62	554	14	1	1
0.15 to <0.25	12 449	3 345	10	13 163	0.21	9	26	2.63	3 762	29	7	8
0.25 to <0.50	94	421	50	216	0.45	19	23	1.01	59	27	–	–
0.50 to <0.75	7	167	50	91	0.74	3	27	4.82	64	70	–	–
0.75 to <2.50	703	1 086	44	1 267	1.46	104	30	1.81	818	65	6	1
2.50 to <10.00	–	–	100	–	4.42	4	45	1.00	–	103	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	15 445	7 883	29	18 760	0.28	153	26	2.35	5 257	28	14	10
Local government and municipalities												
0.00 to <0.15	1 869	108	46	1 975	0.13	37	19	3.70	319	16	–	–
0.15 to <0.25	917	1 468	15	1 674	0.19	14	11	2.09	167	10	–	–
0.25 to <0.50	1 138	1 524	30	1 661	0.28	15	12	3.42	271	16	1	–
0.50 to <0.75	1	–	82	1	0.63	4	45	1.69	1	59	–	–
0.75 to <2.50	770	152	33	844	2.38	149	25	2.16	561	67	4	1
2.50 to <10.00	–	1	77	1	4.90	3	47	2.27	1	136	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	4 695	3 253	24	6 156	0.50	222	16	2.98	1 320	21	5	1
Sovereign (including central government and central bank)												
0.00 to <0.15	70 211	1 115	3	72 341	0.01	38	30	3.08	4 880	7	2	–
0.15 to <0.25	168	99	47	220	0.23	11	35	3.05	98	44	–	–
0.25 to <0.50	7	13	80	11	0.47	7	12	1.00	1	13	–	–
0.50 to <0.75	98	1	100	101	0.63	3	58	4.98	116	115	–	1
0.75 to <2.50	471	1 101	29	804	1.39	21	36	1.13	576	72	4	3
2.50 to <10.00	312	–	100	367	5.40	4	36	4.75	557	152	7	8
10.00 to <100.00	–	–	–	–	15.00	1	36	1.00	–	100	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	71 267	2 329	18	73 844	0.05	85	30	3.07	6 228	8	13	12

[1] Total asset class average weighted PD % includes defaulted EADs.
[2] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	December 2017											
PD scale	Original on-balance sheet gross exposure Rm	Off-balance sheet exposures pre CCF Rm	Average CCF %	EAD post CRM and post-CCF Rm	Average PD[1] %	Number of obligors	Average LGD %	Average maturity	RWA Rm	RWA density[2] %	EL Rm	Pro-visions Rm
Banks												
0.00 to <0.15	18 381	4 743	39	15 605	0.04	73	38	1.08	1 628	10	2	9
0.15 to <0.25	737	1 263	30	1 384	0.23	3	43	1.03	574	42	1	1
0.25 to <0.50	121	20	50	135	0.43	10	44	1.00	67	50	–	–
0.50 to <0.75	5 923	–	–	871	0.60	4	44	1.18	697	80	2	1
0.75 to <2.50	4 343	784	47	5 028	1.42	29	42	1.24	4 524	90	30	5
2.50 to <10.00	1 817	1 278	42	2 349	6.26	20	44	1.59	2 885	123	65	11
10.00 to <100.00	–	253	50	127	13.58	7	44	1.00	261	205	8	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	31 322	8 341	39	25 499	0.98	146	40	1.16	10 636	42	108	27
Securities firms												
0.00 to <0.15	3 488	872	32	2 394	0.11	19	20	1.14	228	10	1	–
0.15 to <0.25	2 504	799	13	2 681	0.24	12	37	1.82	1 007	38	2	3
0.25 to <0.50	958	330	1	999	0.29	19	43	1.37	418	42	1	1
0.50 to <0.75	–	133	50	66	0.60	5	44	1.00	40	59	–	–
0.75 to <2.50	1 516	661	8	1 608	1.13	202	44	1.12	1 307	81	8	3
2.50 to <10.00	–	–	–	–	4.45	4	44	1.00	–	130	–	–
10.00 to <100.00	–	–	–	–	–	–	–	–	–	–	–	–
100.00 (Default)	–	–	–	–	–	–	–	–	–	–	–	–
Sub-total	8 466	2 795	18	7 748	0.39	261	34	1.40	3 000	39	12	7
Retail mortgages (including any home equity line of credit)												
0.00 to <0.15	1 044	1 444	56	1 939	0.12	3 225	14	–	84	4	–	1
0.15 to <0.25	2 113	3 428	48	3 792	0.23	9 678	11	–	190	5	1	1
0.25 to <0.50	10 681	10 412	54	16 690	0.37	32 144	13	–	1 477	9	8	9
0.50 to <0.75	19 180	17 691	54	29 323	0.64	58 311	13	–	3 722	13	24	24
0.75 to <2.50	113 595	12 831	54	124 534	1.82	241 400	12	–	28 223	23	268	329
2.50 to <10.00	46 923	5 251	83	49 899	4.19	74 905	12	–	18 908	38	258	310
10.00 to <100.00	9 941	81	61	10 239	28.39	24 375	12	–	6 875	67	337	430
100.00 (Default)	19 500	112	–	18 588	100.00	37 262	16	–	6 714	36	1 994	1 994
Sub-total	222 977	51 250	56	255 004	3.18	481 300	12	–	66 193	26	2 890	3 098
Retail revolving credit												
0.00 to <0.15	408	5 504	52	4 855	0.10	368 434	56	–	177	4	3	2
0.15 to <0.25	555	2 281	51	1 986	0.23	121 689	59	–	145	7	3	1
0.25 to <0.50	2 123	4 574	51	5 081	0.39	326 724	57	–	559	11	11	6
0.50 to <0.75	1 676	2 077	55	3 165	0.65	186 944	56	–	517	16	12	3
0.75 to <2.50	8 476	5 224	55	12 507	1.63	756 010	56	–	4 015	32	114	70
2.50 to <10.00	16 769	16 088	95	23 251	5.01	665 171	57	–	16 740	72	658	341
10.00 to <100.00	2 488	336	59	2 945	26.60	228 582	56	–	4 298	146	432	254
100.00 (Default)	5 336	99	–	5 333	100.00	233 489	74	–	6 581	123	3 422	3 422
Sub-total	37 831	36 183	71	59 123	4.09	2 887 043	58	–	33 032	56	4 655	4 099

[1] Total asset class average weighted PD % includes defaulted EADs.
[2] Post model adjustments (PMAs) not included.

4. Credit risk

	a	b	c	d	e	f	g	h	i	j	k	l
	December 2017											
PD scale	Original on-balance sheet gross exposure Rm	Off-balance sheet exposures pre CCF Rm	Average CCF %	EAD post CRM and post-CCF Rm	Average PD[1] %	Number of obligors	Average LGD %	Average maturity	RWA Rm	RWA density[2] %	EL Rm	Provisions Rm
SME Retail												
0.00 to <0.15	133	1 090	74	1 489	0.04	98 389	78	–	44	3	–	–
0.15 to <0.25	52	52	100	114	0.20	187	56	–	27	24	–	–
0.25 to <0.50	390	747	82	1 307	0.38	28 386	73	–	260	20	4	1
0.50 to <0.75	290	311	84	780	0.63	4 276	64	–	217	28	3	1
0.75 to <2.50	8 941	3 832	81	13 191	1.81	73 901	46	–	5 773	44	113	31
2.50 to <10.00	4 367	837	83	5 370	5.18	25 221	59	–	4 608	86	169	26
10.00 to <100.00	760	117	86	913	27.29	4 518	61	–	1 510	165	144	23
100.00 (Default)	1 010	75	16	984	100.00	3 186	41	–	1 453	148	291	291
Sub-total	15 943	7 061	80	24 148	3.36	238 064	54	–	13 892	58	724	373
Retail – other												
0.00 to <0.15	532	158	99	787	0.11	16 278	54	–	111	14	–	–
0.15 to <0.25	853	964	73	3 620	0.20	6 745	20	–	319	9	1	1
0.25 to <0.50	1 429	130	95	1 689	0.44	15 343	33	–	392	23	2	1
0.50 to <0.75	2 254	27	99	2 309	0.63	22 836	37	–	735	32	5	2
0.75 to <2.50	20 708	168	96	21 023	1.83	176 338	38	–	10 430	50	148	75
2.50 to <10.00	38 948	669	56	39 752	5.44	363 792	39	–	24 889	63	895	490
10.00 to <100.00	11 533	1	97	11 550	20.43	137 583	45	–	11 887	103	1 077	590
100.00 (Default)	7 075	2	1	6 814	100.00	94 174	49	–	9 830	144	2 164	2 164
Sub-total	83 332	2 119	73	87 544	6.12	833 089	40	–	58 593	67	4 292	3 323
Total (all portfolios)	762 203	263 728	39	885 000	2.41	4 471 882	30	2.93	382 272	43	16 494	14 256

[1] Total asset class average weighted PD % includes defaulted EADs.
[2] 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
		December 2018		December 2017	
		Pre-credit derivatives RWA Rm	**Actual RWA Rm**	Pre-credit derivatives RWA Rm	Actual RWA Rm
1	Corporate	107 800	107 751	99 756	99 737
2	Specialised lending	24 905	24 838	23 702	23 684
3	SME Corporate	68 036	68 035	60 700	60 700
4	PSEs	5 420	5 282	5 449	5 257
5	Local government and municipalities	1 132	1 132	1 320	1 320
6	Sovereign (including central government and central bank)	7 484	7 484	6 228	6 228
7	Banks	12 930	12 594	11 199	10 636
8	Securities firms	1 947	1 947	3 000	3 000
9	Retail mortgages (including any home equity line of credit)	67 226	67 226	66 193	66 193
10	Retail revolving credit	33 001	33 001	33 032	33 032
11	SME Retail	13 159	13 159	13 892	13 892
12	Retail – other	60 810	60 810	58 593	58 593
13	**Total**	**403 850**	**403 259**	383 064	382 272

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

		a	a
		December 2018 RWA amounts Rm	December 2017 RWA amounts Rm
1	**RWA as at end of previous reporting period**	**382 908**	358 825
2	Asset size	30 918	15 408
3	Asset quality	–	6 672
4	Model updates	6 481	–
5	Methodology and policy	–	2 003
6	Acquisitions and disposals	–	–
7	Foreign exchange movements	–	–
8	Other	(13 086)	–
9	**RWA as at end of reporting period**	**407 221**	382 908

The increase in the RWA is attributable to exposure growth and model updates. This was offset through the implementation of IFRS9 resulting in increased specific impairment with decreased default RWA.

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 are able to rank order risk and that no material understatement of actual default rates is observed.

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**	**2858 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 Absa Regional Operations.

4. Credit risk

	a	b	c	d	e	f	g
				2017 Number of obligors			
PD range	**External rating equivalent**	**Weighted average PD %**	**Arithmetic average PD by obligors %**	**End of previous year #**	**End of the year #**	**Defaulted obligors in the year #**	**Average historical annual default rate %**
Corporate							
0 to <0.15	AAA, AA, A, BBB+	0.11	0.08	290	203	3	0.06
0.15 to <0.25	BBB, BBB-	0.23	0.20	190	135	1	0.20
0.25 to <0.50	BBB-, BB+	0.36	0.42	403	324	–	0.38
0.50 to <0.75	BB+, BB	0.61	0.62	157	168	3	0.60
0.75 to <2.50	BB, BB-, B+	1.64	1.38	854	1 056	11	1.35
2.50 to <10.00	B+, B, B-	5.86	3.96	183	122	11	3.57
10.00 to <100.0	CCC/C	30.97	28.35	31	21	4	24.58
100.00 (Default)	100.00 (Default)	100.00	100.00	10	19	–	–
Special lending							
0 to <0.15	AAA, AA, A, BBB+	0.17	0.12	19	43	–	0.08
0.15 to <0.25	BBB, BBB-	0.23	0.21	11	75	–	0.21
0.25 to <0.50	BBB-, BB+	0.41	0.36	28	133	–	0.39
0.50 to <0.75	BB+, BB	0.57	0.58	10	60	–	0.64
0.75 to <2.50	BB, BB-, B+	2.05	1.48	64	819	1	1.22
2.50 to <10.00	B+, B, B-	5.77	3.02	23	42	13	4.93
10.00 to <100.0	CCC/C	29.51	27.80	3	18	5	18.33
100.00 (Default)	100.00 (Default)	100.00	100.00	10	56	–	100.00
SME Corporate							
0 to <0.15	AAA, AA, A, BBB+	0.13	0.05	395	129	2	0.07
0.15 to <0.25	BBB, BBB-	0.22	0.21	321	186	–	0.22
0.25 to <0.50	BBB-, BB+	0.41	0.39	3 154	2 188	17	0.37
0.50 to <0.75	BB+, BB	0.64	0.63	1 924	1 302	14	0.61
0.75 to <2.50	BB, BB-, B+	1.80	1.39	18 956	22 197	162	1.40
2.50 to <10.00	B+, B, B-	5.23	3.34	4 536	1 349	633	3.61
10.00 to <100.0	CCC/C	25.83	21.81	916	309	219	21.50
100.00 (Default)	100.00 (Default)	100.00	100.00	1 128	565	–	–
Sovereigns							
0 to <0.15	AAA, AA, A, BBB+	0.01	0.02	3	38	–	–
0.15 to <0.25	BBB, BBB-	0.23	0.22	19	11	–	–
0.25 to <0.50	BBB-, BB+	0.47	0.38	13	7	–	–
0.50 to <0.75	BB+, BB	0.63	0.60	3	3	–	–
0.75 to <2.50	BB, BB-, B+	1.39	1.41	22	21	–	–
2.50 to <10.00	B+, B, B-	5.40	3.28	2	4	–	–
10.00 to <100.0	CCC/C	15.00	15.00	–	1	–	–
100.00 (Default)	100.00 (Default)	–	–	–	–	–	–
Banks							
0 to <0.15	AAA, AA, A, BBB+	0.04	0.06	70	73	–	–
0.15 to <0.25	BBB, BBB-	0.23	0.23	9	3	–	–
0.25 to <0.50	BBB-, BB+	0.43	0.35	10	10	–	2
0.50 to <0.75	BB+, BB	0.60	0.60	3	4	–	–
0.75 to <2.50	BB, BB-, B+	1.42	1.36	24	29	–	–
2.50 to <10.00	B+, B, B-	6.26	3.23	17	20	–	–
10.00 to <100.0	CCC/C	13.58	16.80	7	7	–	–
100.00 (Default)	100.00 (Default)	–	–	–	–	–	–
Retail mortgages							
0 to <0.25	AAA, AA, A, BBB, BBB-	0.14	0.14	12 434	12 903	13	0.57
0.25 to <0.50	BBB-, BB+	0.36	0.37	34 387	32 144	52	0.21
0.50 to <0.75	BB+, BB	0.62	0.62	58 813	58 311	137	0.35
0.75 to <2.50	BB, BB-, B+	1.58	1.63	255 371	241 400	2 200	1.16
2.50 to <10.00	B+, B, B-	3.88	3.81	73 407	74 905	3 213	2.59
10.00 to <100.0	CCC/C	28.51	28.78	24 933	24 375	5 050	21.24
100.00 (Default)	100.00 (Default)	100.00	100.00	36 976	37 262	–	–

