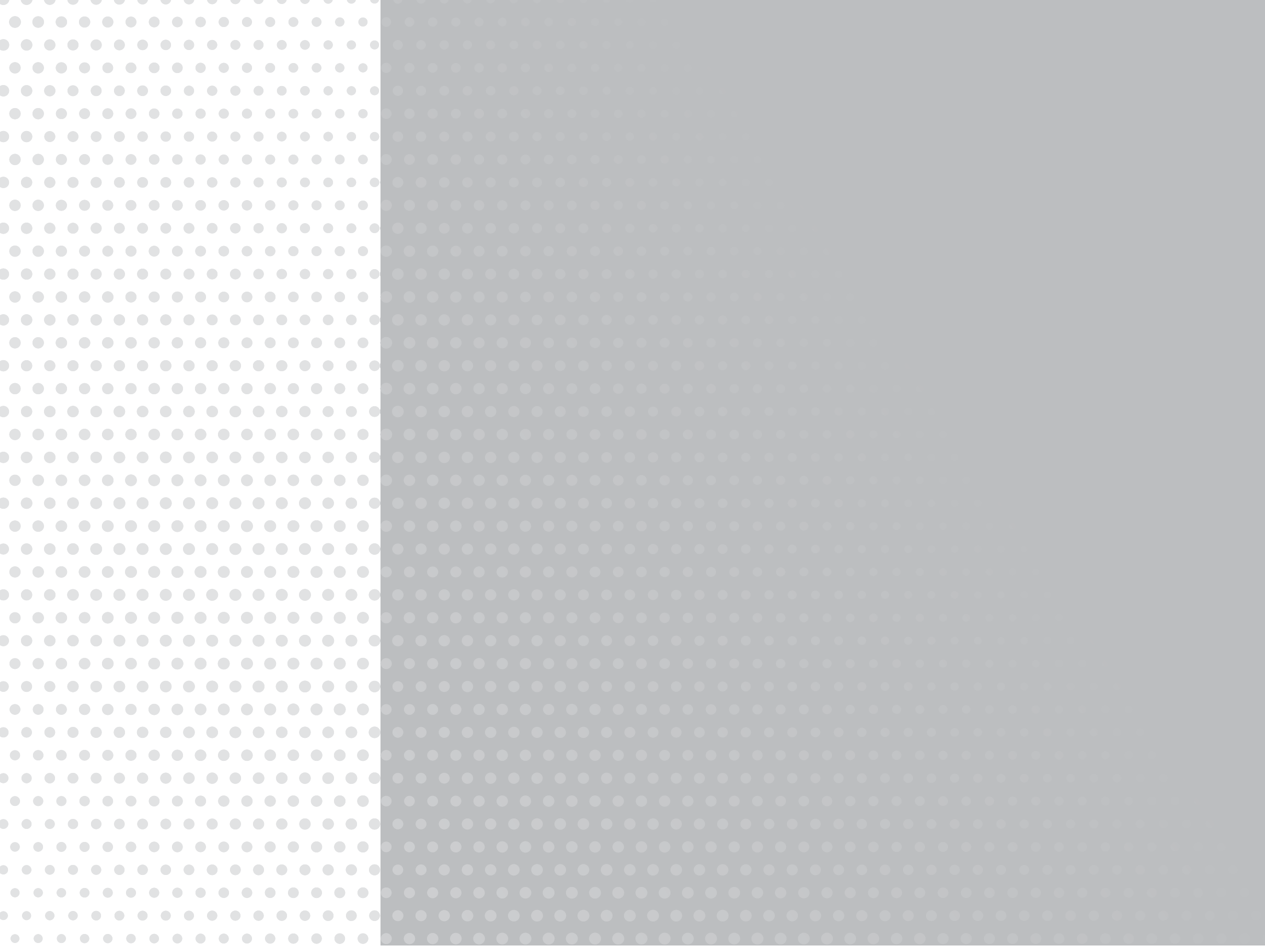
FirstRand



’18 basel pillar 3 disclosure

for the six months ended 31 December

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FirstRand

1966/010753/06
Certain entities within the FirstRand group are Authorised Financial Services and Credit Providers.
This report is available on the group's website:
www.firstrand.co.za

Email questions to
investor.relations@firstrand.co.za

overview of firstrand

FirstRand's portfolio of integrated financial services businesses comprises FNB, RMB, WesBank, Aldermore and Ashburton Investments. The group operates in South Africa, certain markets in sub-Saharan Africa and the UK, and offers a universal set of transactional, lending, investment and insurance products and services. FCC represents group-wide functions.

Overview of risk management

Introduction

This risk and capital management report (Pillar 3 disclosure) covers the operations of FirstRand Limited (FirstRand or the group) and complies with:

- the Basel Committee on Banking Supervision's (BCBS) revised Pillar 3 disclosure requirements (Pillar 3 standard), BCBS 309 published in January 2015, and the consolidated and enhanced framework, BCBS 400 published in March 2017; and
- Regulation 43 of the *Regulations relating to Banks* (Regulations), issued in terms of the Banks Act 94 of 1990, and all Pillar 3 disclosure-related directives issued by the Prudential Authority (PA).

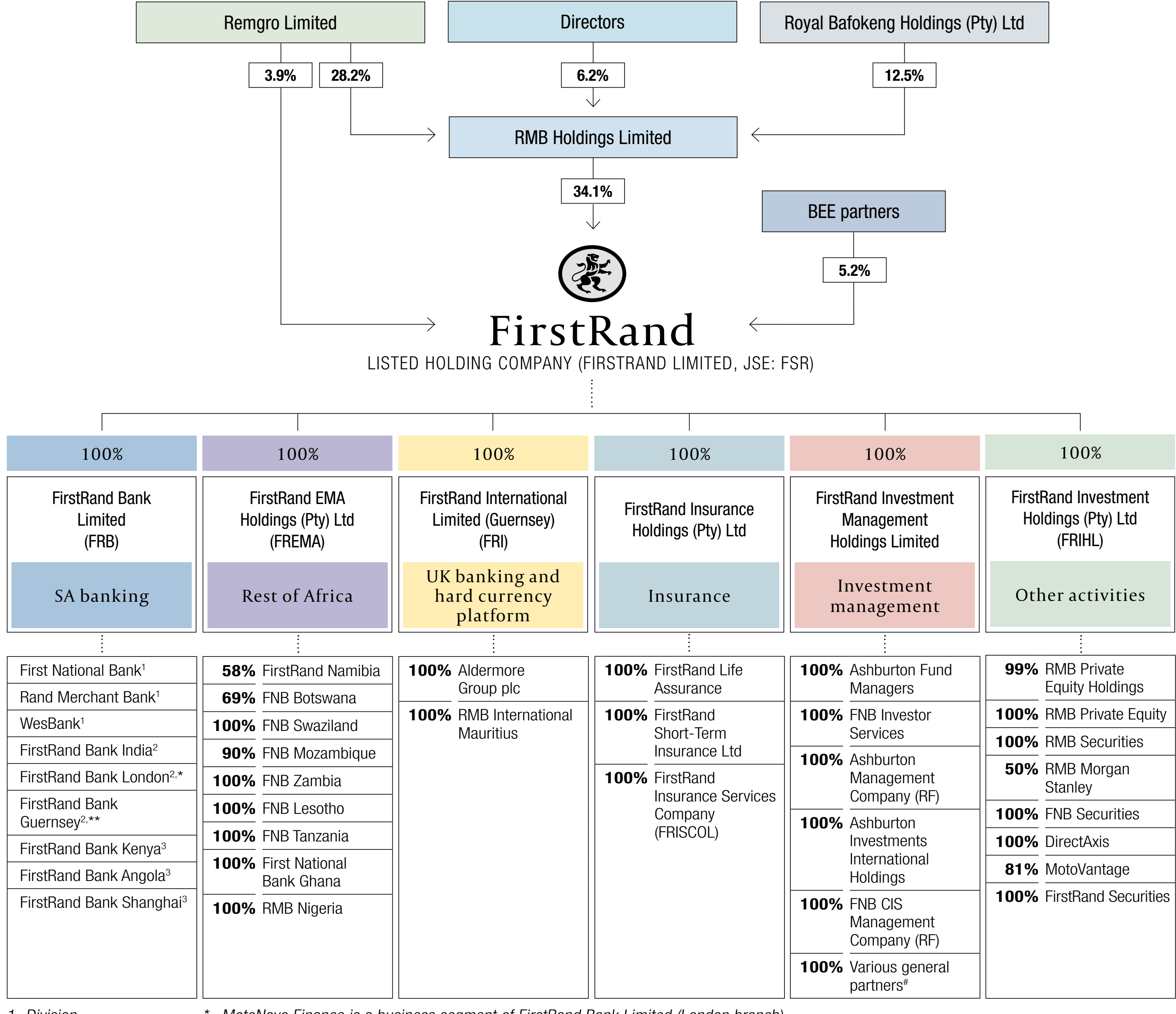
The table references used throughout the Pillar 3 disclosure is in accordance with the Pillar 3 standard, where required.

Some differences exist between the practices, approaches, processes and policies of FirstRand Bank Limited (the bank or FRB) and its fellow FirstRand wholly-owned subsidiaries. These are highlighted by reference to the appropriate entity, where necessary. This report has been internally verified through the group's governance processes, in line with the group's external communication and disclosure policy, and the board is satisfied that this report has been prepared in accordance with the requirements of this policy.

The external communication and disclosure policy describes the responsibilities and duties of senior management and the board in the preparation and review of the Pillar 3 disclosure and aims to ensure that:

- minimum disclosure requirements of the Regulations, standards and directives are met;
- disclosed information is consistent with the manner in which the board assesses the group's risk portfolio;
- the disclosure provides a true reflection of the group's financial condition and risk profile; and
- the quantitative and qualitative disclosures are appropriately reviewed.

Simplified group and shareholding structure



1. Division
2. Branch
3. Representative office

* *MotoNovo Finance is a business segment of FirstRand Bank Limited (London branch).*
** *Trading as FNB Channel Islands.*
# *Ashburton Investments has a number of general partners for fund seeding purposes – all of these entities fall under FirstRand Investment Management Holdings Limited.*

Structure shows effective consolidated shareholding

For segmental analysis purposes entities included in FRIHL, FREMA, FirstRand Investment Management Holdings Limited and FirstRand Insurance Holdings (Pty) Ltd are reported as part of the results of the managing business (i.e. FNB, RMB, WesBank or FCC). The group's securitisations and conduits are in FRIHL, FRI and FRB.

FirstRand strategy

FirstRand Limited is a portfolio of integrated financial services businesses operating in South Africa, certain markets in sub-Saharan Africa, and in the UK. Many of these businesses are leaders in their respective segments and markets, and offer a universal set of transactional, lending, investment and insurance products and services.

FirstRand's strategy accommodates a broad set of growth opportunities across the entire financial services universe from a product, market, segment and geographic perspective. Its approach is to build an integrated financial services value proposition, underpinned by leading digital and data platforms and capabilities.

Group earnings are significantly tilted towards South Africa and are mainly generated by FirstRand's large lending and transactional franchises, which have resulted in deep and loyal customer bases. Many of the expected competitive and regulatory pressures will, however, target these traditional banking operations, particularly the transactional activities, and the group remains focused on protecting that large and profitable revenue stream.

At the same time, FirstRand is working hard to find other sources of capital-light revenues and its strategy to deliver integrated financial services to the group's 8.2 million customers in South Africa is gaining traction. This approach, which is underpinned by the disciplined allocation of financial resources and enabled by disruptive digital and data platforms, allows FirstRand to better optimise the franchise value of its broader portfolio.

The group's strategy outside of its domestic market includes growing its presence and offerings in certain key markets in the rest of Africa, where it believes it can organically build competitive advantage and scale over time.

In the UK, FirstRand recently acquired Aldermore Group plc (Aldermore), a UK specialist lender. It is still in the process of integrating MotoNovo, a leading second-hand vehicle finance business the group has operated in the UK for the past nine years, into Aldermore. Once the integration is complete, additional value for shareholders will be extracted over the medium to longer term through introducing FirstRand's successful financial resource management methodology and unlocking synergies between MotoNovo and Aldermore.

BUSINESS ACTIVITIES AND RESULTANT RISKS

The group's strategy is executed through its portfolio of operating businesses within frameworks set by the group.

	FNB	RMB	WesBank	Aldermore	Ashburton Investments	FCC
Key activities	**Retail and commercial banking, insurance, and wealth and investment management**	**Corporate and investment banking**	**Instalment finance and short-term insurance (VAPS*)**	**Asset and invoice finance, commercial and residential mortgages, and deposit taking**	**Asset management**	**Group-wide functions**
Market segments	> consumer > small business > agricultural > medium corporate > public sector	> financial institutions > large corporates > public sector	> retail and commercial	> retail and commercial	> retail and institutional	> institutional (and internal/ intragroup)
Products and services	> transactional and deposit taking > mortgage and personal loans > credit and debit cards > investment products > insurance products (funeral, risk, credit life) > card acquiring > credit facilities > distribution channels > FNB Connect > wealth and investment management	> advisory > structured finance > markets and structuring > transactional banking and deposit taking > principal investing solutions and private equity	> asset-based finance > full maintenance leasing > personal loans > value-added products and services (short-term insurance)	> asset finance > invoice finance > commercial, buy-to-let and residential mortgages > deposits	> traditional and alternative investment solutions	> group asset/ liability management > funding and liquidity management > funding instruments > capital management > capital issuance > foreign exchange management > tax risk management
Risks	Retail and commercial credit risk	Corporate and counterparty credit risk	Retail, commercial and corporate credit risk	Retail and commercial credit risk		Interest rate risk in the banking book
	Insurance risk	Traded market risk		Interest rate risk in the banking book		Funding and liquidity risk
				Funding and liquidity risk		Foreign exchange risk
	Equity investment risk					
	Operational risk					
Other risks	Strategic, business, reputational, model, environmental and social, tax, and regulatory and conduct risks					

* *Value-added products and services.*

Risk profile

The following table provides a high-level overview of FirstRand's risk profile in relation to its quantitative return and risk appetite measures.

	SIX MONTHS ENDED 31 DECEMBER 2018	RETURN AND RISK APPETITE – QUANTITATIVE MEASURES	PERIOD UNDER REVIEW
GROWTH AND RETURNS	**Normalised ROE** **22.3%** December 2017: 22.5% June 2018: 23.0%	**Normalised ROE** Long-term target **18% – 22%**	The quality of the group's operating businesses' growth strategies and disciplined allocation of financial resources has over time enabled the group to deliver on its earnings growth and return targets. The *Analysis of financial results for the six months ended 31 December 2018* booklet provides an overview of the group's financial position and performance.
	Normalised earnings growth **+7%** December 2017: +7% June 2018: +8%	**Normalised earnings growth** Long-term target **Nominal GDP plus >0% – 3%**	
SOLVENCY	**Capital adequacy** **14.8%** December 2017: 16.9% June 2018: 14.7%	**Capital adequacy** Target **>14%**	The group's capital ratios exceeded its internal targets at 31 December 2018. The group continues to actively manage its capital composition, and to this end, issued its first Basel III-compliance Additional Tier 1 (AT1) instrument (R2.3 billion) in the domestic market. It follows the successful issuance of FRB's inaugural $500 million Tier 2 bond in the international market. This resulted in a more efficient composition, which is closely aligned with the group's internal targets. The Basel III leverage ratio is a supplementary measure to the risk-based capital ratio and, is a function of the Tier 1 capital measure and total on- and off-balance sheet exposures. FirstRand has maintained a leverage ratio above its internal targets.
	Tier 1 **12.6%** December 2017: 14.6% June 2018: 12.1%	**Tier 1** Target **>12%**	
	CET1 **12.0%** December 2017: 14.0% June 2018: 11.5%	**CET1** Target **10% – 11%**	
	Leverage **7.4%** December 2017: 8.5% June 2018: 7.1%	**Leverage** Target **>5%**	

Note: Capital and leverage ratios include unappropriated profits. CET1 - Common Equity Tier 1.

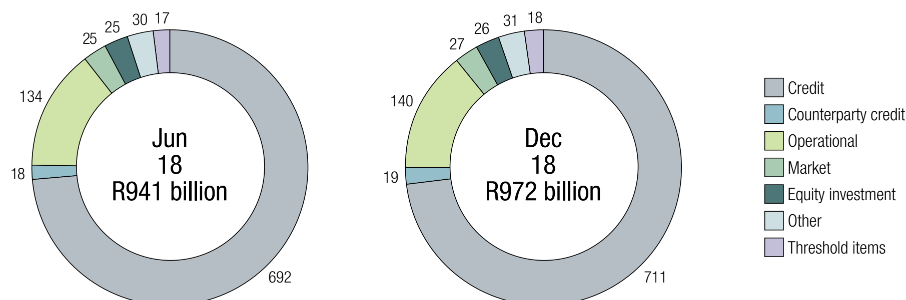
LIQUIDITY	**LCR** **122%** December 2017: 107% June 2018: 115%	**LCR** Minimum regulatory requirement: **90%** December 2017: 80% June 2018: 90%	FirstRand continued to actively manage liquidity buffers through high-quality, highly liquid assets that are available as protection against unexpected events or market disruptions. The group exceeded the 90% minimum liquidity coverage ratio (LCR) with an average LCR of 122% over the quarter ended 31 December 2018. At 31 December 2018, the group's average available high-quality liquid assets (HQLA) holdings amounted to R216 billion.
	NSFR **112%** December 2017: n/a June 2018: 112%	**NSFR** Minimum regulatory requirement: **100%** December 2017: n/a June 2018: 100%	The net stable funding ratio (NSFR) became effective on 1 January 2018 with a minimum regulatory requirement of 100%. The group exceeded the 100% minimum requirement with an NSFR of 112% at 31 December 2018.

EXPOSURES PER RISK TYPE		RETURN AND RISK APPETITE – QUANTITATIVE MEASURES FOR THE SIX MONTHS ENDED 31 DECEMBER 2018	PERIOD UNDER REVIEW
	Credit risk	**Normalised NPLs** **3.2%** December 2017: 2.33% June 2018: 2.36%	Group credit impairments, excluding Aldermore, increased 19% period-on-period, resulting in a group credit loss ratio of 96 bps, compared to 87 bps at December 2017 and 90 bps at June 2018. The group impairment charge, including Aldermore, was 86 bps. IFRS 9 had a material impact on the increase in NPLs due to the inclusion of interest in suspense in NPLs, the lengthening of the write-off period from six months to 12 months for retail unsecured loans, and a more stringent definition of customer rehabilitation which results in customers staying in NPLs for longer.
		Normalised credit loss ratio **86 bps** (including Aldermore) **96 bps** (excluding Aldermore) December 2017: 87 bps* June 2018: 90 bps* Long-run average **100 – 110 bps**	
	Market risk	**10-day expected tail loss** **R527 million** December 2017: R434 million June 2018: R464 million	The interest rate asset class represented the most significant traded market risk exposure at 31 December 2018. The group's market risk profile remained within risk appetite.
	Equity investment risk	**Equity investment carrying value as % of Tier 1** **9.5%** December 2017: 11.0% June 2018: 11.7%	The period under review was characterised by some realisations and R800 million of new private equity investments. The quality of the investment portfolio remains acceptable and within risk appetite. The decrease in equity investment carrying value as a percentage of Tier 1 is due to a higher Tier 1 balance as at 31 December 2018. The unrealised value in the portfolio was approximately R3.7 billion at 31 December 2018 (December 2017: R3.4 billion).
	Interest rate risk in the banking book	**Net interest income sensitivity** **Down 200 bps** **-R2.8 billion** December 2017: -R2.6 billion June 2018: -R3.4 billion **Up 200 bps** **R2.1 billion** December 2017: R1.9 billion June 2018: R3.1 billion	Assuming no change in the balance sheet nor any management action in response to interest rate movements, an instantaneous, sustained parallel 200 bps decrease in interest rates would result in a reduction in projected 12-month net interest income (NII) of R2.8 billion. A similar increase in interest rates would result in an increase in projected 12-month NII of R2.1 billion. The group's average endowment book was R231 billion (excluding Aldermore) for the period.

* *Excluding Aldermore.*

Following the acquisition of Aldermore in the 2018 financial year, the charts below reflect the risk weighted assets (RWA) composition as at 30 June 2018 and 31 December 2018. The group's RWA distribution shows that credit risk remains the most significant contributor to the group's overall risk.

RWA ANALYSIS
R billion



Current and emerging challenges and opportunities

Identifying and monitoring challenges emerging in the wider operating environment and risk landscape domestically, in the rest of Africa and the UK, are integral to the group's approach to risk management. Challenges in the global environment are also monitored to identify possible impacts on the group's operating environment.

These challenges and associated risks are continuously identified and potential impacts determined, reported to and debated by appropriate risk committees and management.

CURRENT AND EMERGING CHALLENGES	OPPORTUNITIES AND RISK MANAGEMENT FOCUS AREAS
Strategic and business risks	
> The macroeconomic environments in most of the jurisdictions in which the group operates remained challenging in the period to December 2018. Globally it was a mixed picture with growth slowing in the euro zone, Japan, China and a few emerging economies. Although economic activity in the US remained relatively robust, US financial markets came under pressure and global financial conditions tightened. The US Federal Reserve has subsequently been more measured in statements relating to rate increases. > Although global growth remained fairly supportive of commodity prices, tightening financial conditions and increased geopolitical uncertainty resulted in increased risk aversion and reduced capital flows to emerging economies. The South African Reserve Bank (SARB) increased interest rates, which attracted capital inflows or, at least, reduced the pace of outflows, as domestic policy uncertainty and political instability continued to weigh on GDP growth, and investor and consumer sentiment. > Intensifying competition in banking profit pools from non-traditional competitors (specifically those with low-cost infrastructures) and insurance players. > Policy uncertainty is high with challenges remaining around the mining charter, state-owned enterprises' (SOEs) financial stability, particularly Eskom, and labour markets. > In the UK, the macros continued to be impacted by the uncertain political outcomes relating to its exit from the European Union (which is likely to formally take effect at the end of March 2019). Notwithstanding this uncertainty, consumer demand and house prices held up reasonably well and the Bank of England is expected to join the US Federal Reserve and other developed markets in gradually tightening monetary policy.	> Developments in South Africa and other key markets are monitored with appropriate responses, adjustments and proactive financial resource management actions implemented, where required. > Credit origination and funding strategies are assessed and adjusted considering macroeconomic conditions and market liquidity.
Funding, liquidity and capital	
> The current environment of increasing cost and scarcity of financial resources, and potential for global financial market volatility, poses risks for FirstRand's funding, liquidity and capital profile. > The PA regulatory minimum capital requirements, which include buffer add-ons for domestic systemically important banks (D-SIB), the countercyclical buffer (CCyB) and the capital conservation requirements, are incorporated in the targets set for the group. Regulatory reforms including proposed Basel III reforms may pose further risks for capital levels.	> The group continues to focus on growing its deposit franchise through innovative products, as well as focusing on improving the risk profile of its institutional funding. > FirstRand has continued to exceed internal capital targets with ongoing focus on optimising the capital stack and RWA. > The impact of the proposed regulatory reforms continues to be assessed and incorporated into the group's capital planning.

CURRENT AND EMERGING CHALLENGES	OPPORTUNITIES AND RISK MANAGEMENT FOCUS AREAS
Credit and counterparty credit risk	
> Credit risk remains high due to a macroeconomic environment characterised by low economic growth, structural constraints, high structural unemployment, and rising income and wealth disparity. > Credit and counterparty credit risks are impacted by the sovereign rating, policy uncertainty and financial distress of several large SOEs.	> Despite challenging economic conditions, the group is benefiting from prudent risk mitigation measures in place. > Developments in the corporate and public sector are closely monitored and managed. > The group reviews risk appetite and credit origination strategies on an ongoing basis. > Sovereign rating actions are also monitored, together with the ratings of associated entities, with proactive revisions where required. > IFRS 9 came into effect on 1 July 2018.
Traded market risk	
> Overall diversified levels of market risk increased over the period. There were no significant concentrations in the portfolio.	> Given the impending regulatory changes outlined in the BCBS's documents, *Fundamental review of the trading book* and BCBS 239, RMB is reviewing the current target operating platform for market risk activities, considering platform capabilities across both front office and risk-management areas, and aligning market risk processes, analyses and reporting in line with these requirements.
Interest rate risk in the banking book and structural foreign exchange risk	
> The SARB increased interest rates by 25 bps in November 2018, with no further increases expected in the current financial year.	> The group is addressing the new BCBS requirements for interest rate risk in the banking book (IRRBB). > FirstRand actively manages the endowment book. > The group monitors its net open foreign currency position against limits, assesses and reviews foreign exchange exposures and continues to focus on enhancing the quality and frequency of reporting.
Operational, IT and information governance risk	
> Operational risk is driven by ongoing challenges in the IT environment, growing sophistication of cybercrime, operational challenges in meeting various new regulatory requirements across multiple jurisdictions, current group-wide projects to replace key legacy systems, the risk of process breakdowns, vendor risk and organisational change. > The impact of external factors on business operations, such as disruptive protest actions, electricity supply shortages and interruptions, pose a risk to operations and require management to continuously review contingency plans to ensure minimal business disruption. > Increased business digitisation (including robotics and artificial intelligence) introduces additional IT risk due to the demand and speed of digital technology adoption.	> Continue to address possible control weaknesses, ongoing improvements in system security, IT risk processes and operational business resilience capability. > Integrated group cybercrime strategy and cyber incident response planning. > Continue to improve risk data management, aggregation and reporting. > Align IT and related frameworks and risk management practices with existing operational risk processes and practices, and changing business models and technological landscape. > Enhancement of vendor risk management processes. > Improve information management capabilities and the control environment, and roll out awareness programmes on records management, data quality and data privacy management.
Regulatory and conduct risk	
> The Twin Peaks system of financial regulation was implemented in April 2018. This has resulted in the creation of the PA and the Financial Sector Conduct Authority (FSCA) to govern prudential regulation and market conduct, respectively. > Regulatory and conduct risk management is impacted by the changing regulatory landscape and the ongoing introduction of new/amended regulations and legislation, and pressure on resources which could impact profitability over the medium to long term. > Heightened scrutiny and monitoring by regulators and other stakeholders on regulatory compliance and ethical conduct.	> Continue to make significant investments in people, systems and processes to manage risks emanating from the large number of new and amended local and international regulatory requirements, market conduct reforms, data privacy and financial crime legislation and others. > Focus on monitoring the risk culture with clear prevention and remediation frameworks. > Risk mitigation strategies are focused on the integration of conduct risk controls into business-as-usual processes, the repositioning of certain programmes to cater for regulatory changes, the active management of conflicts of interest and creating greater awareness of these matters at every level of the organisation.

Risk management approach

FirstRand believes that effective risk, performance and financial resource management is key to its success and underpins the delivery of sustainable returns to shareholders. These disciplines are, therefore, deeply embedded in the group's tactical and strategic decision-making.

The group believes a strong balance sheet and resilient earnings streams are key to growth, particularly during periods of uncertainty. FirstRand's businesses have consistently executed on a set of strategies which are aligned to certain group financial strategies and frameworks designed to ensure earnings resilience and growth, balance sheet strength, an appropriate risk/return profile and an acceptable level of earnings volatility under adverse conditions. These deliverables are underpinned by frameworks set at the centre to ensure financial discipline. These frameworks include:

RISK MANAGEMENT FRAMEWORK	PERFORMANCE MANAGEMENT FRAMEWORK	RISK/RETURN AND FINANCIAL RESOURCE MANAGEMENT FRAMEWORKS
Key principles: > ensure material risks are identified, measured, monitored, mitigated and reported; > assess impact of the cycle on the group's portfolio; > understand and price appropriately for risk; and > originate within cycle-appropriate risk appetite and volatility parameters.	**Key principles:** > allocate capital appropriately; > ensure an efficient capital structure with appropriate/conservative gearing; and > ensure economic value creation, which is measured as net income after capital charge (NIACC), the group's key performance measure.	**Key principles:** > execute sustainable funding and liquidity strategies; > protect credit ratings; > preserve a "fortress" balance sheet that can sustain shocks through the cycle; and > ensure group remains appropriately capitalised.

The group defines risk widely. It is any factor that, if not adequately assessed, monitored and managed, may prevent it from achieving its business objectives or result in adverse outcomes, including reputational damage.

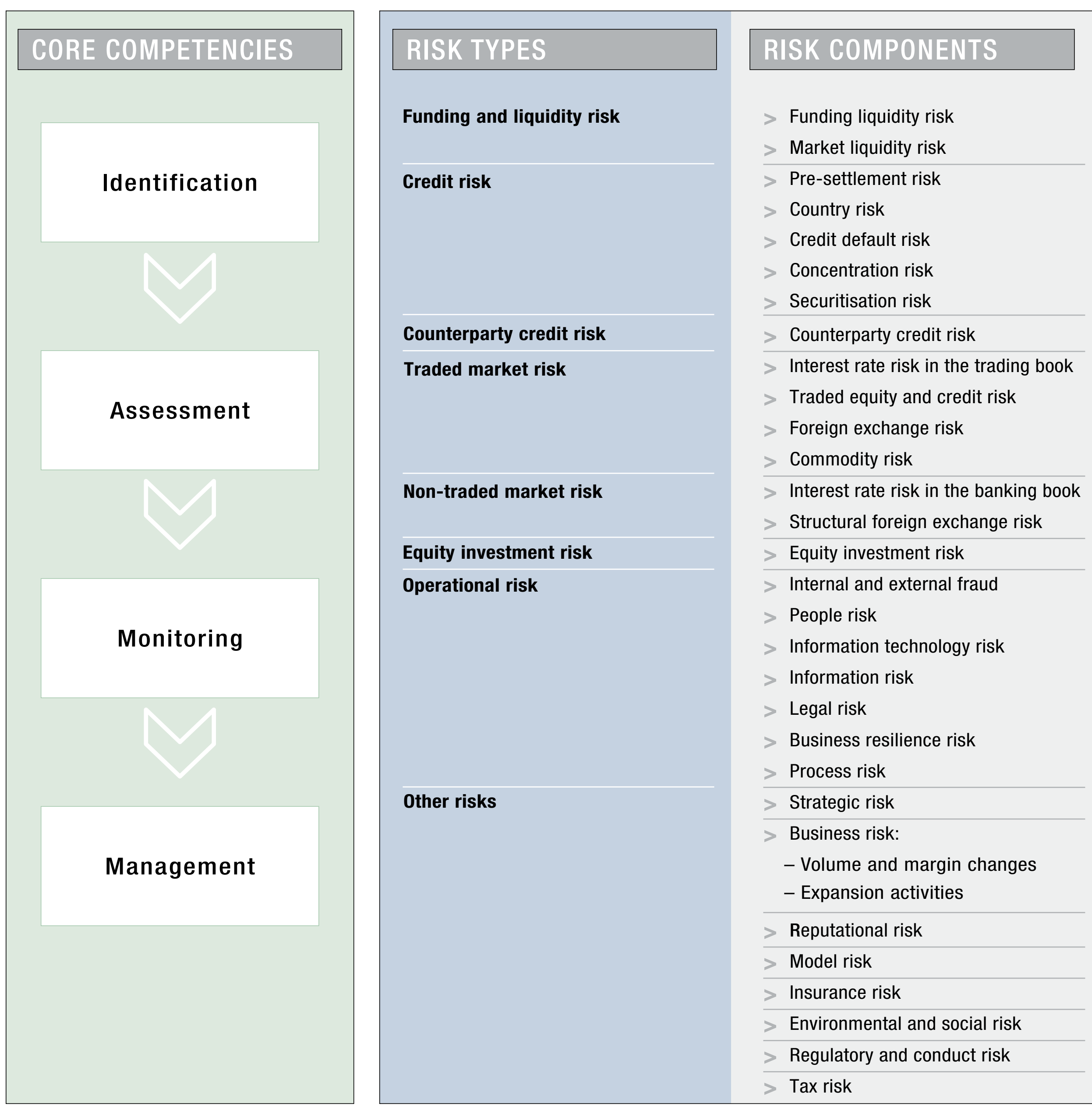
Risk taking is an essential part of the group's business and the group explicitly recognises core risk competencies as necessary and important differentiators in the competitive environment in which it operates. These core risk competencies include identifying, assessing, monitoring and managing risk, and are integrated in all management functions and business areas across the group.

They provide the checks and balances necessary to ensure sustainability and performance, create opportunity, achieve desired objectives, and avoid adverse outcomes and reputational damage.

A business profits from taking risks but will only generate an acceptable profit commensurate with the risk associated with its activities if these risks are properly managed and controlled. The group's aim is not to eliminate risk, but to achieve an appropriate balance between risk and reward. This balance is achieved by controlling risk at the level of individual exposures, at portfolio level, and across all risk types and businesses through the application of the risk appetite framework. The group's risk appetite framework enables organisational decision-making and is aligned with FirstRand's strategic objectives. Refer to page 19 for more on the group's return and risk appetite framework.

The following table illustrates the core competencies that form part of the group's risk management processes across key risk types and components.

CORE RISK COMPETENCIES AND KEY RISKS



Risk limits established across risk types are an integral part of managing risk and are instrumental in constraining risk taking within risk appetite. The risks, and the roles and the responsibilities of each stakeholder in business, support and the various control functions, in the management of these risks are described in the group's business performance and risk management framework (BPRMF).

Risk governance

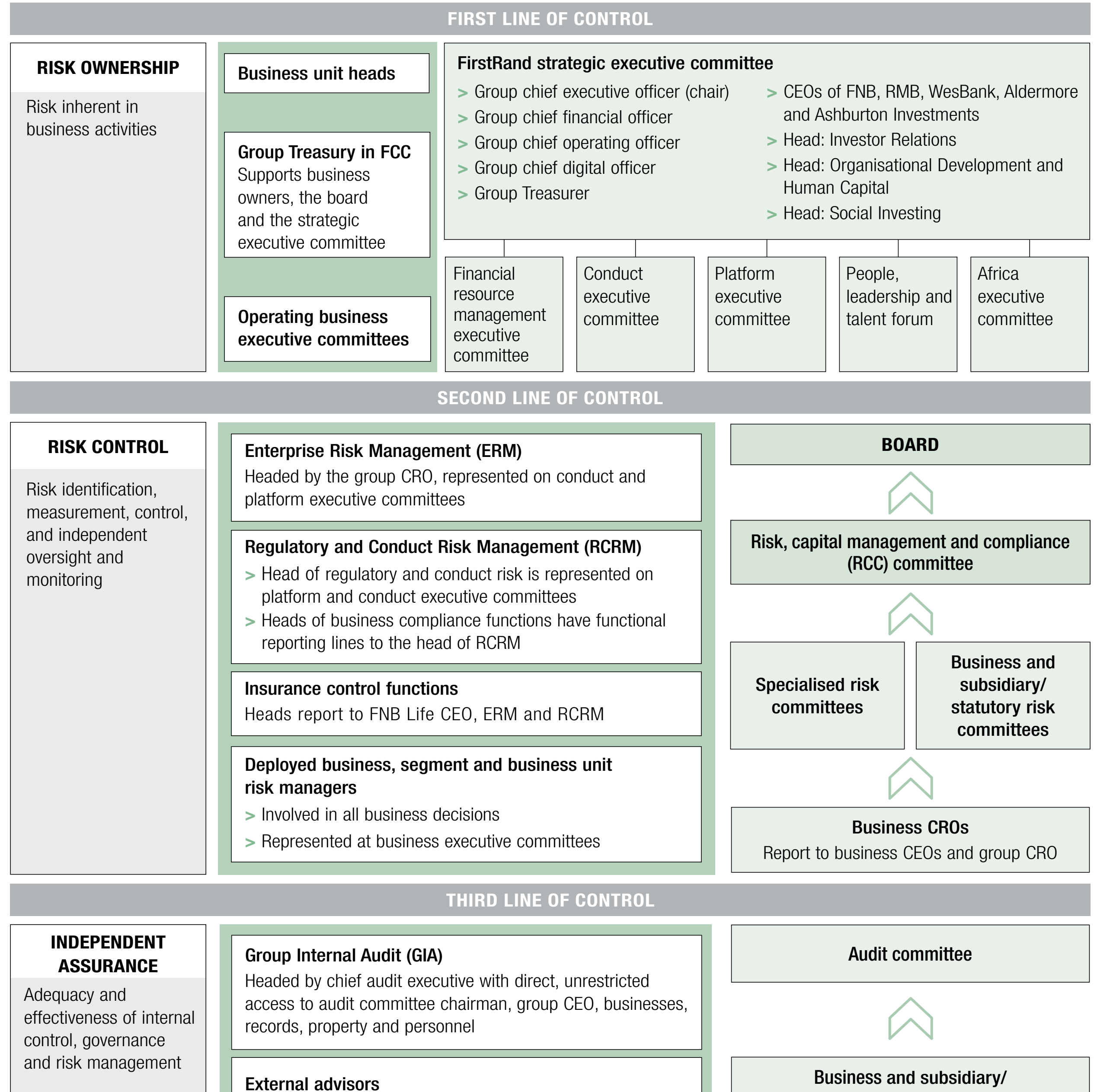
The group believes that effective risk management is supported by effective governance structures, robust policy frameworks and a risk-focused culture. Strong governance structures and policy frameworks foster the embedding of risk considerations in business processes and ensure that consistent standards exist across the group. In line with the group's corporate governance framework, the board retains ultimate responsibility for providing strategic direction, setting risk appetite and ensuring that risks are adequately identified, measured, monitored, managed and reported on.

RISK GOVERNANCE FRAMEWORK

The group's BPRMF describes the group's risk management structure and approach to risk management. Effective risk management requires multiple points of control or safeguards that should consistently be applied at various levels throughout the organisation. There are three lines of control across the group's operations, which are recognised in the BPRMF along with the business functions, committee structures and risk universe as illustrated in the diagram below.

Aldermore employs the three lines of control model in managing its risks in line with the FirstRand model. Its risk and governance committees report to the group's risk and governance committees. Aldermore's executive committee reports to the Aldermore board.

LINES OF RISK CONTROL



RISK GOVERNANCE STRUCTURE

The risk management structure is set out in the group's BPRMF. As a policy of the board, the BPRMF delineates the roles and responsibilities of key stakeholders in business, support and control functions across the group.