4. Credit risk

	a	b	c	d	e	f	g
				2017 Number of obligors			
PD range	External rating equivalent	Weighted average PD %	Arithmetic average PD by obligors %	End of previous year #	End of the year #	Defaulted obligors in the year #	Average historical annual default rate %
Retail revolving credit							
0 to <0.25	AAA, AA, A, BBB, BBB-	0.14	0.14	502 417	490 123	1 188	1.61
0.25 to <0.50	BBB-, BB+	0.39	0.36	303 284	326 724	2 028	0.35
0.50 to <0.75	BB+, BB	0.65	0.62	185 169	186 944	2 283	0.60
0.75 to <2.50	BB, BB-, B+	1.63	1.46	746 638	756 010	16 142	1.43
2.50 to <10.00	B+, B, B-	5.01	5.23	641 332	665 171	113 035	6.70
10.00 to <100.0	CCC/C	26.60	33.39	232 235	228 582	58 387	16.29
100.00 (Default)	100.00 (Default)	100.00	100.00	207 970	233 489	–	–
SME retail							
0 to <0.15	AAA, AA, A, BBB+	0.04	0.04	100 961	98 389	1	0.05
0 to <0.0.25	BBB, BBB-	0.20	0.19	170	187	1	0.21
0.25 to <0.50	BBB-, BB+	0.38	0.34	28 631	28 386	4	0.38
0.50 to <0.75	BB+, BB	0.63	0.61	4 495	4 276	224	0.61
0.75 to <2.50	BB, BB-, B+	1.81	1.53	93 121	73 901	102	1.61
2.50 to <10.00	B+, B, B-	5.18	3.83	36 569	25 221	120	4.12
10.00 to <100.0	CCC/C	27.29	23.46	5 896	4 518	257	18.07
100.00 (Default)	100.00 (Default)	100.00	100.00	1 426	3 186	–	–
Retail – other							
0 to <0.50	AAA, AA, A, BBB, BB+	0.22	0.20	39 438	38 366	1 384	2.12
0.50 to <0.75	BB+, BB	0.63	0.62	24 423	22 836	907	1.99
0.75 to <2.50	BB, BB-, B+	1.83	1.57	168 651	176 338	5 486	1.81
2.50 to <10.00	B+, B, B-	5.44	5.24	360 244	363 792	20 984	3.92
10.00 to <100.0	CCC/C	20.43	21.36	168 842	137 583	25 536	12.28
100.00 (Default)	100.00 (Default)	100.00	100.00	98 099	94 174	–	–

4. Credit risk

4.7 Counterparty credit risk (CCR) [CCRA]

CCR risk arises from the failure of an obligor to meet their payment obligations under a derivative or securities financing agreement. 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 securities financing transaction (SFT) does not remain static over time, but changes due to movement in underlying market variables. The loss to the Bank is the cost of replacing or closing out the contract and is recognised as a trading loss.

The CCR policy details the following objectives:

- **CCR measurement:** The Group uses two principal CCR exposure measures: Current Exposure (CE) 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 credit 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 CCR policy also details 'correlated' risk (wrong way risk), agent trading, electronic trading, prime brokerage and deal contingency.

The table that follows provides a view of the Group's CCR regulatory 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
		December 2018					
		Replacement cost Rm	**PFE Rm**	**EEPE[1] 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**

		a	b	c	d	e	f
		December 2017					
		Replacement cost Rm	PFE Rm	EEPE Rm	Alpha used for computing regulatory EAD Rm	EAD post-CRM Rm	RWA Rm
1	CEM (for derivatives)	25 801	18 343		1.40	35 980	14 729
2	IMM (for derivatives and SFTs)			–	–	–	–
3	Simple approach for CRM (for SFTs)					–	–
4	Comprehensive approach for CRM (for SFTs)					4 368	1 118
5	VaR for SFTs					–	–
6	**Total**						15 847

Year-on-year differences are due to enhanced maturity calculation methodologies implemented and market volatility, specifically exchange rate fluctuations.

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.

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CVA capital charge [CCR2]

		a	b	a	b
		December 2018		December 2017	
		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	32 400	7 735	35 980	21 329
4	**Total subject to the CVA capital charge**	**32 400**	**7 735**	35 980	21 329

The decrease in CVA RWA is due to the implementation of revised methodology, specifically the application of a weighted average cash flow maturity.

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
	December 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**

4. Credit risk

	a	b	c	d	e	f	g
	December 2017						
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	2 037	0.10	51	41	2.01	512	25
0.15 to <0.25	1 526	0.23	37	38	2.05	569	37
0.25 to <0.50	8 647	0.50	87	27	4.20	4 855	56
0.50 to <0.75	541	0.56	31	44	4.06	508	94
0.75 to <2.50	1 025	1.64	352	40	2.07	947	92
2.50 to <10.00	167	6.15	42	42	1.39	239	143
10.00 to <100.00	7	18.01	8	44	1.10	16	220
100.00 (Default)	–	–	–	–	–	–	–
Sub-total	13 950	0.57	608	32	3.44	7 646	55
Banks/Securities firms							
0.00 to <0.15	22 351	0.05	30	42	1.61	3 906	17
0.15 to <0.25	91	0.23	4	44	1.78	50	55
0.25 to <0.50	1 167	0.36	16	44	4.64	988	85
0.50 to <0.75	76	0.61	2	44	3.87	94	123
0.75 to <2.50	1 317	1.83	29	42	1.71	1 324	101
2.50 to <10.00	1 227	5.30	16	44	1.02	1 708	139
10.00 to <100.00	1	17.63	2	43	1.00	1	103
100.00 (Default)	–	–	–	–	–	–	–
Sub-total	26 230	0.40	99	42	1.73	8 071	31
Total (all portfolios)	40 180	0.46	700	39	2.32	15 717	39

RWA decreased as a result of the enhanced cash flow weighted maturity calculation. Market volatility, specifically exchange rate fluctuations, also contributed to the reported decrease.

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
	December 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**

4. Credit risk

	a	b	c	d	e	f
	December 2017					
	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[1] Rm	Fair value of posted collateral Rm
Cash – domestic currency	–	4 561	–	1 058	20 151	22 821
Cash – other currencies	–	2 325	–	9 164	9 841	11 774
Domestic sovereign debt	–	–	–	–	22 804	18 951
Other sovereign debt	–	–	–	–	–	–
Government agency debt	–	–	–	–	–	–
Corporate bonds	–	2 177	–	–	8 315	123
Equity securities	–	–	–	–	–	–
Other collateral	–	–	–	–	–	–
Total	–	9 063	–	10 222	61 111	53 669

The increase in collateral is attributable to market volatility, and growth in the prime broking business.

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
	December 2018		December 2017	
	Protection bought Rm	**Protection sold Rm**	Protection bought[1] Rm	Protection sold[1] Rm
Notionals				
Single-name credit default swaps	4 299	4 908	4 141	5 299
Index credit default swaps	–	–	–	–
Total return swaps	20 382	13 729	7 321	9 542
Credit options	–	–	–	–
Other credit derivatives	2 878	–	–	–
Total notionals	27 559	18 637	11 462	14 841
Fair values				
Positive fair value (asset)	**4 712**	**676**	**1 007**	**429**
Negative fair value (liability)	**(669)**	**(1 310)**	**(513)**	**(857)**

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
		December 2018		December 2017	
		EAD post-CRM Rm	**RWA Rm**	EAD post-CRM Rm	RWA
1	**Exposures to qualifying central counterparty (QCCPs) (total)**		**986**		949
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	–	–	–	–
3	i. OTC derivatives	–	–	–	–
4	ii. Exchange-traded derivatives	10 091	935	13 893	826
5	iii. SFTs	–	–	–	–
6	iv. Netting sets where cross-product netting has been approved	–	–	–	–
7	Segregated initial margin	–		–	
8	Non-segregated initial margin	1 865	45	5 350	56
9	Pre-funded default fund contributions	50	6	135	67
10	Unfunded default fund contributions	–	–	–	–

[1] 2017 restated due to implementation of new reporting platform.

4. Credit risk

		a	b	a	b
		December 2018		December 2017	
		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.

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 (SPV) 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
		December 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)	–	–	–	–	–	–

		a	b	c	e	f	g
		December 2017					
		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)	2 369	–	2 369	189	–	189
2	Residential mortgage	2 369	–	2 369	189	–	189
6	Wholesale (total)	–	–	–	–	–	–

The decrease in traditional securitisation exposure is due to the Homes securitisation vehicle being unwound in 2018.

4. Credit risk

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

		December 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	–	–	–	–	–

		December 2017 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**	2 558	–	–	–	–
2	Traditional securitisation	2 558	–	–	–	–
3	Of which securitisation	2 558	–	–	–	–
4	Of which retail underlying	2 558	–	–	–	–
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

December 2018

	Exposure values (by regulatory approach)				**RWA (by regulatory approach)**				**Capital charge after cap**			
	IRB RBA[1] (incl. IAA)[2] Rm	**IRB SFA[3] Rm**	**SA[4]/SSFA[5] Rm**	**1 250% Rm**	**IRB RBA (incl. IAA) Rm**	**IRB SFA Rm**	**SA/SSFA Rm**	**1 250% Rm**	**IRB RBA (incl. IAA) Rm**	**IRB SFA Rm**	**SA/SSFA Rm**	**1 250% Rm**
	–	**189**	**–**	**–**	**–**	**24**	**–**	**–**	**–**	**2**	**–**	**–**
	–	189	–	–	–	24	–	–	–	2	–	–
	–	189	–	–	–	24	–	–	–	2	–	–
	–	189	–	–	–	24	–	–	–	2	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–	–	–	–

December 2017

	Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
	IRB RBA[1] (incl. IAA)[2] Rm	IRB SFA[3] Rm	SA[4]/SSFA[5] Rm	1 250% Rm	IRB RBA (incl. IAA) Rm	IRB SFA Rm	SA/SSFA Rm	1 250% Rm	IRB RBA (incl. IAA) Rm	IRB SFA Rm	SA/SSFA Rm	1 250% Rm
	–	2 558	–	–	–	461	–	–	–	37	–	–
	–	2 558	–	–	–	461	–	–	–	37	–	–
	–	2 558	–	–	–	461	–	–	–	37	–	–
	–	2 558	–	–	–	461	–	–	–	37	–	–
	–	–	–	–	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–	–	–	–

5. Market risk

Contents

5. Market risk

Market risk is the risk of loss to the Group arising from potential adverse changes in the value of the firm's assets and liabilities held in the trading book from fluctuations in market variables including, but not limited to, interest rates, foreign exchange, equity prices, commodity prices, credit spreads, implied volatilities or asset correlations.[1]

5.1 Review of current reporting period

Key risk metrics[2]	**December 2018**	December 2017
Average traded market risk – 95% daily value at risk (DVaR) (Rm)	**28.3**	26.5
Traded market risk RWA (Rbn)	**37.0**	24.8

- The increase in average DVaR was principally due to a combination of increased volatility feeding into the time series and higher levels of inventory held to facilitate client trades primarily in the offshore interest rate and equity franchise.
- The increase of R12.2bn in RWA was primarily as a result of increased inventory held in support of the Absa Regional Operations growth strategy resulting in higher SA RWAs, as well as increased market volatility.