The primary board committee overseeing risk matters across the group is the FirstRand RCC committee. It has delegated responsibility for a number of specialist topics to various subcommittees. Further detail on the roles and responsibilities of the RCC committee and its subcommittees relating to each risk type is provided in the major risk sections of this report.

Additional risk, audit and compliance committees exist in the operating businesses, segments and subsidiaries, the governance structures of which align closely with that of the group, as illustrated in the risk governance structure diagram. Changes to the group's internal operating model to execute on the group's integrated financial services strategy resulted in the creation of the Retail and Commercial segment committees to replace the FNB committees, and the Corporate and Institutional segment committees to replace the RMB committees. With the acquisition of Aldermore in 2018, its audit and board risk committees were integrated into the group's governance structure. The segment audit, risk and compliance committees support the board risk committees and RCC subcommittees in the third line of control. The diagram on the next page illustrates how the risk committees fit into the board committee structure and the risk coverage of each committee.

Other board committees also exist, with clearly defined responsibilities. The group board committees comprise members of business advisory boards, audit and risk committees to ensure a common understanding of the challenges businesses face and how these are addressed across the group. The strategic executive committee ensures alignment of business strategies, implements the risk/return framework and is responsible for optimal deployment of the group's resources.

RISK GOVERNANCE STRUCTURE

FIRSTRAND BOARD

Management committees

- **Strategic executive committee**
  - Financial resource management executive committee
  - Conduct executive committee
  - Platform executive committee
  - People, leadership and talent forum
  - Africa executive committee

These committees oversee strategic, business and conduct risk

Board risk committees

- Audit committee
- Large exposures committee
- Information technology risk and governance committee
- Risk, capital management and compliance committee

Specialised risk committees	Risk coverage
Credit risk management committee	Credit risk Counterparty credit risk
Market and investment risk committee	Traded market risk Equity investment risk
Model risk and validation committee	Model risk
Asset, liability and capital committee	Non-traded market risk Funding/liquidity risk Capital management
Compliance and conduct risk committee	Regulatory and conduct risk
Tax risk committee	Tax risk
Operational risk committee	Operational risk
Information governance committee	Information governance

Business and subsidiary/statutory risk governance structure

- WesBank audit, risk and compliance committee
  - Retail and Commercial audit committee
  - Retail and Commercial risk and compliance committee
- Corporate and Institutional audit committee
- Corporate and Institutional risk, capital and compliance committee
- FCC audit, risk and compliance committee
- FirstRand Investment Management Holdings Limited audit, risk and compliance committee
- Aldermore audit and board risk committees
- Rest of Africa subsidiary risk and audit committees
- FirstRand Insurance Holdings audit and risk committee

COMBINED ASSURANCE

The audit committee oversees formal enterprise-wide governance structures for enhancing the practice of combined assurance at group and business levels. The primary objective is for the assurance providers to work together with management to deliver the appropriate assurance cost effectively. Assurance providers in this model include GIA, senior management, ERM, RCRM and external auditors. The combined outcome of independent oversight, validation and audit tasks performed by the assurance providers ensure a high standard across methodologies, and operational and process components of the group's risk and financial resource management functions.

The group established a combined assurance forum, supported by business combined assurance forums, with the primary objective to assist the audit committee in discharging its responsibilities on the integration, coordination and alignment of the various risk management and assurance processes and activities across the group. Combined assurance is firmly embedded in the organisation and drives consistent reporting to relevant governance committees.

Combined assurance results in a more efficient assurance process through the reduction of duplication, more focused risk-based assurance against key risk themes and control areas, and heightened awareness of emerging issues, resulting in the implementation of robust, collaborative and appropriate preventative and corrective action plans.

RISK INFORMATION REPORTING

PROCESS OF RISK REPORTING

The group's robust and transparent risk reporting process enables key stakeholders (including the board and the strategic executive committee) to get an accurate, complete and reliable view of the group's financial and non-financial risk profile and enables management to make appropriate strategic and business decisions.

Reporting of risk information follows the governance structure illustrated on page 14. Specialised risk committees and business audit, risk and compliance committees report to the RCC committee and its subcommittees, as well as to relevant executive committees on risk profile, material risk exposures, risk-adjusted business performance and key risk issues. The RCC committee submits its reports and findings to the board, and highlights control issues to the audit committee.

Regular risk reporting enables the board, senior management, RCC committee and relevant subcommittees to evaluate and understand the level and trend of material risk exposures and the impact on the group's capital position, and to make timely adjustments to the group's future capital requirements and strategic plans.

The RCC committee, in turn, submits reports to the board on:

- the group's risk profile, significant issues, key risk exposures, risk rating trends, board risk appetite principles and board risk limits;
- effectiveness of processes on corporate governance, risk management, capital management and capital adequacy;
- level of compliance or non-compliance with laws and regulations, and supervisory requirements;
- internal control and regulatory material malfunction;
- contravention of codes of conduct or ethics, personal trading, or unethical behaviour by any director; and
- limits, authorities and delegations granted to the RCC committee.

GIA provides a written assessment on the adequacy and effectiveness of the system of internal controls (including financial controls) and risk management to the audit committee. This enables the board to report on the effectiveness of the system of internal controls in the annual integrated report.

SCOPE AND CONTENT OF RISK REPORTING

Risk reports to the board, board risk committees, business risk and audit committees, and senior management include the following:

- risk exposure and risk-adjusted business performance;
- feedback on implementation and monitoring of risk management processes;
- comparison of risk management performance against risk appetite, limits and indicators;
- periodical review of process against and deviation from the risk management plan;
- changes in external and internal environment and their possible impact on the group's risk profile;
- the impact of environmental changes on the strategic risk profile of the group;
- assessment of whether risk responses are effective and efficient in both design and operation;
- tracking of implementation of risk responses;
- analysis and lessons learnt from changes, trends, successes, failures and events; and
- identification of emerging risks.

As part of the reporting, interrogation and control processes, ERM drives the implementation of more sophisticated risk assessment methodologies through the design of appropriate policies and processes, including the deployment of skilled risk management personnel in every business.

ERM ensures and GIA provides assurance that all pertinent risk information is accurately captured, evaluated and escalated appropriately and timeously. This enables the board and its designated committees to retain effective control over the group's risk position.

RISK DATA AGGREGATION AND RISK REPORTING

The BCBS published BCBS 239 in January 2013. This paper presents a set of principles to strengthen banks' risk data aggregation capabilities and internal risk reporting practices. In turn, effective implementation of the principles is expected to enhance risk management and decision-making processes at banks. D-SIBs were required to comply with the principles by 1 January 2017.

Management recognises the need to comply, as well as the scope and complexity of remediation efforts. A strategic yet pragmatic approach has been adopted for implementation. Significant investment, commitment and notable progress has been made with the implementation of the principles, taking cognisance of the strategic data roadmap, supported by business IT strategies.

The involvement of GIA from the outset of the BCBS 239 programme, the development of the Banking Association of South Africa (BASA) audit guidelines and benchmarking the group's implementation approach against international best practice has improved the group's understanding of the principles.

Despite the challenges posed by the complexity, scope and scale of the requirements, the group remains committed to ensure implementation of the principles in line with the scope and timelines agreed with the PA. GIA is validating the group's compliance status on an ongoing basis.

RISK CULTURE

The group recognises that effective risk management requires an appropriate risk culture. The group distinguishes between corporate culture (how values are lived in the group) and risk culture (support for and attitudes towards risk management).

Significant determinants are ethical leadership, flow of information, reporting integrity and customer focus.

The group's risk culture is intended to ensure effective risk management and controls. It places primary responsibility for risk management on the first line of control (risk ownership), while designating specific risk management-related duties and responsibilities to the second (risk control) and third (independent assurance) lines of risk control.

The group believes its risk culture is underpinned by the following:

- competent and ethical leadership in setting strategy, risk appetite and a positive attitude towards applying appropriate risk practices;
- robust risk governance structures to ensure risk policy frameworks are visible and implemented, and that appropriate committee structures and membership exist;
- best practice risk identification, measurement, monitoring, management and reporting; and
- a broader organisational culture which drives appropriate business ethics practices and supports risk management goals, and which provides a balance between skills and ethical values, and ensures accountability for performance.

In support of a sound risk culture, the group manages conduct risk programmes with appropriate levels of employee training and communication to ensure responsible conduct. The programmes are further described in the *regulatory and conduct risk* section.

The group has established clear parameters to assess its risk culture rating. This is outlined in the following diagram.

RISK CULTURE ASSESSMENT FRAMEWORK

THEMES

- Ethical and competent leadership
- Accurate and timely flow of information with appropriate disclosure
- Ethical treatment of clients and ethical clients

PARAMETERS

Tone from the top	Setting risk goals	Providing resources and sound platforms	Aligning measurement and rewards
ACTIVITIES			
> ensuring an ethical and competent leadership pipeline – recruitment, promotion and dismissal; > developing management structures and forums that encourage openness; and > zero tolerance for unethical conduct or whistle-blower victimisation.	> ensuring risk management goals, policies and standards are set and communicated throughout the group; and > ensuring that ethics and accountability to risk management parameters are acknowledged to be as important as efficiency, innovation and profit.	> ensuring risk management goals are attainable by adequately staffing risk management functions; > applying fit-and-proper tests for key risk roles; and > embedding risk controls in business platforms.	> ensuring accurate and relevant performance metrics; and > ensuring risk metrics are incorporated in the performance management framework.

Risk measurement approaches

The following approaches are adopted by the group for the calculation of RWA.

RISK TYPE	FRB SA (i.e. FRB excluding foreign branches)	PA APPROVAL DATE	REMAINING FIRSTRAND SUBSIDIARIES AND FRB FOREIGN OPERATIONS
Credit risk	Advanced internal ratings-based (AIRB) approach and the standardised approach for certain portfolios	January 2008	Standardised approach
Counterparty credit risk	Standardised method	May 2012	Current exposure method
Market risk in the trading book	Internal model approach	July 2007	Standardised approach
Equity investment risk	Market-based approach: simple risk-weighted method*	June 2011	Market-based approach: simple risk-weighted method*
Operational risk	Advanced measurement approach (AMA)	January 2009	**Remaining subsidiaries and FRB foreign branches:** > The standardised approach for operational risk (TSA) **FRIHL entities:** > Basic indicator approach (BIA), TSA, AMA **Ashburton Investments:** > BIA **Aldermore:** > BIA
Other assets	Standardised approach	January 2008	Standardised approach

* *Subject to the threshold rules as per Regulation 38(5).*

Risk appetite

Risk appetite is set by the board. The group’s return and risk appetite statement informs organisational decision-making and is integrated with FirstRand’s strategic objectives. Business and strategic decisions are aligned to risk appetite measures to ensure these are met during a normal cyclical downturn. Limits are also set for stressed cyclical downturns. At a business unit level, strategy and execution are influenced by the availability and price of financial resources, earnings volatility limits and required hurdle rates and targets.

RETURN AND RISK APPETITE STATEMENT

FirstRand’s risk appetite is the aggregate level and type of risks the group is willing and able to accept within its overall risk capacity. It is captured by a number of qualitative principles and quantitative measures.

The group’s strategic objectives and financial targets frame its risk appetite in the context of risk, reward and growth, and contextualise the level of reward the group expects to deliver to its stakeholders under normal and stressed conditions for the direct and consequential risks it assumes in the normal course of business.

This ensures that the group maintains an appropriate balance between risk and reward. Risk/return targets and appetite limits are set to enable the group to achieve its overall strategic objectives, namely to:

- create long-term franchise value;
- deliver superior and sustainable economic returns to shareholders within acceptable levels of volatility; and
- maintain balance sheet strength.

Risk capacity is the absolute maximum level of risk the group can technically assume given its current available financial resources. Risk capacity provides a reference for risk appetite and is not intended to be reached under any circumstances.

Risk limits are clearly defined risk boundaries for different measures per risk type, and are also referred to as thresholds, tolerances or triggers.

The return and risk appetite statement aims to drive the discipline of balancing risk, return and sustainable growth across all portfolios. Through this process, the group ultimately seeks to achieve an optimal trade-off between its ability to take on risk, and the sustainability of the returns delivered to shareholders.

The group’s risk/return profile is monitored regularly, using risk appetite limits, which are measured on a point-in-time and forward-looking basis.

Risk appetite influences business plans and informs risk-taking activities and strategies.

The following diagram illustrates the risk/return appetite metrics and processes, which aim to align risk and return metrics with the group's strategic objectives, commitments to stakeholders, performance measurement objectives and the financial resource management process. It also informs the medium- to long-term targets and strategies in terms of return, growth and risk appetite.

FIRSTRAND RISK AND RETURN METRICS

The following diagram outlines the quantitative measures and qualitative principles of the return and risk appetite framework. The measures are continually reassessed as part of the group's ongoing review and refinement of its return and risk appetite framework.

RETURN AND RISK APPETITE FRAMEWORK

QUANTITATIVE MEASURES

Normal cycle

Performance targets		Resource objectives and constraints		
Returns	ROE **18% – 22%**	**Solvency**	CET1 capital **10% – 11%**	Leverage **>5%**
Earnings growth	Normalised earnings growth **Nominal GDP plus >0% to 3%**	**Liquidity**	To exceed minimum regulatory requirements with appropriate buffers	

Credit rating*:
Equal to highest in SA banking industry

* *Refers to a rating agency's measure of a bank's intrinsic creditworthiness before considering external factors and refers to FirstRand Bank Limited.*

Normal downturn and stressed downturn

Limits set for earnings fall under stressed conditions,
as well as minimum ROE, CET1, leverage and liquidity ratios.

RISK LIMITS

Risk limits, thresholds, tolerances and triggers are defined per risk type.

QUALITATIVE PRINCIPLES

Always act with a fiduciary mindset.	Limit concentrations in risky asset classes or sectors.
Comply with prudential regulatory requirements.	Avoid reputational damage.
Comply with the spirit and intention of accounting and regulatory requirements.	Manage the business on a through-the-cycle basis to ensure sustainability.
Build and maintain a strong balance sheet which reflects conservatism and prudence across all disciplines.	Identify, measure, understand and manage the impact of downturn and stress conditions.
Do not take risk without a deep understanding thereof.	Strive for operational excellence and responsible business conduct.
Comply with internal targets in various defined states to the required confidence interval.	Ensure the group's sources of income remain appropriately diversified across activities, products, segments, markets and geographies.
Do not implement business models with excessive gearing through either on- or off-balance sheet leverage.	

Financial resource management

The management of the group's financial resources, which it defines as capital, funding and liquidity, and risk capacity, is a critical enabler of the achievement of FirstRand's stated growth and return targets, and is driven by the group's overall risk appetite.

Forecast growth in earnings and balance sheet RWA is based on the group's macroeconomic outlook and evaluated against available financial resources, considering the requirements of capital providers, regulators and rating agencies. The expected outcomes and constraints are then stress tested, and the group sets financial and prudential targets through different business cycles and scenarios to enable FirstRand to deliver on its commitments to stakeholders at a defined confidence level.

The management of the group's financial resources is executed through Group Treasury and is independent of the operating businesses. This ensures the required level of discipline is applied in the allocation and pricing of financial resources. This also ensures that Group Treasury's mandate is aligned with the portfolio's growth, return and volatility targets to deliver shareholder value. The group continues to monitor and proactively manage a fast-changing regulatory environment and ongoing macroeconomic challenges.

The group adopts a disciplined approach to the management of its foreign currency balance sheet. The framework for the management of external debt takes into account sources of sovereign risk and foreign currency funding capacity, as well as the macroeconomic vulnerabilities of South Africa. The group employs a self-imposed structural borrowing limit and a liquidity risk limit more onerous than required in terms of regulations.

FirstRand uses the group's house view for budgeting, forecasting and business origination strategies. The house view focuses on the key macroeconomic variables that impact the group's financial performance and risk position. The macroeconomic outlook for South Africa and a number of other jurisdictions where the group operates, is reviewed on a monthly basis and spans a three-year forecast horizon. The house view for other jurisdictions with less data are updated less frequently, but at least quarterly. Business plans for the next three years are captured in the budget and forecasting process. Scenario planning is then used to assess whether the desired profile can be delivered and whether the group will remain within the constraints that have been set. These scenarios are based on changing macroeconomic variables, plausible event risks, and regulatory and competitive changes.

The strategy, risk and financial resource management processes inform the capital and funding plans of the group. Analysis and understanding of value drivers, markets and macroeconomic environment also inform portfolio optimisation decisions as well as the price and allocation of financial resources.

Stress testing and scenario planning

Stress testing and scenario planning serve a number of regulatory and internal business purposes, and are conducted for the group and the bank across different risk types, factors and indicators. The group employs a comprehensive, consistent and integrated approach to stress testing and scenario analysis. The group evaluates the impact of various macroeconomic scenarios on the business and considers the need for adjustment to origination and takes appropriate actions. More severe macroeconomic scenarios are run less frequently, but are critical to determine or test capital buffers and other risk appetite measures, enhance capital and liquidity planning, validate existing quantitative risk models and improve the understanding of required management actions/ responses.

Stress tests are conducted throughout the group for most legal entities, whether regulated or not. The various stress test processes are supported by a robust and holistic framework, underpinned by principles and sound governance, aligned to regulatory requirements and best practice.

Stress testing and scenario analysis provide the board and management with useful insight on the group's financial position, level of earnings volatility, risk profile and future capital position. Results are used to challenge and review certain of the group's risk appetite measures, which, over time, influence the allocation of financial resources across businesses and impact performance measurement.

From a regulatory perspective, stress testing and scenario analysis feed into the group's internal capital adequacy assessment process (ICAAP) and recovery plan. The ICAAP stress test is an enterprise-wide, macroeconomic stress test covering material risks that the group is exposed to. It typically covers a three-year horizon, with separate ICAAP submissions also completed for the group's regulated banking entities which are subject to Basel II requirements. The severity of the macroeconomic scenarios ranges from a mild downturn to severe stress scenarios. In addition to macroeconomic scenarios, the group incorporates event risks and reverse stress test scenarios that highlight contagion between risk types. Techniques and methodologies range from multi-factor and regression analyses for macroeconomic stress tests to single-factor sensitivities and qualitative impact analysis for event risks and reverse stress tests.

The group's recovery plan builds on its ICAAP. The scenarios defined for ICAAP are extended and incorporate the following scenarios:

- systemic;
- idiosyncratic;
- fast-moving; and
- slow-moving.

The results of the ICAAP and recovery plan processes are submitted to the PA annually and are key inputs into:

- determination of the capital buffer and targets;
- dividend proposals;
- the group's earnings volatility measures; and
- performance management requirements.

The group regularly runs additional *ad hoc* stress tests for both internal and regulatory purposes. Internally, risk-specific stress tests may utilise various techniques depending on the purpose (e.g. limit setting or risk identification). From a regulatory perspective, the group expects to be subjected to more frequent supervisory stress tests covering a range of objectives.

Recovery and resolution regime

Financial Stability Board (FSB) member countries are required to have recovery and resolution plans in place for all systemically significant financial institutions as per *Key Attributes of Effective Resolution Regimes*. The PA adopted this requirement and has, as part of the first phase, required D-SIBs to develop their own recovery plans. Improving the stability of the banking system by strengthening banks' ability to manage themselves through a potentially severe stress situation is of national importance. Guidance issued by the FSB and PA has been incorporated into the group's comprehensive recovery plan.

RECOVERY PLANNING

The purpose of the recovery plan is to document how FirstRand's board and management, including its operating businesses and key subsidiaries, namely, FRB (including the foreign branches), Aldermore Bank, FirstRand Namibia and FNB Botswana, will recover from a severe stress event/scenario that threatens their commercial viability.

The recovery plan:

- analyses the potential for severe stress in the group that could cause material disruption to the financial system;
- considers the type of stress event(s) that would be necessary to trigger its activation;
- analyses how the entity might potentially be affected by the event(s);
- lists a menu of potential recovery actions available to the board and management to counteract the event(s); and
- assesses how the entity might recover from the event(s) as a result of those actions.

The recovery plan forces the group to perform an extensive self-assessment exercise to determine if there are any potential idiosyncratic vulnerabilities that it may be exposed to, and then reconcile these exposures to its own risk appetite and strategy. Strategies to optimise the balance sheet structure and preserve the group's critical functions to support the recovery from a severe stress event with the least negative impact are considered. This process enables banks to better understand the critical functions for customers and the financial system, as well as assets that are most marketable to facilitate recovery. Where inefficiencies are identified, these can be addressed to ensure the group is more streamlined, adaptable and resilient to stress.

To date FirstRand has submitted six annually revised versions of its recovery plan to the PA, the most recent in December 2018.

RESOLUTION FRAMEWORK

The South African regulatory architecture has undergone significant transformation to create a regulatory framework that will support an effective resolution regime. The country has adopted a twin peaks supervisory framework model that reduces the number of agencies involved in supervision. The SARB's PA and the FSCA were established on 1 April 2018. Whilst the PA/SARB has a financial stability mandate, the SARB will also be responsible for assisting with the prevention of systemic events by means of its designation as the Resolution Authority (RA). The FSCA will supervise how financial institutions conduct their business and treat customers. It is also responsible for the efficiency and integrity of financial markets.

In January 2018, a draft resolution framework was released to the banking industry for initial review and will be released to the public for general comment in due course. This draft framework sets out the broad principles for the resolution of banks, systemically-important non-bank financial institutions and bank holding companies, and highlights the various legislative amendments required to ensure the framework is enforceable. Detailed definitions of key elements of the resolution framework are subject to finalisation, and directives or addendums to this framework will be published once finalised. Resolution plans will allow the PA to prepare for an event from which the group's recovery actions have failed or are deemed likely to fail. Bank resolution plans will be owned and maintained by the RA, but will require a significant amount of bilateral engagement and input from the individual banks to enable the RA to develop a customised plan that is most appropriate to each bank.

The draft Financial Sector Laws Amendment Bill was published for comment by National Treasury in October 2018. In order to support the pending resolution framework, the bill proposes the necessary amendments to various acts including the Insolvency Act, the South African Reserve Bank Act, the Banks Act, the Mutual Banks Act, the Competition Act, the Financial Markets Act and the Insurance Act with a view to strengthen the ability of the SARB to manage the orderly resolution or winding down of a failing financial institution with minimum disruption to the broader economy. One of the key amendments included in the bill is the establishment of the Corporation of Deposit Insurance, which is designed to protect depositors' funds and enhance financial stability.

The bill is awaiting promulgation by parliament before it is enacted, but in the interim the relevant regulators are continuously engaging with industry to continue working on the design and finalisation of the outstanding elements of the resolution framework.

Capital management

The group actively manages its capital base aligned to strategy, risk appetite and risk profile. The optimal level and composition of capital is determined after taking the following into account:

- Prudential requirements, including any prescribed buffer.
- Rating agencies' considerations.
- Investor expectations.
- Peer comparison.
- Strategic and organic growth plans.
- Economic and regulatory capital requirements.
- Proposed regulatory, tax and accounting changes.
- Macro environment and stress test impacts.
- Issuance of capital instruments.

The capital planning process ensures that the total capital adequacy and CET1 ratios remain within or above targets across economic and business cycles. Capital is managed on a forward-looking basis and the group remains appropriately capitalised under a range of normal and severe stress scenarios, which include expansion initiatives, corporate transactions, as well as ongoing regulatory, accounting and tax developments. The group aims to back all economic risk with loss-absorbing capital, and remains well capitalised in the current environment. FirstRand's internal targets have been aligned to the PA end-state minimum capital requirements and are subject to ongoing review and consideration of various stakeholder expectations. No changes were made to the internal targets during the period.

The group is subject to the PA's transitional capital requirements and includes a 75% phased-in requirement for the capital conservation, CCyB and D-SIB buffer add-ons. The PA has not implemented any CCyB requirement for South African exposures, however, the group is required to calculate the CCyB requirement on private sector exposures in foreign jurisdictions where these buffers are applicable. Effective 28 November 2018, the Prudential Regulation Authority's CCyB requirement for UK exposures stepped up to 1.0% from 0.5%. The CCyB requirement for the group as at 31 December 2018 was 13 bps and is included in the disclosed minimum requirement. Effective 1 January 2019, the PA's minimum capital requirements will be fully phased in, including 100% of the capital conservation, CCyB and D-SIB add-ons.

The PA issued Directive 5/2017, *Regulatory treatment of accounting provisions – interim approach and transitional arrangements including disclosure and auditing aspects*, which allows banks to apply a transitional phase-in of the IFRS 9 Day 1 impact for regulatory capital purposes. The Day 1 implementation reduced the group's CET1 position by 50 bps, and will be transitioned over a four-year period.

The Basel III leverage ratio is a supplementary measure to the risk-based capital ratios, and is a function of the Tier 1 capital measure, and total on- and off-balance sheet exposures.

CAPITAL ADEQUACY AND PLANNING

The following diagram defines the main components of capital and leverage as per the Regulations.

CAPITAL POSITION

TOTAL QUALIFYING CAPITAL AND RESERVES =

TIER 1 CAPITAL

CET1 CAPITAL

- share capital and premium;
- retained earnings (appropriated);
- other reserves; and
- non-controlling interests.

Deductions

- prudential valuation adjustment;
- goodwill and intangibles;
- deferred tax assets (other than temporary differences);
- investment in own shares;
- shortfall of expected losses to provisions;
- cash flow hedging reserve;
- investments in financial, banking and insurance institutions*;
- Surplus third-party capital; and
- other.

AT1 CAPITAL

- NCNR preference shares;
- AT1 capital instruments and contingent convertible securities; and
- instruments issued out of consolidated subsidiaries to third parties.

Deductions

- investments in financial, banking and insurance institutions (AT1 instruments)*; and
- surplus third-party capital.

+

TIER 2 CAPITAL

- subordinated debt instruments;
- general provisions under standardised approach;
- surplus of provisions to expected losses; and
- instruments issued out of consolidated subsidiaries to third parties.

Deductions

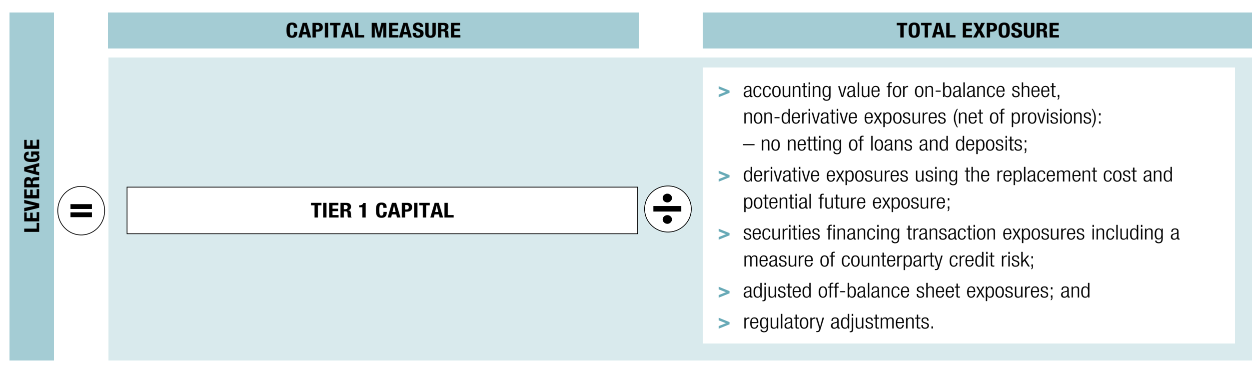
- investment in financial, banking and insurance institutions (Tier 2 instruments)*; and
- surplus third-party capital.

CAPITAL RATIOS

QUALIFYING CAPITAL		RWA		RATIOS
CET1 capital	÷	TOTAL OF: + Credit + Counterparty credit + Operational + Market + Equity investment + Other and threshold items	=	CET1 %
TIER 1 capital	÷		=	TIER 1 %
TOTAL capital	÷		=	TOTAL %

* *As per Regulation 38(5) threshold rules. The full deduction method is applied to insurance entities, i.e. net asset value (NAV) for insurance entities is derecognised from consolidated IFRS NAV.*

LEVERAGE POSITION



PERIOD UNDER REVIEW

The capital and leverage positions as at 31 December 2018 exceeded internal targets, and are summarised in the following table.

CAPITAL ADEQUACY AND LEVERAGE POSITIONS

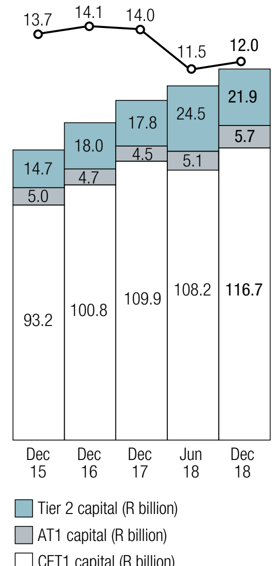
	Capital			Leverage
%	CET1	Tier 1	Total	Total
Regulatory minimum*	7.5	9.0	11.3	4.0
Internal target	10.0 – 11.0	>12.0	>14.0	>5.0
Actual**				
– Including unappropriated profits	**12.0**	**12.6**	**14.8**	**7.4**
– Excluding unappropriated profits	11.3	11.8	14.1	6.9

* *Excludes the bank-specific capital requirements, but includes the CCyB requirement.*
** *Includes the transitional Day 1 impact of IFRS 9.*

CAPITAL

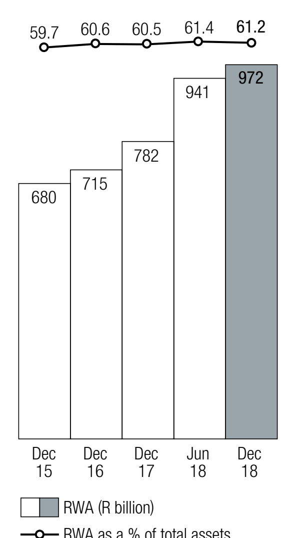
The graphs below show the historical overview of capital adequacy and RWA.

CAPITAL ADEQUACY*



* *Includes unappropriated profits.*

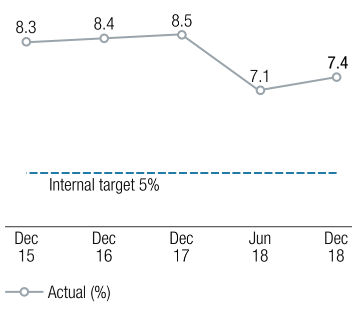
RWA HISTORY



LEVERAGE

The reduction in the leverage ratio period-on-period, shown in the graph below, is mainly due to the decrease in the Tier 1 capital measure from December 2017. The Tier 1 capital measure decreased due to the impact of the Aldermore acquisition.

LEVERAGE*



* *Includes unappropriated profits.*

Note: December 2015 to June 2018 is based on IAS 39 and December 2018 on IFRS 9.

SUPPLY OF CAPITAL

The tables below summarise the group's qualifying capital components and related movements.

COMPOSITION OF CAPITAL ANALYSIS

	As at 31 December		As at 30 June
R million	**2018 IFRS 9**	2017 IAS 39	2018 IAS 39
Including unappropriated profits			
CET1 capital	**116 699**	109 850	108 226
Tier 1 capital	**122 366**	114 318	113 342
Total qualifying capital	**144 321**	132 077	137 796
Excluding unappropriated profits			
CET1 capital	**109 440**	99 769	103 724
Tier 1 capital	**115 107**	104 237	108 840
Total qualifying capital	**137 062**	121 996	133 294

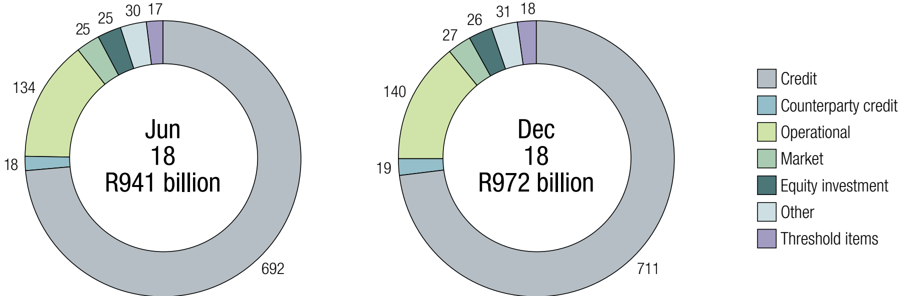
KEY DRIVERS: December 2018 vs June 2018		
CET1 capital	▲	> Ongoing internal capital generation through earnings coupled with sustainable dividend payout. > Once-off realisation relating to Discovery transaction (±R2.3 billion) partly reduced by the Day 1 transitional impact of IFRS 9. > Inclusion of minority capital previously excluded for regulatory purposes (±R1.5 billion).
AT1 capital	▲	> FRB AT1 issuance (R2.3 billion) in November 2018, partly offset by movement in third-party capital from AT1 to CET1 capital.
Tier 2 capital	▼	> Redemption of FRB05, FRBC21 and FRBC22 in December 2018 (R3.2 billion) and movement in third-party capital. The capital stack no longer includes any old-style Tier 2 instruments.

DEMAND FOR CAPITAL

The charts and table below summarises the RWA movement from June 2018 to December 2018.

RWA ANALYSIS

R billion



KEY DRIVERS: DECEMBER 2018 vs JUNE 2018		
Credit	↑	> Organic growth, model recalibrations and exchange rate movements, partly offset by movements in securitisation funding structures.
Counterparty credit	↑	> Volumes and mark-to-market movements.
Operational	↑	> Increase in gross income for entities on AMA used to calculate the AMA capital floor. > Increase in gross income for entities on basic approaches (basic indicator and standardised approaches).
Market	↑	> Volumes and mark-to-market movements.
Equity investment	↑	> New investments and fair value adjustments.
Threshold items	↑	> Movement in deferred tax assets and investments in financial, banking and insurance entities (subject to 250% risk weighting). > Increase in deferred tax assets due to the IFRS 9 implementation.

OV1: OVERVIEW OF RWA

R million	RWA				Minimum capital requirements*
	As at 31 December 2018	As at 30 September 2018	As at 30 June 2018	As at 31 December 2017	**As at 31 December 2018**
1. **Credit risk (excluding counterparty credit risk)**	**673 140**	653 178	648 668	508 792	**75 762**
2. – Standardised approach	**227 200**	227 441	221 218	112 190	**25 571**
5. – AIRB	**445 940**	425 737	427 450	396 602	**50 191**
16. **Securitisation exposures in banking book**	**38 083**	36 966	43 291	31 334	**4 286**
17. – IRB ratings-based approach	**–**	11	64	17	**–**
18. – IRB supervisory formula approach	**2 043**	1 997	1 888	1 896	**230**
19. – Standardised approach/simplified supervisory formula approach	**36 040**	34 958	41 339	29 421	**4 056**
Total credit risk	**711 223**	690 144	691 959	540 126	**80 048**
6. **Counterparty credit risk****	**18 698**	17 089	17 624	24 740	**2 104**
7. – Standardised approach	**18 698**	17 089	17 624	24 740	**2 104**
11. **Equity positions in banking book under simple risk weight approach#**	**25 744**	25 355	25 201	29 857	**2 898**
15. **Settlement risk**	**–**	–	–	–	**–**
20. **Market risk**	**26 773**	23 472	24 773	20 789	**3 013**
21. – Standardised approach	**8 876**	8 708	9 707	8 708	**999**
22. – Internal model approach	**17 897**	14 764	15 066	12 081	**2 014**
24. **Operational risk**	**124 079**	124 158	124 158	110 155	**13 965**
– Basic indicator approach	**14 886**	15 356	15 356	6 037	**1 675**
– Standardised approach	**24 901**	24 234	24 234	22 960	**2 803**
– Advanced measurement approach	**84 292**	84 568	84 568	81 158	**9 487**
25. **Amounts below the thresholds for deduction (subject to 250% risk weight)**	**18 858**	19 733	17 069	14 980	**2 123**
26. **Floor adjustment**	**16 205**	10 151	10 151	10 919	**1 824**
Other assets	**30 619**	31 335	29 635	30 430	**3 446**
27. **Total**	**972 199**	941 437	940 570	781 996	**109 421**

* *Capital requirement calculated at 11.255% of RWA (December 2017: 10.750%). The minimum requirement excludes the bank-specific capital requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the Regulations.*

** *The current exposure and standardised methods are applied to counterparty credit risk. The group does not apply the internal model method to counterparty credit risk (row 6 of OV1 template). Implementation for the standardised approach for counterparty credit risk (SA-CCR) is 1 October 2019.*

The BCBS standard on equity investment in funds has not yet been implemented, rows 12 – 14 of the OV1 template have, therefore, been excluded from this table.

Further detailed analysis on credit risk RWA is provided in the following table.

OVERVIEW OF CREDIT RWA

R million	As at 31 December 2018			
	RWA			Capital requirement*
	Advanced approach	Standardised approach	Total	
– Corporate, banks and sovereigns	**217 242**	**100 312**	**317 554**	**35 741**
– Small and medium enterprises (SMEs)	**55 641**	**50 332**	**105 973**	**11 927**
– Residential mortgages	**65 024**	**42 259**	**107 283**	**12 075**
– Qualifying revolving retail	**36 001**	**6 827**	**42 828**	**4 820**
– Other retail	**72 032**	**27 470**	**99 502**	**11 199**
– Securitisation exposure	**2 043**	**36 040**	**38 083**	**4 286**
Total credit risk	**447 983**	**263 240**	**711 223**	**80 048**

* *Capital requirement calculated at 11.255% of RWA (December 2017: 10.750%). The minimum requirement excludes the bank-specific capital requirements, but includes the CCyB requirement. The difference to the BCBS base minimum (8%) relates to the buffer add-ons for Pillar 2A, CCyB and capital conservation as prescribed in the Regulations.*

CAPITAL ADEQUACY POSITION FOR THE GROUP, ITS REGULATED SUBSIDIARIES AND THE BANK'S FOREIGN BRANCHES

The group's registered banking subsidiaries must comply with PA regulations and those of their respective in-country regulators, with primary focus placed on Tier 1 and total capital adequacy ratios. It remains the group's principle that entities must be adequately capitalised on a standalone basis. Based on the outcome of detailed stress testing, each entity targets a capital level in excess of the in-country regulatory minimum.

Adequate controls and processes are in place to ensure that each entity is adequately capitalised to meet local and PA regulatory requirements. Capital generated by subsidiaries/branches in excess of targeted levels is returned to FirstRand, usually in the form of dividends/return of profits. During the period, no restrictions were experienced on the repayment of such dividends or profits to the group.

The RWA and capital adequacy positions of FirstRand, its regulated subsidiaries and the bank's foreign branches are summarised in the table below.

RWA AND CAPITAL ADEQUACY POSITIONS OF FIRSTRAND, ITS SUBSIDIARIES AND FOREIGN BRANCHES

	As at 31 December				As at 30 June
	2018 IFRS 9			2017 IAS 39	2018 IAS 39
	RWA R million	**Tier 1 %**	**Total capital adequacy %**	Total capital adequacy %	Total capital adequacy %
Basel III (PA regulations)					
FirstRand*	**972 199**	**12.6**	**14.8**	16.9	14.7
FirstRand Bank*,**	**698 853**	**13.6**	**16.9**	17.3	16.8
FirstRand Bank South Africa*	**645 474**	**13.4**	**16.4**	17.3	16.7
FirstRand Bank London	**51 789**	**9.8**	**15.7**	14.0	14.8
FirstRand Bank India	**1 943**	**34.3**	**34.9**	32.9	39.9
FirstRand Bank Guernsey#	**238**	**12.7**	**12.7**	16.5	15.3
Basel III (local regulations)					
Aldermore Bank†	**104 113**	**13.2**	**16.0**	n/a	14.5
Basel II (local regulations)					
FNB Namibia	**29 916**	**14.4**	**17.6**	17.3	18.7
FNB Mozambique	**2 122**	**14.9**	**14.9**	15.1	13.3
RMB Nigeria	**3 588**	**42.4**	**42.4**	46.0	48.1
FNB Botswana	**24 604**	**15.1**	**19.3**	19.9	17.9
FNB Tanzania	**1 628**	**23.9**	**23.9**	44.8	38.6
Basel I (local regulations)					
FNB Swaziland	**3 951**	**21.6**	**22.5**	27.6	23.4
FNB Lesotho	**1 070**	**13.2**	**16.0**	16.0	18.0
FNB Zambia	**4 237**	**18.2**	**23.3**	20.8	22.6
First National Bank Ghana	**696**	**>100**	**>100**	92.9	59.0

* *Includes unappropriated profits.*
** *Includes foreign branches.*
# *Trading as FNB Channel Islands.*
† *Aldermore was acquired on 1 April 2018.*

ICAAP

ICAAP is key to the group's risk and capital management processes as it continues to evolve into an integral part of the business decision-making process which is deeply embedded in the group. Best practice, standards and methodologies are adopted on an ongoing basis to assess the overall risk profile of the group, and embedding a responsible risk culture across all levels in the group.

ICAAP impacts the following:

- Strategy and risk appetite.
- Risk assessment and management.
- Forward-looking capital planning:
  - budget and earnings volatility;
  - stress and scenario analysis;
  - informs capital targets; and
  - dividend decisions.
- Performance measurement.
- Recovery planning, being an extension to ICAAP.

A key input into ICAAP is an assessment of economic risk, with the outcome used to assess the group's capital position and targeted level of capitalisation, i.e. higher of economic and regulatory capital. Economic capital is also used in strategic capital planning, risk measurement and portfolio management.

The assessment of economic risk aligns with the group's economic capital framework that sets out the following:

- the risk universe;
- consistent standards and measurement for each risk type;
- continuous refinement of risk drivers, sensitivities and correlations;
- transparency and verifiable results, subject to rigorous governance processes; and
- alignment and integration with the group's risk and capital frameworks.

Available financial resources comfortably exceed the economic capital requirements as assessed in the latest ICAAP.

Standardised disclosures

In terms of Regulation 43 of the Regulations and BCBS, the following additional standard disclosures are required:

- Key prudential metrics (at consolidated group level).
- Capital:
  - composition of regulatory capital;
  - reconciliation of regulatory capital to balance sheet; and
  - main features of regulatory capital instruments.
- Macroprudential supervisory measures:
  - geographical distribution of credit exposures used in the countercyclical capital buffer.
- Leverage:
  - summary comparison of accounting assets vs leverage ratio exposure measure; and
  - leverage ratio common disclosure template.
- Liquidity:
  - LCR; and
  - NSFR.

Refer to www.firstrand.co.za/investorcentre/pages/commondisclosures.aspx.

Scan with your smart device's QR code reader to access the standard disclosure templates on the group's website.

Regulatory update

BASEL III REFORMS

The BCBS finalised the Basel III reforms in December 2017, with a specific focus on reducing the variability of RWA. The BCBS has agreed on a five-year transitional period, beginning 1 January 2022. The 2017 reforms aim to address weaknesses identified during the global financial crisis, i.e. credibility of the risk-based capital framework and to introduce constraints on the estimates banks used within internal models for regulatory capital purposes. The PA further issued *Guidance Note 6 of 2018, Proposed implementation dates in respect of specified regulatory reforms*, which includes the proposed implementation dates of the outstanding Basel III regulatory reforms. The impact on the group capital position depends on the final implementation by the PA given a level of national discretion. The group continues to participate in the BCBS quantitative impact studies to assess and understand the impact of such reforms. The proposed reforms and implementation dates are set out below:

SUMMARY OF FINAL REGULATORY REFORMS AS PER GUIDANCE NOTE 6 OF 2018

REGULATORY REFORM	PROPOSED IMPLEMENTATION DATE
Capital requirements for equity investments in funds	1 October 2019
Capital requirements for bank exposures to central counterparties	1 October 2019
Standardised approach for measuring counterparty credit risk exposures	1 October 2019
Revisions to securitisation framework	1 April 2020
Total loss-absorbing capacity holdings	1 April 2020
Large exposures framework	1 April 2020
Interest rate risk in the banking book	1 June 2021
Interest rate risk in the banking book: disclosure requirements	1 January 2022
Minimum capital requirements for market risk	1 January 2022
Revised standardised approach for credit risk framework	1 January 2022
Revised internal ratings-based approach framework	1 January 2022
Revised credit valuation adjustment framework	1 January 2022
Revised operational risk framework	1 January 2022
Leverage ratio – revised exposure definition	1 January 2022
Output floor	1 January 2022: 50% 1 January 2023: 55% 1 January 2024: 60% 1 January 2025: 65% 1 January 2026: 70% 1 January 2027: 72.5%

LIQUIDITY COVERAGE RATIO

The LCR has been fully adopted by the PA with the inclusion of a committed liquidity facility (CLF). Phasing in of the LCR commenced in 2015 and banks are required to be fully compliant by 2019. The minimum LCR requirement is currently 90%, with a 10% incremental step-up to 100% on 1 January 2019. The group remains focused on building a diversified pool of available HQLA, which is constrained by the limited availability of these assets in the South African market.

NET STABLE FUNDING RATIO

The NSFR is a structural balance sheet ratio focusing on promoting a more resilient banking sector. The ratio calculates the amount of available stable funding (ASF) relative to the amount of required stable funding (RSF). The ratio was effective from 1 January 2018.

Replacing *Directive 4 of 2016, Directive 8 of 2017* set out the elements of national discretion exercised by the PA in relation to the calibration of the NSFR framework for South Africa. The PA, after due consideration and noting that rand funding is contained in the financial system, concluded it to be appropriate to apply a 35% ASF factor to deposits from financial institutions with a residual maturity of less than six months. In line with several other international regulators, the PA also provided clarity on the alignment of the LCR and NSFR, applying a 5% RSF factor to the assets net of their haircut eligible for CLF purposes. These changes are anchored in the assessment of the true liquidity risk and greatly assist the South African banking sector in meeting the NSFR requirements.

FINANCIAL CONGLOMERATES

The Financial Sector Regulation Act further empowers the PA to designate a group of companies as a financial conglomerate as well as to regulate and supervise such designated financial conglomerates.

Draft standards provide an early signal to the industry and affected stakeholders on the approach to the classification, regulation and supervision of designated financial conglomerates. Comments were due by the end of August 2018. The expected implementation date for the standards is not known.

Funding and liquidity risk

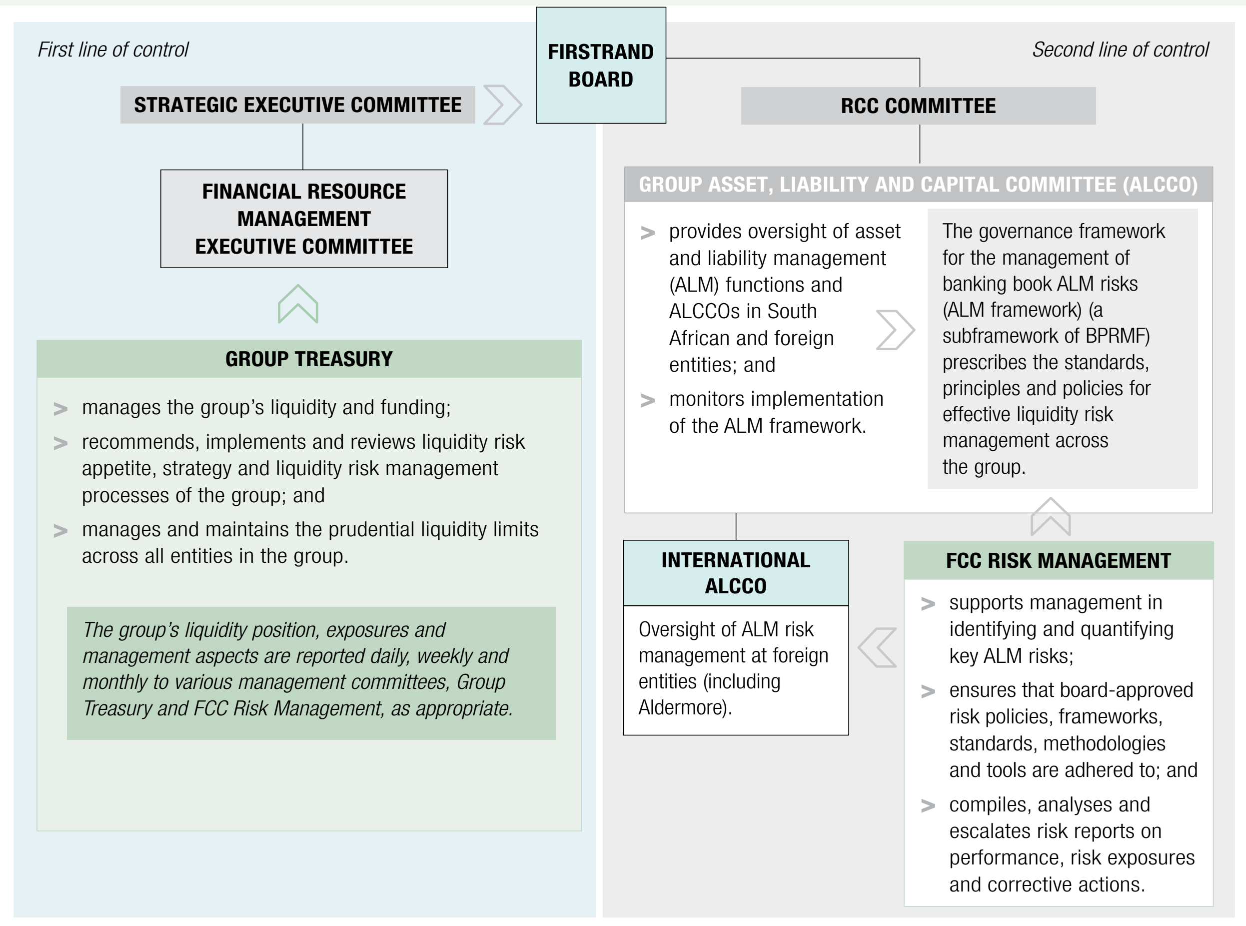
INTRODUCTION AND OBJECTIVES

The group aims to fund its activities in a diversified, efficient, flexible and sustainable manner whilst operating within prudential limits. Its funding strategy is underpinned by strong counterparty relationships. The group's objective is to maintain and enhance its deposit market share by appropriately pricing and rewarding depositors, thus creating a natural liquidity buffer. As a consequence of the liquidity risk introduced by its business activities across various currencies and geographies, the group's objective is to optimise its funding profile within structural and regulatory constraints to enable its operating businesses to operate in an efficient and sustainable manner.

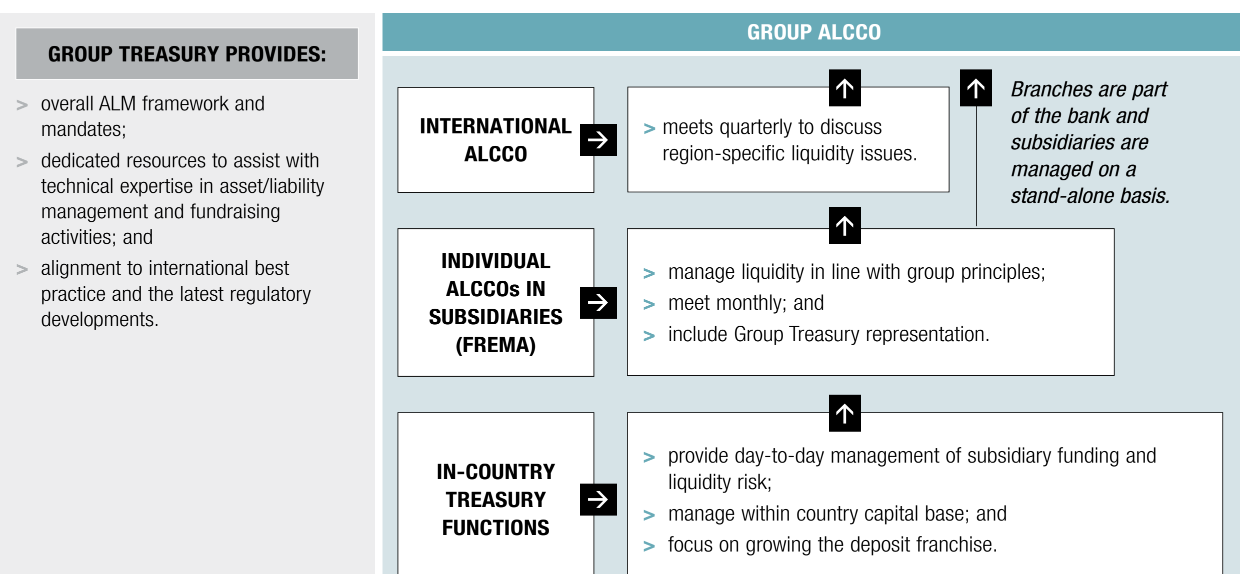
Compliance with the Basel III liquidity ratios influences the group's funding strategy, particularly as it seeks to price appropriately for liquidity on a risk-adjusted basis. The group is actively building its deposit franchise through innovative and competitive products whilst also optimising its institutional funding profile. These initiatives continue to improve the funding and liquidity profile of the group.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

GROUP AND BANK

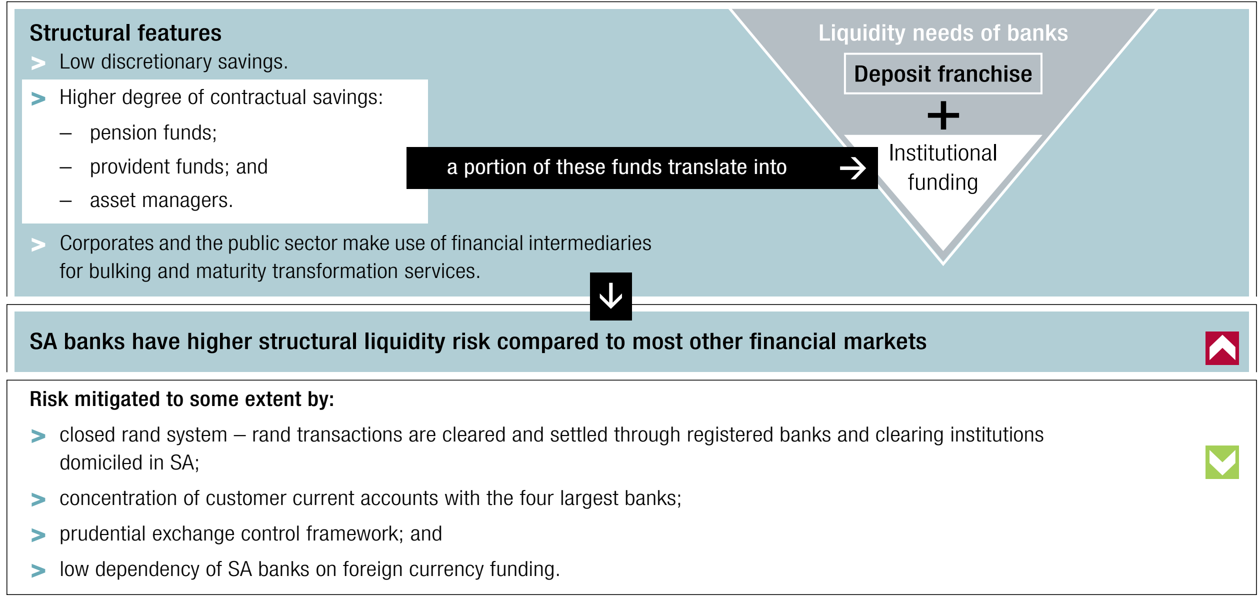


FOREIGN OPERATIONS



FUNDING MANAGEMENT

The following diagram illustrates the structural features of the South African market and its impact on liquidity risk.



Additional liquidity required by banks due to money supply constraints introduced by the LCR and the central bank's open market operations, without a commensurate increase in savings flows, have ultimately resulted in higher liquidity costs.

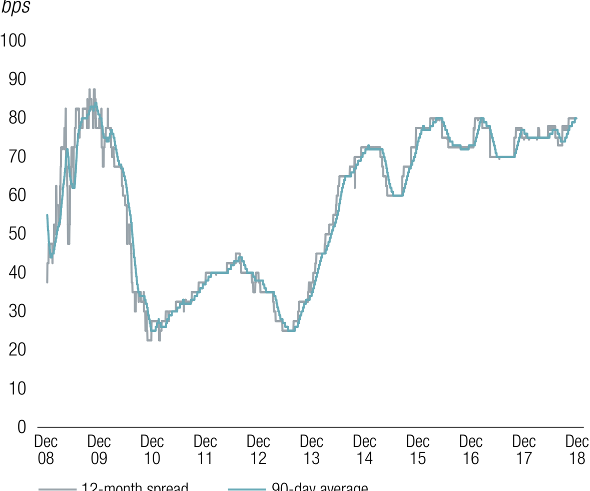
Considering the structural features described earlier, the group's focus remains on achieving an improved risk-adjusted and diversified funding profile, which also enables it to meet Basel III liquidity requirements. Consequently, the group aims to fund the balance sheet in an efficient manner, as set out in its liquidity risk management framework, and within regulatory and rating agency requirements.

To maximise efficiency and flexibility in accessing funding opportunities, a range of domestic and international debt programmes have been established. The group's strategy for domestic vanilla public issuances is to create actively-traded benchmark bonds to facilitate secondary market liquidity. The inherent value of this strategy is the ability to identify cost-effective funding opportunities whilst maintaining an understanding of available market liquidity.

The following graph is indicative of the market cost of liquidity, measured as the spread paid on the bank's 12-month funding instruments, which include negotiable certificates of deposit (NCDs) and floating-rate notes. The graph shows that short-dated liquidity spreads remain elevated.

12-MONTH MID-MARKET FUNDING SPREAD

bps

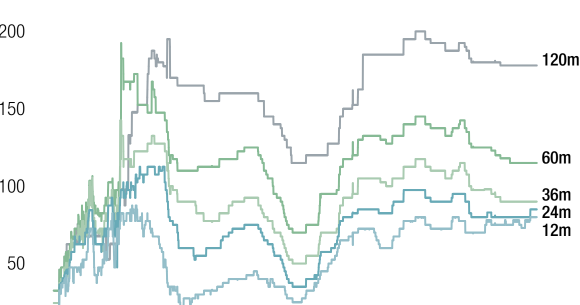


Sources: Bloomberg (RMBP screen) and Reuters.

The following graph shows that long-term funding spreads remain elevated from a historical perspective. Longer-dated funding spreads have moderated to a small degree, while near-dated spreads remain elevated.

LONG-TERM FUNDING SPREADS

bps



Sources: Bloomberg (RMBP screen) and Reuters.

FUNDING MEASUREMENT AND ACTIVITY

FirstRand Bank, FirstRand's wholly-owned subsidiary and the primary debt-issuing entity in the group, generates a larger proportion of its funding from deposits when compared to the South African aggregate, but its funding profile also reflects the structural features described previously.

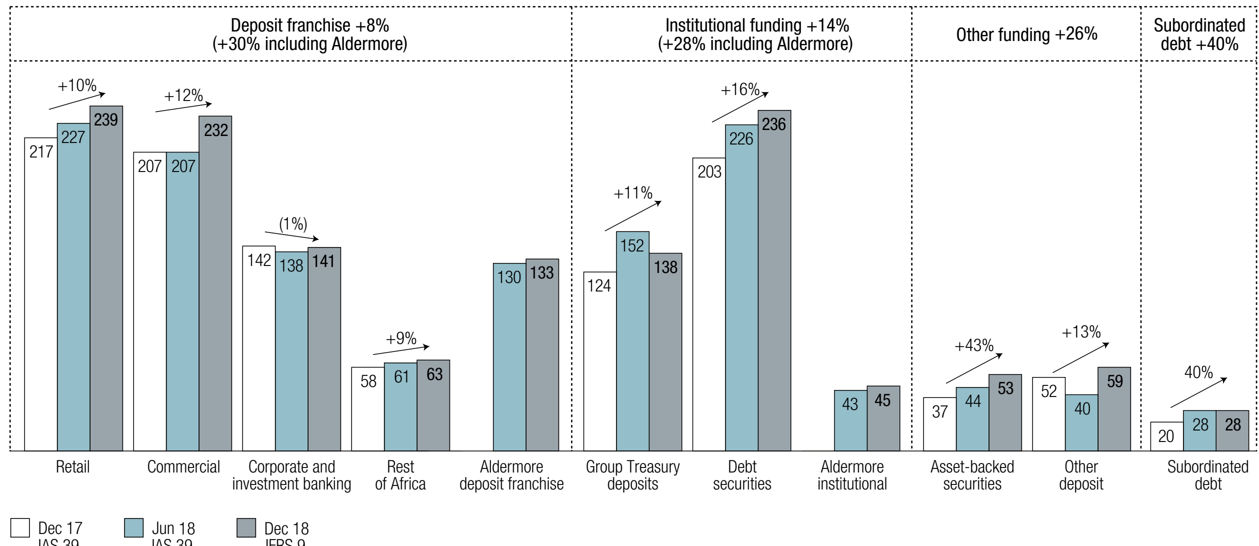
The group manages its funding profile by source, counterparty type, product, currency and market. The deposit franchise is the most efficient source of funding and represented 60% of total group funding liabilities as at 31 December 2018 (December 2017: 59%).

The group continued to focus on growing its deposit franchise across all segments, with increased emphasis on savings and investment products. Progress continues to be made in developing suitable products to attract a greater proportion of clients' available liquidity with improved risk-adjusted pricing for source and behaviour. To fund operations, the group accesses the domestic money markets daily and, from time to time, capital markets. The group issues various capital and funding instruments in the capital markets on an auction and reverse-enquiry basis, with strong support from investors, both domestically and internationally.

The following graph provides a segmental analysis of the group's funding base and illustrates the success of its deposit franchise focus.

FUNDING PORTFOLIO GROWTH

R billion



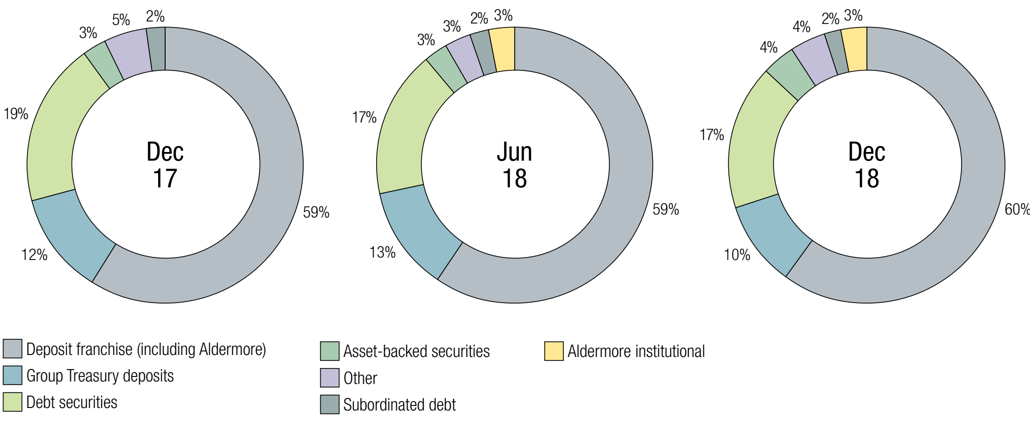
Note 1: Percentage change is based on actual, not rounded, numbers shown in the bar graphs above.

Note 2: December 2018 subordinated debt includes Tier 2 and AT1 capital instruments.

Note 3: Asset-backed securities include Aldermore's securitisations.

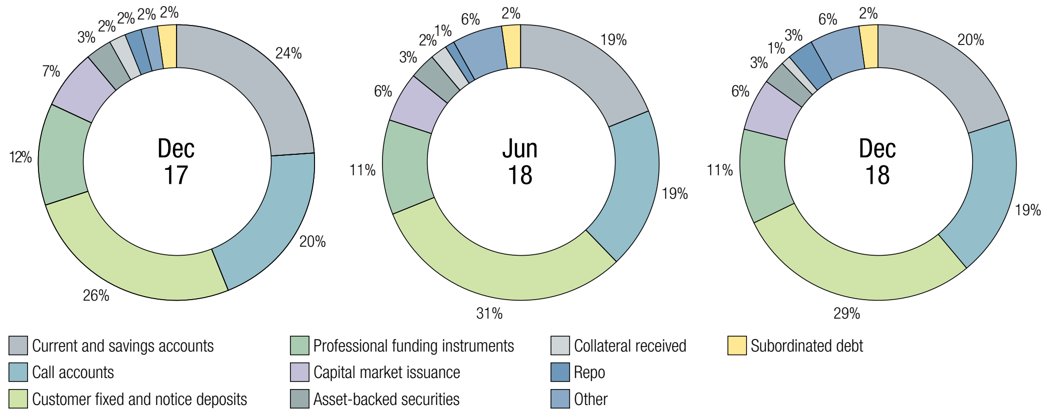
The graphs below show that the group's funding mix has remained relatively stable over the last six months.

FUNDING MIX



The following graph illustrates the group's funding instruments by type, including senior debt and securitisations.

GROUP'S FUNDING ANALYSIS BY INSTRUMENT TYPE



As a consequence of the group's focus on growing its deposit and transactional banking franchise, a significant proportion of funds is contractually short-dated. As these deposits are anchored to clients' service requirements and, given the balance granularity created by individual clients' independent activity, the resultant liquidity risk profile is improved.

The table below provides an analysis of the bank's funding sources per counterparty type.

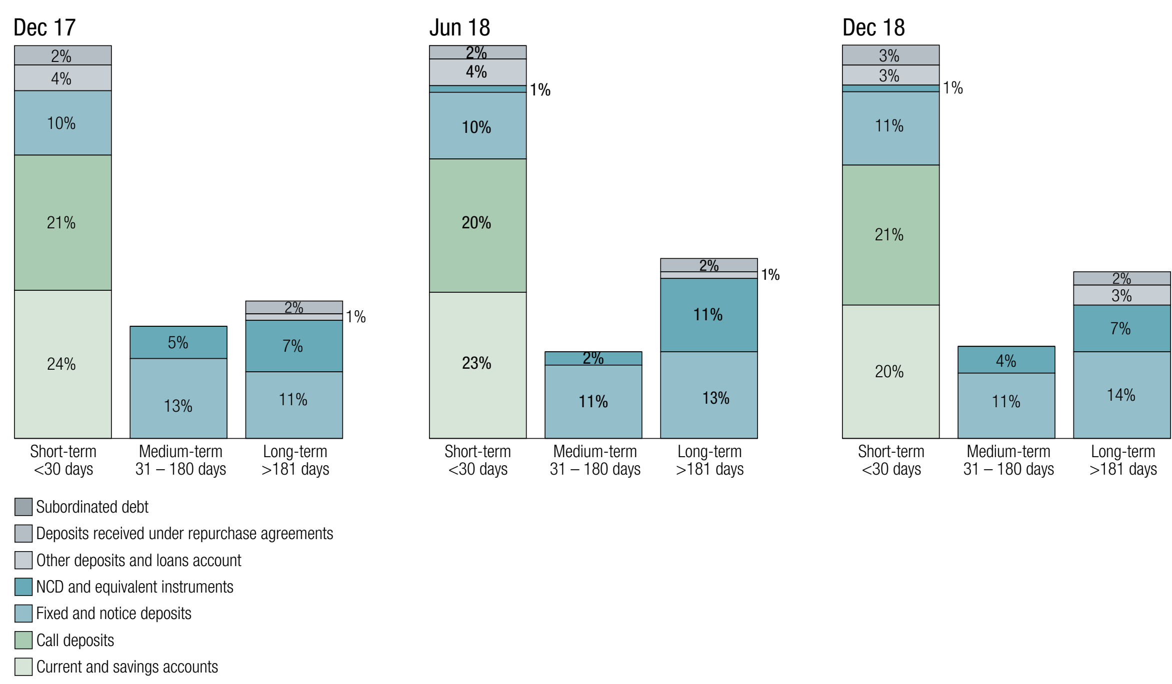
	December 2018 IFRS 9				December 2017 IAS 39	June 2018 IAS 39
% of funding liabilities	**Total**	**Short-term**	**Medium-term**	**Long-term**	Total	Total
Institutional funding	**36.5**	**11.4**	**7.1**	**18.0**	36.8	35.0
Deposit franchise	**63.5**	**49.6**	**8.3**	**5.6**	63.2	65.0
Corporate	**20.6**	**17.7**	**2.1**	**0.8**	21.9	20.6
Retail	**20.5**	**15.9**	**3.2**	**1.4**	20.2	20.3
SMEs	**5.1**	**4.3**	**0.5**	**0.3**	5.3	5.3
Governments and parastatals	**9.8**	**7.9**	**1.2**	**0.7**	9.0	11.0
Foreign	**7.4**	**3.7**	**1.3**	**2.4**	6.8	7.8
Other	**0.1**	**0.1**	**–**	**–**	–	–
Total	**100.0**	**61.0**	**15.4**	**23.6**	100.0	100.0

FUNDING ANALYSIS FOR FIRSTRAND BANK BY SOURCE*

	Dec 14	Jun 15	Dec 15	Jun 16	Dec 16	Jun 17	Dec 17	Jun 18	Dec 18
Total	R731 bn	R760 bn	R795 bn	R826 bn	R857 bn	R885 bn	R939 bn	R974 bn	R1 028 bn
Other	3	2	2	1	1	1			
Foreign	6	7	8	7	6	6	7	8	7
SMEs	5	5	5	6	6	5	5	5	5
Public sector	11	10	10	10	11	11	9	11	10
Retail	18	18	19	19	20	20	20	20	21
Corporate	24	22	22	20	22	21	22	21	21
Institutional	33	36	34	37	34	36	37	35	36

* *Excludes foreign branches.*

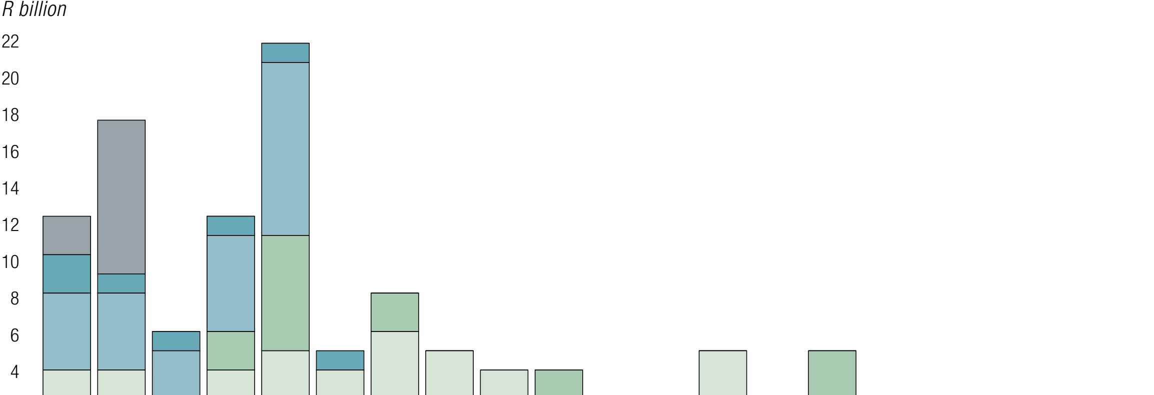
GROUP'S FUNDING LIABILITIES BY INSTRUMENT TYPE AND TERM



The maturity profile of the bank's capital market instruments is depicted in the following chart. The bank does not have significant concentration risk in any one year and seeks to efficiently issue across the maturity spectrum, taking investor demand into account.

MATURITY PROFILE OF CAPITAL MARKET INSTRUMENTS OF FIRSTRAND BANK*

R billion



* *Includes foreign branches.*

** *Subordinated debt includes EMTN Tier 2 and AT1 capital instruments.*

FUNDING STRUCTURE OF FOREIGN OPERATIONS

In line with the group's strategy to build strong in-country deposit franchises, foreign operations are categorised in terms of their stage of development from greenfields start-ups to mature subsidiaries and can be characterised, from a funding perspective, as follows:

- Mature deposit franchises – all assets are largely funded in-country. The pricing of funding is determined via in-country funds transfer pricing, which is already in place.
- Growing deposit franchises – assets are first funded in-country at relevant funds transfer pricing rates. Any excess over and above in-country capacity is funded by the group's dollar funding platforms. This is a temporary arrangement, which allows these entities to develop adequate in-country deposit bases.
- No deposit franchises – all activities are funded by the group's dollar funding platforms.

In all categories, the pricing of funding is determined from established in-country funds transfer pricing.

GROUP FUNDING SUPPORT

Any funding provided by the group is constrained by the appetite set independently by the credit risk management committee or the board. In arriving at limits, the credit risk management committee considers the operating jurisdiction and any sovereign risk limits that should apply. Group Treasury, therefore, must ensure that any resources provided to foreign entities are priced appropriately.

FUNDS TRANSFER PRICING

The group operates a funds transfer pricing framework which incorporates liquidity costs and benefits as well as regulatory friction costs into product pricing and performance measurement for all on- and off-balance sheet activities. The active management of foreign currency liquidity risk remains a strategic focus given the group's rest of Africa growth strategy. Where fixed-rate commitments are undertaken (fixed-rate loans or fixed deposits), transfer pricing will also include the interest rate transfer price. Businesses are effectively incentivised to:

- enhance and preserve funding stability;
- ensure that asset pricing is aligned to liquidity risk appetite;
- reward liabilities in accordance with behavioural characteristics and maturity profile; and
- manage contingencies with respect to potential funding drawdowns.

FOREIGN CURRENCY BALANCE SHEET

MOTONOVO

The acquisition of Aldermore alleviates some pressure on the group's foreign currency funding capacity. Once integrated with Aldermore, MotoNovo will be supported by Aldermore's funding platform through which all new business will be funded via a combination of on-balance sheet deposits, wholesale and structured funding. MotoNovo's existing asset book, which currently forms part of the bank's London branch, continues to be funded through existing funding mechanisms and will, over time, be run down. Consequently, the funding capacity currently allocated to MotoNovo from the group's domestic balance sheet can ultimately be redeployed into other growth strategies.

ALDERMORE

Aldermore actively follows a diversified and flexible funding strategy and is predominantly funded by retail and business customer deposits, and bespoke corporate deposits. These account for approximately 80% of total funding. The deposit franchise amounted to £8 billion at 31 December 2018.

Aldermore's funding strategy is complemented by its continuing access to wholesale funding. Notwithstanding the end of the Bank of England's term funding scheme, Aldermore returned to the securitisation market in October 2018 with its second prime residential mortgage-backed securities transaction, Oak 2. Aldermore continues to access the capital markets as and when opportunities arise to optimise its funding profile and cost of funds.

Aldermore's liquid asset composition remains prudent with an LCR well in excess of the regulatory minimum. The liquidity risk position is managed to more stringent internal parameters. Given the Brexit uncertainty, there has been a proactive approach to reduce exposures in bonds from the second half of 2018 and place these with the Bank of England, which accounts for 40% of Aldermore's liquidity buffer.