5.2 Priorities

- Continue to manage traded market risk within risk appetite under volatile and event driven conditions.
- Implement the operating model and infrastructure to support the requirements of the Fundamental Review of the Trading Book standard (FRTB).

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 Chief Risk Officer, 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 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] Refer to the interest rate risk in the banking book section 6.5 under treasury risk for non-traded market risk.
[2] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.

5. Market risk

Daily value at risk[1] (DVaR)

DVaR provides an estimate of the potential loss, at a chosen confidence level, that may arise from unfavourable market movements if current positions were 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 two-year data history of unweighted historical market moves, a holding period of one day and a confidence interval of 95% for risk management purposes.

The historical simulation methodology can be split into three parts:

- Calculate hypothetical daily profit or loss for each position, using observed daily market moves (absolute rate/price/volatility changes) between consecutive business days via a full revaluation approach.
- Sum all hypothetical profits or losses for each position, giving a total profit or loss. Maintain a two-year history of positions.
- Calculate DVaR as the 95th percentile loss selected from the resultant two-year historic period of daily hypothetical net profit or loss amounts. Daily losses in excess of the DVaR figure are likely to occur, on average, up to 26 times over the two-year period.

This internal model is also used for measuring VaR over both a one-day and 10-day holding period (via a scalar[2] assuming no autocorrelation to increase the holding period time horizon) at a 99% confidence level for regulatory backtesting and RC calculation purposes. The VaR 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 DVaR model multiplier to be used in the calculation of RC. The approval covers general position-risk across the following risk types: interest rate, foreign exchange, commodity, equity and traded credit products.

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 PnL representing the change in the value of the portfolio as computed by the risk system 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 internal models approach (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 regulatory capital.
[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. 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 the Absa Regional Operations. 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 95th 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 the Absa Regional Operations 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

5.3.2.1 Structure

Traded market risk is structured by asset class for South Africa and geographically for Absa Regional Operations with assigned analysts responsible for ensuring trading activity occurs within assigned limits and that VaR results are accurate. The Head of 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 Chief Risk Officer and front office detailing limit utilisation, limit breaches, VaR/sVaR and commentary where relevant.

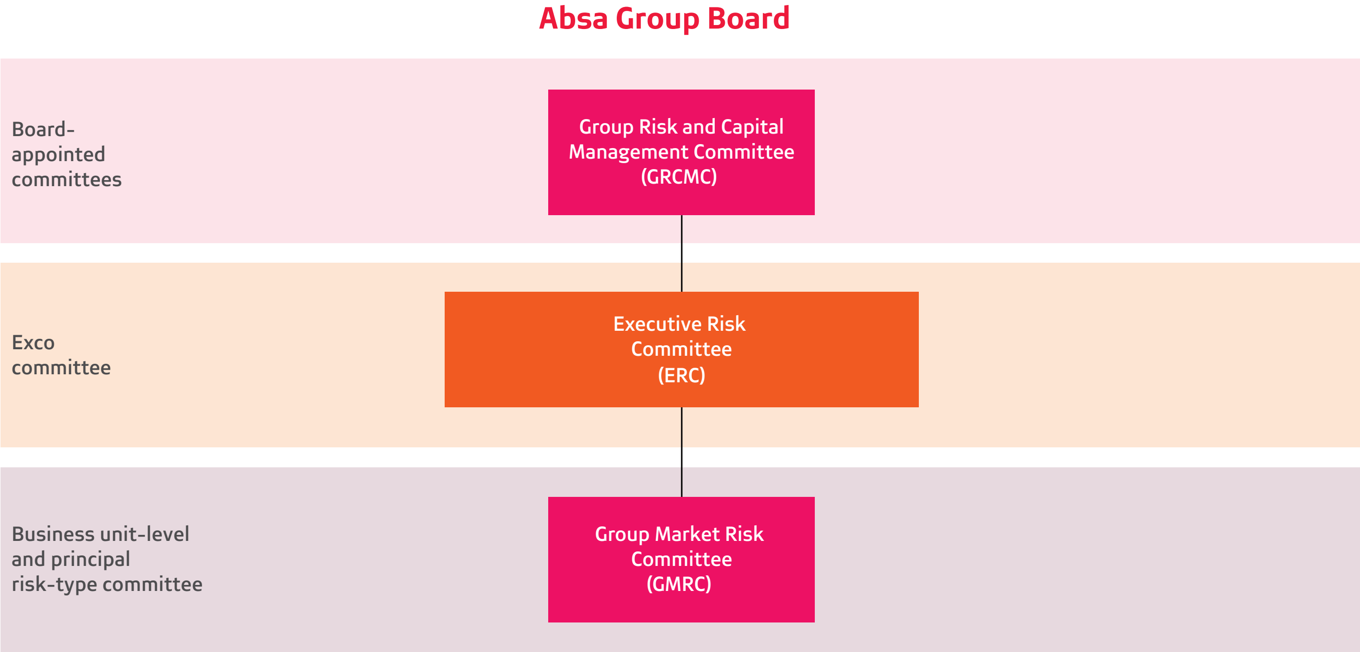
Traded market risk is governed by the Traded Risk Committee, a sub-committee of the GMRC. The information reviewed at this monthly meeting includes a summary of the month's risk utilisation, limit breaches, independent valuation results and capital utilisation. The committee is also responsible for reviewing traded market risk policies and recommending them for approval to the GMRC.

5.3.2.2 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.

5. Market risk

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



5.3.3 Reporting

5.3.3.1 Risk reporting: Traded market risk

The Group's Market Risk function produces 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 **December 2018** **RWA** **Rm**	a December 2017 RWA Rm
	Outright products		
1	Interest rate risk (general and specific)[1]	14 390	6 710
2	Equity risk (general and specific)	881	573
3	Foreign exchange risk	548	407
4	Commodity risk	–	–
	Options		
5	Simplified approach	–	–
6	Delta-plus method	–	–
7	Scenario approach	–	–
8	Securitisation	–	–
9	**Total**	**15 819**	7 690

Traded market risk standardised RWA increased by R8 129m (106%) from December 2017. 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 and Eurobond issuances, in support of Absa's strategy to build out the Absa Regional Operations franchise.

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 previous and current reporting period.

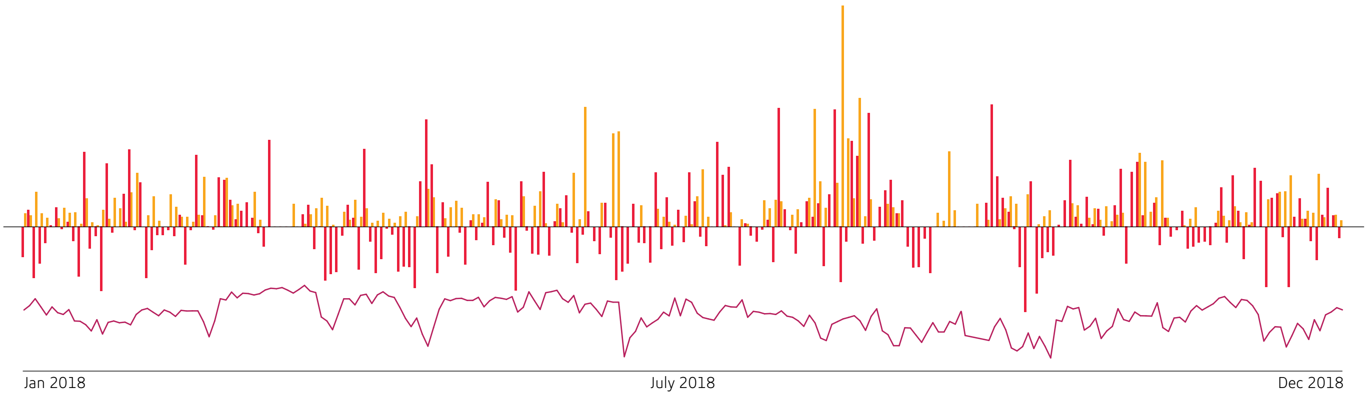
[1] General and Specific risk are calculated separately as stand-alone charges without diversification.

5. Market risk

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]



Hypothetical profit and loss
Actual profit and loss
Regulatoryback testing Var (one-day, at a 99% confidence interval)

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

		a	b	c	d	e	f	
		December 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

- **VaR and sVaR:** VaR reduced primarily as a result of a stressed period of market activity falling off the two-year historical time series in addition to 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.

		a	b	c	d	e	f	
		December 2017						
		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 (29 September 2017[3])	6 579	8 122	–	–	–	14 701	1 580
2	Movements in risk levels	921	1 450	–	–	–	2 371	255
3	Model updates/changes							
4	Methodology and policy							
5	Acquisitions and disposals)							
6	Other							
7	**RWA at end of reporting period (29 December 2017[3])**	7 501	9 571	–	–	–	17 072	1 835

[1] IRC: incremental risk change.
[2] Calculated at 10.75% of RWA.
[3] Refer to the last workday of the month.

5. Market risk

IMA values for trading portfolios [MR3]

		a **December 2018** **Rm**	a December 2017 Rm
VaR (10 day 99%)[1]			
1	Maximum value	**282**	301
2	Average value	**151**	159
3	Minimum value	**83**	94
4	Period end	**136**	130
Stressed VaR (10 day 99%)[1]			
5	Maximum value	**606**	367
6	Average value	**274**	197
7	Minimum value	**153**	121
8	Period end	**203**	210
Incremental risk change (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 decreased by 5% year-on-year. This was principally due to a stressed period of market activity falling off the 2018 two year historical time series.

5.3.4 Additional disclosures

5.3.4.1 Analysis of market risk exposure

The following table reflects the DVaR and expected shortfall statistics for trading book activities as measured by the internal models approach (IMA) for general trading position risk. Traded market risk exposure, as measured by average total DVaR, increased to R28.3m (2017: R25.9m) for the reporting period, which is a 9% increase on the prior year balance. This was principally due to increased volatility feeding into the historic time series and risk positioning across the period.

[1] 1 day VaR scaled to 10 days by multiplying the 1 day VaR by square root of 10, same approach for sVaR

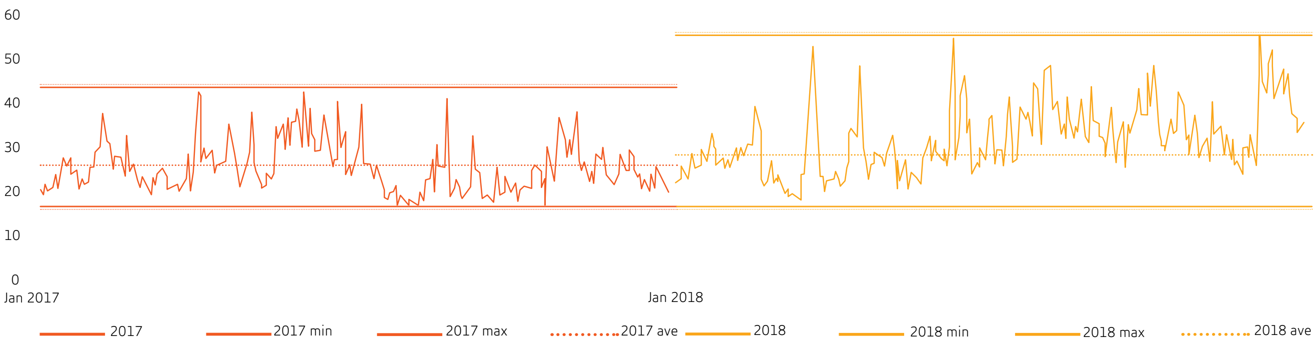
5. Market risk

Trading book management DVaR summary[1]

	December 2018				December 2017			
	Average Rm	**High[2] Rm**	**Low[2] Rm**	**At the reporting date Rm**	Average Rm	High[2] Rm	Low[2] Rm	At the reporting date Rm
Interest rate risk	**24**	**39**	**12**	**22**	26	37	19	32
Foreign exchange risk	**13**	**35**	**4**	**7**	9	33	2	12
Equity risk	**11**	**27**	**2**	**17**	7	30	1	3
Commodity risk	**1**	**2**	**–**	**1**	1	2	–	1
Inflation risk	**11**	**28**	**5**	**7**	10	21	3	14
Credit spread risk	**3**	**4**	**1**	**2**	4	6	3	4
Diversification effect	**(34)**	**(81)**	**(8)**	**(24)**	(31)	n/a	n/a	(45)
Total DVaR[3]	**28**	**53**	**17**	**32**	26	n/a	n/a	21
Expected shortfall	**41**	**76**	**23**	**41**	43	80	27	34
Regulatory VaR[4]	**48**	**89**	**26**	**43**	50	95	30	41
Regulatory sVaR[4]	**87**	**192**	**48**	**64**	62	116	38	66

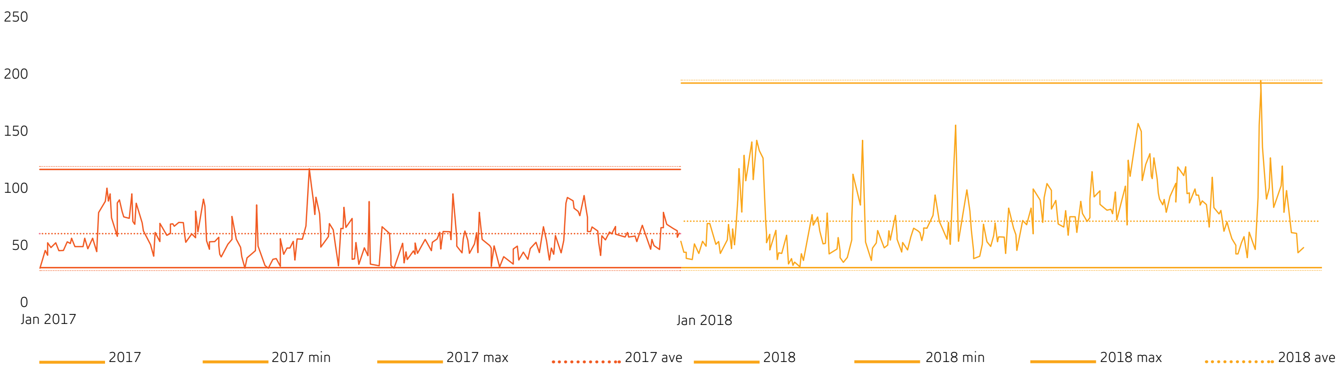
The following graph indicates the daily history of the trading book DVaR, along with the period averages, highs and lows. Average VaR noted an increase over 2018 due to increased volatility in the time series and a change in directional risk.

Trading book management DVaR (daily values, period average, high and low) (Rm)



The following graph depicts the daily history of the trading book sVaR. Average sVaR noted an increase over 2018, driven by an increase in volatility feeding the time series and switch in the direction of the FX net open position and interest rate risk being held.

Trading book management sVaR (daily values, period average, high and low) (Rm)



[1] DVaR at 95% confidence level and a two-year historical time series for businesses with IMA approval.
[2] 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.
[3] The analysis includes trading books for which internal models approval has been obtained.
[4] Regulatory VaR and sVaR are reported with a 1-day holding period at a 99% confidence level. Consequently, these figures are not directly comparable to the 95% risk metrics reported in the rest of the table. The sVaR period is subject to ongoing review for appropriateness.

5. Market risk

5.4 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]

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

	December 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**

	December 2017				
	On-balance sheet amount Rm	Off-balance sheet amount Rm	Risk weight %	Exposure amount Rm	RWA Rm
Exchange-traded equity exposures	154		300	154	490
Private equity exposures	2 174		400	2 174	9 217
Total	2 328			2 328	9 707

6. Treasury risk

Contents

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

		a	b	c	d	e
		31 Dec 18	30 Sep 18[2]	30 Jun 18[2]	31 Mar 18[2]	31 Dec 17
Available capital (Rm)						
1	CET1 transitional basis	**92 829**	94 638	96 391	90 289	91 297
1a	Fully loaded ECL accounting model	**90 237**	92 062	93 814	87 713	–
2	Tier 1 transitional basis	**98 547**	98 993	100 662	94 238	95 661
2a	Fully loaded ECL accounting model Tier 1	**95 955**	96 417	98 086	91 662	–
3	Total capital transitional basis	**119 835**	120 961	122 524	110 679	110 874
3a	Fully loaded ECL accounting model total capital	**117 243**	118 385	119 948	108 103	–
RWA (Rm)						
4	Total risk-weighted assets (RWA) transitional basis	**818 592**	784 068	769 725	735 660	736 892
4a	Fully loaded RWA	**807 872**	773 349	759 005	724 940	–
Risk-based capital ratios as a percentage of RWA (%)						
5	CET1 ratio transitional basis	**11.3**	12.1	12.5	12.3	12.4
5a	Fully loaded ECL accounting model CET1	**11.2**	11.9	12.4	12.1	–
6	Tier 1 ratio transitional basis	**12.0**	12.6	13.1	12.8	13.0
6a	Fully loaded ECL accounting model Tier 1 ratio	**11.9**	12.5	12.9	12.6	–
7	Total capital ratio transitional basis	**14.6**	15.4	15.9	15.0	15.0
7a	Fully loaded ECL accounting model total capital ratio	**14.5**	15.3	15.8	14.9	–
Additional CET1 buffer requirements as a percentage of RWA (%)						
8	Capital conservation buffer requirement (2.5% from 2019)	**1.9**	1.9	1.9	1.9	1.3
9	Countercyclical buffer requirement[3]	**–**	–	–	–	–
10	Bank G-SIB and/or D-SIB additional requirements[4]	**–**	–	–	–	–
11	Total of bank CET1 specific buffer requirements (Row 8 + row 9 + row 10)	**1.9**	1.9	1.9	1.9	1.3
12	CET1 available after meeting the bank's minimum capital requirements	**3.9**	4.7	5.1	4.9	5.1
Basel III leverage ratio						
13	Total Basel III leverage ratio exposure measure (Rm)	**1 494 861**	1 431 094	1 416 659	1 330 032	1 311 893
14	Basel III leverage ratio (%) (row 2/row 13) transitional basis	**6.6**	6.9	7.1	7.1	7.3
14a	Fully loaded ECL accounting model Basel III leverage ratio (%) (row 2a/row13)	**6.4**	6.7	6.9	6.9	–
Liquidity coverage ratio						
15	Total HQLA (Rm)	**189 979**	180 750	173 195	172 477	157 119
16	Total net cash outflow (Rm)	**162 862**	167 234	160 150	158 523	146 104
17	LCR (%)	**116.7**	108.1	108.6	108.8	107.5
Net stable funding ratio						
18	Total available stable funding (ASF) (Rm)	**808 351**	799 054	755 870	–	–
19	Total required stable funding (RSF) (Rm)	**734 200**	704 855	713 291	–	–
20	NSFR (%)	**110.1**	113.4	106.0	N/A	N/A

[1] Numbers reported are on a regulatory basis, and include the contribution amounts received from Barclays PLC as part of the separation.
[2] These numbers have been restated Reporting changes overview on the inside front cover of the Absa Group results booklet for the year ended 31 December 2018.
[3] The countercyclical buffer is not required for banks in South Africa.
[4] The D-SIB add on is not required to be disclosed.

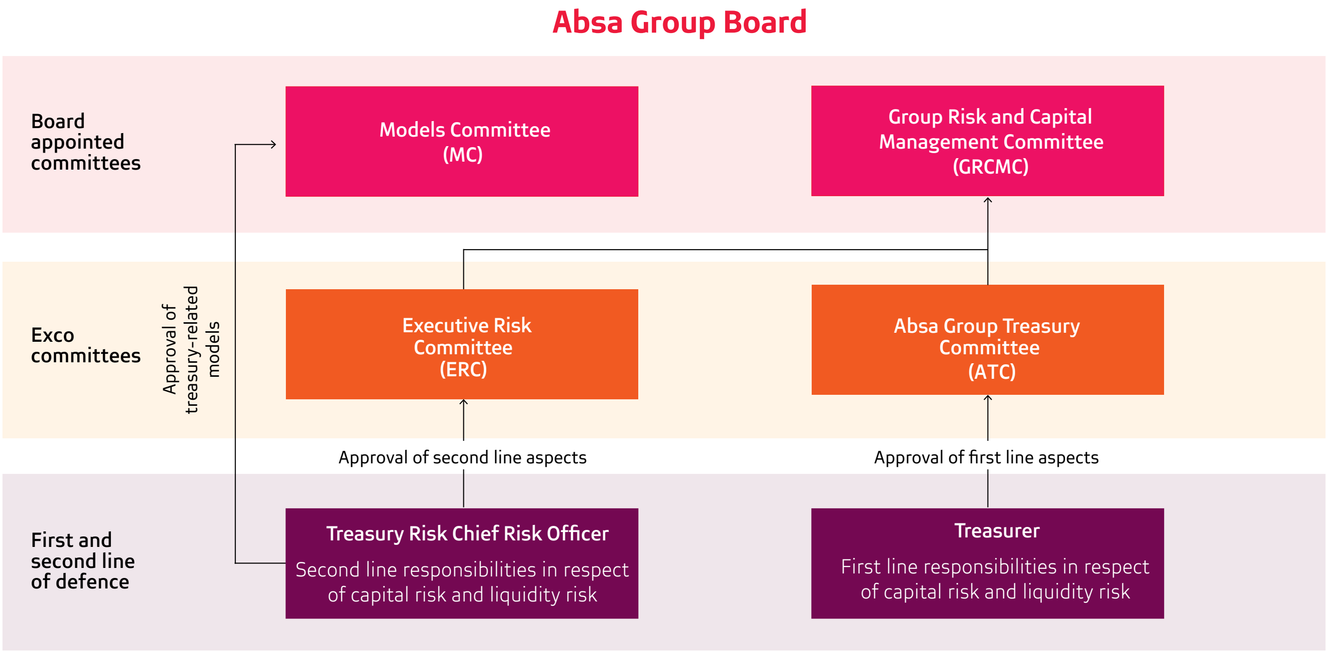
6. Treasury risk

6.2 Governance

The three lines of defence model is followed in respect of treasury risk, with Treasury acting as first line of defence and Group Risk acting as the second line of defence. In line with other risk types, internal audit serves as the third line of defence.

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 and capital risk 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:



6.3 Liquidity risk

6.3.1 Review of the current reporting period

Key risk metrics[1]	December 2018	December 2017
Sources of liquidity (Rbn)	**217.7**	213.0
NSFR (%)[2]	**110.1**	N/A
LCR (%)[3]	**116.7**	107.5
Loan-to-deposit ratio (%)	**93.8**	90.6
Loans and advances to customers	**841.7**	749.8
South Africa	744.5	671.9
Absa Regional Operations	97.2	77.9
Deposits from customers and debt securities	**897.3**	827.8
South Africa	762.3	718.8
Absa Regional Operations	135.0	109.0

[1] Unless otherwise indicated, the numbers reported are on an IFRS basis of reporting.
[2] NSFR which became effective on 1 January 2018 (minimum regulatory requirement of 100%) was reported publicly with effect from 30 June 2018, therefore no comparatives are disclosed.
[3] The Group LCR reflects an aggregation of the Absa Bank LCR and the LCR of the Absa Regional Operations. For this purpose, a simple average of the relevant 3 month-end data points is used in respect of the Absa Regional Operations. In respect of Absa Bank, the December 2017 LCR was determined using a simple average of the relevant 3 month-end data points. As at 31 December 2018, the Absa Bank LCR was calculated as a simple average of 90 calendar-day LCR observations.

6. Treasury risk

- **Liquidity risk position:** The liquidity position of the Group remained strong, in line with risk appetite, and above the minimum regulatory requirements, with sources of liquidity of R217.7bn (December 2017: R213.0bn), amounting to 29.6% (December 2017: 30.9%) of deposits due to customers, demonstrating the strength of the Group's liquidity resources.
- 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 liquidity risk appetite (LRA), regulatory limits and reporting requirements.
- **Long-term balance sheet structure:**
  - The NSFR became effective 1 January 2018. Both the Group and Absa Bank were above the regulatory minimum requirement of 100% during the reporting period.
  - In addition to the NSFR, the long-term funding ratio is managed at an Absa Bank level on a contractual basis in order to balance the LCR and NSFR requirements with overall costs. Long-term funding is raised with appropriate tenor to support the growth in long-term assets, through a combination of funding instruments and capital market issuances.
- **Short-term balance sheet structure and liquidity buffers**
  - The Group targets an LCR above the minimum regulatory requirement, and consistently maintained a buffer in excess of the regulatory minimum requirement of 90% during 2018. The Group's average HQLA of R190bn include a committed CLF from the SARB.
  - The Group has an internal LRA framework, which is used to determine the amount of HQLA the Group is required to hold in order to meet internally defined stress requirements.
- **Diversification:** The Group has a well-diversified deposit base and concentration risk is managed within appropriate guidelines. Sources of funding are managed in order to maintain a wide diversity of depositor, product, tenor and currency.

6.3.2 Priorities

- Manage the funding and HQLA position in line with the Board-approved LRA framework and ensure compliance with the regulatory requirements.
- Build and maintain adequate liquidity buffers to ensure the Group continues to remain compliant with the LCR while managing the phase-out of the CLF.
- Continue to grow and diversify the funding base to support asset growth and other strategic initiatives while optimising funding cost and complying with the NSFR.
- Continue to focus on the growth of core Retail, Business Bank, Corporate and Public Sector deposits.
- Continue to work with regulatory authorities and other stakeholders on resolution planning and the introduction of a Deposit Insurance Scheme in South Africa.