RISK MANAGEMENT APPROACH

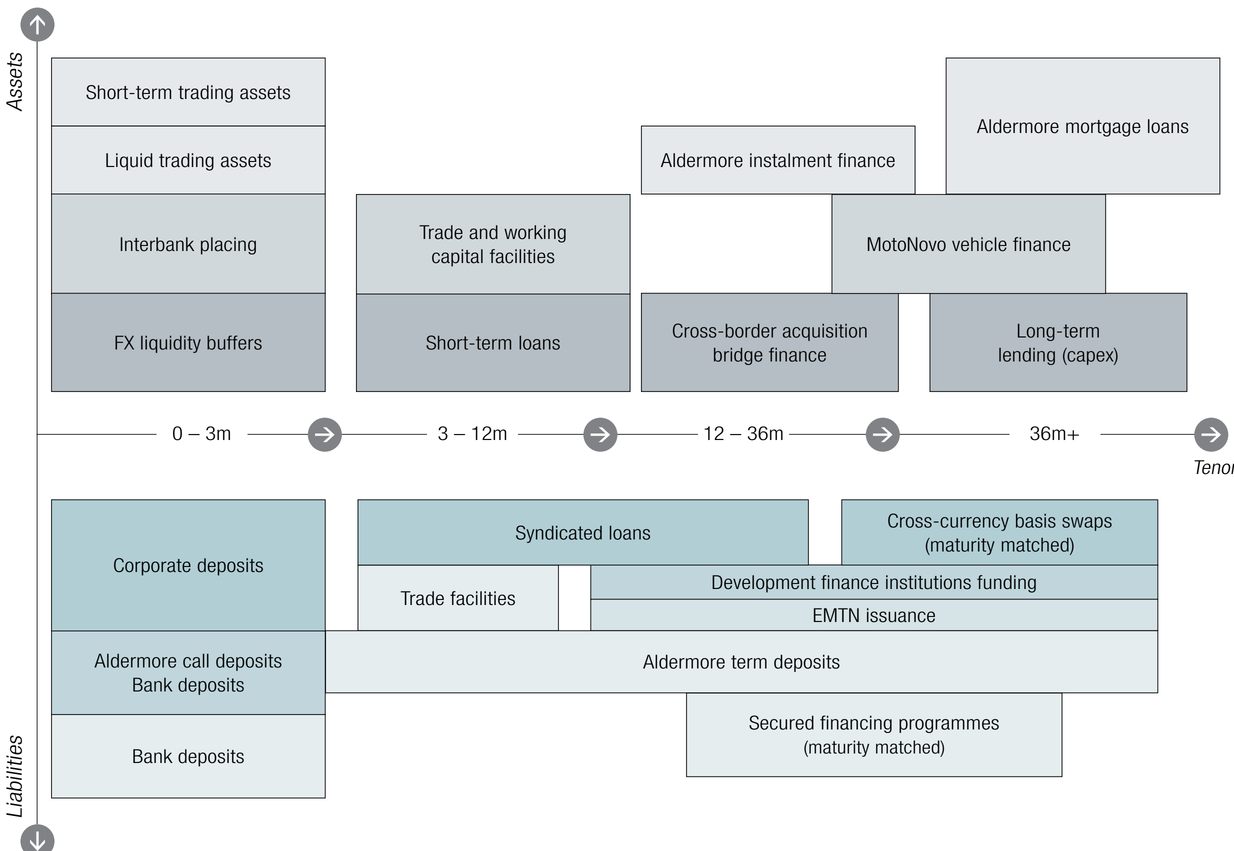
The group seeks to avoid undue liquidity risk exposure and thus maintains liquidity risk within the risk appetite approved by the board and risk committee. The SARB, via *Exchange Control Circular 6/2010,* introduced macro-prudential limits applicable to authorised dealers. The group utilises its own foreign currency balance sheet measures based on economic risk and has set internal limits below those allowed by the macro-prudential limits framework.

FirstRand's foreign currency activities, specifically lending and trade finance, have steadily increased over the past six years. It is, therefore, important to have a sound framework for the assessment and management of foreign currency external debt, given the inherent vulnerabilities and liquidity risks associated with cross-border financing. This limit includes the group's exposure to branches, foreign currency assets and guarantees.

PHILOSOPHY ON FOREIGN CURRENCY EXTERNAL DEBT

The key determinant in an institution's ability to fund and refinance foreign currency exposures is the sovereign risk and the associated external financing requirement. The group's framework for the management of external debt considers sources of sovereign risk and foreign currency funding capacity, and the macroeconomic vulnerabilities of South Africa. To determine South Africa's foreign currency funding capacity, the group takes into account the external debt of all South African entities (private and public sector, and financial institutions) as all these entities utilise the South African system's capacity, namely confidence and export receipts. The group thus employs a self-imposed structural borrowing limit and a liquidity risk limit more onerous than that allowed by regulations.

GRAPHICAL REPRESENTATION OF THE FOREIGN CURRENCY BALANCE SHEET



LIQUIDITY RISK MANAGEMENT

OVERVIEW

Liquidity risk is a consequential risk that may be caused by other risks as demonstrated by the reduction in liquidity in many international markets as a consequence of the 2008/9 global credit crisis. The group, therefore, continuously monitors and analyses the potential impact of other risks and events on its funding and liquidity position to ensure that business activities preserve and improve funding stability. This ensures that the group is able to operate through periods of stress when access to funding could be constrained.

The group recognises two types of liquidity risk:

Funding liquidity risk – the risk that a bank will not be able to effectively meet current and future cash flow and collateral requirements without negatively affecting its normal course of business, financial position or reputation.

Market liquidity risk – the risk that market disruptions or lack of market liquidity will cause a bank to be unable (or able, but with difficulty) to trade in specific markets without affecting market prices significantly.

Mitigation of market and funding liquidity risks is achieved via contingent liquidity risk management. Buffer stocks of high-quality, highly liquid assets are held either to be sold into the market or to provide collateral for loans to cover any unforeseen cash shortfall that may arise.

The group's approach to liquidity risk management distinguishes between structural, daily and contingency liquidity risk management across all currencies, and various approaches are employed in the assessment and management of these on a daily, weekly and monthly basis as illustrated in the following table.

LIQUIDITY RISK MANAGEMENT APPROACHES

STRUCTURAL LIQUIDITY RISK	DAILY LIQUIDITY RISK	CONTINGENCY LIQUIDITY RISK
Managing the risk that structural, long-term, on- and off-balance sheet exposures cannot be funded timeously or at reasonable cost.	Ensuring that intraday and day-to-day anticipated and unforeseen payment obligations can be met by maintaining a sustainable balance between liquidity inflows and outflows.	Maintaining a number of contingency funding sources to draw upon in times of economic stress.
> setting liquidity risk tolerance; > setting liquidity strategy; > ensuring substantial diversification of funding sources; > assessing the impact of future funding and liquidity needs taking into account expected liquidity shortfalls or excesses; > setting the approach to liquidity management in different currencies and countries; > ensuring adequate liquidity ratios; > ensuring an appropriate structural liquidity gap; and > maintaining a funds transfer pricing methodology and process.	> managing intraday liquidity positions; > managing daily payment queue; > monitoring net funding requirements; > forecasting cash flows; > performing short-term cash flow analysis for all currencies (individually and in aggregate); > managing intragroup liquidity; > managing central bank clearing; > managing net daily cash positions; > managing and maintaining market access; and > managing and maintaining collateral.	> managing early warning and key risk indicators; > performing stress testing, including sensitivity analysis and scenario testing; > maintaining product behaviour and optionality assumptions; > ensuring that an adequate and diversified portfolio of liquid assets and buffers are in place; and > maintaining the contingency funding plan.

STRESS TESTING AND SCENARIO ANALYSIS

Regular and rigorous stress tests are conducted on the funding profile and liquidity position as part of the overall stress testing framework with a focus on:

- quantifying the potential exposure to future liquidity stresses;
- analysing the possible impact of economic and event risks on cash flows, liquidity, profitability and solvency position; and
- proactively evaluating the potential secondary and tertiary effects of other risks on the group.

LIQUIDITY CONTINGENCY PLANNING

Frequent volatility in funding markets and the fact that financial institutions can, and have, experienced liquidity problems even during benign economic conditions highlight the importance of quality liquidity risk and contingency management processes.

The group's ability to meet all of its daily funding obligations and emergency liquidity needs is of paramount importance and, in order to ensure that this is always adequately managed, the group maintains a liquidity contingency plan.

The objective of liquidity contingency planning is to achieve and maintain funding levels in a manner that allows the group to emerge from a potential funding crisis with its reputation intact and maintain its financial position for continuing operations. The plan is expected to:

- support effective management of liquidity and funding risk under stressed conditions;
- establish clear roles and responsibilities in the event of a liquidity crisis; and
- establish clear invocation and escalation procedures.

The liquidity contingency plan provides a pre-planned response mechanism to facilitate swift and effective responses to contingency funding events. These events may be triggered by financial distress in the market (systemic) or bank-specific events (idiosyncratic) which may result in the loss of funding sources.

The plan is reviewed annually and tested regularly via a group-wide liquidity stress simulation exercise to ensure the document remains up to date, relevant and familiar to all key personnel within the group that have a role to play, should it ever experience an extreme liquidity stress event.

LIQUIDITY RISK POSITION

The following table provides a breakdown of the available sources of liquidity.

COMPOSITION OF LIQUID ASSETS

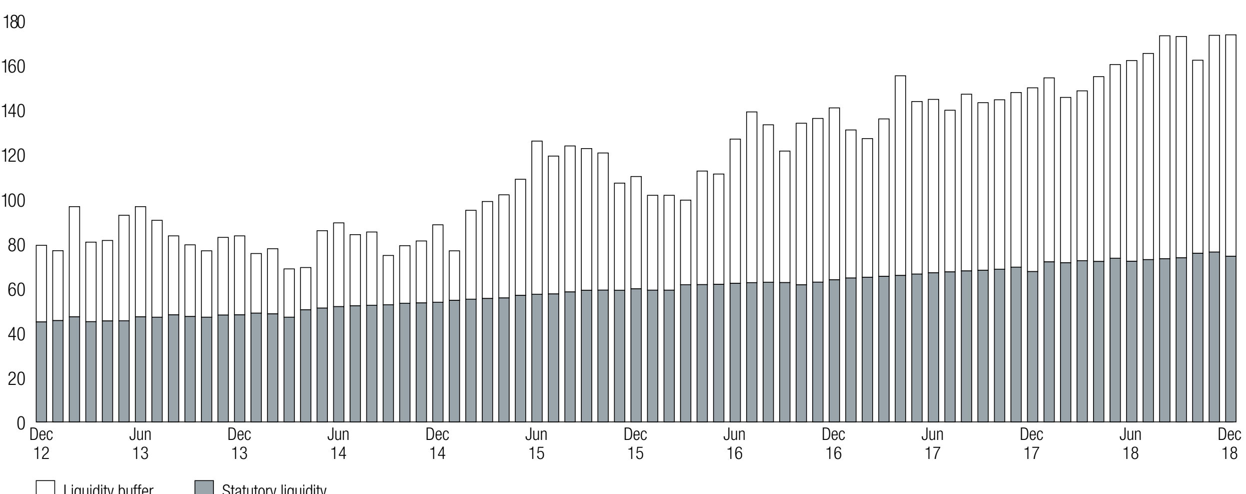
	As at 31 December	
R billion	**2018**	2017
Cash and deposits with central banks	**37**	32
Government bonds and bills	**135**	117
Other liquid assets	**44**	38
Total liquid assets	**216**	187

Group liquidity buffers are actively managed via the group's pool of high-quality, highly liquid assets that are available as protection against unexpected stress events or market disruptions, as well as to facilitate the variable liquidity needs of the operating businesses. The composition and quantum of available liquid resources are defined behaviourally, considering both the funding liquidity-at-risk and the market liquidity depth of these resources. In addition, adaptive overlays to liquidity requirements are derived from stress testing and scenario analysis of cash inflows and outflows.

The group has continued to build its liquid asset holdings in accordance with asset growth, risk appetite and regulatory requirements.

LIQUIDITY BUFFER AND STATUTORY LIQUIDITY REQUIREMENTS OF FIRSTRAND BANK (EXCLUDING FOREIGN BRANCHES)

R billion



Liquidity ratios for the group and bank at 31 December 2018 are summarised below. The NSFR became effective on 1 January 2018.

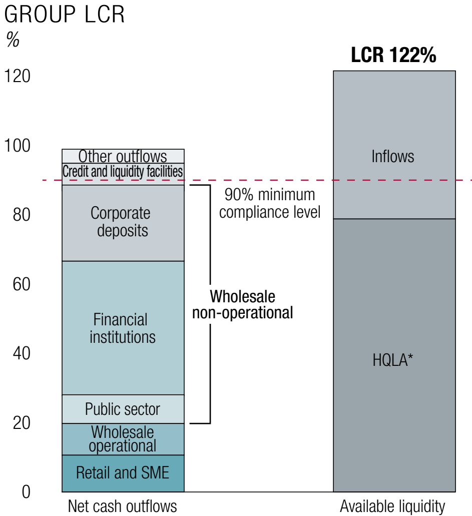
	Group		Bank*	
	LCR**	**NSFR**	**LCR****	**NSFR**
Regulatory minimum	90%	100%	90%	100%
Actual	122%	112%	130%	110%

* *Excludes foreign branches.*

** *LCR is calculated as a simple average of 90 calendar days' LCR observations over the preceding quarter.*

The following graph illustrates the group's LCR position and demonstrates compliance with the 90% minimum requirement at 31 December 2018 (1 January 2019 increased to 100%).

GROUP LCR



* *HQLA held by subsidiaries and foreign branches in excess of the required LCR minimum of 90% have been excluded on consolidation as per Directive 11 of 2014.*

Funding from institutional clients is a significant contributor to the group's net cash outflows as measured under the LCR. Other significant contributors to cash outflows are corporate funding and off-balance sheet facilities granted to clients. The group continues to execute on strategies to increase funding sourced through its deposit franchise and to reduce reliance on institutional funding sources, as well as to offer facilities more efficiently.

Credit risk

INTRODUCTION AND OBJECTIVES

Credit risk is the risk of loss due to the non-performance of a counterparty in respect of any financial or other obligation. For fair value portfolios, the definition of credit risk is expanded to include the risk of losses through fair value changes arising from changes in credit spreads. Credit risk also includes credit default risk, pre-settlement risk, country risk, concentration risk and securitisation risk.

Credit risk management across the group is split into three distinct portfolios, which are aligned to customer profiles. These portfolios are retail, commercial and corporate:

- retail credit is offered by FNB, WesBank and Aldermore to individuals and SMEs with a turnover of up to R12.5 million;
- commercial credit focuses on relationship banking offered by FNB and WesBank to companies that are mainly single-banked; and
- corporate credit is offered by RMB to large corporate multi-banked customers.

As advances are split across the operating businesses, default risk is allocated to the income-receiving portfolio.

The goal of credit risk management is to maximise the group's measure of economic profit, NIACC, within acceptable levels of earnings volatility by maintaining credit risk exposure within acceptable parameters.

Credit risk is one of the core risks assumed as part of achieving the group's business objectives. It is the most significant risk type in terms of regulatory and economic capital requirements. Credit risk management objectives are twofold:

Risk control: Appropriate limits are placed on the assumption of credit risk and steps taken to ensure the accuracy of credit risk assessments and reports. Deployed and central credit risk management teams fulfil this task.

Management: Credit risk is taken within the constraints of the risk appetite framework. The credit portfolio is managed at an aggregate level to optimise the exposure to this risk. Business units and deployed risk functions, overseen by the group credit risk management function in ERM and relevant board committees, fulfil this role.

Based on the group's credit risk appetite, as measured on ROE, NIACC and volatility-of-earnings basis, credit risk management principles include holding the appropriate level of capital and pricing for risk on an individual and portfolio basis. The scope of credit risk identification and management practices across the group, therefore, spans the credit value chain, including risk appetite, credit origination strategy, risk quantification and measurement, as well as collection and recovery of delinquent accounts.

Credit risk is managed through the implementation of comprehensive policies, processes and controls to ensure a sound credit risk management environment with appropriate credit granting, administration, measurement, monitoring and reporting of credit risk exposure.

Credit risk appetite measures are set in line with overall risk appetite. The aim of the credit risk appetite is to deliver an earnings profile that will perform within acceptable levels of earnings volatility determined by the group's overall risk appetite. In setting credit risk appetite measures:

- the group's credit risk appetite is aligned to the overall group risk appetite;
- credit risk appetite is determined using both a top-down group credit risk appetite and an aggregated bottom-up assessment of the business unit level credit risk appetites; and
- stress testing is used to enable the measurement of the financial performance and the credit volatility profile of the different credit business units at a portfolio, segment, business and ultimately diversified group-wide level.

Formulated business unit level credit risk appetite statements are annually reviewed and approved, and risk limits are reported quarterly to and monitored by business unit credit or executive committees and the relevant portfolio credit policy and risk appetite approval committees (subcommittee of the group credit risk management committee). In the credit risk appetite process, ERM group credit risk management is responsible for:

- setting the requirements in the credit risk appetite framework;
- articulating a top-down group credit risk appetite statement;
- assessing alignment between the top-down statement with aggregation of the individual business unit credit risk appetite statements;
- jointly with credit portfolio heads, reporting risk appetite breaches to the FirstRand credit risk management committee; and
- jointly with the business CROs, reporting risk appetite breaches to the RCC committee.

Credit risk limits include the following:

BUSINESS UNIT LIMITS	
Counterparty limits	Borrower's risk grades are mapped to the FirstRand rating scale.
Collateral limits	For secured loans, limits are based on collateral profiles, e.g. loan-to-value bands.
Capacity limits	Measures of customer affordability.
Concentration limits	Limits for concentrations to, for example, customer segments or high collateral risk.
PORTFOLIO-LEVEL LIMITS	
Additional limits for subportfolios subject to excessive loss volatility.	

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> Aligned credit origination strategies to the group's macroeconomic outlook with reference to low economic growth and lack of employment growth. > Monitored live production environment of IFRS 9 models and outputs and refined associated control environment. > Continued roll-out of data architecture refinements related to BCBS 239 to further enhance credit risk data aggregation and reporting. > Continued to focus on and strengthen credit risk management disciplines across the subsidiaries in the rest of Africa.	> Continue to monitor sovereign rating outlook, and the ratings of associated entities with proactive revisions, where required. > Leverage BCBS 239 activities to integrate credit risk data aggregation and reporting, and credit risk stress testing activities. > Monitor changes to credit portfolio composition and assess the need for additional prudential limits. > Expand initiatives related to credit model risk management across non-AIRB jurisdictions.

CREDIT RISK REPORTING

Reporting of credit risk information follows the credit governance structure illustrated on the next page. The credit portfolio committees (retail, commercial and corporate) report to the FirstRand credit risk management committee on the risk profile of the advances in each portfolio on a biannual basis. These reports include a review of portfolio trends and quality of new business originated to enable an aggregated credit portfolio view for the group.

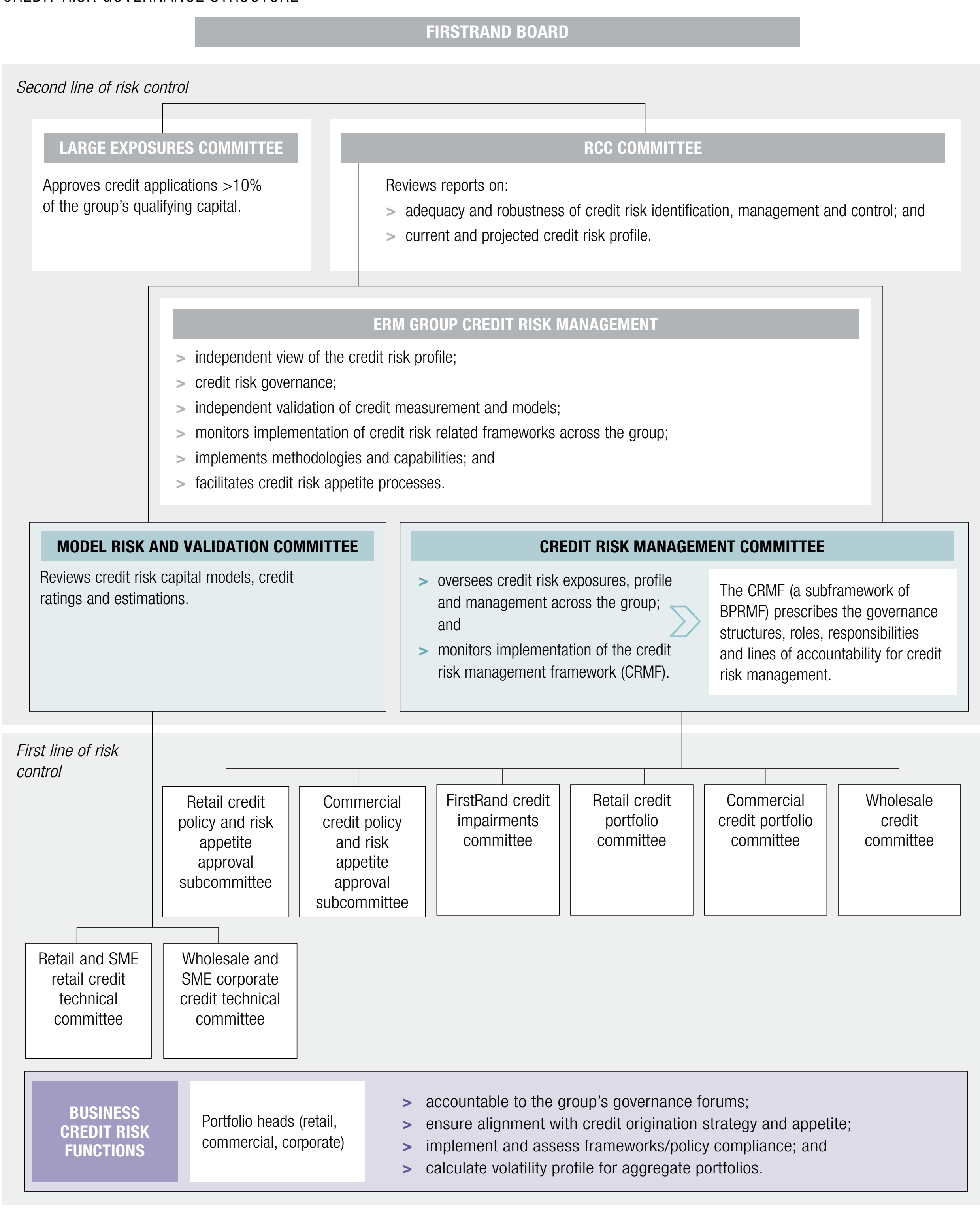
Each quarter ERM provides the RCC committee with an aggregated credit risk profile report of each portfolio with inputs from credit portfolio reports and business CRO reports. It includes:

- an overview of key credit financial indicators;
- significant credit observations from the respective credit portfolios, such as risk appetite breaches; and
- significant regulatory and credit model-related issues.

Business CROs report quarterly on the credit risk profile and include a high-level overview of advances split by portfolio to business risk and executive committees.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

CREDIT RISK GOVERNANCE STRUCTURE



CREDIT ASSETS

CREDIT ASSETS BY TYPE, SEGMENT AND PA APPROACH

		AIRB approach	Standardised approach subsidiaries and foreign branches			
	As at 31 December 2018 Total	FRB SA	Regulated banking entities in the rest of Africa	Other subsidiaries and foreign branches	As at 31 December 2017 Total	As at 30 June 2018 Total
On-balance sheet exposures	**1 441 152**	**1 037 464**	**89 234**	**314 454**	1 140 848	1 390 746
Cash and short-term funds	**74 706**	**47 695**	**7 881**	**19 130**	54 226	87 592
– Money at call and short notice	**35 743**	**27 013**	**2 435**	**6 295**	29 327	50 612
– Balances with central banks	**38 963**	**20 682**	**5 446**	**12 835**	24 899	36 980
Gross advances*	**1 205 114**	**869 630**	**63 793**	**271 691**	944 588	1 140 062
Less: impairments	**32 570**	**25 103**	**3 845**	**3 622**	16 856	18 835
Net advances	**1 172 544**	**844 527**	**59 948**	**268 069**	927 732	1 121 227
Debt investment securities (excluding non-recourse investments)**	**193 902**	**145 242**	**21 405**	**27 255**	158 890	181 927
Off-balance sheet exposures	**180 182**	**151 756**	**12 803**	**15 623**	162 703	177 896
Total contingencies	**48 420**	**42 318**	**5 171**	**931**	43 356	47 658
– Guarantees	**38 000**	**33 118**	**4 099**	**783**	35 027	36 977
– Letters of credit#	**10 420**	**9 200**	**1 072**	**148**	8 329	10 681
Irrevocable commitments	**127 963**	**105 639**	**7 632**	**14 692**	114 604	126 631
Credit derivatives	**3 799**	**3 799**	**–**	**–**	4 743	3 607
Total	**1 621 334**	**1 189 220**	**102 037**	**330 077**	1 303 551	1 568 642

* *The business split of gross advances is provided in the CR1: Analysis of gross advances, debt investment securities and off-balance sheet exposures table.*

** *Debt investment securities are net of allowances and impairments.*

\# *Includes acceptances.*

CREDIT QUALITY OF ASSETS

The following tables provide the credit quality of advances in the in-force portfolio.

CR1: ANALYSIS OF GROSS ADVANCES, DEBT INVESTMENT SECURITIES AND OFF-BALANCE SHEET EXPOSURES

	As at 31 December 2018						
	Gross exposures*						
	Net defaulted exposures (NPLs)	Non-defaulted exposures					
R million		Neither past due nor impaired	One instalment past due	Two instalments past due	Total	Allowances/ impairments	Net value
1. **Gross advances**	**38 588**	**1 148 252**	**13 959**	**4 315**	**1 205 114**	**32 570**	**1 172 544**
FNB	**24 613**	**408 063**	**5 984**	**1 655**	**440 315**	**20 477**	**419 838**
– Retail	**16 392**	**266 166**	**4 374**	**1 289**	**288 221**	**13 315**	**274 906**
– Commercial	**3 925**	**93 089**	**383**	**149**	**97 546**	**3 564**	**93 982**
– Rest of Africa	**4 296**	**48 808**	**1 227**	**217**	**54 548**	**3 598**	**50 950**
WesBank	**7 570**	**117 709**	**7 971**	**2 660**	**135 910**	**4 533**	**131 377**
RMB investment banking	**2 678**	**271 088**	**4**	**–**	**273 770**	**3 368**	**270 402**
RMB corporate banking	**694**	**68 145**	**–**	**–**	**68 839**	**1 173**	**67 666**
Aldermore	**1 762**	**171 053**	**–**	**–**	**172 815**	**776**	**172 039**
FCC (including Group Treasury)	**1 271**	**112 194**	**–**	**–**	**113 465**	**2 243**	**111 222**
2. **Debt investment securities**	**–**	**195 964**	**–**	**–**	**195 964**	**2 062**	**193 902**
3. **Off-balance sheet exposures**	**92**	**180 756**	**–**	**–**	**180 848**	**666**	**180 182**
4. **Total (IFRS 9)**	**38 680**	**1 524 972**	**13 959**	**4 315**	**1 581 926**	**35 298**	**1 546 628**

* *Gross exposures exclude recoverable loan commitments.*

	As at 31 December 2017**						
	Gross exposures*						
	Net defaulted exposures (NPLs)	Non-defaulted exposures					
R million		Neither past due nor impaired	One instalment past due	Two instalments past due	Total	Allowances/ impairments	Net value
1. **Gross advances**	21 982	905 041	11 450	6 115	944 588	17 276	927 312
FNB	12 356	363 557	6 192	2 963	385 068	8 109	376 959
– Retail	7 598	239 819	3 977	2 036	253 430	5 161	248 269
– Commercial	2 235	85 202	295	168	87 900	1 527	86 373
– Rest of Africa	2 523	38 536	1 920	759	43 738	1 421	42 317
WesBank	8 616	194 051	5 196	2 559	210 422	4 754	205 668
RMB investment banking	909	237 470	6	593	238 978	3 119	235 859
RMB corporate banking	101	51 257	56	–	51 414	1 003	50 411
FCC (including Group Treasury)	–	58 706	–	–	58 706	291	58 415
2. **Debt investment securities**	–	157 560	120	840	158 520	(370)	158 890
3. **Off-balance sheet exposures**	16	162 687	–	–	162 703	–	162 703
4. **Total (IAS 39)**	21 998	1 225 288	11 570	6 955	1 265 811	16 906	1 248 905

* *Gross exposures exclude recoverable loan commitments.*

** *Gross advances have not been restated to take the following reallocations into account.*
During the December 2018 period the following reallocations were made to the segments:
- *Discovery card previously reported under FNB retail have been reallocated to FCC (including Group Treasury);*
- *DirectAxis loans previously reported under WesBank has been reallocated to FNB retail;*
- *WesBank Africa reallocated to FNB rest of Africa; and*
- *MotoNovo is now included in FCC (including Group Treasury).*

CR1: ANALYSIS OF GROSS ADVANCES, DEBT INVESTMENT SECURITIES AND OFF-BALANCE SHEET EXPOSURES continued

	As at 30 June 2018**						
	Gross exposures*						
		Non-defaulted exposures					
R million	Net defaulted exposures (NPLs)	Neither past due nor impaired	One instalment past due	Two instalments past due	Total	Allowances/ impairments	Net value
1. **Gross advances**	26 947	1 092 816	13 530	6 769	1 140 062	18 835	1 121 227
FNB	14 066	379 960	6 955	3 373	404 354	8 772	395 582
– Retail	8 485	249 891	4 456	2 290	265 122	5 364	259 758
– Commercial	2 714	90 752	221	300	93 987	1 552	92 435
– Rest of Africa	2 867	39 317	2 278	783	45 245	1 856	43 389
WesBank	9 760	203 467	5 168	2 838	221 233	5 436	215 797
RMB investment banking	2 299	241 946	690	159	245 094	2 999	242 095
RMB corporate banking	206	49 537	37	27	49 807	994	48 813
Aldermore	616	162 208	680	372	163 876	459	163 417
FCC (including Group Treasury)	–	55 698	–	–	55 698	175	55 523
2. **Debt investment securities**	–	181 927	–	–	181 927	–	181 927
3. **Off-balance sheet exposures**	38	177 858	–	–	177 896	–	177 896
4. **Total (IAS 39)**	26 985	1 452 601	13 530	6 769	1 499 885	18 835	1 481 050

* *Gross exposures exclude recoverable loan commitments.*

** *Gross advances have not been restated to take the following reallocations into account.*
During the December 2018 period the following reallocations were made to the segments:
- *Discovery card previously reported under FNB retail have been reallocated to FCC (including Group Treasury);*
- *DirectAxis loans previously reported under WesBank has been reallocated to FNB retail;*
- *WesBank Africa reallocated to FNB rest of Africa; and*
- *MotoNovo is now included in FCC (including Group Treasury).*

CR2: CHANGES IN STOCK OF DEFAULTED ADVANCES, DEBT SECURITIES AND OFF-BALANCE SHEET EXPOSURES*

R million	Total
1. **Defaulted credit exposures at 1 July 2018 (IFRS 9)**	**33 552**
2. Advances defaulted	**12 566**
3. Return to not defaulted status	**(2 689)**
4. Amounts written off	**(2 898)**
5. Other changes	**(1 851)**
6. **Defaulted credit exposures at 31 December 2018**	**38 680**

* *CR2 is a semi-annual disclosure, movement therefore included from July 2018 to December 2018.*

CREDIT RISK MITIGATION (CRM)

Since taking and managing credit risk is core to its business, the group aims to optimise the amount of credit risk it takes to achieve its return objectives. Mitigation of credit risk is an important component of this, beginning with the structuring and approval of facilities for only those clients, and within those parameters that fall within risk appetite.

Although in principle credit assessment focuses on the counterparty's ability to repay debt, credit mitigation instruments are used where appropriate to reduce the group's lending risk, resulting in security against the majority of exposures. These include financial or other collateral, netting agreements, guarantees or credit derivatives. The collateral types are driven by portfolio, product or counterparty type.

CRM instruments

- Mortgage and instalment sale finance portfolios in FNB HomeLoans, FNB Wealth, WesBank, MotoNovo and Aldermore are secured by the underlying assets financed.
- FNB and Aldermore commercial credit exposures are secured by the assets of the SME counterparties and commercial property finance deals are secured by the underlying property and associated cash flows.
- Structured facilities in RMB are secured as part of the structure through financial or other collateral, including guarantees, credit derivative instruments and assets.
- Counterparty credit risk in RMB is mitigated through the use of netting agreements and financial collateral.
- Personal loans, overdrafts and credit card exposures are generally unsecured or secured by guarantees and sureties.
- Working capital facilities in RMB corporate banking are unsecured.

Furthermore, it is the group's policy that all items of collateral are valued at the inception of a transaction and at various points throughout the life of a transaction, either through physical inspection or indexation methods, as appropriate. For corporate and commercial portfolios, the value of collateral is reviewed as part of the annual facility review. For mortgage portfolios, collateral valuations are updated on an ongoing basis through statistical indexation models. In the event of default, however, more detailed reviews and valuations of collateral are performed, which yield a more accurate financial impact.

Limited on- and off-balance sheet netting is used in the process of determining exposure to credit risk. RMB and FNB apply netting for corporate, SME corporate, banks, securities firms, public sector and sovereign exposures based on facility type, natural set-off, net exposure determination rules and ceding rules. The policies followed are documented and strictly governed by the applicable regulatory clauses.

CR3: CREDIT RISK MITIGATION TECHNIQUES

	As at 31 December 2018				
	Exposures*				
	Unsecured	Secured by collateral		Secured by financial guarantees	
R million	carrying value	Carrying value	Secured amount	Carrying value	Secured amount
Advances	**225 183**	**947 362**	**947 362**	**7 607**	**7 607**
Debt securities	**69 307**	**126 452**	**126 452**	**–**	**–**
Total advances and debt securities	**294 490**	**1 073 814**	**1 073 814**	**7 607**	**7 607**
Of which defaulted	**5 201**	**16 443**	**16 443**	**–**	**–**

* *No exposures were secured by credit derivatives during the period.*

	As at 31 December 2017				
	Exposures*				
	Unsecured	Secured by collateral		Secured by financial guarantees	
R million	carrying value	Carrying value	Secured amount	Carrying value	Secured amount
Advances	170 336	765 640	765 640	8 243	8 243
Debt securities	44 341	114 549	114 549	–	–
Total advances and debt securities	214 677	880 189	880 189	8 243	8 243
Of which defaulted	4 399	13 455	13 455	3 766	3 766

* *No exposures were secured by credit derivatives during the period.*

	As at 30 June 2018				
	Exposures*				
	Unsecured	Secured by collateral		Secured by financial guarantees	
R million	carrying value	Carrying value	Secured amount	Carrying value	Secured amount
Advances	181 942	939 781	939 781	5 300	5 300
Debt securities	65 001	116 926	116 926	–	–
Total advances and debt securities	246 943	1 056 707	1 056 707	5 300	5 300
Of which defaulted	5 046	11 909	11 909	–	–

* *No exposures were secured by credit derivatives during the period.*

CREDIT RISK UNDER AIRB APPROACH

The use of quantitative models is crucial to the successful management of credit risk, with models being applied across the credit value chain to drive business decisions and to measure and report on credit risk.

Technical requirements for the development of credit risk models are captured in model-type specific model development frameworks, while model governance, validation and implementation requirements are articulated in the group's model risk management framework for credit risk. Where applicable, independent validation of credit risk models is performed according to requirements articulated in model-type specific independent validation frameworks.

Credit risk models are widely employed in the assessment of capital requirements, origination, pricing, impairment calculations and stress testing of the credit portfolio. All of these models are built on a number of client and facility rating models, in line with the AIRB approach requirements and the group's model building frameworks. Credit risk approaches employed across the group are shown in the following table.

Basel approach	FRB SA	Remaining FirstRand entities
AIRB	✓	
Standardised approach		✓

The following table provides the EAD composition per major portfolio within the group (including Aldermore), for each of the credit approaches.

EAD % per portfolio	AIRB	Standardised approach
Retail	67	33
Commercial	61	39
Corporate	75	25

Even though the remaining subsidiaries do not have regulatory approval to use the AIRB approach, the same or similar models are applied for the internal assessment of credit risk on the standardised approach. The models are used for the internal assessment of the three primary credit risk components:

- probability of default (PD);
- exposure at default (EAD); and
- loss given default (LGD).

Management of the credit portfolio is reliant on these three credit risk measures. PD, EAD and LGD are inputs into the portfolio and group-level credit risk assessment where the measures are combined with estimates of correlations between individual counterparties, industries and portfolios to reflect diversification benefits across the portfolio.

PROBABILITY OF DEFAULT	
Definition	> The probability of a counterparty defaulting on any of its obligations over the next 12 months. > A measure of the counterparty's ability and willingness to repay facilities granted.
Dimensions	> Time-driven: counterparty is in arrears for more than 90 days or three instalments. > Event-driven: there is reason to believe that the exposure will not be recovered in full and has been classified as such.
Application	> All credit portfolios. > Recognition of NPLs for accounting.
PD measures	> Through-the-cycle PD measures reflect long-term, average default expectations over the course of the economic cycle. Through-the-cycle PDs are inputs in economic and regulatory capital calculations. > Point-in-time PD measures reflect default expectations in the current economic environment and thus tend to be more volatile than through-the-cycle PDs. Point-in-time PDs are used in credit portfolio management, including risk appetite and portfolio monitoring.
Measure application	> Probability of default is used in the management of exposure to credit risk.

The group employs a granular, 100-point master rating scale, which has been mapped to the continuum of default probabilities, as illustrated in the following table. These mappings are reviewed and updated on a regular basis. The group currently only uses mapping to S&P Global Ratings (S&P) rating scales.

MAPPING OF FIRSTRAND (FR) GRADES TO RATING AGENCY SCALES

FR RATING	MIDPOINT PD	INTERNATIONAL SCALE MAPPING
1 – 14	0.06%	AAA, AA+, AA, AA-, A+, A, A-
15 – 25	0.29%	BBB+, BBB(upper), BBB, BBB-(upper), BBB-, BB+(upper)
26 – 32	0.77%	BB+, BB(upper), BB, BB-(upper)
33 – 39	1.44%	BB-, B+(upper)
40 – 53	2.52%	B+
54 – 83	6.18%	B(upper), B, B-(upper)
84 – 90	13.68%	B-
91 – 99	59.11%	CCC
100	100%	D (defaulted)

- FR1 is the lowest PD and FR100 the highest.
- External ratings have also been mapped to the master rating scale for reporting purposes.

EXPOSURE AT DEFAULT	
Definition	The expected exposure to a counterparty through a facility should the counterparty default over the next 12 months. It reflects commitments made and facilities granted that have not been paid out and may be drawn over the period under consideration (i.e. off-balance sheet exposures). It is also a measure of potential future exposure on derivative positions.
Application	A number of EAD models, which are tailored to the respective portfolios and products employed, are in use across the group. These have been developed internally and are calibrated to historical default experience.

LOSS GIVEN DEFAULT	
Definition	The economic loss on a particular facility upon default of the counterparty is expressed as a percentage of exposure outstanding at the time of default.
Dependent on	> Type, quality and level of subordination. > Value of collateral held compared to the size of overall exposure. > Effectiveness of the recovery process and timing of cash flows received during the work-out or restructuring process.
Application	> All credit portfolios. > Recognition of NPLs for accounting.
Distinctions	> Long-run expected LGDs (long-run LGDs). > LGDs reflective of downturn conditions: – more conservative assessment of risk, incorporating a degree of interdependence between PD and LGD that can be found in a number of portfolios, i.e. instances where deteriorating collateral values are also indicative of higher default risk; and – used in the calculation of regulatory capital estimates.