6.3.3 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 local Board. This framework is delivered through a combination of policy formation, review and governance, analysis, stress testing, limit setting and monitoring.

6.3.3.1 Risk identification and management

The efficient management of liquidity is essential for safeguarding the Group's depositors, preserving market confidence and maintaining the Group's 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.

6. Treasury risk

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

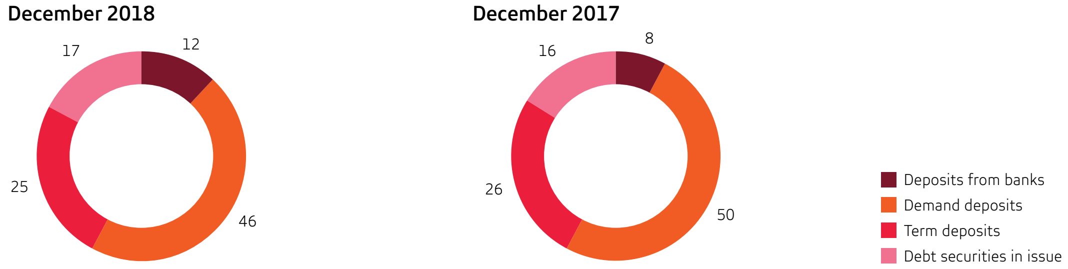
Funding planning	Liquidity risk monitoring	Execution and intra-day liquidity risk	Contingent funding planning	Regulatory compliance
• Funding plan • Concentration risk • Client behaviour • Pricing liquidity risk through funds transfer pricing	• Treasury framework and policies • LRA • Stress testing • 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

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.



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 December 2018	Absa Bank December 2018
ASF (Rm)	808 351	656 999
RSF (Rm)	734 200	632 683
Actual NSFR (%)	110	104
Required NSFR (%)	100	100

Diversification

The Group has a well-diversified deposit base and concentration risk is managed within appropriate guidelines. Sources of funding target a wide diversity of depositor, product and tenor.

Foreign currency loans and advances as well as deposits make up 5% of Absa Bank's balance sheet. The Group is in the process of increasing long term foreign currency funding from international banks, to lengthen the contractual profile of the foreign currency book.

Each entity within the Group is required to ensure that funding diversification is taken into account in its business planning process and 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 size the liquidity pool.

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.

6. Treasury risk

Contingency funding planning

Each banking entity within the Group maintains its own CFP. The CFP includes, inter alia:

- The roles and responsibilities of senior management in a crisis.
- Authorities for invoking the plan.
- Communications and organisation.
- 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.

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.

6.3.3.2 Reporting

Short-term liquidity stress

The Group's sources of liquidity

	December 2018 Rm	December 2017 Rm
The Group sources of liquidity	**217 690**	212 954
HQLA[1]	157 307	159 958
Other liquid assets (outside South Africa)	44 013	32 797
Other sources of liquidity	16 370	20 199

The Group's sources of liquidity amount to 29.6% of deposits due to customers.

Liquidity coverage ratio (LCR)

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% increases by 10% on 1 January 2019 at which point the requirement reaches a level of 100%. The Group targets an LCR above the minimum regulatory requirement and consistently maintained a buffer above the 90% requirement during 2018. The table below represents the LCR for the quarter:

	Absa Group		**Absa Bank**	
	December 2018	December 2017	**December 2018**	December 2017
HQLA (Rm)	**189 979**	157 119	**173 987**	144 970
Net cash outflows (Rm)	**162 862**	146 104	**145 094**	129 845
LCR (%)	**116.7**	107.5	**119.9**	111.6
Required LCR (%)	**90**	80	**90**	80

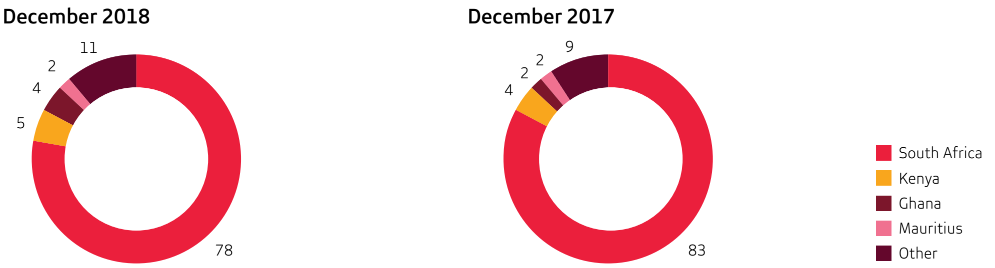
High quality liquid assets (HQLA)

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 successfully applied for a CLF from the SARB, which has been included in HQLA for LCR purposes, from January 2016.

Composition of liquid assets by country (%)



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

6. Treasury risk

6.4 Capital risk

6.4.1 Review of the current reporting period

Key risk metrics[1]	December 2018	December 2017
Total RWA (Rbn)	**818.6**	736.9
CET1 capital adequacy ratio (%)[2,3]	**12.0**	12.1
Return on average RWA (RoRWA)[3] (%)	**2.1**	2.2
EC coverage[3]	**1.5**	1.3
Return on average EC[3] (%)	**19.2**	18.4
Return on equity (RoE)[3] (%)	**16.8**	16.5
Cost of equity (CoE)[4] (%)	**14.00**	13.75

- The Group's capital position was above minimum regulatory requirements as at 31 December 2018, with capital buffers sufficient to withstand stressed conditions.
- The CET1 ratio decreased marginally year-on-year due to RWA growth.
- A final dividend of 620 cents per share was declared, representing an increase of 3.7% on the full year dividend.
- The Group issued R1.2bn new style Basel III Additional Tier 1 capital instruments, which qualify as RC at an Absa Group and Absa Bank level.
- The Group issued USD400m of Basel III compliant Tier 2 capital in the international capital markets in its inaugural issuance of this nature as well as R1.5bn of Basel III compliant Tier 2 capital in the local markets, strengthening the capital position of the Group.
- RWAs increased by 11.1% year-on-year due to an increase in exposure growth, in line with balance sheet growth in the South African portfolios. Absa Regional Operations contributed to the increase due to the weakening of the Rand against the Absa Regional Operations currencies and balance sheet growth.

6.4.2 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 manage the capital position of the Group and its subsidiaries, throughout the period of the separation from Barclays PLC.
- Continuously monitor and assess regulatory developments that may affect the capital position, such as the standard entitled 'Basel III: Finalising post-crisis reforms' published by the Basel Committee on Banking Supervision 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, which outlines the requirements for the establishment of a resolution framework in South Africa.

6.4.3 General information about capital risk

6.4.3.1 Risk identification and management

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

- The ICAAP.
- Stress testing.
- 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. The increase in 2018 was driven by higher inflation forecasts in a number of countries.

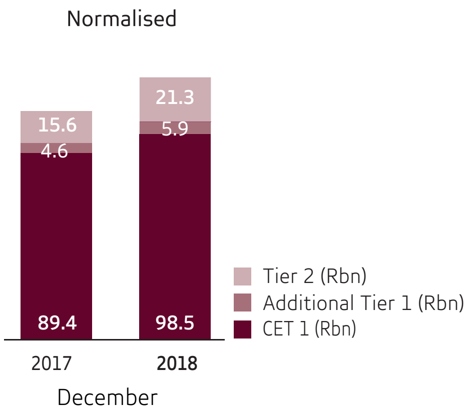
6. Treasury risk

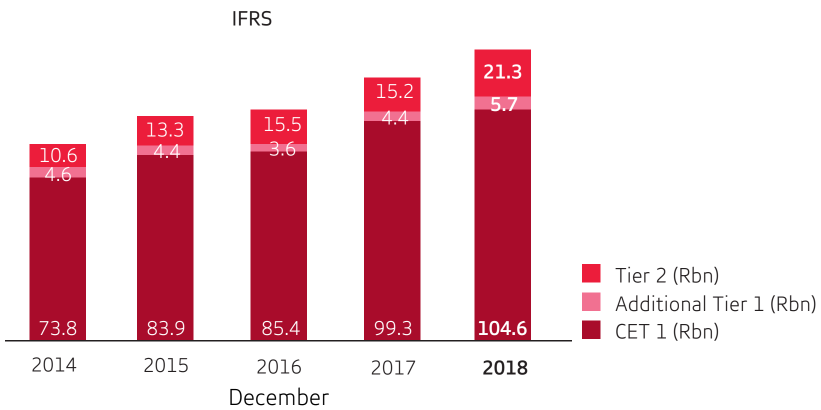
6.4.3.2 Reporting

Capital adequacy

Group	Board target ranges[1] %	Minimum RC requirements[2] %	**Normalised Group performance 31 December 2018**	Normalised Group performance 31 December 2017	**IFRS Group performance 31 December 2018**	IFRS Group performance 31 December 2017
Statutory capital ratios (includes unappropriated profits) (%)						
CET1	10.00 – 11.50		**12.0**	12.1	**12.8**	13.5
Tier 1	11.75 – 13.25		**12.8**	12.8	**13.5**	14.1
Total capital adequacy requirement (CAR)	14.25 – 15.75		**15.4**	14.9	**16.1**	16.1
Regulatory capital ratios (excludes unappropriated profits) (%)						
CET1		7.4	**–**	–	**11.3**	12.4
Tier 1		8.9	**–**	–	**12.0**	13.0
Total CAR		11.1	**–**	–	**14.6**	15.0

Group qualifying capital (including unappropriated profits)





Normalised December 2017	**Normalised December 2018**		IFRS December 2014	IFRS December 2015	IFRS December 2016	IFRS December 2017	**IFRS December 2018**
12.1	**12.0**	CET1 ratio (%)	11.9	11.9	12.1	13.5	**12.8**
14.9	**15.4**	Total capital adequacy ratio (%)	14.4	14.5	14.8	16.1	**16.1**

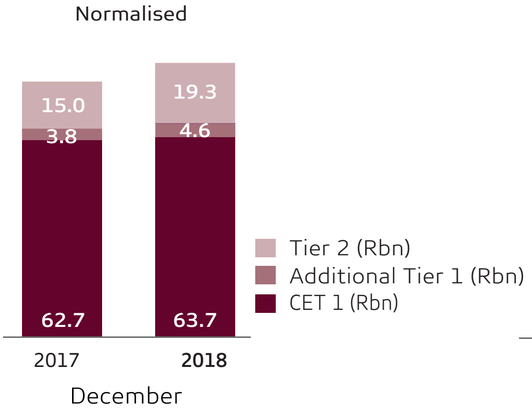
[1] Normalised capital ratios (including unappropriated profits) are managed against Board capital target ranges.
[2] The 2018 minimum regulatory capital requirements of 11.13% (2017: 10.75%) include the capital conservation buffer, which is being phased in between 1 January 2016 and 1 January 2019 but excludes the bank-specific individual capital requirement (Pillar 2b add-on) and the D-SIB add-on.

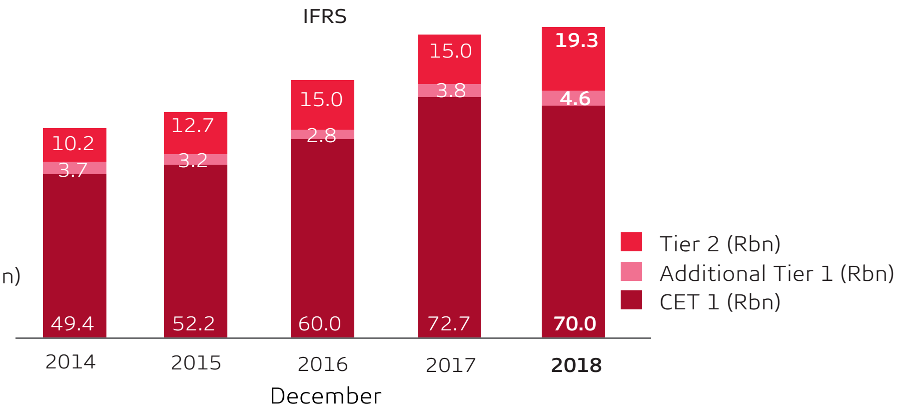
6. Treasury risk

Absa Bank capital adequacy

Absa Bank[1]	Board target ranges[2] %	Minimum RC requirements[3] %	**Normalised performance 31 December 2018**	Normalised Group performance 31 December 2017	**IFRS performance 31 December 2018**	IFRS Group performance 31 December 2017
Statutory capital ratios (includes unappropriated profits) (%)						
CET1	10.00 – 11.50		**11.2**	11.6	**12.3**	13.4
Tier 1	11.75 – 13.25		**12.0**	12.3	**13.1**	14.1
Total CAR	14.25 – 15.75		**15.4**	15.0	**16.5**	16.9
Regulatory capital ratios (excludes unappropriated profits) (%)						
CET1		7.4	**–**	–	**11.4**	12.6
Tier 1		8.9	**–**	–	**12.2**	13.3
Total CAR		11.1	**–**	–	**15.6**	16.1

Absa Bank qualifying capital (including unappropriated profits)