EXPECTED LOSS (EL)

EL, the product of the primary risk measures PD, EAD and LGD, is a forward-looking measure of portfolio or transaction risk. It is used for a variety of purposes along with other risk measures. EL is not directly comparable to impairment levels, as EL calculations are based on regulatory parameters, through-the-cycle PD and downturn LGD, whilst impairment calculations are driven by IFRS requirements.

USE OF CREDIT RISK MEASURES

Credit risk management encompasses the following:

- credit approval;
- pricing;
- limit-setting/risk appetite;
- reporting;
- provisioning;
- capital calculations and allocation;
- profitability analysis;
- stress testing;
- risk management and credit monitoring; and
- performance measurement.

The following table describes the use of credit risk actions and measures across a number of key areas and business processes related to the management of the credit portfolio.

USE OF CREDIT RISK MANAGEMENT ACTIONS AND MEASURES IN THE CREDIT LIFE CYCLE

	CORPORATE	RETAIL
Determination of portfolio and client acquisition strategy	> Assessment of overall portfolio credit risk determined by PD, EAD and LGD. > Acquisition and overall strategy set in terms of appropriate limits and group risk appetite.	> Same measures as for corporate. > Credit models determine loss thresholds used in setting of credit risk appetite.
Determination of individual and portfolio limits	> Industry and geographical concentrations. > Ratings. > Risk-related limits on the composition of portfolio. > Group credit risk appetite.	> Same measures as for corporate. > Modelled versus actual experience is evaluated in setting of risk appetite.
Profitability analysis and pricing decisions	> PD, EAD and LGD used to determine pricing. > Economic profit used for profitability.	> Same measures as for corporate.
Credit approval	> Consideration of application's ratings. > Credit risk appetite limits. > Projected risk-adjusted return on economic capital (PD, EAD and LGD are key inputs in these measures).	> Automated based on application scorecards (scorecards are reflective of PD, EAD and LGD). > Assessment of client's affordability.
Credit monitoring and risk management	> Risk assessment based on PD, EAD and LGD. > Counterparty FR grades updated based on risk assessment. > Additional capital for large transactions that will increase concentration risk.	> Same measures as for corporate. > Monthly analysis of portfolio and risk movements used in portfolio management and credit strategy decisions.
Impairments	> PD and LGD used in assessment of impairments and provisioning. > Judgemental assessment to determine adequacy of provisions.	> Loss identification period PD, LGD and roll rates used for specific, portfolio and IBNR provisions.
Regulatory and economic capital calculation	> Primary credit risk measures, PD, EAD and LGD are the most important inputs.	> Primary credit risk measures, PD, EAD and LGD are the most important inputs.
Reporting to senior management and board	> Portfolio reports discussed at business and business unit risk committee meetings. > Quarterly portfolio reports submitted to credit risk management and RCC committees.	> Portfolio reports discussed at business and business unit risk committee meetings. > Quarterly portfolio reports submitted to credit risk management and RCC committees.

CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE

The following tables provide the main parameters used for the calculation of capital requirements for the exposures in the AIRB models split by asset class and shown within fixed regulatory PD ranges. These exposures are for **FRB SA**, where AIRB models are applied. The information in the different columns is explained as follows:

- regulatory supplied credit conversion factors (CCF) are used;
- CRM measures applied are described on page 49;
- number of obligors corresponds to the number of counterparties in the PD band;
- average PD and LGD are weighted by EAD;
- average maturity is the obligor maturity in years weighted by EAD;
- RWA density is the total RWA to EAD post-CRM; and
- provisions are only included on a total basis.

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE

	Total FRB SA					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	32 180	19 334	37.63	38 085	0.07	122 695
0.15 to < 0.25	48 776	30 880	53.99	53 677	0.17	84 113
0.25 to < 0.50	317 818	76 885	47.31	316 058	0.38	262 085
0.50 to < 0.75	85 720	22 384	51.41	95 056	0.66	470 860
0.75 to < 2.50	287 205	71 587	48.79	302 439	1.56	2 361 606
2.50 to < 10.00	146 432	29 369	33.34	158 895	4.61	2 947 174
10.00 to < 100.00	36 722	4 154	47.62	38 279	24.30	1 152 077
100.00 (default)	29 428	–	–	29 312	100.00	1 506 013
Total	984 281	254 593	46.55	1 031 801	5.10	8 906 623

	Total FRB SA					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years	RWA R million*	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	25.32	0.62	2 603	6.83	8	
0.15 to < 0.25	30.83	1.17	11 772	21.93	28	
0.25 to < 0.50	20.12	2.06	78 499	24.84	240	
0.50 to < 0.75	26.82	0.99	31 101	32.72	172	
0.75 to < 2.50	28.19	1.06	135 941	44.95	1 374	
2.50 to < 10.00	38.22	0.98	110 029	69.25	2 910	
10.00 to < 100.00	37.43	0.93	45 750	119.52	3 618	
100.00 (default)	45.61	1.00	12 816	43.72	13 266	
Total	28.00	1.33	428 511	41.53	21 616	23 197

* *The difference between the OV1: Overview of RWA and CR6 templates RWA is due to slotting.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Total FRB SA					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	76 472	29 076	44.49	94 619	0.04	206 496
0.15 to < 0.25	83 051	39 929	49.33	92 879	0.17	101 654
0.25 to < 0.50	270 765	68 287	41.80	280 892	0.42	351 801
0.50 to < 0.75	86 586	25 444	49.25	96 996	0.66	436 237
0.75 to < 2.50	250 350	54 691	52.53	269 496	1.57	2 130 928
2.50 to < 10.00	130 059	20 957	33.70	139 569	4.59	2 445 141
10.00 to < 100.00	29 939	2 983	51.65	31 964	25.69	1 156 347
100.00 (default)	18 640	–	–	18 588	100.00	1 211 010
Total	945 862	241 367	46.01	1 025 003	3.85	8 039 614

	Total FRB SA					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years	RWA R million*	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	29.65	0.86	4 555	4.81	11	
0.15 to < 0.25	31.66	1.52	23 430	25.23	52	
0.25 to < 0.50	19.98	1.91	67 699	24.10	224	
0.50 to < 0.75	26.47	1.00	32 296	33.30	179	
0.75 to < 2.50	27.93	0.67	120 132	44.58	1 225	
2.50 to < 10.00	35.72	0.52	94 288	67.56	2 330	
10.00 to < 100.00	40.36	0.36	36 924	115.52	3 354	
100.00 (default)	39.92	0.46	13 936	74.96	6 511	
Total	27.78	1.10	393 260	38.37	13 886	13 601

* *The difference between the OV1: Overview of RWA and CR6 templates RWA is due to slotting.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Corporate					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	2 240	1 740	57.62	3 342	0.08	5
0.15 to < 0.25	16 091	17 731	55.07	25 973	0.17	28
0.25 to < 0.50	79 474	36 404	50.17	91 788	0.37	147
0.50 to < 0.75	28 798	8 868	50.88	29 971	0.74	91
0.75 to < 2.50	41 588	11 433	54.86	46 670	1.63	197
2.50 to < 10.00	5 321	2 272	50.01	6 401	4.40	100
10.00 to < 100.00	1 407	910	42.68	1 608	12.07	63
100.00 (default)	1 028	–	–	1 028	100.00	8
Total	**175 947**	**79 358**	**51.91**	**206 781**	**1.41**	**639**

	Corporate					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	34.67	1.55	517	15.47	1	
0.15 to < 0.25	31.21	1.49	6 104	23.50	14	
0.25 to < 0.50	32.59	1.92	39 991	43.57	110	
0.50 to < 0.75	32.70	1.81	16 322	54.46	72	
0.75 to < 2.50	34.35	1.98	37 384	80.10	263	
2.50 to < 10.00	32.30	1.49	6 280	98.11	91	
10.00 to < 100.00	39.40	2.15	2 890	179.73	73	
100.00 (default)	77.16	1.10	–	–	822	
Total	**33.14**	**1.84**	**109 488**	**52.95**	**1 446**	**2 337**

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Corporate					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	1 851	757	42.33	2 096	0.08	6
0.15 to < 0.25	47 883	26 918	52.48	58 030	0.02	60
0.25 to < 0.50	43 987	25 780	50.15	54 830	0.39	119
0.50 to < 0.75	27 108	9 797	55.11	29 775	0.74	101
0.75 to < 2.50	33 037	9 364	53.38	37 334	1.85	179
2.50 to < 10.00	3 728	2 267	51.94	4 900	4.28	88
10.00 to < 100.00	1 832	355	50.59	2 036	10.86	55
100.00 (default)	432	–	–	418	100.00	7
Total	159 858	75 238	52.01	189 419	1.11	615

	Corporate					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	33.75	1.16	284	13.54	1	
0.15 to < 0.25	33.21	1.63	15 953	27.49	33	
0.25 to < 0.50	33.56	2.09	26 221	47.82	72	
0.50 to < 0.75	32.63	1.70	16 360	54.94	72	
0.75 to < 2.50	34.66	2.01	32 101	85.98	236	
2.50 to < 10.00	34.61	2.05	5 532	112.89	73	
10.00 to < 100.00	39.25	1.83	3 470	172.30	84	
100.00 (default)	70.77	2.27	–	–	311	
Total	33.70	1.86	99 921	52.75	882	2 553

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Specialised lending					
	As at 31 December 2018					
PD scale	**Original on-balance sheet gross exposure R million**	**Off-balance sheet exposures pre-CCF R million**	**Average CCF %**	**EAD post-CRM and post-CCF R million**	**Average PD %**	**Number of obligors**
0.00 to < 0.15	**419**	**–**	**–**	**419**	**0.08**	**1**
0.15 to < 0.25	**1 044**	**64**	**–**	**1 044**	**0.17**	**2**
0.25 to < 0.50	**36 450**	**4 332**	**49.43**	**37 278**	**0.36**	**31**
0.50 to < 0.75	**7 719**	**794**	**57.95**	**8 122**	**0.74**	**70**
0.75 to < 2.50	**18 933**	**2 791**	**57.72**	**19 436**	**1.75**	**724**
2.50 to < 10.00	**4 942**	**124**	**58.00**	**5 066**	**4.52**	**357**
10.00 to < 100.00	**1 998**	**76**	**57.92**	**2 058**	**16.42**	**87**
100.00 (default)	**615**	**–**	**–**	**615**	**100.00**	**24**
Total	**72 120**	**8 181**	**52.91**	**74 038**	**2.32**	**1 296**

	Specialised lending					
	As at 31 December 2018					
PD scale	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**	**Expected loss R million**	**Provisions R million**
0.00 to < 0.15	**28.89**	**3.18**	**88**	**21.00**	**–**	
0.15 to < 0.25	**21.57**	**4.47**	**306**	**29.31**	**–**	
0.25 to < 0.50	**17.84**	**2.26**	**8 977**	**24.08**	**24**	
0.50 to < 0.75	**24.12**	**2.24**	**3 653**	**44.98**	**14**	
0.75 to < 2.50	**29.37**	**1.14**	**14 639**	**75.32**	**109**	
2.50 to < 10.00	**25.55**	**0.78**	**5 037**	**99.43**	**108**	
10.00 to < 100.00	**24.36**	**0.07**	**2 527**	**122.79**	**74**	
100.00 (default)	**41.23**	**4.98**	**–**	**–**	**222**	
Total	**22.57**	**1.86**	**35 227**	**47.58**	**551**	**617**

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Specialised lending					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	321	128	58.00	395	0.08	2
0.15 to < 0.25	7 882	877	0.15	7 883	0.17	14
0.25 to < 0.50	25 059	3 441	59.75	25 799	0.35	48
0.50 to < 0.75	8 840	208	48.98	8 579	0.74	59
0.75 to < 2.50	12 332	1 070	59.09	12 863	1.42	651
2.50 to < 10.00	3 380	244	57.99	3 644	5.27	359
10.00 to < 100.00	156	–	–	162	17.52	37
100.00 (default)	592	–	–	592	100.00	30
Total	58 562	5 968	50.38	59 917	1.94	1 200

	Specialised lending					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	27.29	1.09	58	14.71	–	
0.15 to < 0.25	18.32	2.87	1 534	19.46	3	
0.25 to < 0.50	17.60	1.98	5 895	22.85	16	
0.50 to < 0.75	25.07	2.14	3 978	46.37	21	
0.75 to < 2.50	24.38	0.90	8 121	63.13	52	
2.50 to < 10.00	29.05	1.43	3 847	105.56	56	
10.00 to < 100.00	25.53	0.26	223	137.67	8	
100.00 (default)	41.05	4.99	–	–	218	
Total	21.23	1.87	23 656	39.48	374	507

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Sovereign					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	8 622	53	20.00	8 633	0.04	3
0.15 to < 0.25	33	–	–	1	0.17	3
0.25 to < 0.50	131 459	4 773	53.71	121 858	0.40	131
0.50 to < 0.75	284	371	–	482	0.62	36
0.75 to < 2.50	3 634	2 208	52.05	4 235	2.26	41
2.50 to < 10.00	389	61	34.44	421	3.43	71
10.00 to < 100.00	1 622	129	57.47	1 577	10.94	6
100.00 (default)	664	–	–	647	100.00	2
Total	**146 707**	**7 595**	**50.28**	**137 854**	**1.03**	**293**

	Sovereign					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	18.26	0.82	355	4.11	1	
0.15 to < 0.25	21.40	0.32	–	–	–	
0.25 to < 0.50	8.29	2.89	15 474	12.70	41	
0.50 to < 0.75	28.56	2.07	228	47.30	1	
0.75 to < 2.50	18.03	3.78	2 116	49.96	16	
2.50 to < 10.00	42.59	1.88	513	121.85	6	
10.00 to < 100.00	27.93	1.79	1 976	125.30	53	
100.00 (default)	29.40	1.11	1	0.15	190	
Total	**9.72**	**2.76**	**20 663**	**14.99**	**308**	**411**

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Sovereign					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	9 584	–	–	9 584	0.04	2
0.15 to < 0.25	729	–	–	18	0.17	17
0.25 to < 0.50	124 446	4 546	50.76	112 834	0.48	71
0.50 to < 0.75	873	2 814	49.78	2 133	0.73	125
0.75 to < 2.50	2 374	924	48.89	2 847	2.08	47
2.50 to < 10.00	370	54	16.13	397	3.85	180
10.00 to < 100.00	649	71	33.50	676	12.79	17
100.00 (default)	3	–	–	3	100.00	15
Total	139 028	8 409	49.86	128 492	0.56	474

	Sovereign					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	29.02	0.20	335	3.50	1	
0.15 to < 0.25	41.57	0.10	5	24.99	–	
0.25 to < 0.50	8.95	2.89	16 151	14.31	47	
0.50 to < 0.75	18.25	3.60	868	40.69	3	
0.75 to < 2.50	29.65	3.39	2 512	88.21	17	
2.50 to < 10.00	49.00	1.64	581	146.14	7	
10.00 to < 100.00	19.67	1.48	634	93.85	23	
100.00 (default)	34.00	1.00	6	163.14	–	
Total	11.25	2.70	21 092	16.41	98	118

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Banks and securities firms					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	10 376	2 611	40.78	9 958	0.05	51
0.15 to < 0.25	18 889	4 634	53.03	9 465	0.16	49
0.25 to < 0.50	34 722	5 095	48.59	15 801	0.39	69
0.50 to < 0.75	1 302	247	26.86	1 323	0.72	26
0.75 to < 2.50	31 210	999	20.73	1 914	1.97	66
2.50 to < 10.00	2 281	1 462	21.12	1 328	4.52	48
10.00 to < 100.00	264	259	27.77	96	12.97	34
100.00 (default)	–	–	–	–	–	–
Total	99 044	15 307	43.46	39 885	0.51	343

	Banks and securities firms					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	28.64	1.01	1 076	10.81	2	
0.15 to < 0.25	32.50	0.97	2 542	26.86	5	
0.25 to < 0.50	33.39	0.98	6 502	41.15	20	
0.50 to < 0.75	23.63	1.63	607	45.88	2	
0.75 to < 2.50	67.21	0.86	3 176	165.94	24	
2.50 to < 10.00	44.60	0.93	1 756	132.23	27	
10.00 to < 100.00	32.66	0.92	117	121.88	4	
100.00 (default)	–	–	–	–	–	
Total	33.66	1.00	15 776	39.55	84	104

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Banks and securities firms					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	53 441	9 362	50.47	63 442	0.02	54
0.15 to < 0.25	13 097	5 892	51.77	10 940	0.16	64
0.25 to < 0.50	38 397	3 300	47.02	31 754	0.39	74
0.50 to < 0.75	1 724	254	33.41	968	0.74	29
0.75 to < 2.50	20 218	137	23.61	2 523	1.48	61
2.50 to < 10.00	1 896	867	23.89	1 472	4.25	51
10.00 to < 100.00	73	175	37.78	157	25.06	40
100.00 (default)	–	–	–	–	–	–
Total	128 846	19 987	48.62	111 256	0.27	373

	Banks and securities firms					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	28.60	1.19	3 238	5.10	4	
0.15 to < 0.25	32.82	1.23	3 156	28.85	6	
0.25 to < 0.50	27.58	0.60	10 393	32.73	35	
0.50 to < 0.75	18.86	1.96	381	39.39	1	
0.75 to < 2.50	75.56	0.77	4 574	181.30	29	
2.50 to < 10.00	32.53	1.13	1 376	93.50	19	
10.00 to < 100.00	24.28	1.00	170	108.40	8	
100.00 (default)	–	–	–	–	–	
Total	29.75	1.02	23 288	20.93	102	151

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME corporate					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	–	–	–	–	–	–
0.15 to < 0.25	8 473	2 091	91.29	10 382	0.17	106
0.25 to < 0.50	8 329	6 121	0.11	10 628	0.42	6 122
0.50 to < 0.75	4 773	2 138	0.20	5 669	0.63	2 522
0.75 to < 2.50	30 640	11 059	1.21	34 919	1.47	14 442
2.50 to < 10.00	13 059	4 780	2.67	14 579	4.13	4 647
10.00 to < 100.00	3 318	773	1.84	3 649	18.16	907
100.00 (default)	1 614	–	–	1 614	100.00	863
Total	70 206	26 962	8.14	81 440	4.28	29 609

	SME corporate					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	–	–	–	–	–	
0.15 to < 0.25	26.21	1.00	2 338	22.52	5	
0.25 to < 0.50	22.84	2.31	3 258	30.65	10	
0.50 to < 0.75	20.57	2.18	2 046	36.09	8	
0.75 to < 2.50	20.70	2.07	15 162	43.42	110	
2.50 to < 10.00	21.29	1.93	8 174	56.07	122	
10.00 to < 100.00	22.15	1.85	5 882	161.19	206	
100.00 (default)	43.74	3.34	28	1.73	593	
Total	22.30	1.96	36 888	45.29	1 054	1 203

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME corporate					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	1	4	52.57	2	0.10	36
0.15 to < 0.25	8 960	368	5.90	8 982	0.20	444
0.25 to < 0.50	7 817	5 814	0.39	10 051	0.43	5 391
0.50 to < 0.75	6 384	3 662	0.29	8 026	0.60	2 018
0.75 to < 2.50	27 479	8 882	2.04	31 062	1.46	11 797
2.50 to < 10.00	13 564	3 468	19.13	15 517	4.33	5 095
10.00 to < 100.00	1 640	436	3.20	2 012	18.38	766
100.00 (default)	668	–	–	668	100.00	2 305
Total	66 513	22 634	4.04	76 320	3.23	27 852

	SME corporate					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	76.29	1.65	1	32.40	–	
0.15 to < 0.25	26.67	1.19	2 275	25.33	5	
0.25 to < 0.50	23.33	2.43	3 228	32.11	10	
0.50 to < 0.75	21.92	2.28	2 700	33.64	11	
0.75 to < 2.50	21.12	2.04	13 556	43.64	97	
2.50 to < 10.00	24.28	2.15	10 238	65.98	162	
10.00 to < 100.00	22.35	1.66	2 093	118.00	72	
100.00 (default)	44.40	3.47	9	0.95	456	
Total	23.10	2.04	34 100	44.68	813	886

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME retail					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	50	26	–	63	0.08	658
0.15 to < 0.25	18	72	–	45	0.21	1 944
0.25 to < 0.50	1 833	980	2.61	2 257	0.40	14 792
0.50 to < 0.75	1 725	475	11.76	1 962	0.60	13 059
0.75 to < 2.50	27 372	11 251	0.33	35 919	1.71	627 022
2.50 to < 10.00	22 735	3 238	0.41	25 368	3.94	838 215
10.00 to < 100.00	4 155	209	0.68	4 259	28.66	38 623
100.00 (default)	3 143	–	–	3 044	100.00	40 885
Total	61 031	16 251	0.82	72 917	8.09	1 575 198

	SME retail					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	41.81	1.79	6	9.52	–	
0.15 to < 0.25	76.47	0.07	15	33.33	–	
0.25 to < 0.50	31.67	0.02	465	20.60	3	
0.50 to < 0.75	23.23	0.06	384	19.57	3	
0.75 to < 2.50	33.57	0.57	15 454	43.02	207	
2.50 to < 10.00	37.94	0.92	14 666	57.81	396	
10.00 to < 100.00	38.76	0.91	3 838	90.12	488	
100.00 (default)	51.53	0.94	2 586	84.95	1 841	
Total	35.84	0.70	37 414	51.31	2 938	3 004

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	SME retail					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	181	25	–	193	0.08	998
0.15 to < 0.25	46	69	–	73	0.20	2 025
0.25 to < 0.50	4 419	6 855	0.68	9 350	0.33	69 146
0.50 to < 0.75	1 562	613	9.25	1 942	0.60	12 067
0.75 to < 2.50	25 585	7 045	0.63	31 155	1.77	540 917
2.50 to < 10.00	18 521	2 025	0.80	20 181	3.64	658 874
10.00 to < 100.00	2 986	156	4.27	3 062	26.85	24 994
100.00 (default)	2 517	–	–	2 479	100.00	36 928
Total	55 817	16 788	1.02	68 435	6.77	1 345 949

	SME retail					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	33.74	2.26	15	7.56	–	
0.15 to < 0.25	57.33	1.14	18	24.94	–	
0.25 to < 0.50	34.52	0.01	1 915	20.48	11	
0.50 to < 0.75	27.12	0.03	449	23.09	3	
0.75 to < 2.50	33.54	0.64	13 609	43.68	190	
2.50 to < 10.00	36.75	1.10	11 228	55.64	286	
10.00 to < 100.00	39.17	1.07	2 764	90.26	328	
100.00 (default)	50.45	0.91	1 948	78.55	866	
Total	35.33	0.71	31 946	46.68	1 684	1 360

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail mortgages					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	9 785	10 510	29.01	12 834	0.08	22 731
0.15 to < 0.25	3 562	2 947	28.33	4 396	0.18	8 609
0.25 to < 0.50	23 422	12 306	57.53	30 503	0.38	34 407
0.50 to < 0.75	35 988	2 425	57.02	37 371	0.61	56 839
0.75 to < 2.50	78 856	16 995	89.85	94 127	1.35	145 980
2.50 to < 10.00	35 389	8 939	16.75	36 887	4.95	55 447
10.00 to < 100.00	8 050	961	49.77	8 472	25.91	14 362
100.00 (default)	8 944	–	–	8 944	100.00	19 559
Total	203 996	55 083	53.72	233 534	6.25	357 934

	Retail mortgages					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	14.60		415	3.23	2	
0.15 to < 0.25	15.61		270	6.14	1	
0.25 to < 0.50	14.33		3 024	9.91	17	
0.50 to < 0.75	16.10		5 806	15.54	37	
0.75 to < 2.50	15.98		23 999	25.50	202	
2.50 to < 10.00	15.28		19 200	52.05	278	
10.00 to < 100.00	15.81		7 386	87.18	358	
100.00 (default)	23.35		4 923	55.04	1 845	
Total	15.87		65 023	27.84	2 740	2 500

* *Average maturity not applied for the retail mortgages RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail mortgages					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	9 641	10 396	30.21	12 781	0.08	22 909
0.15 to < 0.25	3 382	2 490	29.86	4 125	0.18	8 034
0.25 to < 0.50	23 677	12 184	49.55	29 714	0.38	35 102
0.50 to < 0.75	34 630	2 398	58.98	36 044	0.61	57 724
0.75 to < 2.50	74 090	16 233	89.06	88 546	1.36	146 455
2.50 to < 10.00	33 673	6 714	12.31	34 500	4.95	58 728
10.00 to < 100.00	6 639	432	36.40	6 802	26.44	15 194
100.00 (default)	5 962	–	–	5 962	100.00	16 165
Total	191 694	50 847	52.67	218 474	5.05	360 311

	Retail mortgages					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	14.27		402	3.15	2	
0.15 to < 0.25	15.41		259	6.27	1	
0.25 to < 0.50	14.50		3 024	10.18	17	
0.50 to < 0.75	16.05		5 706	15.83	37	
0.75 to < 2.50	16.02		23 080	26.07	195	
2.50 to < 10.00	15.36		18 046	52.31	261	
10.00 to < 100.00	16.03		5 976	87.97	297	
100.00 (default)	18.79		1 554	26.02	1 116	
Total	15.68		58 047	26.57	1 925	1 613

* *Average maturity not applied for the retail mortgages RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail revolving					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	686	4 376	48.84	2 823	0.11	99 223
0.15 to < 0.25	664	3 332	51.03	2 364	0.21	72 802
0.25 to < 0.50	1 887	6 763	55.32	5 629	0.35	199 979
0.50 to < 0.75	2 200	6 491	70.99	6 807	0.62	371 418
0.75 to < 2.50	11 351	14 557	68.75	21 359	1.51	1 161 013
2.50 to < 10.00	14 707	7 898	75.13	20 641	4.60	1 351 032
10.00 to < 100.00	3 716	811	82.32	4 352	24.17	803 210
100.00 (default)	2 678	–	–	2 678	100.00	1 247 456
Total	37 889	44 228	65.11	66 653	7.61	5 306 133

	Retail revolving					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	71.70		143	5.07	2	
0.15 to < 0.25	71.55		195	8.25	3	
0.25 to < 0.50	70.77		717	12.74	14	
0.50 to < 0.75	70.10		1 340	19.69	30	
0.75 to < 2.50	70.33		8 181	38.30	226	
2.50 to < 10.00	71.43		17 561	85.08	677	
10.00 to < 100.00	69.79		7 620	175.09	731	
100.00 (default)	75.43		244	9.11	2 148	
Total	70.96		36 001	54.01	3 831	3 520

* *Average maturity not applied for the retail revolving RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Retail revolving					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	1 448	8 387	55.62	6 113	0.08	182 365
0.15 to < 0.25	1 070	3 310	52.95	2 823	0.20	90 483
0.25 to < 0.50	2 686	5 996	56.17	6 054	0.35	234 758
0.50 to < 0.75	2 512	5 289	71.80	6 310	0.62	336 158
0.75 to < 2.50	11 744	10 503	71.82	19 288	1.49	1 014 172
2.50 to < 10.00	8 684	4 856	73.43	12 250	4.50	1 098 615
10.00 to < 100.00	3 484	1 320	72.23	4 437	24.45	816 286
100.00 (default)	1 272	–	–	1 272	100.00	1 043 213
Total	32 900	39 661	64.66	58 547	5.58	4 816 050

	Retail revolving					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	72.24		220	3.60	3	
0.15 to < 0.25	71.52		228	8.08	4	
0.25 to < 0.50	70.64		759	12.54	15	
0.50 to < 0.75	69.77		1 231	19.51	27	
0.75 to < 2.50	70.20		7 336	38.03	202	
2.50 to < 10.00	69.98		10 011	81.72	384	
10.00 to < 100.00	69.30		7 786	175.47	750	
100.00 (default)	68.71		312	24.54	902	
Total	70.33		27 883	47.63	2 287	1 636

* *Average maturity not applied for the retail revolving RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Other retail					
	As at 31 December 2018					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	**2**	**18**	**61.39**	**13**	**0.10**	**23**
0.15 to < 0.25	**2**	**9**	**58.68**	**7**	**0.20**	**570**
0.25 to < 0.50	**242**	**111**	**67.30**	**316**	**0.43**	**6 407**
0.50 to < 0.75	**2 931**	**575**	**72.70**	**3 349**	**0.56**	**26 799**
0.75 to < 2.50	**43 621**	**294**	**81.16**	**43 860**	**1.75**	**412 121**
2.50 to < 10.00	**47 609**	**595**	**114.77**	**48 204**	**4.89**	**697 257**
10.00 to < 100.00	**12 192**	**26**	**911.31**	**12 208**	**28.31**	**294 785**
100.00 (default)	**10 742**	**–**	**–**	**10 742**	**100.00**	**197 216**
Total	**117 341**	**1 628**	**102.51**	**118 699**	**14.61**	**1 635 178**

	Other retail					
	As at 31 December 2018					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	**74.77**		**3**	**23.08**	**–**	
0.15 to < 0.25	**77.16**		**2**	**28.57**	**–**	
0.25 to < 0.50	**41.64**		**91**	**28.80**	**1**	
0.50 to < 0.75	**26.15**		**715**	**21.35**	**5**	
0.75 to < 2.50	**27.65**		**15 830**	**36.09**	**217**	
2.50 to < 10.00	**48.72**		**36 842**	**76.43**	**1 205**	
10.00 to < 100.00	**48.22**		**13 514**	**110.70**	**1 631**	
100.00 (default)	**53.52**		**5 034**	**46.86**	**5 605**	
Total	**40.67**		**72 031**	**60.68**	**8 664**	**9 501**

* *Average maturity not applied for the other retail RWA calculation.*

CR6: AIRB – FRB SA CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Other retail					
	As at 31 December 2017					
PD scale	Original on-balance sheet gross exposure R million	Off-balance sheet exposures pre-CCF R million	Average CCF %	EAD post-CRM and post-CCF R million	Average PD %	Number of obligors
0.00 to < 0.15	4	17	53.14	13	0.08	124
0.15 to < 0.25	2	5	60.59	5	0.20	513
0.25 to < 0.50	277	371	61.77	506	0.41	7 092
0.50 to < 0.75	2 953	409	64.93	3 219	0.56	27 956
0.75 to < 2.50	43 491	533	72.57	43 878	1.73	416 649
2.50 to < 10.00	46 253	462	98.44	46 708	4.83	623 151
10.00 to < 100.00	12 480	38	364.96	12 620	29.80	298 958
100.00 (default)	7 194	–	–	7 194	100.00	112 347
Total	112 654	1 835	81.14	114 143	12.25	1 486 790

	Other retail					
	As at 31 December 2017					
PD scale	Average LGD %	Average maturity years*	RWA R million	RWA density %	Expected loss R million	Provisions R million
0.00 to < 0.15	72.60		2	16.82	–	
0.15 to < 0.25	77.92		2	33.96	–	
0.25 to < 0.50	31.80		113	22.22	1	
0.50 to < 0.75	23.78		623	19.35	4	
0.75 to < 2.50	26.70		15 243	34.74	207	
2.50 to < 10.00	45.75		33 429	71.57	1 082	
10.00 to < 100.00	48.12		13 808	109.42	1 784	
100.00 (default)	46.40		10 107	140.48	2 642	
Total	38.05		73 327	64.24	5 720	4 777

* *Average maturity not applied for the other retail RWA calculation.*

Effect on RWA of credit derivatives used as credit risk mitigation techniques

The following table illustrates the effect of credit derivatives on the capital requirement calculation under the AIRB approach. As the group does not apply the foundation internal ratings-based approach, the rows related to this approach have been excluded from the CR7 table. Pre-credit derivatives RWA (before taking credit derivatives' mitigation effect into account) has been selected to assess the impact of credit derivatives on RWA, irrespective of how the credit risk mitigation technique feeds into the RWA calculation. No credit derivatives were applied as credit risk mitigation during the period. There were no exposures in the equity and purchased receivables portfolios during the period, rows 14 and 16 were therefore excluded from this table.

CR7: AIRB – EFFECT ON RWA OF CREDIT DERIVATIVES USED AS CREDIT RISK MITIGATION TECHNIQUES

	Pre-credit derivatives RWA		
R million	**As at 31 December 2018**	As at 31 December 2017	As at 30 June 2018
2. Sovereign	**21 643**	21 091	21 193
4. Banks and securities firms	**14 881**	23 288	16 892
6. Corporate	**96 291**	88 226	99 492
8. Specialised lending	**53 357**	38 697	50 386
SME corporate	**38 740**	34 099	33 767
9. Retail revolving	**37 808**	27 884	29 515
10. Retail mortgages	**68 286**	58 047	64 043
11. SME retail	**39 288**	31 945	34 540
12. Other retail	**75 646**	73 325	77 622
17. **Total**	**445 940**	396 602	427 450

RWA flow statement of credit risk exposure under AIRB

The calculation of credit RWA for FRB SA is based on internally developed, quantitative models in line with the AIRB approach. The three credit risk measures, namely PD, EAD and LGD, are used along with prescribed correlations (dependent on the asset class) and estimates of maturity, where applicable, to derive credit RWA. The quantitative models also adhere to the AIRB requirements related to annual validation.

For the remaining entities, credit RWA is based on the standardised approach where regulatory risk weights are prescribed per asset class. Even though the remaining entities do not have regulatory approval to use the AIRB approach, internally developed quantitative models are used for internal assessment of credit risk.

The following table presents a flow statement explaining variations in the credit RWA determined under the AIRB approach.

CR8: RWA FLOW STATEMENT OF CREDIT RISK EXPOSURES UNDER AIRB

R million	**RWA**
1. **RWA at 30 September 2018**	**425 737**
2. Asset size	**16 940**
3. Asset quality	**1 422**
4. Model updates	**1 841**
5. Methodology and policy	**–**
6. Acquisitions and disposals	**–**
7. Foreign exchange movements	**–**
8. Other	**–**
9. **RWA at 31 December 2018***	**445 940**

* *The RWA represents credit risk exposures excluding securitisation exposure per Overview of credit RWA table on page 27.*

CREDIT RISK UNDER STANDARDISED APPROACH

For regulatory capital purposes, the group uses the AIRB approach for FRB SA exposures, and the standardised approach for the group's other legal entities, the bank's offshore branches and Aldermore. Due to the relatively small size of the subsidiaries and the scarcity of relevant data, the group plans to continue using the standardised approach for the foreseeable future for the majority of these portfolios.

For portfolios using the standardised approach, only S&P ratings are used. As external ratings are not available for all jurisdictions and for certain parts of the portfolio, the group uses its internally developed mapping between FR grades and S&P grades (refer to the table: *Mapping of FirstRand (FR) grades to rating agency scales* on page 52).

For cases where the bank invests in particular debt issuance, the risk weight of claims is based on these assessments. If the investment is not in a specific assessed issuance, then the following factors apply when determining the applicable assessments in accordance with Basel prescriptions:

- borrower's issuer assessment;
- borrower's specific assessment on issued debt;
- ranking of the unassessed claim; and
- entire amount of credit risk exposure the bank has.

The following table provides the credit risk exposures, credit risk mitigation effects and RWA for standardised approach exposures per asset class. RWA density is the ratio of RWA to exposures post-CCF and CRM.

CR4: STANDARDISED APPROACH – CREDIT RISK EXPOSURE AND CREDIT RISK MITIGATION EFFECTS

	As at 31 December 2018					
	Exposures before CCF and CRM		**Exposure post-CCF and CRM**		**RWA and RWA density**	
R million	**On-balance sheet amount**	**Off-balance sheet amount**	**On-balance sheet amount**	**Off-balance sheet amount**	**RWA amount**	**RWA density %**
Asset classes						
1. Sovereigns and their central banks	**54 184**	**196**	**32 612**	**–**	**23 009**	**70.55**
2. Non-central government public sector entities	**4 123**	**920**	**626**	**–**	**1 507**	**240.73**
3. Multilateral development banks	**–**	**–**	**–**	**–**	**–**	**–**
4. Banks	**13 527**	**358**	**11 269**	**54**	**4 652**	**41.08**
5. Securities firms	**8**	**–**	**8**	**–**	**–**	**–**
6. Corporates	**105 952**	**27 085**	**75 041**	**6 168**	**98 825**	**121.69**
7. Regulatory retail portfolios	**59 604**	**11 369**	**29 175**	**4**	**48 900**	**167.59**
8. Secured by residential property	**132 920**	**7 360**	**113 702**	**1 113**	**48 567**	**42.30**
9. Secured by commercial real estate	**–**	**–**	**–**	**–**	**–**	**–**
10. Equity	**–**	**–**	**–**	**–**	**–**	**–**
11. Past due advances	**–**	**–**	**–**	**–**	**–**	**–**
12. Higher-risk categories	**–**	**–**	**–**	**–**	**–**	**–**
13. Other assets	**–**	**–**	**–**	**–**	**–**	**–**
14. **Total**	**370 318**	**47 288**	**262 433**	**7 339**	**225 460**	**83.57**

	As at 31 December 2017					
	Exposures before CCF and CRM		Exposure post-CCF and CRM		RWA and RWA density	
R million	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA amount	RWA density %
Asset classes						
1. Sovereigns and their central banks	24 866	389	22 801	52	16 275	71.22
2. Non-central government public sector entities	3 670	956	2 471	382	2 247	78.76
3. Multilateral development banks	1	21	1	4	3	60.00
4. Banks	26 057	141	26 002	220	2 321	8.85
5. Securities firms	–	–	–	–	–	–
6. Corporates	24 709	13 214	27 279	7 184	30 397	88.20
7. Regulatory retail portfolios	62 562	10 886	62 043	4 787	45 828	68.57
8. Secured by residential property	18 772	1 883	18 680	941	7 455	38.00
9. Secured by commercial real estate	–	–	–	–	–	–
10. Equity	–	–	–	–	–	–
11. Past due advances	243	–	243	–	253	104.12
12. Higher-risk categories	–	–	–	–	–	–
13. Other assets	–	–	–	–	–	–
14. **Total**	160 880	27 490	159 520	13 570	104 785	60.53

The following tables provide a breakdown of exposures rated through the standardised approach by asset class to show the effect of credit risk mitigation. Further breakdown by risk weight per asset class is shown where the risk weights used are those prescribed in the Regulations and will differ primarily by asset class as well as credit rating.