Normalised December 2017	**Normalised December 2018**		IFRS December 2014	IFRS December 2015	IFRS December 2016	IFRS December 2017	**IFRS December 2018**
11.6	**11.2**	CET1 ratio (%)	10.8	10.5	11.6	13.4	**12.3**
15.0	**15.4**	Total capital adequacy ratio (%)	13.9	13.8	15.1	16.9	**16.5**

[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 2018 minimum regulatory capital requirements of 11.13% (2017: 10.75%) include the capital conservation buffer which is 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

Operations	Regulator	December 2018 Total qualifying capital Rm	December 2018 Tier 1 ratio %	December 2018 Total capital adequacy %	December 2018 Regulatory minimum %
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	11.1[2]
Absa Bank[3]	SARB				
Including unappropriated profits[1]		93 842	13.1	16.5	
Excluding unappropriated profits[1]		88 710	12.2	15.6	11.1[2]
Foreign banking entities[4]					
Barclays Bank of Mozambique	Banco de Mozambique	1 434	17.5	23.1	9.0
Barclays Bank of Botswana	Bank of Botswana	3 434	12.7	19.8	15.0
Barclays Bank of Ghana	Bank of Ghana	3 494	14.8	21.9	10.0
Barclays Bank of Kenya	Central Bank of Kenya	6 177	14.9	16.8	14.5
Barclays Bank of Mauritius	Bank of Mauritius	5 462	18.1	19.3	12.4
National Bank of Commerce	Bank of Tanzania	1 435	14.7	16.7	14.5
Barclays Bank of Tanzania	Bank of Tanzania	604	14.7	16.7	14.5
Barclays Bank of Uganda	Bank of Uganda	1 554	16.7	20.1	14.5
Barclays Bank of Seychelles	Bank of Seychelles	666	15.0	18.9	12.0
Barclays Bank of Zambia	Bank of Zambia	1 708	17.7	23.8	10.0
Insurance entities					
Absa Life Limited	FSCA[6]	5 454		1.73xCAR[7]	1.0xSCR[7]
Absa Insurance Company Limited	FSCA[6]	1 505		2.75xSCR[8]	1.0xSCR[8]

Operations	Regulator	December 2017 Total qualifying capital Rm	December 2017 Tier 1 ratio %	December 2017 Total capital adequacy %
Local entities (South Africa)				
Group	SARB			
Including unappropriated profits[1]		118 899	14.1	16.1
Excluding unappropriated profits[1]		110 874	13.0	15.0
Absa Bank[3]	SARB			
Including unappropriated profits[1]		91 478	14.1	16.9
Excluding unappropriated profits[1]		87 030	13.3	16.1
Foreign banking entities[4]				
Barclays Bank of Mozambique	Banco de Mozambique	1 235[5]	17.9	24.9
Barclays Bank of Botswana	Bank of Botswana	2 775[5]	16.6	19.4
Barclays Bank of Ghana	Bank of Ghana	2 500[5]	11.2	20.5[5]
Barclays Bank of Kenya	Central Bank of Kenya	6 201[5]	15.9	18.0
Barclays Bank of Mauritius	Bank of Mauritius	6 031[5]	22.2	23.1
National Bank of Commerce	Bank of Tanzania	1 472[5]	20.3	22.3
Barclays Bank of Tanzania	Bank of Tanzania	579[5]	20.7	22.7
Barclays Bank of Uganda	Bank of Uganda	1 499[5]	19.5	23.1
Barclays Bank of Seychelles	Bank of Seychelles	660[5]	19.7	24.0
Barclays Bank of Zambia	Bank of Zambia	1 937[5]	28.4[5]	34.9[5]
Insurance entities				
Absa Life Limited	FSCA[6]	4 702		1.72xCAR[7]
Absa Insurance Company Limited	FSCA[6]	1 135		51.85%xNWP[8]

1 Includes the contribution amounts received from Barclays PLC as part of the separation.
2 The SARB 2018 minimum regulatory requirement of 11.13% (2017:10.75%) include the RSA minimum of 8%, Pillar 2a of 1.25% (2017:1.50%) and capital conservation buffer of 1.88% (2017: 1.25%) 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 2018 foreign banking entity disclosures are unaudited.
5 December 2017 numbers updated post audit.
6 Financial Sector Conduct Authority.
7 Solvency capital requirement (SCR): Actuarial calculation of VaR on insurance liabilities under the Solvency Assessment and Management (SAM) regime. The SAM prudential regulations became effective on 1 July 2018.
8 As at December 2017, the capital requirements were calculated in accordance with Board Notice 169. However, effective July 2018, the insurance capital requirements are calculated in accordance with the Prudential Standards. As at December 2017, AIC had a funding level, calculated in accordance with the Prudential Standards, of 1.84 x CAR.

6. Treasury risk

Capital supply

Breakdown of qualifying capital

Group	December 2018 Rm	December 2018 %[1]	December 2017 Rm	December 2017 %[1]
CET1	**92 829**	**11.3**	91 297	12.4
Ordinary share capital	1 655	0.3	1 666	0.3
Ordinary share premium	10 205	1.2	10 498	1.4
Reserves[2]	85 107	10.4	85 048	11.5
Non-controlling interest	2 433	0.3	1 910	0.3
Deductions	(6 571)	(0.8)	(7 825)	(1.1)
Goodwill	(770)	(0.1)	(684)	(0.1)
Amount by which EL exceeds eligible provisions	–	(0.0)	(2 083)	(0.3)
Other deductions	(5 801)	(0.7)	(5 058)	(0.7)
Additional Tier 1 capital	**5 718**	**0.7**	4 364	0.6
Tier 1 capital	**98 547**	**12.0**	95 661	13.0
Tier 2 capital	**21 288**	**2.6**	15 213	2.0
Instruments recognised as Tier 2 capital	19 143	2.3	14 675	2.0
General allowance for impairment losses on loans and advances – SA	2 145	0.3	538	0.0
Total qualifying capital (excluding unappropriated profits)	**119 835**	**14.6**	110 874	15.0
Qualifying capital (including unappropriated profits)				
Tier 1 capital	**110 308**	**13.5**	103 686	14.1
CET1 (excluding unappropriated profits)	92 829	11.3	91 297	12.4
Unappropriated profits	11 761	1.4	8 025	1.1
Additional Tier 1	5 718	0.7	4 364	0.6
Tier 2 capital	**21 288**	**2.6**	15 213	2.0
Total qualifying capital (including unappropriated profits)	**131 596**	**16.1**	118 899	16.1
Normalised qualifying capital (including unappropriated profits)	**125 718**	**15.4**	109 602	14.9

Leverage

Group	2018 December	2018 September[3]	2018 June[3]	2018 March[3]
Leverage ratio exposure (Rm)	1 494 861	1 431 094	1 416 659	1 330 032
Tier 1 Capital (excluding unappropriated profits) (Rm)	98 547	98 993	100 662	94 238
Tier 1 Capital (including unappropriated profits) (Rm)	110 308	106 929	106 877	100 658
Leverage ratio (excluding unappropriated profits) (%)	6.6	6.9	7.1	7.1
Leverage ratio (including unappropriated profits) (%)	7.4	7.5	7.5	7.6
Normalised leverage ratio (including unappropriated profits) (%)	7.0	6.9	6.9	6.9
Board target leverage ratio (%)	≥4.5	≥4.5	≥4.5	≥4.5
Minimum required leverage ratio (%)	**4.0**	4.0	4.0	4.0

[1] Percentage of capital to RWAs.
[2] Reserves exclude unappropriated profits.
[3] These numbers have been restated Reporting changes overview on the inside front cover of the Absa Group results booklet for the year ended 31 December 2018.

6. Treasury risk

Absa Bank[1]	December 2018 Rm	December 2018 %[2]	December 2017 Rm	December 2017 %[2]
CET1	**64 827**	**11.4**	68 194	12.6
Ordinary share capital	304	0.1	304	0.1
Ordinary share premium	36 880	6.5	36 880	6.8
Reserves[3]	33 993	6.0	37 545	6.9
Deductions	(6 350)	(1.1)	(6 535)	(1.2)
Goodwill	(297)	(0.1)	(112)	(0.0)
Amount by which EL exceeds eligible provisions	–	(0.0)	(2 139)	(0.4)
Other deductions	(5 941)	(1.0)	(4 284)	(0.8)
Additional Tier 1 capital	**4 599**	**0.8**	3 812	0.7
Tier 1 capital	**69 426**	**12.2**	72 006	13.3
Tier 2 capital	**19 284**	**3.4**	15 024	2.8
Instruments recognised as Tier 2 capital	18 972	3.3	14 917	2.8
General allowance for impairment losses on loans and advances – SA	312	0.1	107	0.0
Total qualifying capital (excluding unappropriated profits)	**88 710**	**15.6**	87 030	16.1
Qualifying capital (including unappropriated profits)				
Tier 1 capital	**74 558**	**13.1**	76 454	14.1
CET1 (excluding unappropriated profits)	64 827	11.4	68 194	12.6
Unappropriated profits	5 132	0.9	4 448	0.8
Additional Tier 1	4 599	0.8	3 812	0.7
Tier 2 capital	**19 284**	**3.4**	15 024	2.8
Total qualifying capital (including unappropriated profits)	**93 842**	**16.5**	91 478	16.9
Normalised qualifying capital (including unappropriated profits)	**87 541**	**15.4**	81 513	15.0

Leverage

Absa Bank[1]	2018 December	2018 September[4]	2018 June[4]	2018 March[4]
Leverage ratio exposure (Rm)	1 297 287	1 229 002	1 209 478	1 176 425
Tier 1 Capital (excluding unappropriated profits) (Rm)	69 426	70 712	71 714	71 855
Tier 1 Capital (including unappropriated profits) (Rm)	74 558	73 502	76 024	75 116
Leverage ratio (excluding unappropriated profits) (%)	5.4	5.8	5.9	6.1
Leverage ratio (including unappropriated profits) (%)	5.7	6.0	6.3	6.4
Normalised leverage ratio (including unappropriated profits) (%)	5.3	5.3	5.2	5.3
Board target leverage ratio (%)	≥4.5	≥4.5	≥4.5	≥4.5
Minimum required leverage ratio (%)	**4.0**	4.0	4.0	4.0

[1] Absa Bank includes subsidiary undertakings, special-purpose entities, joint ventures, associates and offshore holdings.
[2] Percentage of capital to RWAs.
[3] Reserves exclude unappropriated profits.
[4] These numbers have been restated Reporting changes overview on the inside front cover of the Absa Group results booklet for the year ended 31 December 2018.

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. 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.

EC demand	**December 2018[1] Rm**	December 2017[1] Rm
Credit risk[2]	53 231	50 254
Equity positions in banking book	1 236	1 548
Market risk	3 139	2 732
Operational risk	6 658	6 140
Property and equipment risk	3 229	8 730
IRRBB	5 876	5 397
Business risk	5 595	5 364
Insurance risk	3 028	3 104
Total EC requirement	**81 992**	83 269
IFRS total EC AFR	**127 914**	117 129[3]
IFRS total EC surplus	**45 922**	33 860
IFRS EC coverage ratio	**1.6**	1.4
Normalised total EC AFR	**121 850**	107 292[3]
Normalised total EC surplus	**39 858**	24 023
Normalised EC coverage ratio	**1.5**	1.3

1 EC demand and AFR reported on a spot basis.
2 Credit risk includes CCR and CVA.
3 December 2017 IFRS and normalised total EC AFR was restated post the release of the 2017 year-end Financial Results, due to the enhancement of the EC framework.

6. Treasury risk

6.5 Interest rate risk in the banking book (IRRBB)

6.5.1 Review of current reporting period

Key risk metrics[1]	December 2018	December 2017
Banking book NII sensitivity for a 2% downward shock in interest rates (Rm)	**(2 755)**	(1 934)

- The banking book NII sensitivity increased year-on-year, remaining within risk appetite. The increase in NII was due to balance sheet growth combined with a change in the underlying mix. The Group remained positively exposed to increases in interest rates after the impact of hedging.

6.5.2 Priorities

- Retain focus on regulatory changes, specifically preparing for the adoption of the BCBS standard on IRRBB.
- Continue to manage margin volatility through risk management processes, such as the structural hedge programme in South Africa and through appropriate asset and liability management processes in Absa Regional Operations.

6.5.3 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. Non-traded interest rate risk arises in the banking book from the provision of retail and wholesale (non-traded) banking products and services, and certain structural exposures within the balance sheet from re-pricing differences between assets, liabilities and equity. These risks impact 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:
  - Prepayment risk arises in relation to transactions where an early settlement option is embedded in the product. This risk most commonly arises in relation to fixed rate loans offered to retail customers, where the customer has an option to repay the loan prior to contractual maturity and where the Group is unable to collect full market-related compensation. 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. Customers have the option to take up this offer. Processes are in place to enable robust management of these additional forms of IRRBB.

The techniques that are used to measure IRRBB include:

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

DVaR and tail metrics are assessed on a daily basis while re-pricing profiles, AEaR and EVE are assessed on a monthly basis. These techniques are supported by non-VaR metrics (position and sensitivity limits). Limits are set and monitored through the formal governance process.