CR5: STANDARDISED APPROACH – EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS

	As at 31 December 2018*									
	Risk weight									**Total credit exposures amount (post-CCF and post-CRM)**
R million	**0%**	**10%**	**20%**	**35%**	**50%**	**75%**	**100%**	**150%**	**Others**	
Asset classes										
1. Sovereigns and their central banks	**25 983**	**–**	**124**	**–**	**631**	**5 138**	**737**	**–**	**–**	**32 613**
2. Non-central government public sector entities	**–**	**–**	**6**	**–**	**136**	**–**	**484**	**–**	**–**	**626**
3. Multilateral development banks	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
4. Banks	**–**	**–**	**7 709**	**–**	**2 504**	**–**	**1 110**	**–**	**–**	**11 323**
5. Securities firms	**–**	**–**	**–**	**–**	**8**	**–**	**–**	**–**	**–**	**8**
6. Corporates	**–**	**–**	**2 001**	**–**	**16 317**	**1 081**	**59 042**	**786**	**1 983**	**81 210**
7. Regulatory retail portfolios	**–**	**–**	**–**	**–**	**–**	**29 180**	**–**	**–**	**–**	**29 180**
8. Secured by residential property	**20**	**–**	**–**	**113 635**	**–**	**1 160**	**–**	**–**	**–**	**114 815**
9. Secured by commercial real estate	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
10. Equity	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
11. Past due advances	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
12. Higher-risk categories	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
13. Other assets	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
14. **Total**	**26 003**	**–**	**9 840**	**113 635**	**19 596**	**36 559**	**61 373**	**786**	**1 983**	**269 775**

* *The increase in exposures from December 2017 to December 2018 is due to the inclusion of Aldermore.*

CR5: STANDARDISED APPROACH – EXPOSURES BY ASSET CLASSES AND RISK WEIGHTS continued

	As at 31 December 2017									
	Risk weight									Total credit exposures amount (post-CCF and post-CRM)
R million	0%	10%	20%	35%	50%	75%	100%	150%	Others	
Asset classes										
1. Sovereigns and their central banks	2 070	–	–	–	685	16 665	3 433	–	–	22 853
2. Non-central government public sector entities	–	–	–	–	92	2 237	524	–	–	2 853
3. Multilateral development banks	–	–	–	–	5	–	–	–	–	5
4. Banks	8 162	–	993	2 531	2 324	–	67	–	12 146	26 223
5. Securities firms	–	–	–	–	–	–	–	–	–	–
6. Corporates	229	–	402	–	4 744	1 480	24 460	255	2 894	34 464
7. Regulatory retail portfolios	–	–	–	–	2	61 778	5 050	–	–	66 830
8. Secured by residential property	–	–	–	15 702	3 919	–	–	–	–	19 621
9. Secured by commercial real estate	–	–	–	–	–	–	–	–	–	–
10. Equity	–	–	–	–	–	–	–	–	–	–
11. Past due advances	–	–	–	–	107	–	9	127	–	243
12. Higher-risk categories	–	–	–	–	–	–	–	–	–	–
13. Other assets	–	–	–	–	–	–	–	–	–	–
14. **Total**	10 461	–	1 395	18 233	11 878	82 160	33 543	382	15 040	173 092

SPECIALISED LENDING EXPOSURES UNDER SLOTTING APPROACH

The following table provides information relating to specialised lending exposures that are rated through the slotting approach. The exposures are split between regulatory asset classes.

CR10: AIRB SPECIALISED LENDING

R million		As at 31 December 2018							
		Other than high-volatility commercial estate*							
					Exposure amount				
Regulatory categories	**Remaining maturity**	**On-balance sheet amount**	**Off-balance sheet amount**	**Risk weight**	**Project finance**	**Income-producing real estate**	**Total**	**RWA**	**Expected losses**
Strong	Less than 2.5 years	**–**	**–**	**50%**	**–**	**–**	**–**	**–**	**–**
	Equal to or more than 2.5 years	**10 246**	**1 986**	**70%**	**11 419**	**–**	**11 419**	**8 473**	**46**
Good	Less than 2.5 years	**12**	**–**	**70%**	**–**	**12**	**12**	**12**	**–**
	Equal to or more than 2.5 years	**5 866**	**551**	**90%**	**6 081**	**3**	**6 084**	**6 130**	**55**
Satisfactory		**576**	**–**	**115%**	**–**	**576**	**576**	**748**	**22**
Weak		**1 831**	**3**	**250%**	**1 538**	**295**	**1 833**	**4 859**	**153**
Total		**18 531**	**2 540**		**19 038**	**886**	**19 924**	**20 222**	**276**

* *There were no high-volatility commercial real estate exposures during the period. For specialised lending exposures other than high-volatility commercial real estate, there were no exposures to object finance or commodities asset classes during the period.*

R million		As at 31 December 2017							
		Other than high-volatility commercial real estate*							
					Exposure amount				
Regulatory categories	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Risk weight	Project finance	Income-producing real estate	Total	RWA	Expected losses
Strong	Less than 2.5 years	–	32	50%	–	–	–	–	–
	Equal to or more than 2.5 years	8 745	–	70%	8 632	18	8 650	6 650	39
Good	Less than 2.5 years	–	–	70%	–	–	–	–	–
	Equal to or more than 2.5 years	6 785	447	90%	6 945	153	7 099	6 772	57
Satisfactory		1 564	123	115%	1 370	317	1 687	1 964	42
Weak		60	3	250%	2	60	62	164	6
Total		17 154	605		16 949	548	17 498	15 550	144

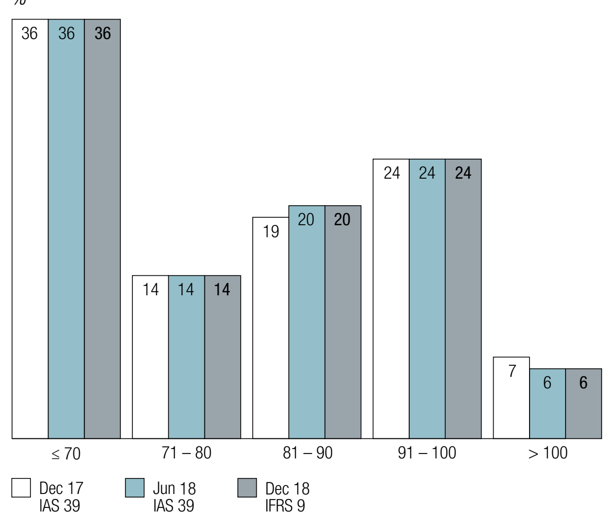
* *There were no high-volatility commercial real estate exposures during the period. For specialised lending exposures other than high-volatility commercial real estate, there were no exposures to object finance or commodities asset classes during the period.*

RISK ANALYSES

The graphs below provide loan balance-to-value ratios and age distributions of residential mortgages.

Loan-to-value ratios for new business are an important consideration in the credit origination process. The group, however, places more emphasis on counterparty creditworthiness as opposed to relying only on the underlying security.

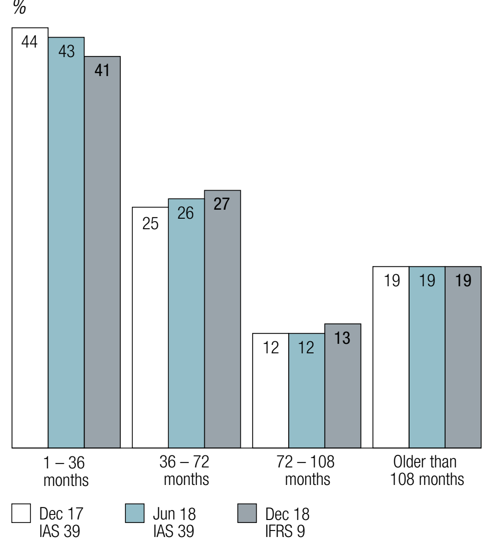
FNB RESIDENTIAL MORTGAGES
BALANCE-TO-ORIGINAL VALUE
%



FNB RESIDENTIAL MORTGAGES
BALANCE-TO-MARKET VALUE
%

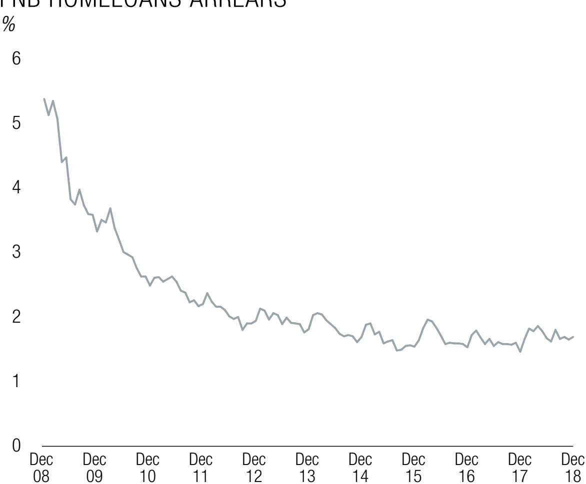
	≤ 70	71 – 80	81 – 90	91 – 100	> 100
Dec 17 IAS 39	57	14	14	11	4
Jun 18 IAS 39	58	14	14	10	4
Dec 18 IFRS 9	54	14	14	13	5

FNB RESIDENTIAL MORTGAGES
AGE DISTRIBUTION
%



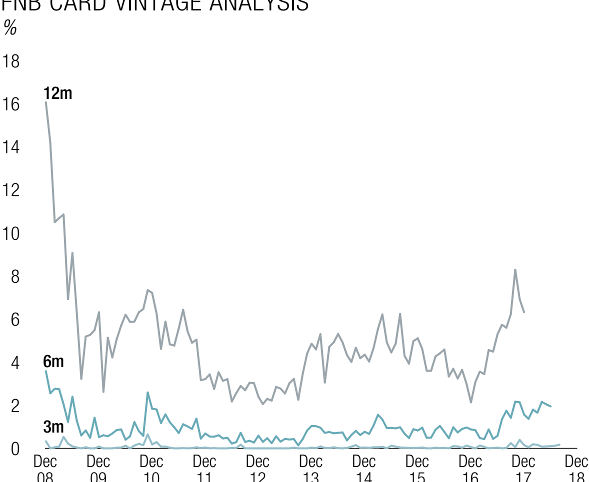
The following graph shows arrears in the FNB HomeLoans portfolio. It includes accounts where more than one full payment is in arrears, expressed as a percentage of total advances. Collections performance has been strong in the portfolio.

FNB HOMELOANS ARREARS



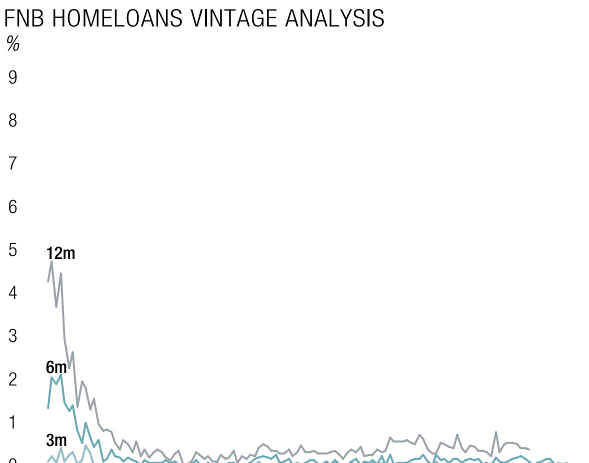
FNB card growth differed across segments over the period. Card growth in premium benefited from customer growth and up-sell, whilst the book contracted in the consumer segment as appetite remained conservative. The 12- and six-month vintages have trended higher. To counter this, risk cuts have been implemented to ensure that performance remains within expectations.

FNB CARD VINTAGE ANALYSIS



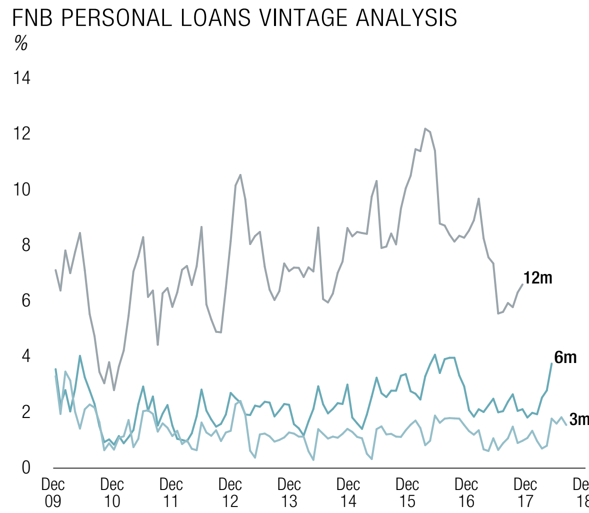
Vintages in FNB HomeLoans remained stable as collections improved. Lower new business volumes constrained book growth in the current period.

FNB HOMELOANS VINTAGE ANALYSIS



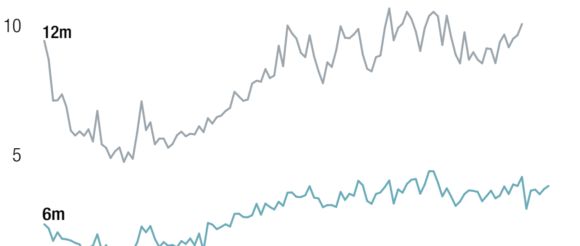
FNB personal loans growth was focused on the premium segment and was driven by increased penetration into the main-banked base. The 12-month vintage increase towards year end primarily relates to seasonality and some changes to credit underwriting strategies. Performance remained well within internal thresholds, and the increase was expected due to origination strategy changes implemented during 2018.

FNB PERSONAL LOANS VINTAGE ANALYSIS



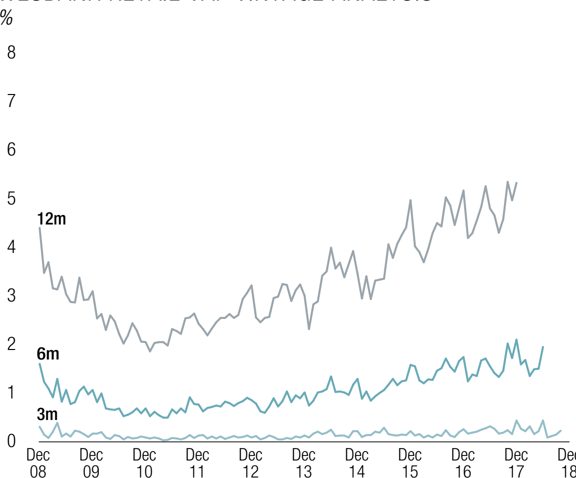
DirectAxis loans' vintages have remained stable since December 2013 while the business continued to see positive growth in disbursements. This is due to active credit origination management within the portfolio.

DIRECTAXIS LOANS VINTAGE ANALYSIS

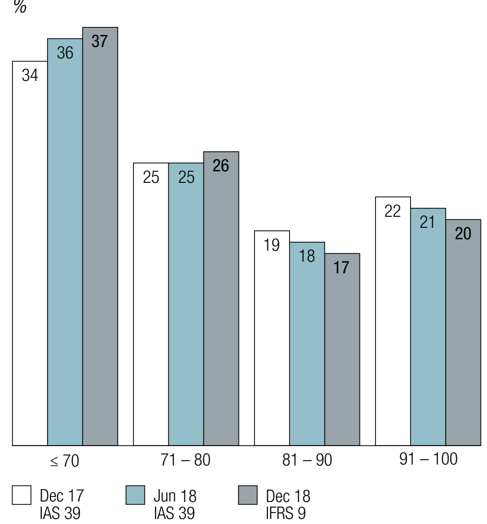


The retail SA vehicle and asset finance (VAF) vintages experienced strain in the latter part of 2018 due to the continued increase in customers opting for court orders for repossession as well as increased macroeconomic challenges. The portfolio remains weighted towards lower and medium risk. During 2018 a few strategic changes were implemented to improve the performance of the portfolio, and the impact of these changes can already be seen in the reduction of the three-month vintage performance. Portfolio arrears and NPL levels have stabilised during the last six months.

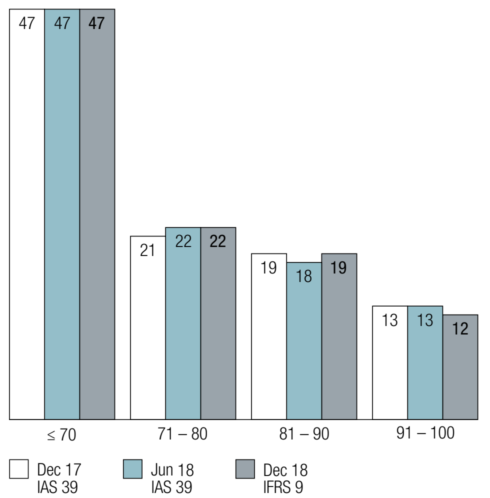
WESBANK RETAIL VAF VINTAGE ANALYSIS



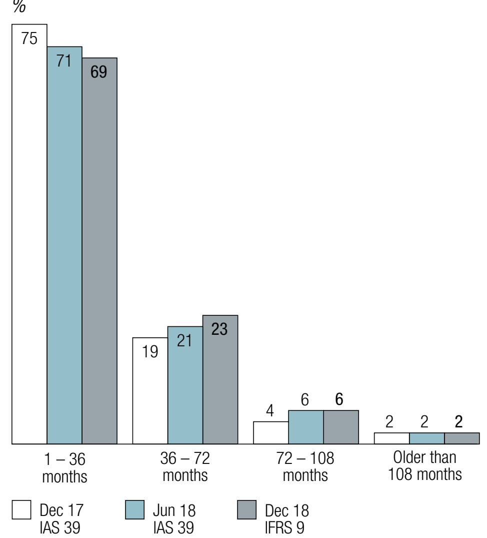
ALDERMORE RESIDENTIAL MORTGAGES
BALANCE-TO-ORIGINAL VALUE
%



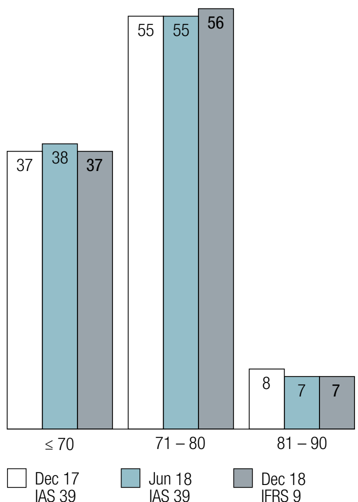
ALDERMORE RESIDENTIAL MORTGAGES
CURRENT BALANCE-TO-MARKET VALUE
%



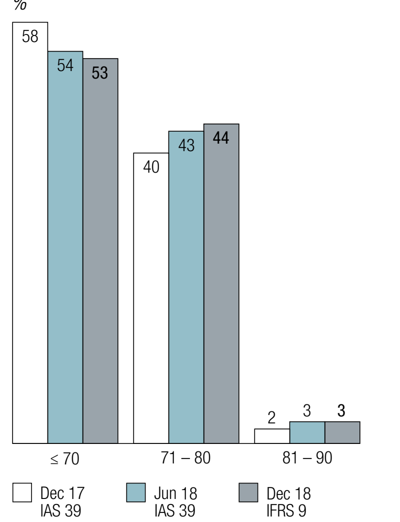
ALDERMORE RESIDENTIAL MORTGAGES
AGE DISTRIBUTION
%



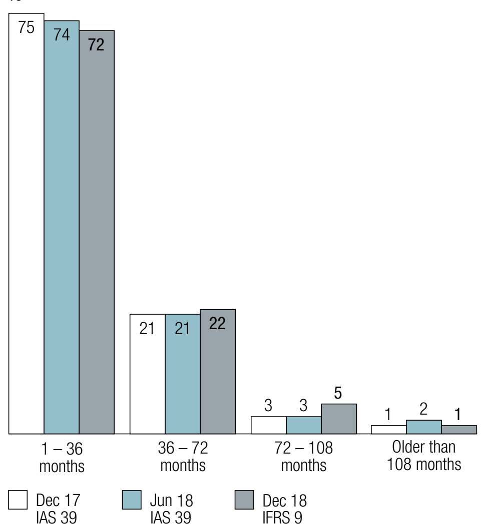
ALDERMORE BUY-TO-LET
BALANCE-TO-ORIGINAL VALUE
%



ALDERMORE BUY-TO-LET
CURRENT BALANCE-TO-MARKET VALUE
%

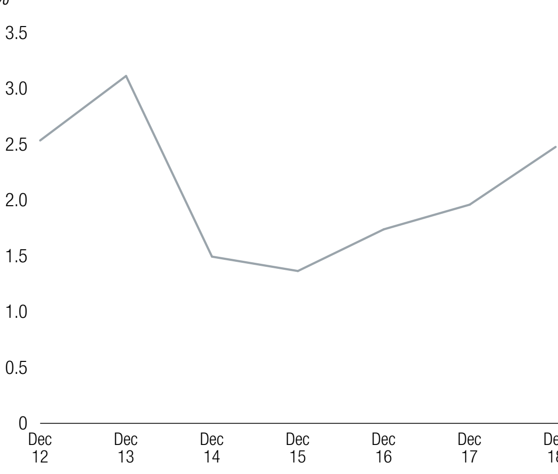


ALDERMORE BUY-TO-LET
AGE DISTRIBUTION
%



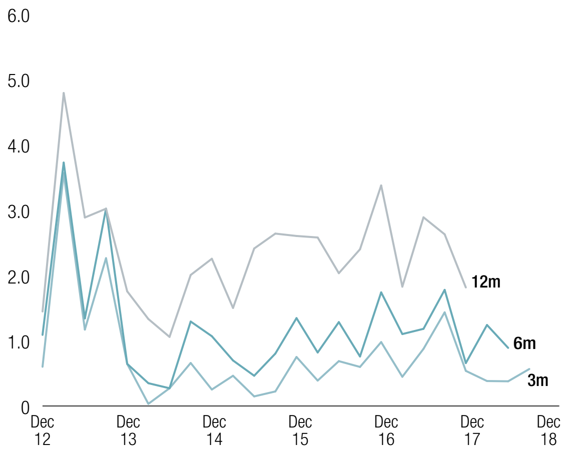
For standard residential mortgages, Aldermore typically operates in a higher loan-to-value (LTV) range than the larger high street banks, but uses experienced manual underwriting to identify low-to-medium-risk lending opportunities within that range. Aldermore covers a broad spectrum of customers from first-time buyers to self-employed customers.

The following graph shows arrears in the Aldermore residential mortgages portfolio. Arrears levels spiked in December 2013 as a relatively small acquired mortgage portfolio was migrated to Aldermore, adding some short-term volatility. Arrears levels have subsequently reduced as the portfolio grew rapidly. The gradual increase during 2017/18 largely reflects the maturing of the book. Arrears levels are, however, in line with industry benchmarked figures.



Relatively low volumes of arrears cause a degree of volatility in the vintages. The performance of business written in 2015 demonstrates slightly higher arrears than other cohorts, although credit quality has been steady for cohorts from 2016 onwards.

ALDERMORE RESIDENTIAL MORTGAGES VINTAGE ANALYSIS

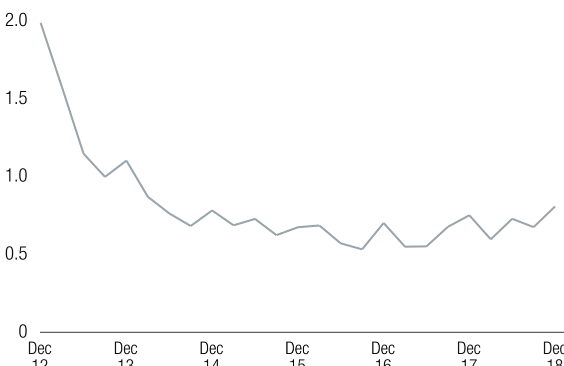


The buy-to-let (BTL) mortgages business services the needs of a wide range of customers, from first-time to experienced landlords.

The graph below shows that arrears have been relatively stable since 2014.

With the deployment of new BTL underwriting standards in January 2017 (for affordability) and September 2017 (for portfolio landlords), an increased level of conservatism has been applied to affordability assessments for this portfolio.

ALDERMORE BUY-TO-LET ARREARS



The following graph demonstrates that relatively low volumes of arrears with diverse loan values for this portfolio result in some volatility in the vintages. The peak observed in December 2017 resulted from a low volume of accounts, but with higher values. Credit quality is resilient and relatively stable.

ALDERMORE BUY-TO-LET VINTAGE ANALYSIS

%

4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0

12m
6m
3m

Dec 12
Dec 13
Dec 14
Dec 15
Dec 16
Dec 17
Dec 18

Counterparty credit risk

INTRODUCTION AND OBJECTIVES

Counterparty credit risk is the risk of a counterparty to a contract, transaction or agreement defaulting prior to the final settlement of the transaction's cash flows.

Counterparty credit risk measures a counterparty's ability to satisfy its obligations under a contract that has positive economic value to the group at any point during the life of the contract. It differs from normal credit risk in that the economic value of the transaction is uncertain and dependent on market factors that are typically not under the control of the group or the client.

Counterparty credit risk is a risk taken mainly in the group's trading and securities financing businesses. The objective of counterparty credit risk management is to ensure that this risk is appropriately measured, analysed and reported on, and is only taken within specified limits in line with the group's risk appetite framework as mandated by the board.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> Focused on integrated assessment of credit, legal, liquidity and market risks of complex counterparty derivative portfolios. > Performed impact assessment of upcoming liquidity, margin and capital regulations on derivative portfolios. > Performed impact assessment of the proposed BCBS's Basel III post-crisis regulatory reforms, commonly referred to as Basel IV standards.	> Improve the group's internal counterparty credit risk exposure assessment methodology. > Prepare for the regulatory implementation of the standardised approach for measuring counterparty credit risk exposures (SA-CCR). The implementation date for the proposed amendment to the regulations in South Africa is 1 October 2019. > Prepare for the implementation of Basel margin requirements for non-cleared derivatives. > Refine internal derivative credit portfolio reporting. > Build economic capital capability for counterparty credit risk exposure.

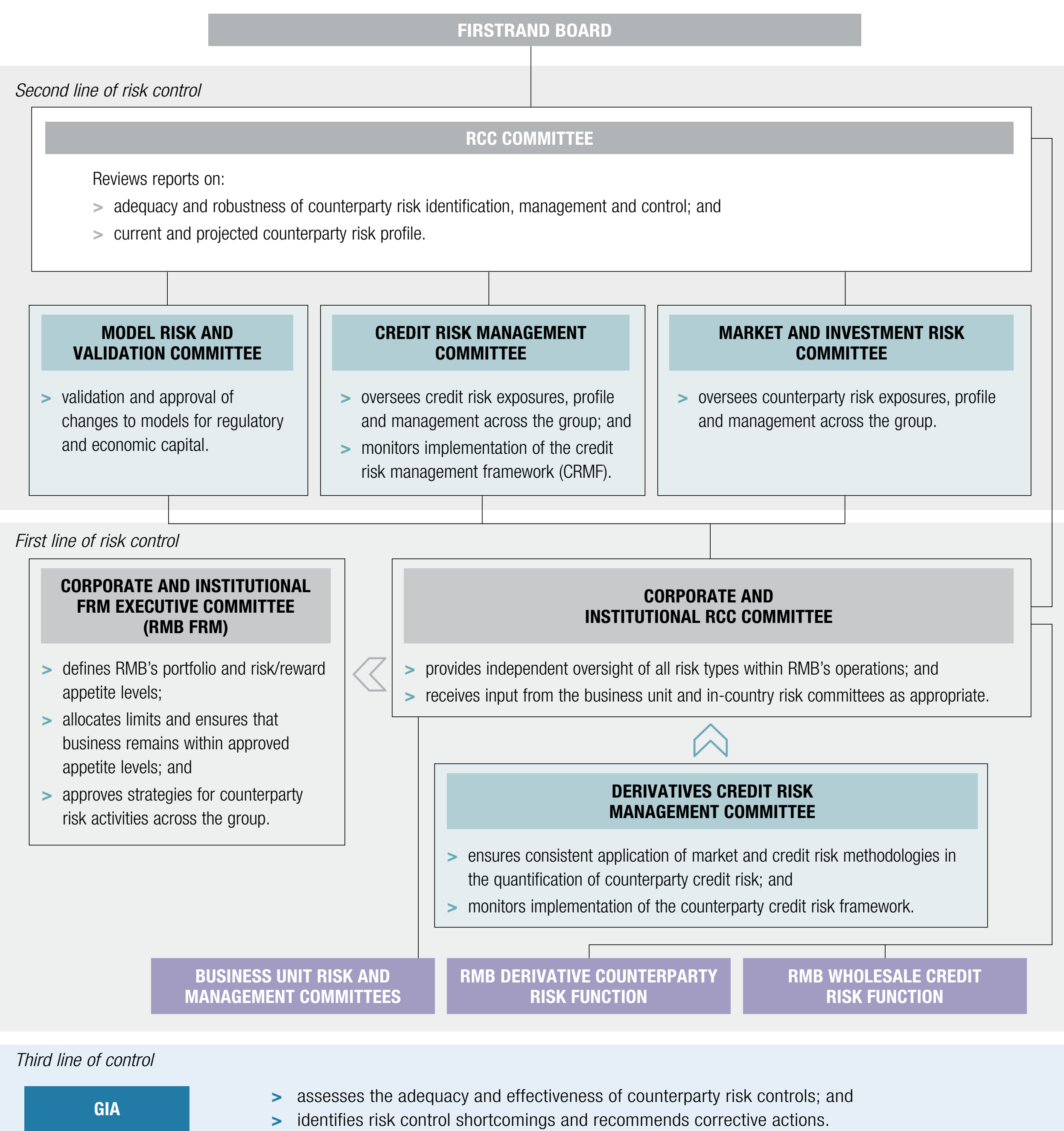
ORGANISATIONAL STRUCTURE AND GOVERNANCE

The wholesale credit function in RMB is responsible for the overall management of counterparty credit risk. It is supported by RMB's derivative counterparty risk department, which is responsible for ensuring that market and credit risk methodologies are consistently applied in the quantification of risk.

Counterparty credit risk is managed on the basis of the principles, approaches, policies and processes set out in the credit risk management framework for wholesale credit exposures. In this respect, counterparty credit risk governance aligns closely with the group's credit risk governance framework, with mandates and responsibilities cascading from the board through the RCC committee to the respective credit committees and subcommittees, as well as deployed and central risk management functions. Refer to the risk governance section and organisational structure and governance in the credit risk section for more details.

The derivative counterparty risk committee supports the credit risk management committee and its subcommittees with analysis and quantification of counterparty credit risk for traded product exposures.

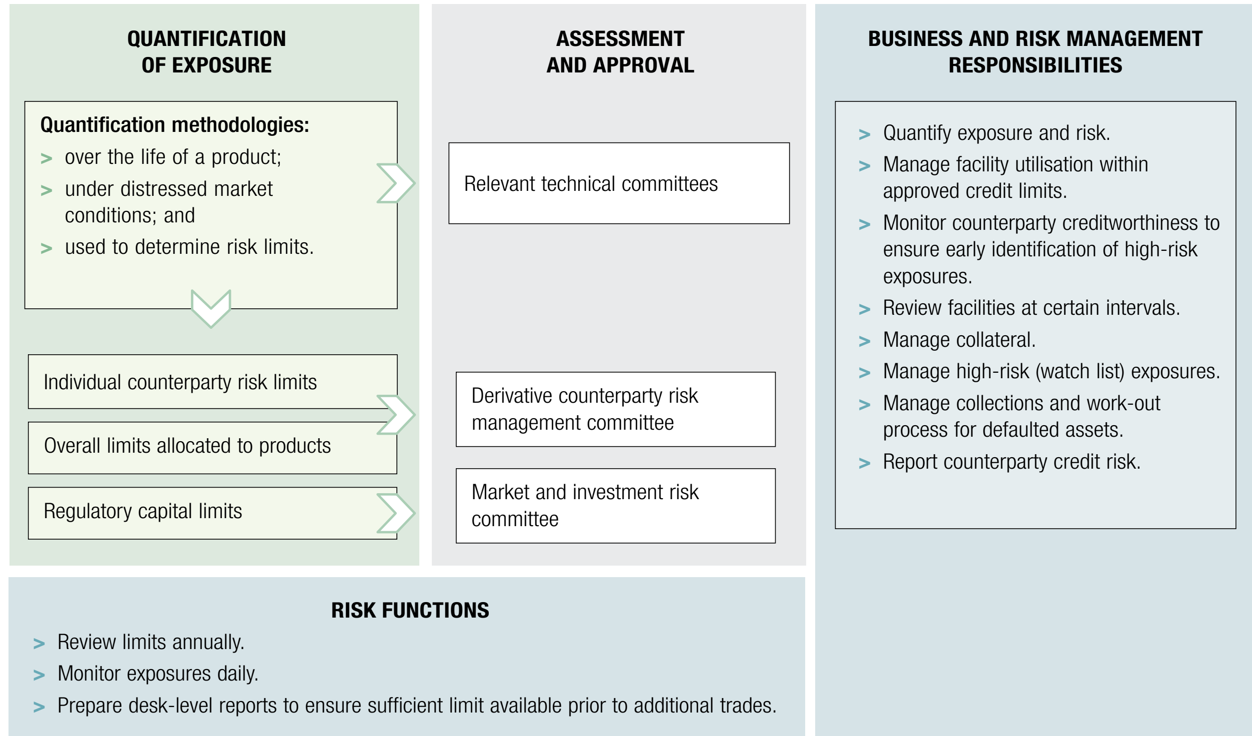
COUNTERPARTY CREDIT RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

Measurement of counterparty credit risk aligns closely with credit risk measurement practices and is focused on establishing appropriate limits at a counterparty level and ongoing portfolio risk management. The quantification of risk exposure is described in the following diagram.

QUANTIFICATION OF COUNTERPARTY CREDIT RISK EXPOSURE



The ETL method is applied internally to estimate counterparty credit risk exposure at counterparty and/or portfolio level. These exposures are monitored daily against limits. Excesses and covenant breaches are managed in accordance with the excess approval and escalation mandates.

COUNTERPARTY CREDIT RISK MITIGATION

The group uses various instruments to mitigate potential exposure to certain counterparties. These include financial or other collateral in line with common credit risk practices, as well as netting agreements, guarantees and credit derivatives. In addition, the group has set up a function to clear over-the-counter (OTC) derivatives centrally as part of risk mitigation.

The group uses International Swaps and Derivatives Association (ISDA) and International Securities Market Association (ISMA) agreements for netting derivative transactions and repurchase transactions, respectively. These master agreements as well as associated credit support annexes (CSA) set out internationally-accepted valuation and default covenants, which are evaluated and applied daily, including daily margin calls based on the approved CSA thresholds.

The effectiveness of the hedges and mitigants in place are monitored by a combination of counterparty risk limits and market risk limits. These limits are set in accordance with the wholesale credit risk and market risk limit frameworks. The counterparty credit risk team in RMB Global Markets is the custodian of the policies that set collateral requirements for counterparties and portfolios. Business units are responsible for executing these policies and the RMB Business Resource Management desk is responsible for the overall management of the funding costs/benefits of the collateral. Client and portfolio exposures, concentrations and effectiveness of collateral and hedges are monitored on an ongoing basis via the relevant derivative risk committees and the quarterly derivative counterparty risk management committee in RMB.

Collateral, in the form of cash and/or cash equivalents, is the primary credit risk mitigant for counterparty credit risk. Collateral arises from margin arrangements, which are stipulated within netting agreements, and is also a function of providing market access to clients across certain business lines. The liquid nature of the collateral taken makes it effective as a mitigant in that its valuation, where applicable, is easily observable in the market and in that lower regulatory haircuts apply.

WRONG-WAY RISK EXPOSURE

Wrong-way risk exposure occurs when exposure to a counterparty is adversely correlated with the credit quality of that counterparty. The methods applied in managing counterparty credit limits, exposures and collateral create visibility on portfolio concentrations and exposures, which may be a source of wrong-way risk. These areas are monitored and managed within the relevant exposure mandates.

CREDIT VALUATION ADJUSTMENT (CVA)

CVA is an adjustment to the fair value (or price) of derivative instruments to account for counterparty credit risk. Thus, CVA is commonly viewed as the price of counterparty credit risk. This price depends on counterparty credit spreads as well as on the market risk factors that drive derivatives' value and, therefore, exposure.

The current CVA framework is being revised by BCBS with the intention to implement new standards by January 2022. The rationale for revising the current framework is as follows:

- capturing all CVA risks and better recognition of CVA hedges;
- alignment with industry practices for accounting purposes; and
- alignment with proposed revisions of the market risk framework.

COLLATERAL TO BE PROVIDED IN THE EVENT OF A CREDIT RATING DOWNGRADE

In rare instances, FirstRand has signed ISDA agreements where both parties would be required to post additional collateral in the event of a credit rating downgrade. The additional collateral to be provided by the group in the event of a credit rating downgrade is not material and would not adversely impact its financial position. The group is phasing out ISDA agreements with these provisions. The number of trades with counterparties with these types of agreements (and the associated risk) is also immaterial.

When assessing the portfolio in aggregate, the collateral that the group would need to provide in the event of a rating downgrade is subject to many factors, including market moves in the underlying traded instruments and netting of existing positions.

COUNTERPARTY CREDIT EXPOSURE

The *CCR1: Analysis of counterparty credit risk* table on the following page provides an overview of the counterparty credit risk arising from the group's derivative and structured finance transactions. The standardised approach for measuring counterparty credit risk (SA-CCR) has not been implemented yet. The information provided in row 1 (SA-CCR) therefore corresponds to the requirements of the standardised method as applied by FRB SA. The group calculates counterparty credit risk exposures under the standardised method for FRB SA and uses the current exposure method for the other group entities. EAD under the standardised method is quantified by scaling either the current credit exposure less collateral or the net potential future exposure by a factor of 1.4.