Re-pricing profiles

With the re-pricing profile, instruments are allocated to time periods with reference to the earlier of the next contractual interest rate re-pricing date and the maturity date. Instruments which have no explicit contractual re-pricing or maturity dates are placed in time buckets based on the most likely re-pricing behaviour. The re-pricing profiles take the assumed behavioural profile of structural product balances into account.

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

6. Treasury risk

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 assessed across a range of interest rate scenarios, including parallel and key rate shocks and yield curve twists and inversions as appropriate for each business. AEaR is monitored against approved internal limits.

DVaR

DVaR calculated at a 95% confidence level is used for measuring IRRBB. 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 PIT to a specified shock to the yield curve. Similar to DVaR, EVE is present value sensitive and is complementary to income sensitivity measures such as AEaR. 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. Stress testing is carried out by Market Risk to supplement the DVaR and AEaR metrics for South Africa. Stress testing for the Absa Regional Operations is carried out by Market Risk and the risk functions in-country and has been adopted as one of the primary risk techniques for the Absa Regional Operations. It is monitored against formal internal limits.

Foreign exchange risk

Foreign exchange risk is regarded as an ancillary risk type under IRRBB. The Group is exposed to two sources of foreign exchange risk, namely, transactional and translational risk.

Transactional foreign exchange risk arises when the banking assets and liabilities are not denominated in the functional currency of the transacting entity. The Group's policy is for transactional foreign exchange risk to be managed within the trading book.

In accordance with the Group's policy, there were no significant net open currency positions outside the trading book at the reporting date that would give rise to material foreign exchange gains and losses being recognised in the statement of comprehensive income or in equity as a result of a foreign exchange rate shock.

Risk reporting non-traded market risk

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.

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 **R2,75bn** (31 December 2017: R1.93bn). A similar increase would result in an increase in projected 12-month NII of **R2.49bn** (31 December 2017: R1.7bn). On this basis AEaR expressed as sensitivity to a 200bps parallel decrease in all market interest rates increased by 1.8% to 6.3% of the Group's NII.

AEaR for 100 and 200 bps changes in market interest rates

	December 2018			
	200 bps decrease	**100 bps decrease**	**100 bps increase**	**200 bps increase**
South Africa[1] (Rm)	(2 148)	(912)	947	1 884
Absa Regional Operations[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**

	December 2017			
	200 bps decrease	100 bps decrease	100 bps increase	200 bps increase
South Africa[1] (Rm)	(1 405)	(459)	609	1 172
Absa Regional Operations[2] (Rm)	(530)	(265)	265	530
Total (Rm)	(1 934)	(724)	873	1 701
Percentage of the Group's NII (%)	(4.5)	(1.7)	2.0	4.0
Percentage of the Group's equity (%)	(1.9)	(0.7)	0.9	1.7

[1] Includes exposures held in the CIB banking book.
[2] Absa Regional Operations' interest rate sensitivities are shown on a 100% (rather than actual) shareholding basis.

7. Operational risk

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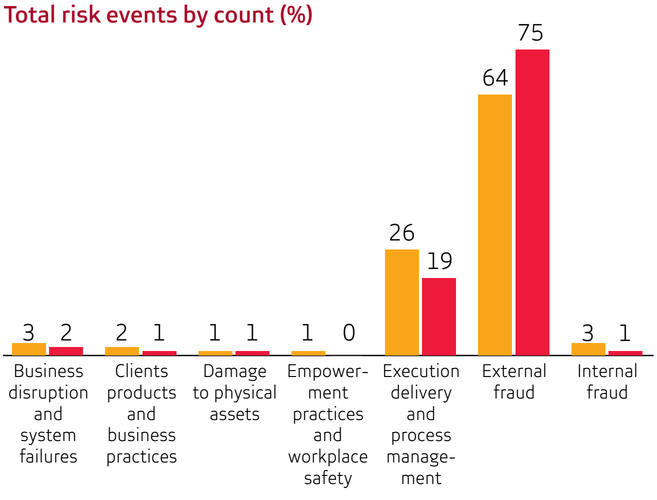
7. Operational risk

Operational risk is the risk of loss to the Group as a result of inadequate or failed processes or systems, human factors or due to external events.

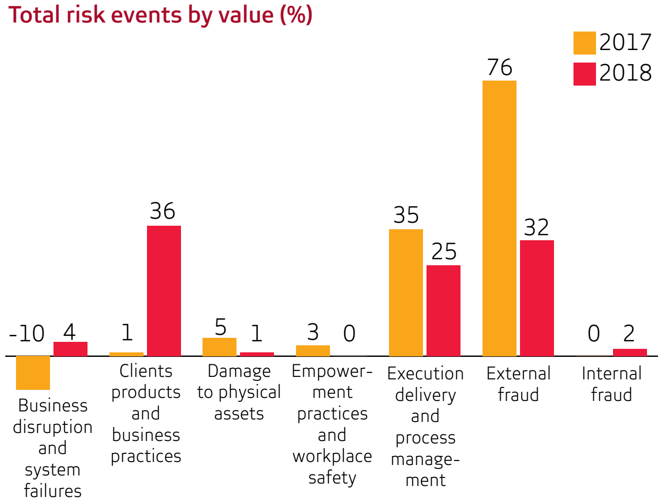
7.1 Review of current reporting period

Key risk metrics[1]	**December 2018**	December 2017
Total losses as a percentage of gross income (%)	**0.7**	0.3
Total operational risk losses (Rm)	**535**	240
Operational RWA (Rbn)	**112.7**	105.7

Total risk events by count (%)



Total risk events by value (%)



- Total operational risk losses increased by R295m (122%) to R535m mainly due to increased litigation reserves for historic cases recently concluded. Plastic and digital fraud losses remain as the major contributor to operational risk losses.
- Operational risk RWA increased by R7.0bn or 6,6% from increased operating income translating to an increased capital requirement under the TSA in the Absa Regional Operations, and the application of the TSA floor in the AMA entities.
- The highest frequency of events for the period occurred in external fraud (75%). This pattern is in line with the nature of operational risk and the environment in which the Group operates.
- The highest portion of losses by value during 2018 occurred in clients, products and business practices (36%) and external fraud (32%).
- Key achievements in the period include improvements in the:
  - Resilience capability, which includes migration to a new data centre.
  - Technology disaster recovery capability.
  - Cybersecurity through execution of the converged security strategy.
  - Infrastructure, capability and control processes over key datasets, in line with the Group's data standards.
  - Privacy controls, including requirements of the draft Protection of Personal Information Act (PoPIA).
  - Toolsets used in the management of operational risk with the rollout of a new platform.

7.2 Priorities

- Continue to focus on the Group's:
  - Cyber strategy, specifically implementing core security infrastructure.
  - Rollout of the infrastructure, capability and control processes over key datasets, in line with the Group's data standards.
  - Privacy controls, including requirements of the draft PoPIA.
  - Change book-of-work to ensure that business as usual, separation and strategic and organisational transition initiatives continue to be delivered in a safe and controlled manner.
  - Strengthening of fraud capabilities, in particular over digital channels.
  - Further enhancements to the toolsets and processes used in the management of operational risk.

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

7. Operational risk

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 (ELs) and to avoid or reduce the likelihood of suffering an extreme (or unexpected) loss.

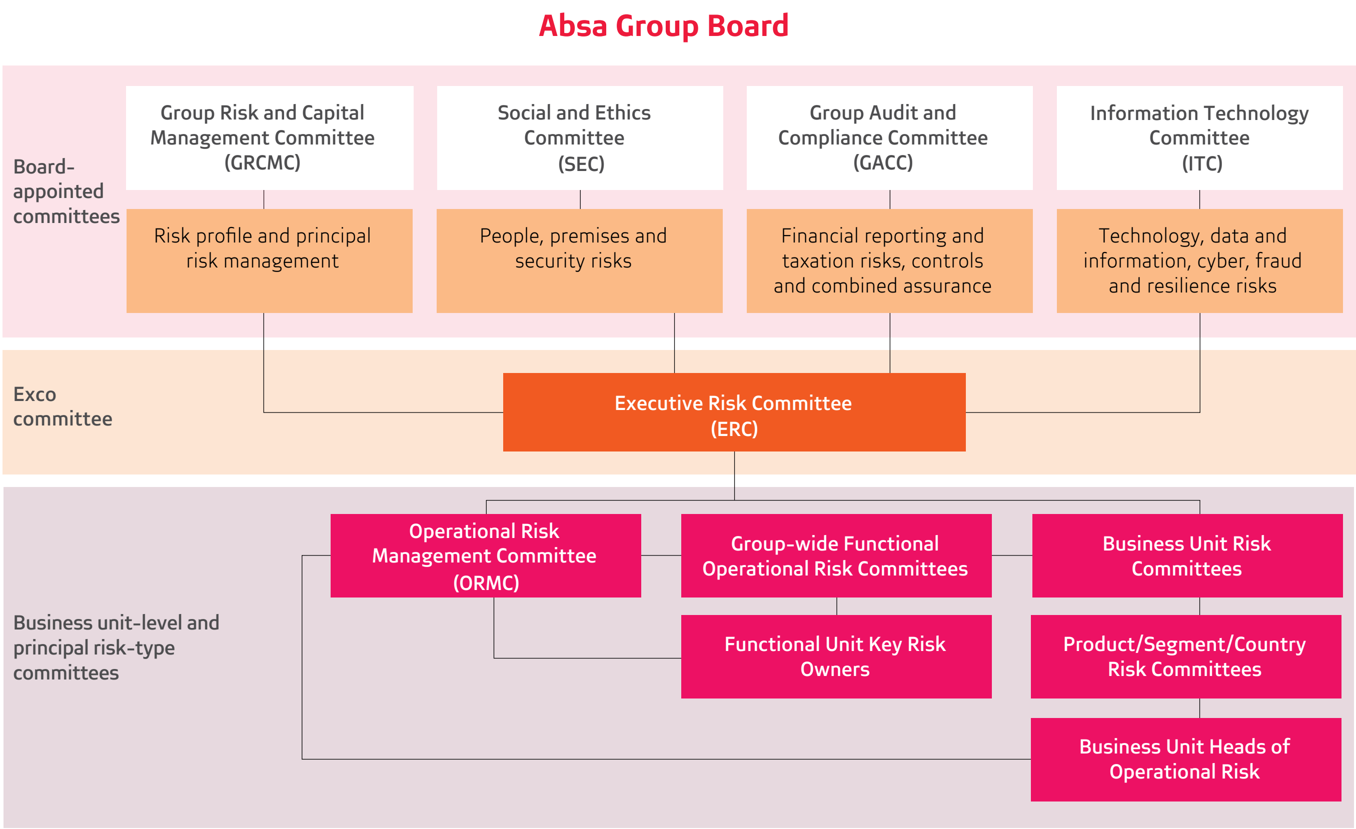
The management of operational risk aligns to the 'three lines of defence' model as set out in the ERMF; with the primary responsibility (i.e. first line of defence) for the management of operational risk residing with the business and infrastructure functional units where the risk arises. The heads of 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.

7.3.2 Governance of operational risk

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



7. Operational risk

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

A Group Operational Risk Management Committee (ORMC) chaired by the head 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:

- Technology
- Cyber
- Fraud
- Data management and information
- Change
- Resilience
- People
- Payments
- Transaction operations
- Financial reporting
- Taxation
- Premises and security
- Supplier

Whilst legal, conduct, reputational and model 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:

7.3.3.1 Critical process assessments (CPAs)

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

7.3.3.2 Internal risk events

An operational risk event is any circumstance where there is a potential or actual impact to the Group resulting from inadequately controlled or failed internal processes, people and systems, or from an external event. The definition includes situations in which a loss could have been incurred, 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.

7.3.3.3 External risk events

Applicable external loss information is regularly considered to support and inform risk identification, assessment, and measurement, and provide management with insight into possible emerging risks. 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.

7. Operational risk

7.3.3.4 Risk mitigation

It is not always possible or cost effective to eliminate all operational risks, nor is this the objective of operational risk management. Achieving the correct balance of focus and effort is pivotal to the Group's operational risk management strategy 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.
- **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 and joint ventures.

7.3.3.5 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 the sustained and shared learning across the organisation; promoting stronger risk management.

7.3.3.6 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, using 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.

Regulatory Capital requirements are set to cover 99.9% of estimated unexpected losses with Economic Capital requirements covering estimated losses that exceed the typical losses.

7.3.4.1 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 assessment of the potential frequency of risk events, the average size of losses and extreme scenarios. The assessment considers 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 is regularly reviewed, and is presented annually to the GRCMC.

8. Model risk

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8. Model risk

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

8.1 Review of current reporting period

- Model development initiatives, completed in 2017, were implemented in early 2018, primarily new IFRS 9 credit impairment models and three regulatory models.
- Significant progress made in the design and implementation of the strategic model implementation platform and migration to this platform has been initiated.