The comprehensive approach for credit risk mitigation is used to calculate the exposure for collateralised transactions other than collateralised OTC derivative transactions that are subject to the current exposure method. This approach is typically applied to securities financing and repo type of transactions.

The table below provides an explanation of the approaches used in the *CCR1: Analysis of counterparty credit risk* table on the next page.

Replacement cost	The replacement cost for trades that are not subject to margining requirements is the loss that would occur if a counterparty were to default and was immediately closed out of its transactions. For margined trades, the replacement cost is the loss that would occur if a counterparty were to default at present or at a future date, assuming that the close-out and replacement of transactions occur simultaneously. Under the current exposure method, the current replacement cost is determined by marking contracts to market, thus capturing the current exposure without any need for estimation.
Potential future exposure	The potential increase in the exposure between the present and the end of the margin period of risk. An add-on factor is applied to the replacement cost to determine the potential future exposure over the remaining life of the contract.
Effective expected positive exposure (EEPE)	The weighted average of the effective expected exposure over the first year, or, if all the contracts in the netting set mature before one year, over the time period of the longest-maturity contract in the netting set, where the weights represent the proportion of an individual expected exposure over the entire time interval.
EAD post credit risk mitigation (CRM)	Refers to the amount relevant to the calculated capital requirement over applying credit risk mitigation techniques, credit valuation adjustments and specific wrong-way adjustments.

CCR1 provides a comprehensive view of the methods used to calculate counterparty credit risk regulatory requirements and the main parameters used within each method. The exposures reported exclude CVA charges and exposures cleared through central clearing counterparties (CCP). The changes in counterparty exposure numbers year-on-year are attributable to factors which include changes in market prices, a decrease in trade volumes, expiry of trades and hedges. Replacement cost, potential future exposure and alpha used for computing regulatory EAD, EAD post-CRM and RWA are not inputs into the VaR model calculation for security financing transactions. Row 5 of CCR1 is, therefore, excluded from these tables.

CCR1: ANALYSIS OF COUNTERPARTY CREDIT RISK BY APPROACH FOR FRB SA

	As at 31 December 2018					
R million	**Replacement cost**	**Potential future exposure**	**EEPE**	**Alpha used for computing regulatory EAD**	**EAD post-CRM**	**RWA**
1. Standardised approach (for derivatives)*	**5 725**	**7 508**		**1.4**	**18 526**	**7 937**
4. Comprehensive approach for credit risk mitigation for security financing transactions**					**3 806**	**2 189**
6. **Total**	**5 725**	**7 508**			**22 332**	**10 126**

* *EEPE is not calculated under the SA-CCR (for derivatives).*

** *Replacement cost, potential future exposure, EEPE and alpha used for computing regulatory EAD are not calculated under the comprehensive approach for credit mitigation for security financing transactions.*

	As at 31 December 2017					
R million	Replacement cost	Potential future exposure	EEPE	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
1. Standardised approach (for derivatives)*	9 194	8 015		1.4	25 989	11 181
4. Comprehensive approach for credit risk mitigation for security financing transactions**					1 846	1 969
6. **Total**	9 194	8 015			27 835	13 150

* *EEPE is not calculated under the SA-CCR (for derivatives).*

** *Replacement cost, potential future exposure, EEPE and alpha used for computing regulatory EAD are not calculated under the comprehensive approach for credit mitigation for security financing transactions.*

	As at 30 June 2018					
R million	Replacement cost	Potential future exposure	EEPE	Alpha used for computing regulatory EAD	EAD post-CRM	RWA
1. Standardised approach (for derivatives)*	6 343	6 058		1.4	17 361	5 879
4. Comprehensive approach for credit risk mitigation for security financing transactions**					4 011	1 850
6. **Total**	6 343	6 058			21 372	7 729

* *EEPE is not calculated under the SA-CCR (for derivatives).*

** *Replacement cost, potential future exposure, EEPE and alpha used for computing regulatory EAD are not calculated under the comprehensive approach for credit mitigation for security financing transactions.*

The following table provides the EAD post-CRM and RWA amounts for portfolios subject to the standardised CVA capital charge. As the group does not apply the advanced approach for CVA charge, rows 1 and 2 are excluded from CCR2. CVA RWA are sensitive to EAD and credit ratings. The decrease in CVA RWA was due to a decrease in trade exposures.

CCR2: CVA CAPITAL CHARGE

	As at 31 December 2018		As at 31 December 2017		As at 30 June 2018	
R million	**EAD post-CRM**	**RWA***	EAD post-CRM	RWA	EAD post-CRM	RWA
3. All portfolios subject to the standardised CVA capital charge	**19 951**	**8 412**	25 989	10 886	17 361	6 734
4. **Total subject to the CVA capital charge**	**19 951**	**8 412**	25 989	10 886	17 361	6 734

* *From December 2018, CVA RWA includes rest of Africa and foreign subsidiaries.*

CCR3: STANDARDISED APPROACH – EXPOSURES BY REGULATORY PORTFOLIO AND RISK WEIGHTS*

	As at 31 December 2018					
	Risk weight**					
R million	**0%**	**20%**	**50%**	**100%**	**150%**	**Total credit exposure**
Asset classes[#]						
Sovereigns	**–**	**–**	**–**	**–**	**–**	**–**
Non-central government public sector entities	**–**	**–**	**–**	**–**	**–**	**–**
Banks	**1 152**	**–**	**108**	**796**	**–**	**2 056**
Securities firms	**–**	**–**	**1**	**–**	**–**	**1**
Corporates	**–**	**–**	**4**	**508**	**9**	**521**
Total	**1 152**	**–**	**113**	**1 304**	**9**	**2 578**

* *These exposures are for the subsidiaries in the rest of Africa and foreign branches.*

** *There were no exposures in the 10%, 20%, 35% and 75% risk weight buckets at 31 December 2018.*

[#] *There were no exposures in the regulatory retail, multilateral development banks and other assets classes at 31 December 2018.*

	As at 31 December 2017					
	Risk weight**					
R million	0%	20%	50%	100%	150%	Total credit exposure
Asset classes[#]						
Sovereigns	–	–	–	44	–	44
Non-central government public sector entities	–	–	9	65	–	74
Banks	1 006	5	37	2	–	1 050
Securities	–	–	13	–	–	13
Corporates	–	–	–	1 659	–	1 659
Total	1 006	5	59	1 770	–	2 840

* *These exposures are for the subsidiaries in the rest of Africa and foreign branches.*

** *There were no exposures in the 10%, 35%, 75% and 150% risk weight buckets at 31 December 2017.*

[#] *There were no exposures in the regulatory retail, multilateral development banks and other assets classes at 31 December 2017.*

	As at 30 June 2018					
	Risk weight**					
R million	0%	20%	50%	100%	150%	Total credit exposure
Asset classes[#]						
Sovereigns	–	–	–	350	–	350
Non-central government public sector entities	–	–	–	–	–	–
Banks	1 555	2	36	1	1	1 595
Securities firms	473	–	3	–	–	476
Corporates	–	–	5	157	–	162
Total	2 028	2	44	508	1	2 583

* *These exposures are for the subsidiaries in the rest of Africa and foreign branches.*

** *There were no exposures in the 10%, 35%, and 75% risk weight buckets at 30 June 2018.*

[#] *There were no exposures in the regulatory retail, multilateral development banks and other assets classes at 30 June 2018.*

The following tables provide the counterparty credit risk exposures per portfolio and PD range where the AIRB approach is used for credit risk. They also include the main parameters used in the calculation of RWA. These exposures are for FRB SA, where AIRB for credit risk is applied.

The information provided in the different columns is explained as follows:

- EAD post-CRM, gross of accounting provisions;
- average PD is the obligor-grade PD weighted by EAD;
- average LGD is the obligor-grade LGD weighted EAD;
- average maturity in years is obligor maturity weighted by EAD; and
- RWA density is total risk weighted assets to EAD post-CRM.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE

	Total FRB SA						
	As at 31 December 2018						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**3 210**	**0.07**	**44**	**23.69**	**1.22**	**436**	**13.58**
0.15 to <0.25	**3 444**	**0.16**	**57**	**20.47**	**0.78**	**621**	**18.03**
0.25 to <0.50	**4 979**	**0.38**	**203**	**31.93**	**2.27**	**2 057**	**41.31**
0.50 to <0.75	**293**	**0.74**	**67**	**21.00**	**1.02**	**106**	**36.18**
0.75 to <2.50	**4 616**	**1.72**	**222**	**29.77**	**1.70**	**3 531**	**76.49**
2.50 to <10.00	**506**	**4.74**	**56**	**14.65**	**3.39**	**715**	**141.30**
10.00 to <100.00	**51**	**22.79**	**31**	**33.34**	**1.14**	**64**	**125.49**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**17 099**		**680**			**7 530**	**44.04**

	Total FRB SA						
	As at 31 December 2017						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	2 511	0.07	48	16.28	1.10	223	8.90
0.15 to <0.25	7 932	0.17	130	19.97	0.89	1 372	17.30
0.25 to <0.50	8 191	0.40	123	33.44	2.28	3 929	47.97
0.50 to <0.75	850	0.74	92	28.00	1.09	383	45.05
0.75 to <2.50	4 256	1.53	208	39.84	1.18	4 046	95.06
2.50 to <10.00	282	4.25	64	34.21	1.77	294	104.19
10.00 to <100.00	19	20.07	26	30.29	1.83	33	170.31
100.00 (default)	–	–	–	–	–	–	–
Total	24 041		691			10 280	42.76

For the bank's portfolio, the overall decrease in exposure and RWA was driven by futures transactions with central clearing counterparties that have matured during the period under review.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Banks						
	As at 31 December 2018						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**2 772**	**0.07**	**36**	**21.77**	**1.12**	**329**	**11.87**
0.15 to <0.25	**594**	**0.16**	**4**	**35.60**	**0.80**	**186**	**31.31**
0.25 to <0.50	**513**	**0.40**	**12**	**26.13**	**1.66**	**210**	**40.94**
0.50 to <0.75	**1**	**0.74**	**1**	**45.00**	**0.02**	**1**	**100.00**
0.75 to <2.50	**17**	**1.28**	**3**	**35.80**	**0.80**	**14**	**82.35**
2.50 to <10.00	**2**	**4.93**	**4**	**49.55**	**0.21**	**4**	**200.00**
10.00 to <100.00	**2**	**33.16**	**4**	**45.00**	**0.20**	**4**	**200.00**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**3 901**		**64**			**748**	**19.17**

	Banks						
	As at 31 December 2017						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	2 338	0.07	39	15.49	1.06	194	8.30
0.15 to <0.25	282	0.16	6	37.11	1.22	98	34.75
0.25 to <0.50	686	0.45	14	13.93	1.42	152	22.16
0.50 to <0.75	16	0.74	1	45.00	0.25	11	68.75
0.75 to <2.50	8	1.53	5	29.93	2.17	6	75.00
2.50 to <10.00	1	4.80	4	50.12	0.25	2	200.00
10.00 to <100.00	7	32.20	3	44.79	0.30	18	257.14
100.00 (default)	–	–	–	–	–	–	–
Subtotal	3 338		72			481	14.41

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Securities						
	As at 31 December 2018						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**254**	**0.08**	**3**	**33.99**	**2.45**	**75**	**29.53**
0.15 to <0.25	**2 816**	**0.16**	**40**	**17.16**	**0.78**	**427**	**15.16**
0.25 to <0.50	**2 738**	**0.39**	**43**	**35.86**	**2.25**	**1 180**	**43.10**
0.50 to <0.75	**165**	**0.74**	**22**	**9.50**	**0.50**	**29**	**17.58**
0.75 to <2.50	**2 665**	**1.48**	**117**	**23.55**	**1.13**	**1 609**	**60.38**
2.50 to <10.00	**194**	**4.93**	**15**	**6.83**	**2.33**	**53**	**27.32**
10.00 to <100.00	**18**	**10.07**	**11**	**19.68**	**2.99**	**20**	**111.11**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**8 850**		**251**			**3 393**	**38.34**

	Securities						
	As at 31 December 2017						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	114	0.09	2	22.11	1.83	20	17.54
0.15 to <0.25	6 403	0.17	61	17.02	0.80	967	15.10
0.25 to <0.50	3 690	0.37	35	38.90	1.92	1 796	48.67
0.50 to <0.75	356	0.74	24	17.01	0.45	96	26.97
0.75 to <2.50	3 197	1.38	119	41.46	1.08	3 136	98.09
2.50 to <10.00	80	4.47	18	22.84	5.63	70	87.05
10.00 to <100.00	11	10.07	10	18.80	3.06	12	109.09
100.00 (default)	–	–	–	–	–	–	–
Subtotal	13 851		269			6 097	44.02

The decrease in exposure and RWA was driven by futures transactions with central clearing counterparties that have matured during the period under review.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Corporate						
	As at 31 December 2018						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**176**	**0.08**	**4**	**38.80**	**0.81**	**30**	**17.05**
0.15 to <0.25	**32**	**0.17**	**11**	**29.78**	**0.41**	**6**	**18.75**
0.25 to <0.50	**728**	**0.35**	**111**	**33.37**	**1.17**	**286**	**39.29**
0.50 to <0.75	**89**	**0.74**	**39**	**40.44**	**1.49**	**58**	**65.17**
0.75 to <2.50	**1 391**	**2.14**	**92**	**42.15**	**0.66**	**1 343**	**96.55**
2.50 to <10.00	**84**	**3.78**	**29**	**25.93**	**0.31**	**62**	**73.81**
10.00 to <100.00	**31**	**29.52**	**16**	**40.54**	**0.12**	**40**	**129.03**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**2 531**		**302**			**1 825**	**72.11**

	Corporate						
	As at 31 December 2017						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	52	0.08	6	37.22	0.73	7	14.16
0.15 to <0.25	1 191	0.17	56	31.85	1.20	296	24.87
0.25 to <0.50	1 132	0.36	55	39.63	1.10	515	45.55
0.50 to <0.75	415	0.74	60	37.17	1.38	242	58.27
0.75 to <2.50	601	1.67	79	38.65	0.29	496	82.47
2.50 to <10.00	199	4.12	35	38.73	0.22	219	110.05
10.00 to <100.00	1	35.57	12	44.96	0.17	3	247.07
100.00 (default)	–	–	–	–	–	–	–
Subtotal	3 591		303			1 778	49.51

The decrease in exposure was due to currency swaps that have matured during the period under review. Changes in market prices, decreased trade volumes and currency swaps that have matured have resulted in an overall decrease in EAD. The increase in RWA was driven by an increase in obligators, exposure and average maturity in the 0.75% to 2.50% PD band. The average maturity of the book is below 18 months, reflecting reduced appetite for long-dated transactions from corporate clients.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Public sector and local government						
	As at 31 December 2018						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.15 to <0.25	**1**	**0.17**	**1**	**20.00**	**4.15**	**1**	**100.00**
0.25 to <0.50	**75**	**0.40**	**6**	**31.70**	**3.16**	**38**	**50.67**
0.50 to <0.75	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.75 to <2.50	**350**	**2.45**	**2**	**30.00**	**3.49**	**332**	**94.86**
2.50 to <10.00	**1**	**6.22**	**2.00**	**45.00**	**1.00**	**2**	**200.00**
10.00 to <100.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**427**		**11**			**373**	**87.35**

	Public sector and local government						
	As at 31 December 2017						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	–	–	–	–	–	–	–
0.15 to <0.25	5	0.16	1	20.00	8.27	2	38.06
0.25 to <0.50	2 124	0.47	5	30.55	3.83	1 293	60.88
0.50 to <0.75	1	0.74	1	35.00	0.32	–	52.71
0.75 to <2.50	446	2.45	3	30.00	3.09	407	91.15
2.50 to <10.00	–	–	–	–	–	–	–
10.00 to <100.00	–	–	–	–	–	–	–
100.00 (default)	–	–	–	–	–	–	–
Subtotal	2 576		10			1 702	66.09

The overall decrease in EAD reflects the effect of credit hedges and depreciation of the rand against the US dollar.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Sovereign						
	As at 31 December 2018						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.15 to <0.25	**1**	**0.17**	**1**	**43.55**	**1.61**	**1.00**	**100.00**
0.25 to <0.50	**28**	**0.48**	**4**	**44.06**	**1.07**	**19**	**67.86**
0.50 to <0.75	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.75 to <2.50	**–**	**–**	**–**	**–**	**–**	**–**	**–**
2.50 to <10.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
10.00 to <100.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**29**		**5**			**20**	**68.97**

	Sovereign						
	As at 31 December 2017						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	–	–	–	–	–	–	–
0.15 to <0.25	1	0.17	3	42.85	1.12	0.16	16.00
0.25 to <0.50	268	0.41	3	23.40	1.04	98	36.68
0.50 to <0.75	–	–	–	–	–	–	–
0.75 to <2.50	–	–	–	–	–	–	–
2.50 to <10.00	–	–	–	–	–	–	–
10.00 to <100.00	–	–	–	–	–	–	–
100.00 (default)	–	–	–	–	–	–	–
Subtotal	269		6			98	36.60

The decrease in exposure and RWA was due to transactions that have matured during the period under review.

CCR4: AIRB – COUNTERPARTY CREDIT RISK EXPOSURES BY PORTFOLIO AND PD RANGE continued

	Other						
	As at 31 December 2018						
PD scale	**EAD post-CRM R million**	**Average PD %**	**Number of obligors**	**Average LGD %**	**Average maturity years**	**RWA R million**	**RWA density %**
0.00 to <0.15	**8**	**0.08**	**1**	**30.00**	**4.55**	**2**	**25.00**
0.15 to <0.25	**–**	**–**	**–**	**–**	**–**	**–**	**–**
0.25 to <0.50	**897**	**0.38**	**27**	**21.71**	**3.50**	**324**	**36.12**
0.50 to <0.75	**38**	**0.74**	**5**	**25.40**	**2.21**	**18**	**47.37**
0.75 to <2.50	**193**	**0.94**	**8**	**29.95**	**13.44**	**233**	**120.73**
2.50 to <10.00	**225**	**4.93**	**6**	**16.76**	**5.48**	**594**	**264.00**
10.00 to <100.00	**–**	**–**	**–**	**–**	**–**	**–**	**–**
100.00 (default)	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Subtotal	**1 361**		**47**			**1 171**	**86.04**

	Other						
	As at 31 December 2017						
PD scale	EAD post-CRM R million	Average PD %	Number of obligors	Average LGD %	Average maturity years	RWA R million	RWA density %
0.00 to <0.15	7	0.08	1	30.00	5.56	2	30.30
0.15 to <0.25	53	0.17	3	18.51	2.46	9	17.11
0.25 to <0.50	289	0.35	11	16.32	3.32	74	25.75
0.50 to <0.75	62	0.74	6	25.36	2.99	34	54.04
0.75 to <2.50	3	1.13	4	31.96	0.11	1	58.10
2.50 to <10.00	2	7.50	6	31.15	2.64	3	127.58
10.00 to <100.00	–	–	–	–	–	–	–
100.00 (default)	–	–	–	–	–	–	–
Subtotal	416		31			123	29.57

The increase in exposure and RWA was due to an increase in obligors in the 0.25% to <0.50% PD band, and an increase in exposure in the 2.50% to <10.00% PD band.

The following tables provide the composition of collateral for counterparty credit risk exposures per category for collateral used in derivative transactions, split between fair value of collateral received and posted collateral. "Segregated" refers to collateral which is held in a bankruptcy-remote manner and "unsegregated" to collateral not held in a bankruptcy-remote manner.

CCR5: COMPOSITION OF COLLATERAL FOR COUNTERPARTY CREDIT RISK EXPOSURE PER COLLATERAL CATEGORY*

	As at 31 December 2018					
	Collateral used in derivative transactions				Collateral used in security finance transactions	
	Fair value of collateral received		**Fair value of posted collateral**		**Fair value of collateral received**	**Fair value of posted collateral**
R million	**Segregated**	**Unsegregated**	**Segregated**	**Unsegregated**		
Cash – domestic currency	**7 580**	**6 614**	**–**	**19 151**	**–**	**–**
Cash – other currencies	**–**	**1 806**	**–**	**–**	**–**	**–**
Domestic sovereign debt	**–**	**–**	**–**	**791**	**356 651**	**345 931**
Other sovereign debt	**–**	**–**	**–**	**–**	**42**	**41**
Government agency debt	**–**	**–**	**–**	**2 812**	**4 806**	**4 774**
Corporate bonds	**–**	**–**	**–**	**7**	**1 458**	**2 078**
Other collateral	**–**	**–**	**–**	**22 762**	**–**	**–**
Total	**7 580**	**8 420**	**–**	**45 523**	**362 957**	**352 824**

* *There was no collateral in the equity securities and other collateral categories during the period under review.*

	As at 31 December 2017					
	Collateral used in derivative transactions				Collateral used in security finance transactions	
	Fair value of collateral received		Fair value of posted collateral**		Fair value of collateral received	Fair value of posted collateral
R million	Segregated	Unsegregated	Segregated	Unsegregated		
Cash – domestic currency	6 888	7 948	–	2 834	–	–
Cash – other currencies	–	3 631	–	–	–	–
Domestic sovereign debt	–	–	–	175	311 276	323 311
Other sovereign debt	–	–	–	–	31	31
Government agency debt	–	–	–	–	12 188	12 268
Corporate bonds	–	–	–	–	2 450	2 450
Other collateral	–	–	–	2 726	–	–
Total	6 888	11 579	–	5 735	325 945	338 060

* *There was no collateral in the equity securities and other collateral categories during the period under review.*
** *The value of unsegregated posted collateral was restated due to the refinement of approach used.*

	As at 30 June 2018					
	Collateral used in derivative transactions				Collateral used in security finance transactions	
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral
R million	Segregated	Unsegregated	Segregated	Unsegregated		
Cash – domestic currency	6 588	4 922	–	18 119	–	–
Cash – other currencies	–	2 468	–	–	–	–
Domestic sovereign debt	–	–	–	1 354	310 665	315 376
Other sovereign debt	–	–	–	–	31	31
Government agency debt	–	–	–	3 101	9 878	9 891
Corporate bonds	–	–	–	–	1 796	1 471
Other collateral	–	–	–	–	–	–
Total	6 588	7 390	–	22 574	322 370	326 769

* *There was no collateral in the equity securities and other collateral categories during the period under review.*

The group employs credit derivatives primarily for the purposes of protecting its own positions and for hedging its credit portfolio as indicated in the following tables.

CCR6: CREDIT DERIVATIVES

	As at 31 December 2018		As at 31 December 2017		As at 30 June 2018	
R million	**Protection bought**	**Protection sold**	Protection bought	Protection sold	Protection bought	Protection sold
Notionals*						
– Single-name credit default swaps	**19 804**	**6 599**	15 402	3 618	17 208	3 757
Total notionals	**19 804**	**6 599**	15 402	3 618	17 208	3 757
Fair values	**(886)**	**923**	(924)	983	(779)	846
– Positive fair value (asset)	**324**	**1 028**	297	1 129	300	938
– Negative fair value (liability)	**(1 210)**	**(105)**	(1 221)	(146)	(1 079)	(92)

* *There were no credit derivatives in the index credit default swaps, total return swaps, credit options and other credit derivative categories during the period.*

The group's exposure to central counterparties (central clearing houses) and related RWA is provided below.

CCR8: EXPOSURES TO CENTRAL COUNTERPARTIES

	As at 31 December 2018		As at December 2017		As at 30 June 2018	
R million	**EAD post-CRM**	**RWA**	EAD post-CRM	RWA	EAD post-CRM	RWA
2. Exposures for trade at qualifying central counterparties (excluding initial margin and default fund contributions) of which:	**5 752**	**115**	4 125	82	11 072	222
3. – OTC derivatives	**753**	**15**	701	14	589	12
4. – Exchange-traded derivatives	**4 999**	**100**	3 424	68	10 483	210
5. – Securities financing transactions	**–**	**–**	–	–	–	–
6. – Nettings sets where cross-product netting has been approved	**–**	**–**	–	–	–	–
7. Segregated initial margin*	**7 580**		6 888		6 588	
8. Non-segregated initial margin	**–**	**–**	–	–	–	–
9. Pre-funded default fund contributions**	**321**	**45**	302	158	321	38
10. Unfunded default fund contributions	**–**	**–**	–	–	–	–
1. **Total exposures to qualifying central counterparties#**	**13 653**	**160**	11 315	240	17 981	260

* *RWA is not determined on segregation initial margin.*

** *June 2018 pre-funded default fund RWA was restated due to refined methodology for computing default fund RWA.*

There were no exposures to non-qualifying central counterparties (rows 11 – 20 of the CCR8 template) for the period.

Securitisations

INTRODUCTION AND OBJECTIVES

Securitisation is the process whereby illiquid loans and other receivables are packaged, underwritten and sold in the form of asset-backed securities to investors.

OBJECTIVES OF SECURITISATION ACTIVITIES

Securitisation enables the group to access funding markets at ratings that are typically higher than its own corporate credit rating. This generally provides access to broader funding sources at more favourable rates. The removal of the assets and supporting funding from the balance sheet enables the group to reduce the cost of on-balance sheet financing and to manage potential asset-liability mismatches and credit concentrations.

The group uses securitisation as a tool to achieve one or more of the following objectives:

- improve the group's liquidity position through the diversification of funding sources;
- match the cash flow profile of assets and liabilities;
- reduce balance sheet credit risk exposure; and
- manage credit concentration risk.

EXPOSURES INTENDED TO BE SECURITISED OR RESECURITISED IN THE FUTURE

FirstRand uses securitisation primarily as a funding tool. The ability to securitise assets depends on the availability of eligible assets, investor appetite for securitisation paper and the availability of alternative funding sources. All assets on the group's balance sheet are considered possible exposures that could be securitised within market constraints. The group obtains both internal and external approval for any proposed transactions.

RESECURITISATION

A resecuritisation exposure is a securitisation exposure where the risk associated with an underlying pool of exposures is tranched and at least one of the underlying exposures is itself a securitisation exposure.

The group's asset-backed commercial paper conduits occasionally acquire securitisation paper, which is managed as part of the underlying portfolio. This, however, represents a minimal portion of the total portfolio and is disclosed as a resecuritisation exposure for regulatory capital purposes.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

THE GROUP'S ROLE IN SECURITISATION AND CONDUIT STRUCTURES

Transaction	Originator	Sponsor	Servicer	Investor	Liquidity provider	Credit enhancement provider	Swap counterparty
Own securitisations							
FAST Issuer	✓	✓	✓	✓			✓
MotoFirst	✓	✓	✓	✓			
MotoPark	✓	✓	✓	✓			✓
MotoHouse	✓	✓	✓	✓			✓
Nitro 5	✓	✓	✓	✓			✓
Nitro 6	✓	✓	✓	✓			✓
Turbo Finance 5	✓	✓	✓	✓			
Turbo Finance 6	✓	✓	✓	✓			
Turbo Finance 7	✓	✓	✓	✓			
Turbo Finance 8	✓	✓	✓	✓			
Oak 1	✓	✓	✓	✓			
Oak 2	✓	✓	✓	✓			
Conduit structures							
iNdwa*		✓	✓		✓		✓
iVuzi*		✓	✓		✓	✓	✓
iNkotha**			✓				
iNguza**			✓				
Third party							
Homes Obligor Mortgage Enhanced Securities					✓		
Private Residential Mortgages 2					✓		
Superdrive Investments				✓			
Velocity Finance				✓			✓

* *Conduits incorporated under regulations relating to securitisation scheme.*

** *Conduits incorporated under regulations relating to commercial paper.*

FirstRand Limited does not have any affiliated entities that it manages or advises nor does the group have affiliated entities that invest in securitisation exposures that the group has securitised.

The ultimate responsibility for determining risk appetite and thus risk limits for the group vests in the board. Independent oversight and monitoring is conducted via the RCC committee, which, in turn, has delegated the responsibility for securitisation exposures to group ALCCO. ALCCO also maintains responsibility on behalf of the board for the allocation of sublimits and any remedial action in the event of limit breaches. The FirstRand wholesale credit committee approves credit limits for retained securitisation exposures per special purpose vehicle (SPV).

ASSESSMENT AND MANAGEMENT

OVERSIGHT AND RISK MITIGATION

The group's role in securitisation transactions, both for group-originated and group-sponsored transactions as well as third-party securitisations, results in various financial and operational risks, including:

- compliance risk;
- credit risk;
- currency risk;
- interest rate risk;
- liquidity and funding risk;
- operational risk; and
- reputational risk.

For securitisations originated by the group, exposures are managed from a credit perspective by the originating business unit as if the securitisation had never occurred. Resultant risks from retained exposures and the overall origination and maintenance of securitisation structures are covered as part of the day-to-day management of the various risk types. This includes risk mitigation and management actions, depending on risk limits and appetite per risk area. Securitisation performance is monitored on an ongoing basis and reported to management and governance forums.

Some governance and management processes in place to monitor securitisation-related risks are outlined below:

- rigorous internal approval processes are in place for proposed securitisations, and transactions are reviewed by ALCCO, RCC committee and the board against approved limits;
- changes to retained exposures (as a result of ratings changes, reviews, note redemptions and credit losses) are reflected in the monthly BA 500 regulatory return; and
- transaction investor reports, alignment with SPV financial reporting and the impact of underlying asset performance are reflected on the quarterly BA 501 regulatory return.

The group does not employ credit risk mitigation techniques to hedge credit risk on retained securitisation tranches.

SUMMARY OF ACCOUNTING POLICIES FOR SECURITISATION ACTIVITIES

From an accounting perspective, traditional securitisations are treated as sales transactions. At inception, the assets are sold to an SPV at carrying value and no gains or losses are recognised. For synthetic securitisations, credit derivatives used in the transaction are recognised at fair value, with any fair value adjustments reported in profit or loss.

Securitisation entities are consolidated into FRIHL and FRB for financial reporting purposes. Any retained notes are accounted for as investment securities in the banking book. Liabilities resulting from securitisation vehicles are accounted for in line with group accounting policies for liabilities, provisions and contingent liabilities.

PERIOD UNDER REVIEW

FAST ISSUER SPV UPSIZE

The FAST Issuer SPV was created to provide FRB with access to dollar funding on a secured basis at favourable funding spreads. In January 2018, the external funding was successfully upsized from $350 million to $500 million. FRB has negotiated a further extension to the revolving period of 12 months (Oct 18 – Oct 19) and an improvement to the credit enhancement required by senior investors.

TURBO FINANCE 8

The group continues to raise funding for MotoNovo through securitisation. Turbo Finance 8, with a total size of £400 million, was completed in October 2018. The group retained the junior note (class F: £8 million), and remaining notes were issued to the market.

MOTOHOUSE

MotoHouse Limited was executed in July 2015. £294.8 million of vehicle finance loans was purchased from FRB London branch and funded through the issuance of class A notes of £280 million and B notes of £14.8 million. Class C of £5.9 million was used to fund the cash reserve. The transaction was structured with a revolving period of 36 months, which expired in 2018. The vehicle finance loans were sold back to FRB London branch on 23 July 2018 and the proceeds from the sale were used to redeem the class A, B and C notes.

OAK 2

Aldermore's funding strategy is complemented by its continuing access to wholesale funding. Notwithstanding the end of the Bank of England's term funding scheme, Aldermore returned to the securitisation market in October 2018 with its second prime residential mortgage-backed securities transaction, Oak 2. Oak 2 is recorded as individual credit exposures for regulatory capital purposes and, therefore, not disclosed as a securitisation exposure in this section.

EXTERNAL CREDIT ASSESSMENT INSTITUTIONS (ECAIs)

The group employs eligible ratings issued by nominated ECAIs to risk-weight its securitisation and resecuritisation exposures where the use is permitted. The ECAIs nominated by the group for this purpose are Moody's, S&P and Fitch. The following tables show the traditional securitisations currently in issue and the rating distribution of any exposures retained. Global scale ratings are used for internal risk management purposes and regulatory capital reporting.

TRADITIONAL SECURITISATIONS TRANSACTIONS*

Traditional securitisations	Asset type	Rating agency	Year initiated	Expected close
Nitro 5	Retail: auto loans	S&P	2015	2023
Nitro 6	Retail: auto loans	GCR	2018	2025
FAST Issuer	Retail: auto loans		2016	2025
Turbo Finance 5	Retail: auto loans	Moody's and Fitch	2014	2021
Turbo Finance 6	Retail: auto loans	S&P and Moody's	2016	2023
Turbo Finance 7	Retail: auto loans	S&P and Moody's	2016	2023
Turbo Finance 8	Retail: auto loans	S&P and Moody's	2016	2023
MotoPark	Retail: auto loans	S&P and DBRS	2018	2025
MotoFirst	Retail: auto loans		2017	2026
MotoHouse	Retail: auto loans		2015	2023

		Assets outstanding**			Notes outstanding			Retained exposure		
R million	Assets securitised	**Dec 2018**	Dec 2017	June 2018	**Dec 2018**	Dec 2017	June 2018	**Dec 2018**	Dec 2017	June 2018
Nitro 5	–	**–**	406	243	**–**	466	293	**–**	226	226
Nitro 6	2 000	**1 587**	–	1 824	**1 532**	–	1 944	**20**	–	20
FAST Issuer	8 475	**9 643**	6 222	8 476	**9 334**	6 047	9 284	**2 093**	1 723	2 336
Turbo Finance 5	–	**–**	1 055	–	**–**	1 168	–	**–**	327	–
Turbo Finance 6	7 240	**2 127**	3 740	2 746	**1 840**	1 430	2 885	**479**	941	714
Turbo Finance 7	10 485	**4 313**	6 813	5 282	**3 748**	7 104	5 524	**416**	369	404
Turbo Finance 8	7 332	**7 578**	–	–	**6 870**	–	–	**147**	–	–
MotoFirst	11 017	**14 767**	7 345	10 929	**13 107**	7 687	11 221	**866**	783	881
MotoPark	9 898	**11 152**	–	9 558	**9 969**	–	9 885	**9 967**	–	9 885
MotoHouse	–	**–**	4 756	5 181	**–**	4 994	5 468	**–**	345	377
Total	56 447	**51 167**	30 337	44 239	**46 400**	28 896	46 504	**13 987**	4 714	14 843

* *Include transactions structured by the group and exclude third-party transactions.*

** *Assets outstanding do not include cash reserves.*

SECURITISATION EXPOSURES IN THE BANKING BOOK

The following tables provide a breakdown of the group's traditional securitisation exposures in the banking book for the retail and corporate portfolios where the group acts as originator, sponsor, investor, or originator and sponsor.

SEC1: SECURITISATION EXPOSURE IN THE BANKING BOOK PER PORTFOLIO

	As at 31 December 2018				
	Traditional securitisations				
R million	**Group acts as originator**	**Group acts as sponsor**	**Group acts as investor**	**Group acts as originator and sponsor**	**Total**
1. **Retail**					
4. – Auto loans	**13 987**	**–**	**25 994**	**–**	**39 981**
6. **Corporate**	**–**	**–**	**–**	**–**	**–**
7. – Loans to corporates	**–**	**–**	**–**	**5 320**	**5 320**
Total	**13 987**	**–**	**25 994**	**5 320**	**45 301**

	As at 31 December 2017				
	Traditional securitisations				
R million	Group acts as originator	Group acts as sponsor	Group acts as investor	Group acts as originator and sponsor	Total
1. **Retail**					
4. – Auto loans	4 714	31	24 340	–	29 085
6. **Corporate**	–	–	–	–	–
7. – Loans to corporates	–	–	–	4 282	4 282
Total	4 714	31	24 340	4 282	33 367

	As at 30 June 2018				
	Traditional securitisations				
R million	Group acts as originator	Group acts as sponsor	Group acts as investor	Group acts as originator and sponsor	Total
1. **Retail**					
4. – Auto loans	14 843	–	23 775	–	38 618
6. **Corporate**					
7. – Loans to corporates	–	–	–	4 205	4 205
Total	14 843	–	23 775	4 205	42 823

There were no residential mortgage, credit card or resecuritisation exposures in the retail portfolio (rows 2, 3 and 5 of the *SEC1* template) and no commercial mortgage, lease and receivables, other corporate or resecuritisation exposures in the corporate portfolio (rows 8 – 11 of the *SEC1* template).

The regulatory approaches for securitisation exposures in the following tables are explained below.

Internal ratings-based (IRB) approach	**Ratings-based approach (RBA)** Securitisation exposures to notes rated by an ECAI and held in an entity that uses the IRB approach.
	Internal assessment approach (IAA) The group does not use IAA for calculating risk weighted assets on securitisation exposures.
	Supervisory formula approach (SFA) Where SFA is used, these exposures are captured in the IRB SFA column.
Standardised approach	Exposures subject to the look-through approach are disclosed in the simplified supervisory approach (SSFA).
Unrated notes	Exposures to unrated notes are risk weighted at 1250%.

There were no synthetic securitisations during the period under review.