8.2 Priorities

- Enhance model risk management and governance through the implementation of a new workflow tool.
- Continue to focus on the enhancement of the current model suites that support the Group risk appetite assessment.
- Complete migration of existing models to the new platform by 2020.

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 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.

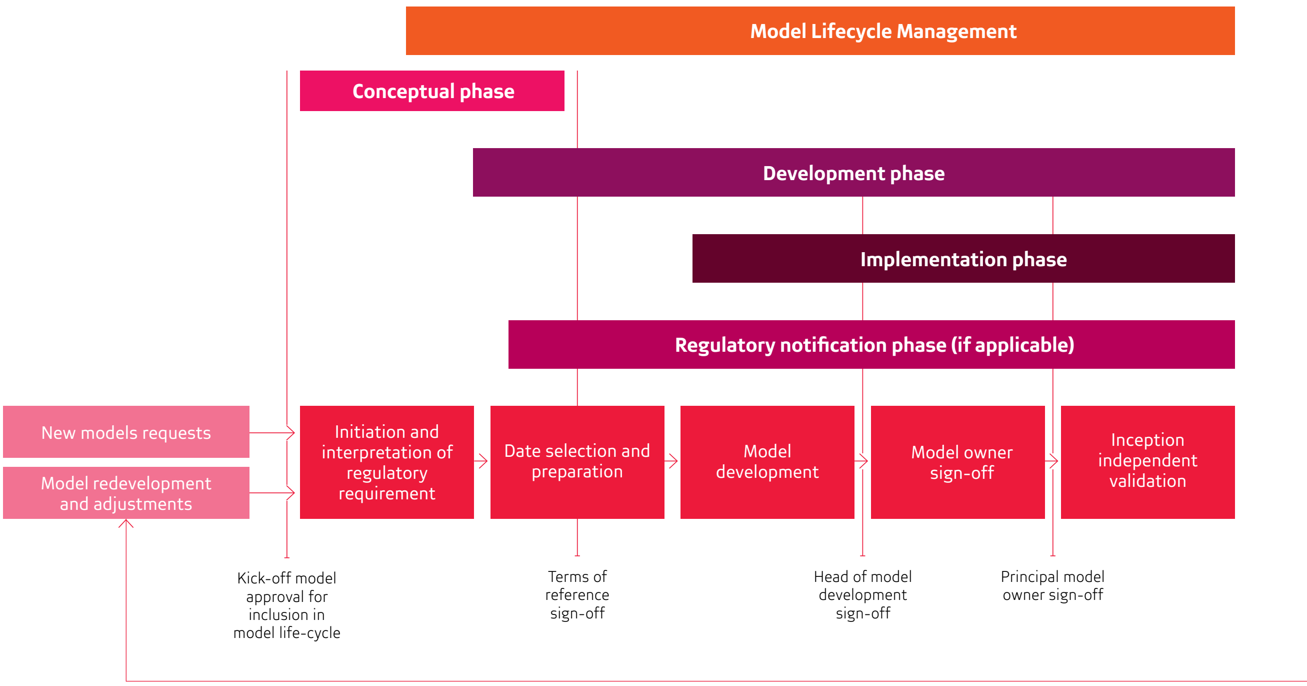
The model risk process is a structured, practical set of three steps, evaluate, respond and monitor, that enables management to identify and assess risks, determine the appropriate risk response, and then monitor the effectiveness of the risk response and any changes to the risk profile.

The Group defines model risk as including the following components:

- Models in use are not identified and correctly registered to facilitate appropriate and effective governance.
- Models are poorly designed, developed, documented and implemented, resulting in model error.
- Models are not monitored, reviewed and updated to assess ongoing fitness for purpose, resulting in model error or misuse.

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.
- Regulatory and audit issues are identified.



8. Model risk

Risk Management

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 institutionalizes 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.
- Model risk management workflow.
- Model monitoring.
- Model implementation.
- Model annual review.
- Post model adjustment.
- Vendor models.

Model risk is managed within approved risk appetite and defined limits. Risk appetite is defined as the level of risk that Absa 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 Absa 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 control 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 control 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.

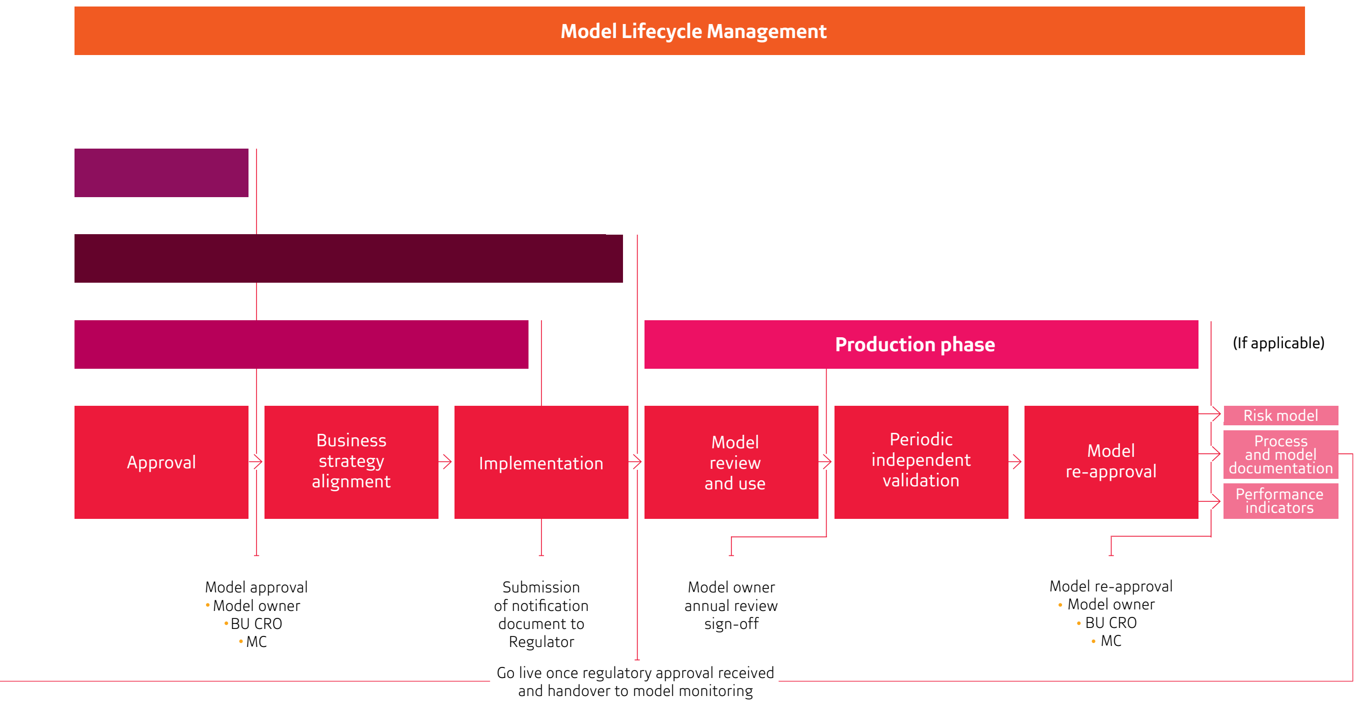
The second line of defence in relation to model risk comprises of Model Governance and Control (MGC) and the Independent Validation Unit (IVU). MGC establishes the framework, policy and standards to manage model risk, sets limits consistent with the Group's risk appetite and monitors performance of the 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.

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 Business Unit Chief Risk Officers (BU CROs) through a model approval forum.

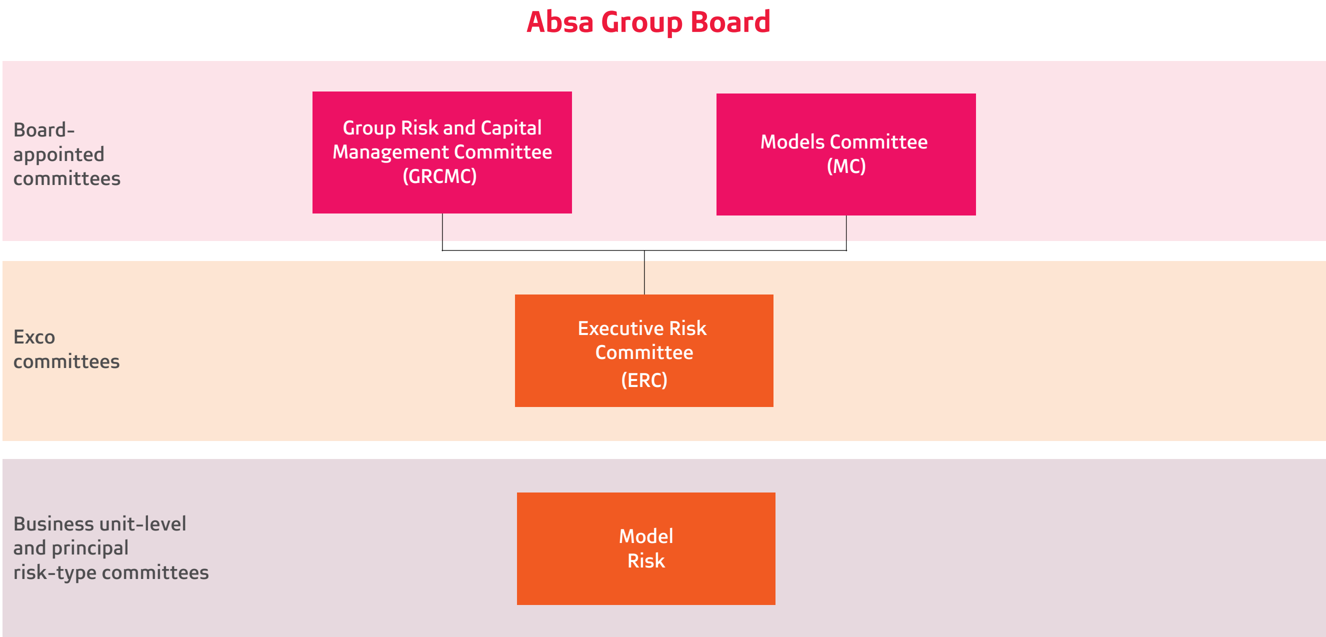


8. Model risk

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.

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. 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, while all the Absa Regional Operations credit portfolios are on the SA. It was confirmed in 2018 that the Edcon portfolio will remain on the standardised approach. The Group has PA approval for the use of the AMA for operational risk and the IMA for market risk.

8. Model risk

The EAD coverage per approach and subject to a roll-out plan is listed below:

	December 2018			December 2017		
	AIRB %	**AIRB roll-out plan %**	**Standardised %**	AIRB %	AIRB roll-out plan %	Standardised %
Retail South Africa	36.5	0.7	–	38.9	0.9	–
Wholesale South Africa	46.2	–	–	45.7	–	–
Absa Regional Operations	–	–	16.6	–	–	14.5
Total	**82.7**	**0.7**	**16.6**	84.6	0.9	14.5

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

	December 2018			December 2017		
	PD #	**LGD #**	**EAD #**	PD #	LGD #	EAD #
Retail South Africa	8	8	8	9	8	8
Wholesale South Africa	13	4	2	13	4	1
Absa Regional Operations	–	–	–	–	–	–
Total	**21**	**12**	**10**	22	12	9

9. Abbreviations and acronyms

9. Abbreviations and acronyms

A	
Absa/Absa Group	Absa Group Limited
AEaR	annual earnings at risk
AFR	available financial resources
AFS	annual financial statements
AIRB	advanced internal ratings-based approach
AMA	advanced measurement approach
ASF	available stable funding
AVM	automated valuation model

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

C	
CAR	capital adequacy requirement
CCF	credit conversion factor
CCO	Chief Credit Officer
CCP	central counterparty
CCR	counterparty credit risk
CEM	current exposure method
CET1	Common equity tier 1
CFP	contingent funding plan
CIB	Corporate and Investment Bank
CLF	committed liquidity facility
CLR	credit loss ratio
CoE	Cost of equity
CRO	Chief Risk Officer
CVA	credit valuation adjustment

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

F	
FIRB	foundation internal rating based
FRTB	Fundamental Review of the Trading Book
FSCA	Financial Sector Conduct Authority
FX	foreign exchange

G	
GACC	Group Audit and Compliance Committee
GCRC	Group Credit Risk Committee
GCCO	Group Chief Credit Officer
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
LTIP	long-term incentive plan

M	
MC	Models Committee
MCA	management control approach
MGC	Models Governance and Control
MR	market risk

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

O	
ORMC	Operational Risk Management Committee
ORMF	Operational Risk Management Framework
ORX	operational risk data exchange
OTC	over-the-counter

9. Abbreviations and acronyms

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
PoPIA	Protection of Personal Information Act
PRO	principal risk officer
PSE	public sector entity
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
RoE	return on average 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
SCR	solvency capital requirement
SEC	Social and Ethics Committee
SFA	supervisory formula approach
SFTs	securities financing transactions
SME	small – and medium-sized enterprises
SPV	special purpose vehicle
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
W	
WIMI	Wealth, Investment Management and Insurance
Y	
Y-o-Y	year-on-year

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