SEC3: TRADITIONAL SECURITISATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED REGULATORY CAPITAL REQUIREMENTS – BANK ACTING AS ORIGINATOR OR AS SPONSOR

	As at 31 December 2018*								
	Exposure values by RW bands					Exposure values by regulatory approach			
						IRB		SA	
R million	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	RBA	SFA	SSFA	1250%
Securitisation									
4. – Retail	**1 778**	**9 300**	**550**	**180**	**2 178**	**–**	**1 534**	**10 275**	**2 178**
5. – Corporate	**–**	**5 320**	**–**	**–**	**–**	**–**	**–**	**5 320**	**–**
Total	**1 778**	**14 620**	**550**	**180**	**2 178**	**–**	**1 534**	**15 595**	**2 178**

* *There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC3 template) during the period.*

	As at 31 December 2017*								
	Exposure values by RW bands					Exposure values by regulatory approach			
						IRB		SA	
R million	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	RBA	SFA	SSFA	1250%
Securitisation									
4. – Retail	2 129	–	–	482	2 133	31	1 307	1 873	1 534
5. – Corporate	–	4 282	–	–	–	–	–	4 282	–
Total	2 129	4 282	–	482	2 133	31	1 307	6 155	1 534

* *There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC3 template) during the period.*

	As at 30 June 2018*								
	Exposure values by RW bands					Exposure values by regulatory approach			
						IRB		SA	
R million	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW	RBA	SFA	SSFA	1250%
Securitisation									
4. – Retail	2 257	9 225	391	334	2 637	–	1 772	10 434	2 637
5. – Corporate	–	4 205	–	–	–	–	–	4 205	–
Total	2 257	13 430	391	334	2 637	–	1 772	14 639	2 637

* *There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC3 template) during the period.*

	As at 31 December 2018							
	RWA by regulatory approach				**Capital charge after cap**			
	IRB		**SA**		**IRB**		**SA**	
	RBA	**SFA**	**SSFA**	**1250%**	**RBA**	**SFA**	**SSFA**	**1250%**
	–	**114**	**5 880**	**27 225**	**–**	**13**	**658**	**3 047**
	–	**–**	**2 935**	**–**	**–**	**–**	**328**	**–**
	–	**114**	**8 815**	**27 225**	**–**	**13**	**986**	**3 047**

	As at 31 December 2017							
	RWA by regulatory approach				Capital charge after cap			
	IRB		SA		IRB		SA	
	RBA	SFA	SSFA	1250%	RBA	SFA	SSFA	1250%
	7	97	1 846	26 667	1	11	217	3 133
	–	–	907	–	–	–	107	–
	7	97	2 753	26 667	1	11	324	3 133

	As at 30 June 2018							
	RWA by regulatory approach				Capital charge after cap			
	IRB		SA		IRB		SA	
	RBA	SFA	SSFA	1250%	RBA	SFA	SSFA	1250%
	–	131	6 268	32 961	–	15	702	3 695
	–	–	2 110	–	–	–	236	–
	–	131	8 378	32 961	–	15	938	3 695

SEC4: TRADITIONAL SECURITISATION EXPOSURES IN THE BANKING BOOK AND ASSOCIATED CAPITAL REQUIREMENTS – BANK ACTING AS INVESTOR

	As at 31 December 2018*						
	Exposure values by RW bands**	**Exposure values by regulatory approach[#]**		**RWA by regulatory approach**		**Capital charge after cap**	
		IRB		**IRB**		**IRB**	
R million	**≤20% RW**	**RBA**	**SFA**	**RBA**	**SFA**	**RBA**	**SFA**
Securitisation							
4. – Retail	**25 994**	**–**	**25 994**	**–**	**1 929**	**–**	**216**
5. – Corporate	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Total	**25 994**	**–**	**25 994**	**–**	**1 929**	**–**	**216**

* *There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC4 template) during the period.*
** *There were no exposures in the >20% to 50%, >50% to 100%, >100% to <1250% and 1250% RW bands.*
[#] *There were no exposures under the standardised approach or to unrated notes risk weighted at 1250% during the period.*

	As at 31 December 2017*						
	Exposure values by RW bands**	Exposure values by regulatory approach[#]		RWA by regulatory approach		Capital charge after cap	
		IRB		IRB		IRB	
R million	≤20% RW	RBA	SFA	RBA	SFA	RBA	SFA
Securitisation							
4. – Retail	24 340	101	24 239	11	1 799	1	211
5. – Corporate	–	–	–	–	–	–	–
Total	24 340	101	24 239	11	1 799	1	211

* *There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC4 template) during the period.*
** *There were no exposures in the >20% to 50%, >50% to 100%, >100% to <1250% and 1250% RW bands.*
[#] *There were no exposures under the standardised approach or to unrated notes risk weighted at 1250% during the period.*

	As at 30 June 2018*						
	Exposure values by RW bands**	Exposure values by regulatory approach[#]		RWA by regulatory approach		Capital charge after cap	
		IRB		IRB		IRB	
R million	≤20% RW	RBA	SFA	RBA	SFA	RBA	SFA
Securitisation							
4. – Retail	23 775	101	23 674	64	1 757	7	197
5. – Corporate	–	–	–	–	–	–	–
Total	23 775	101	23 674	64	1 757	7	197

* *There were no resecuritisations or synthetic securitisations (rows 6 – 15 of the SEC4 template) during the period.*
** *There were no exposures in the >20% to 50%, >50% to 100%, >100% to <1250% and 1250% RW bands.*
[#] *There were no exposures under the standardised approach or to unrated notes risk weighted at 1250% during the period.*

Market risk

The group distinguishes between **traded market risk** and **non-traded market risk**. The following diagram describes the traded and non-traded market risks and the governance bodies responsible for managing these risks.

TRADED AND NON-TRADED MARKET RISK ELEMENTS

Traded market risk

INTRODUCTION AND OBJECTIVES

TRADED MARKET RISK ACTIVITIES

Traded market risk is the risk of adverse revaluation of any financial instrument as a consequence of changes in market prices or rates.

The group's market risk in the trading book emanates mainly from the provision of hedging solutions for clients, market-making activities and term-lending products, and is taken and managed by RMB. The relevant business units in RMB function as the centres of expertise for all market risk-related activities. Market risk is managed and contained within the group's appetite.

The group's objective is to manage and control market risk exposures, based on three pillars, each with its own objective:

- strategic business mix – ensure that RMB's current and future strategies, spanning various activities and geographies, achieve their growth and return targets within acceptable levels of risk;
- financial performance – optimise portfolio performance and manage the interplay between growth and ROE given the differentiated risk/return characteristics of activities; and
- risk and capital impact – only accept an appropriate level of risk commensurate with performance objectives and market opportunity.

The nature of hedging and risk mitigation strategies performed across the group corresponds to the market risk management instruments available in each operating jurisdiction. These strategies range from the use of traditional market instruments, such as interest rate swaps, to more sophisticated hedging strategies to address a combination of risk factors arising at portfolio level.

The group uses global and industry accepted models and operating platforms to measure market risk. These operating platforms support regulatory reporting, external disclosures and internal management reporting for market risk. The risk infrastructure incorporates the relevant legal entities and business units, and provides the basis for reporting on risk positions, capital adequacy and limit utilisation to the relevant governance and management functions on a regular and ad hoc basis. Established units in risk management functions assume responsibility for measurement, analysis and reporting of risk while promoting sufficient quality and integrity of risk-related data. The VaR and sVaR calculations and aggregations are performed daily by these operating platforms and risk measures are compared to limits. Breaches are escalated to senior management.

INTEREST RATE RISK IN THE BANKING BOOK ACTIVITIES UNDER THE MARKET RISK FRAMEWORK

Management and monitoring of interest rate risk in the banking book is split between the RMB banking book and the remaining domestic banking book. RMB manages the majority of its banking book under the market risk framework, with risk measured and monitored in conjunction with the trading book and management oversight provided by the market and investment risk committee. The RMB banking book interest rate risk exposure was R40 million on a 10-day ETL basis at 31 December 2018 (December 2017: R33 million; June 2018: R45 million). Interest rate risk in the remaining domestic banking book is discussed in the *interest rate risk in the banking book* section.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> Overall diversified levels of market risk increased over the period under review. There are no significant concentrations in the portfolio. > The increase in market risk across the group emanated mainly from an increase in business activity and the current macroeconomic conditions.	> Given the impending regulatory changes from BCBS's documents, *Fundamental review of the trading book* and BCBS 239, RMB is reviewing the current operating process platform for market risk, considering platform capabilities across both front office and risk areas, and aligning market risk processes, analysis and reporting in line with these requirements.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

MARKET RISK IN THE TRADING BOOK GOVERNANCE STRUCTURE

FIRSTRAND BOARD

Second line of risk control

RCC COMMITTEE

Review reports on:

- adequacy and robustness of market risk identification, management and control; and
- current and projected market risk profile.

ERM

- provides independent view of the market risk profile;
- oversees market risk management practices; and
- monitors implementation of the group's market risk framework.

MODEL RISK AND VALIDATION COMMITTEE

- validation and approval of changes to internal VaR models for regulatory and economic capital.

MARKET AND INVESTMENT RISK COMMITTEE

- oversees market risk exposures, profile and management across the group; and
- monitors implementation of the market risk framework.

The market risk framework (a subframework of BPRMF) prescribes the governance structures, roles, responsibilities and lines of accountability for market risk management.

First line of risk control

MARKET RISK TECHNICAL COMMITTEE

- reviews and approves independent validation of market risk, valuation and curve construction models and reports to the model risk and validation committee on these model changes.

CORPORATE AND INSTITUTIONAL FRM EXECUTIVE COMMITTEE

- defines RMB's portfolio and risk/reward appetite levels;
- allocates limits and ensures that business remains within approved appetite levels; and
- approves strategies for market risk activities across the group.

Business unit management and risk committees

CORPORATE AND INSTITUTIONAL RCC COMMITTEE

- provides independent oversight of all risk types within RMB's operations; and
- receives input from the business unit and in-country risk committees as appropriate.

Third line of control

GIA

- assesses the adequacy and effectiveness of market risk controls; and
- identifies risk control shortcomings and recommends corrective actions.

MARKET RISK REPORTING

High-quality risk reporting enables senior management and governance committees to make well-considered decisions to achieve objectives and manage key risks. The group regularly reviews the content of market risk reports to ensure relevance and that reporting adequately and accurately reflects the group's market risk profile. Market risk reporting follows the market risk governance structure on the previous page. The frequency of each report aligns with the timing of governance committee meetings and content is driven by information requirements of the target audience.

Market risk reports are provided to the Corporate and Institutional (C&I) financial resource management (FRM) executive committee, and the C&I RCC committee and MIRC on a quarterly basis. Daily and monthly reports on market risk movements, risk factors and limit utilisation are provided to senior management and executive committees, as appropriate. Information included in market risk reports includes, but is not limited to:

- ETL/VaR and sVaR, and specific risks;
- utilisation of the above against predefined limits;
- concentrations and risk build-ups;
- governance issues, such as limit breaches;
- risk factor sensitivities, stress test results and earnings volatility;
- nominal exposures;
- profit and loss attribution;
- risk and profit trends;
- internal model back testing results; and
- model risk.

INTERNAL MODELS APPROACH (IMA): DOMESTIC TRADING PORTFOLIOS

The internal VaR model for general market risk was approved by the PA for domestic trading units. For all international entities, the standardised approach is used for regulatory market risk capital purposes. Economic capital for market risk is calculated using liquidity-adjusted ETL plus an assessment of specific risk.

The risk related to market risk-taking activities is measured as the higher of the group's internal ETL measure (as a proxy for economic capital) and regulatory capital based on VaR plus sVaR. The 10-day holding period used in calculation of a 10-day VaR, 10-day sVaR and ETL is directly modelled on the group's operating platform.

Market risk in the trading book for the group is taken and managed by RMB using risk limits approved by the C&I FRM executive committee and MIRC. VaR limits are set for portfolios and risk types, with market liquidity being a primary factor in determining the level of limits set. Market risk limits are governed according to the market risk framework. The VaR model is designed to take into account a comprehensive set of risk factors across all asset classes.

VaR enables the group to apply a consistent measure across all trading desks and products. It allows a comparison of risk in different businesses, and provides a means of aggregating and netting positions in a portfolio to reflect correlations and offsets between different asset classes. Furthermore, it facilitates comparisons of market risk both over time and against daily trading results.

QUANTIFICATION OF RISK EXPOSURES

ETL	The internal measure of risk is an ETL metric at the 99% confidence level under the full revaluation methodology using historical risk factor scenarios (historical simulation method). In order to accommodate the regulatory stress loss imperative, the set of scenarios used for revaluation of the current portfolio comprises historical scenarios which incorporate both the past 260 trading days and at least one static period of market distress. The ETL is liquidity adjusted for illiquid exposures. Holding periods, ranging between 10 and 90 days or more, are used in the calculation and are based on an assessment of distressed liquidity of portfolios.
VaR and sVaR	VaR is calculated at the 99%, 10-day actual holding period level using data from the past 260 trading days. For regulatory capital purposes, this is supplemented with a sVaR, calibrated to a one-year period of stress observed in history (2008/2009). The choice of period 2008/2009 is based on the assessment of the most volatile period in recent history. sVaR calculations are based on the same systems, trade information and processes as VaR calculations. The only difference is that sVaR is supplemented with historical risk factor scenarios (historical simulation method) as an input for the full revaluation methodology. The historical factor scenarios include historical market data from a period of significant financial stress, characterised by high volatilities in recent history. When simulating potential movements in risk factors, both absolute and relative risk factors are used. VaR calculations over a holding period of one day are used as an additional tool in the assessment of market risk. The updating of historical scenarios is kept within the one-month regulatory requirement and is monitored on a daily basis.

The group's VaR should be interpreted taking into account the limitations of this methodology, namely:

- historical simulation VaR may not provide an accurate estimate of future market movements;
- the use of a 99% confidence level does not reflect the extent of potential losses beyond that percentile – ETL is a better measure to quantify losses beyond that percentile (but still subject to similar limitations as stated for VaR);
- the use of a one-day time horizon is not a fair reflection of profit or loss for positions with low trading liquidity, which cannot be closed out or hedged in one day;
- as exposures and risk factors can change during daily trading, exposures and risk factors are not necessarily captured in the VaR calibration which uses end-of-day trading data; and
- where historical data is not available, time series data is approximated or backfilled using appropriate quantitative methodologies. Use of proxies is, however, limited.

These limitations mean that the group cannot guarantee that losses will not exceed VaR. Recognising its limitations, VaR is supplemented with stress testing to evaluate the potential impact on portfolio values of more extreme, though plausible, events or movements in a set of financial variables.

The group does not apply the incremental risk charge or comprehensive risk capital charge approach.

RISK CONCENTRATIONS

Risk concentrations are controlled by means of appropriate ETL sublimits for individual asset classes and the maximum allowable exposure for each business unit. In addition to the general market risk limits described above, limits covering obligor-specific risk and event risk utilisation against these limits are monitored continuously, based on the regulatory building block approach.

RWA FLOW STATEMENT FOR IMA MARKET RISK EXPOSURES

Regulatory capital for domestic trading units is based on the internal VaR model supplemented with sVaR. VaR is calculated at the 99%, 10-day actual holding period level using data from the past 260 trading days. sVaR is calculated using a predefined static stress period (2008/2009). VaR calculations over a holding period of one day are used as an additional tool in the assessment of market risk.

The group's subsidiaries in the rest of Africa and the bank's foreign branches are measured using the regulatory standardised approach for regulatory capital and an internal stress loss methodology for internal measurement of risk. Capital is calculated for general and specific market risk using the Basel III standardised duration methodology.

The following flow statement explains the variations in the market risk RWA determined under IMA.

MR2: RWA FLOW STATEMENT OF MARKET RISK EXPOSURES UNDER IMA*

R million	VaR	sVaR	Total RWA
1. **RWA at 30 September 2018**	**7 246**	**7 518**	**14 764**
2. Movement in risk levels	**1 221**	**1 912**	**3 133**
3. Model updates/changes	**–**	**–**	**–**
4. Methodology and policy	**–**	**–**	**–**
5. Acquisitions and disposals	**–**	**–**	**–**
6. Foreign exchange movements	**–**	**–**	**–**
7. Other	**–**	**–**	**–**
8. **RWA at 31 December 2018**	**8 467**	**9 430**	**17 897**

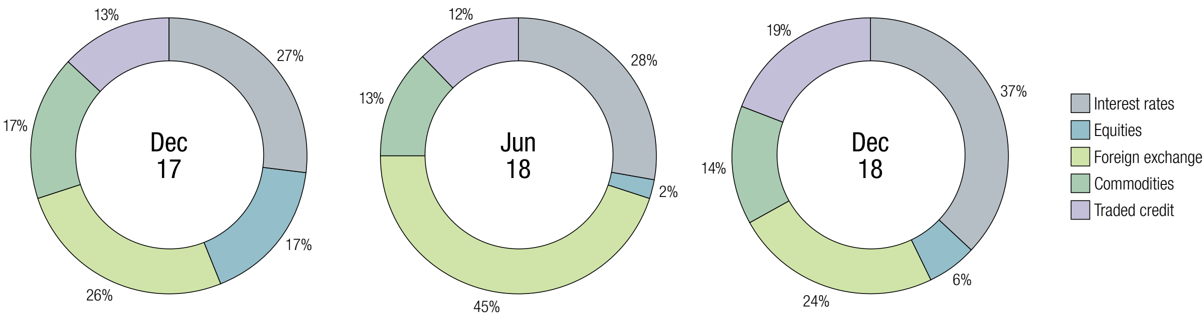
* *The group does not use the incremental risk charge and comprehensive risk measure approaches.*

The movement in market risk RWA for the period ended 31 December 2018 relates to normal business activities.

VaR EXPOSURE PER ASSET CLASS

The following chart shows the distribution of exposures per asset class across the group's trading activities at 31 December 2018 based on the VaR methodology. Interest rate risk represented the most significant exposure at 31 December 2018.

TRADED MARKET RISK VaR EXPOSURE PER ASSET CLASS FOR THE GROUP EXCLUDING SUBSIDIARIES IN THE REST OF AFRICA



IMA VALUES

Total market risk is split between traded and non-traded market risk in the following tables. Traded market risk represents the portfolios that are designated as trading book for regulatory reporting. Non-traded market risk represents the portfolios that are structural in nature and are used to manage banking book risk. The non-traded market risk portfolio is directly influenced by the foreign exchange markets and, therefore, still form part of the group's total market risk and are included in this disclosure. The group does not use the incremental risk charge (rows 9 – 12 of the *MR3* template) and comprehensive risk measure (rows 13 – 17 of the *MR3* template) approaches.

MR3: IMA VALUES FOR TRADED MARKET RISK

	FRB SA		
R million	**As at 31 December 2018**	As at 31 December 2017	As at 30 June 2018
VaR (10-day 99%)			
1. Maximum value	**187**	105	241
2. Average value	**99**	65	84
3. Minimum value	**34**	40	40
4. Period end	**76**	71	112
sVaR (10-day 99%)			
5. Maximum value	**215**	184	283
6. Average value	**121**	120	133
7. Minimum value	**35**	80	80
8. Period end	**125**	116	127
VaR (1-day 99%)			
Maximum value	**63**	67	215
Average value	**38**	37	57
Minimum value	**19**	23	23
Period end	**27**	50	34

MR3: IMA VALUES FOR NON-TRADED MARKET RISK

R million	FRB SA		
	As at 31 December 2018	As at 31 December 2017	As at 30 June 2018
VaR (10-day 99%)			
1. Maximum value	**218**	217	217
2. Average value	**114**	48	55
3. Minimum value	**19**	24	23
4. Period end	**171**	42	80
sVaR (10-day 99%)			
5. Maximum value	**278**	356	209
6. Average value	**141**	99	91
7. Minimum value	**20**	41	41
8. Period end	**211**	93	101
VaR (1-day 99%)			
Maximum value	**68**	101	127
Average value	**31**	19	25
Minimum value	**4**	10	10
Period end	**48**	18	23

MR3: IMA VALUES FOR TOTAL MARKET RISK

R million	FirstRand*			FRB SA		
	As at 31 December 2018	As at 31 December 2017	As at 30 June 2018	**As at 31 December 2018**	As at 31 December 2017	As at 30 June 2018
VaR (10-day 99%)						
1. Maximum value	**307**	197	389	**296**	153	358
2. Average value	**176**	102	148	**164**	85	110
3. Minimum value	**30**	64	64	**20**	57	57
4. Period end	**173**	130	201	**162**	89	185
sVaR (10-day 99%)						
5. Maximum value	**446**	341	344	**328**	272	275
6. Average value	**207**	173	182	**175**	159	170
7. Minimum value	**80**	97	97	**71**	97	97
8. Period end	**241**	164	218	**230**	154	205
VaR (1-day 99%)						
Maximum value				**75**	95	273
Average value				**51**	45	63
Minimum value				**15**	26	26
Period end				**42**	62	45

* *FirstRand Limited VaR numbers include the foreign branches but exclude the subsidiaries in the rest of Africa which are reported on the standardised approach for market risk. The sVaR numbers relate to FRB SA only.*

VaR and sVaR at 31 December 2018 remained relatively flat compared to 30 June 2018.

STRESS TESTING

Stress testing provides an indication of potential losses that could occur under extreme market conditions. The ETL assessment provides a view of risk exposures under stress conditions.

Additional stress testing to supplement the ETL assessment is conducted using historical market downturn scenarios and includes the use of "what-if" hypothetical and forward-looking simulations. Stress test calibrations are reviewed regularly to ensure that results are indicative of the possible impact of severely distressed and event-driven market conditions. Stress and scenario analyses are regularly reported to and considered by the relevant governance bodies.

EARNINGS VOLATILITY

A key element of the group's risk appetite framework is an assessment of potential earnings volatility that may arise from underlying activities. Earnings volatility for market risk is quantified by subjecting key market risk exposures to predetermined stress conditions, ranging from business-as-usual stress through severe stress and event risks.

In addition to assessing the maximum acceptable level of earnings volatility, stress testing is used to understand sources of earnings volatility and highlight unused capacity within the group's risk appetite. Market risk earnings volatility is calculated and assessed on a quarterly basis.

REGULATORY BACK TESTING

Back testing is performed to verify the predictive ability of the VaR model and ensure ongoing appropriateness. The back testing process is a regulatory requirement and seeks to estimate the performance of the regulatory VaR model. Performance is measured by the number of exceptions to the model, i.e. net trading profit and loss in one trading day is greater than the estimated VaR for the same trading day. The group's procedures could be underestimating VaR if exceptions occur regularly (a 99% confidence interval indicates that one exception will occur in 100 days).

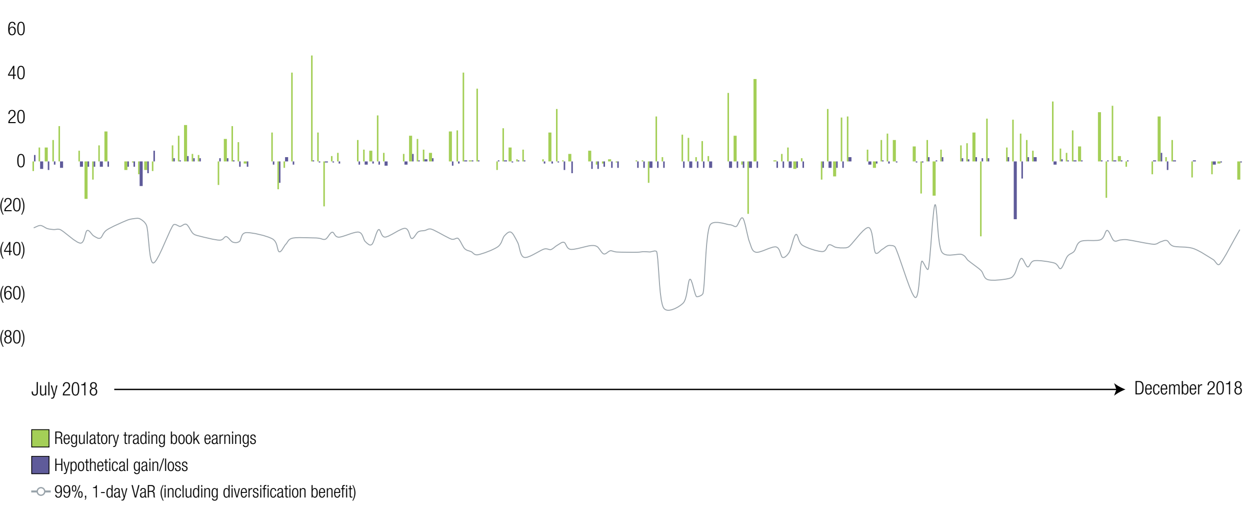
The regulatory standard for back testing is to measure daily actual and hypothetical changes in portfolio value against VaR at the 99th percentile (one-day holding period equivalent). The number of breaches over a period of 250 trading days is calculated, and should the number exceed that which is considered appropriate, the model is recalibrated.

BACK TESTING: DAILY REGULATORY TRADING BOOK EARNINGS VERSUS 1-DAY, 99% VAR

The group tracks its daily domestic earnings profile as illustrated in the following chart. The earnings and 1-day VaR relate to the group's internal VaR model. Exposures were contained within risk limits during the six months ended 31 December 2018.

MR4: COMPARISON OF VAR ESTIMATES WITH GAINS AND LOSSES FOR FRB SA

R million



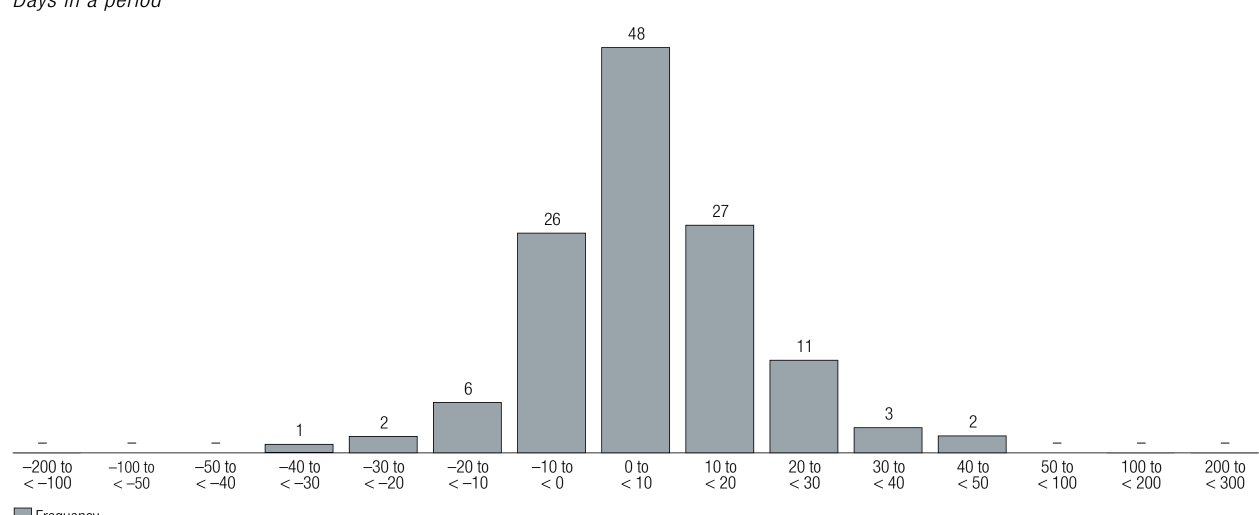
Trading book earnings did not exceed 1-day VaR during the period. This indicates that the group's internal model quantifies market risk appropriately.

DISTRIBUTION OF DAILY TRADING EARNINGS FROM TRADING UNITS

The following histogram shows the daily revenue for the group's domestic trading units for the six months ended 31 December 2018. The results are skewed towards profitability.

FRB SA DISTRIBUTION OF DAILY EARNINGS – FREQUENCY

Days in a period



STANDARDISED APPROACH: GENERAL AND SPECIFIC RISK

The bank's India and London branches and the group's subsidiaries in the rest of Africa also have market risk exposure. The India and London branches are measured and managed on the same basis as the domestic portfolios for internal measurement, with regulatory capital based on the regulatory standardised approach. The subsidiaries in the rest of Africa are measured using the regulatory standardised approach for regulatory capital and an internal stress loss methodology for internal measurement of risk. Under the standardised approach, capital is calculated for general market risk and specific risk. Capital for specific risk is held in addition to general market risk capital.

General market risk capital	The general market risk capital calculation is based on the duration methodology. To calculate the general market risk capital charge, the long or short position (at current market value) of each debt instrument and other sources of interest rate exposure, including derivatives, is distributed into appropriate time bands by maturity. The long and short positions in each time band are then summed respectively and multiplied by the appropriate risk weight factor (reflecting the price sensitivity of the positions to changes in interest rates) to determine the risk weighted long and short market risk positions for each time band.

Specific risk regulatory capital	Specific risk accurately measures idiosyncratic risk not captured by general market risk measures for interest rate and equity risk, such as default, credit migration and event risks, and identifies concentrations in a portfolio. The total regulatory specific risk capital amount is the sum of equity-specific risk and interest-rate specific risk, and is based on the Basel III standardised approach duration method.

The FRB SA balance sheet is exposed to interest rate and equity-specific risk. Equity-specific risk relates to listed equity exposures in the RMB Resources portfolio. The bank's India and London branches and the group's subsidiaries in the rest of Africa are exposed to interest rate and foreign exchange (general risk). Aldermore is exposed to foreign exchange (general risk).

MR1: MARKET RISK UNDER STANDARDISED APPROACH – RISK WEIGHTED ASSETS

	RWA		
R million	**As at 31 December 2018**	As at 31 December 2017	As at 30 June 2018
Outright products			
1. Interest rate risk	**6 345**	5 563	6 759
– Specific risk	**4 717**	3 359	5 137
– General risk	**1 628**	2 204	1 622
2. Equity risk	**151**	525	168
– Specific risk	**150**	523	168
– General risk	**1**	2	–
3. Foreign exchange risk	**2 380**	2 595	2 780
– Traded market risk	**206**	132	248
– Non-traded market risk	**2 174**	2 463	2 532
4. Commodity risk	**–**	–	–
Total	**8 876**	8 683	9 707

Market risk was contained within acceptable stress loss limits and effectively managed across the subsidiaries during the period. Options are capitalised using IMA (rows 5 – 7 of the *MR1* template are therefore excluded), (refer to *MR3: IMA values for traded market risk* table on page 118) and securitisations (row 8 of the *MR1* template therefore excluded) are capitalised under the securitisation framework (refer to the *securitisation* section). The decrease in specific risk from June 2018 to December 2018 was due to additional regulatory capital required on direct exposures to non-investment grade underlying issuers in the trading book. The decrease in foreign exchange risk was largely due to decreased pound-based exposures in the FRB London branch book.

Non-traded market risk

For non-traded market risk, the group distinguishes between **interest rate risk in the banking book** and **structural foreign exchange risk.** The following table describes how these risks are measured, managed and governed.

RISK AND JURISDICTION	RISK MEASURE	MANAGED BY	OVERSIGHT
Interest rate risk in the banking book			
Domestic – FNB, WesBank and FCC	> 12-month earnings sensitivity; and > economic sensitivity of open risk position.	Group Treasury	FCC Risk Management Group ALCCO
Subsidiaries in the rest of Africa, the bank's foreign branches and Aldermore	> 12-month earnings sensitivity; and > economic sensitivity of open risk position.	In-country management	Group Treasury FCC Risk Management In-country ALCCOs International ALCCO
Structural foreign exchange			
Group	> total capital in a functional currency other than rand; > impact of translation back to rand reflected in group's income statement; and > foreign currency translation reserve value.	Group Treasury	Group ALCCO

Interest rate risk in the banking book

INTRODUCTION AND OBJECTIVES

IRRBB relates to the sensitivity of a bank's financial position and earnings to unexpected, adverse movements in interest rates.

IRRBB originates from the differing repricing characteristics of balance sheet positions/instruments, yield curve risk, basis risk and client optionality embedded in banking book products.

The endowment effect, which results from a large proportion of non- and low-rate liabilities that fund variable-rate assets, remains the primary driver of IRRBB and results in the group's earnings being vulnerable to interest rate cuts, or conversely benefiting from a hiking cycle.

IRRBB is an inevitable risk associated with banking and can be an important source of profitability and shareholder value. FirstRand continues to manage IRRBB on an earnings approach, with the aim to protect and enhance the group's earnings and economic value through the cycle within approved risk limit and appetite levels. The endowment hedge portfolio is managed dynamically taking into account the continuously changing macroeconomic environment.

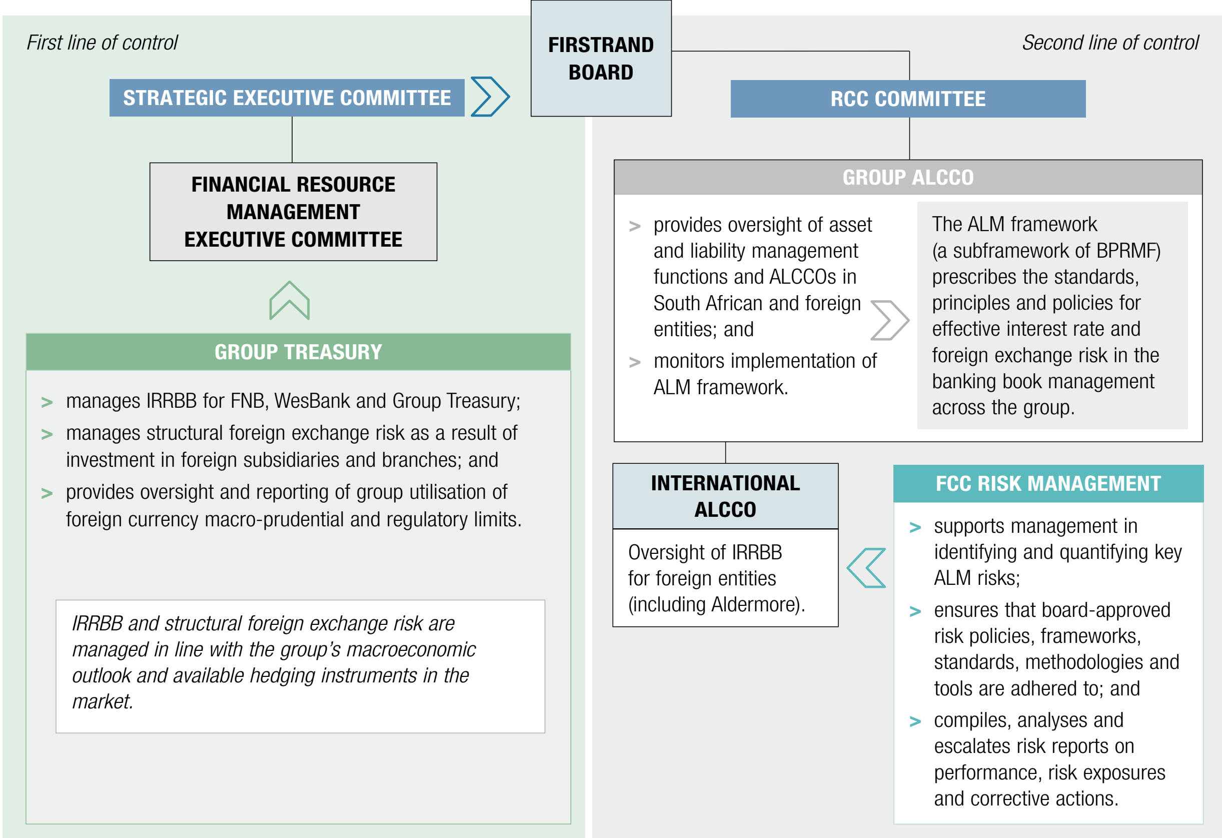
Hedges are in place to protect the group's net interest margin. These hedges are actively monitored along with macroeconomic factors impacting domestic rates, as well as rates in the other countries where the group operates.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> The cumulative impact of the 25 bps cut in the repo rate in March 2018 and the 25 bps increase in the repo rate in November 2018 was a decrease of 23 bps in the average repo rate period-on-period.	> The BCBS, through the task force for IRRBB, has published a more robust regulation for IRRBB. The group is addressing these new requirements, which will be formally adopted on 1 January 2020. > Given current uncertainty about the level and direction of future interest rates, the group continues to actively manage endowment.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

IRRBB GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

FRB SA

The measurement techniques used to monitor IRRBB include NII sensitivity/earnings risk and NAV/economic value of equity (EVE) sensitivity. A repricing gap is also generated to better understand the repricing characteristics of the balance sheet. In calculating the repricing gap, all banking book assets, liabilities and derivative instruments are placed in gap intervals based on repricing characteristics. The repricing gap, however, is not used for management decisions.

The internal funds transfer pricing process is used to transfer interest rate risk from the operating businesses to Group Treasury. This process allows risk to be managed centrally and holistically in line with the group's macroeconomic outlook. Management of the resultant risk position is achieved by balance sheet optimisation or through the use of derivative transactions. Derivative instruments used are mainly interest rate swaps, for which a liquid market exists. Where possible, hedge accounting is used to minimise accounting mismatches, thus ensuring that amounts deferred in equity are released to the income statement at the same time as movements attributable to the underlying hedged asset/liability. Interest rate risk from the fixed-rate book is managed to low levels with remaining risk stemming from timing and basis risk.

FOREIGN OPERATIONS

Management of subsidiaries in the rest of Africa, Aldermore and the bank's foreign branches is performed by in-country management teams with oversight provided by Group Treasury and FCC Risk Management. For subsidiaries, earnings sensitivity measures are used to monitor and manage interest rate risk in line with the group's appetite. Where applicable, PV01 and ETL risk limits are also used for endowment hedges.

INTEREST RATE RISK MANAGEMENT AND ASSESSMENT

FRAMEWORKS AND MANDATES			MACROECONOMIC VIEW
	Risk measurement	Underlying banking book balance sheet	
		Modelling and analytics	
	Risk management	Risk transfer process	
		Hedging strategies and portfolio management	
	Risk monitoring	Daily risk and profit and loss	
		Regulatory, financial and internal reporting	

SENSITIVITY ANALYSIS

A change in interest rates impacts both the earnings potential of the banking book (as underlying assets and liabilities reprice to new rates), as well as in the economic value/NAV of an entity (as a result of a change in the fair value of any open risk portfolios used to manage the earnings risk). The role of management is to protect both the financial performance as a result of a change in earnings and to protect the long-term economic value. To achieve this, both earnings sensitivity and economic value sensitivity measures are monitored and managed within appropriate risk limits and appetite levels, considering the macroeconomic environment and factors which can cause a change in rates.

EARNINGS SENSITIVITY

Earnings models are run on a monthly basis to provide a measure of the NII sensitivity of the existing banking book balance sheet to shocks in interest rates. Underlying transactions are modelled on a contractual basis and behavioural adjustments are applied where relevant. The calculation assumes a constant balance sheet size and product mix over the forecast horizon. A pass-through assumption is applied in relation to non-maturing deposits, which reprice at the group's discretion. This assumption is based on historical product behaviour.

The following tables show the 12-month NII sensitivity for sustained, instantaneous parallel 200 bps downward and upward shocks to interest rates. The increased sensitivity is attributable to the hedges put in place to manage the margin impact of the capital and deposit endowment books through the cycle. Given current uncertainty about the level and direction of future interest rates, the endowment book remains actively managed.

Most of NII sensitivity relates to the endowment book mismatch. The group's average endowment book was R232 billion for the period ended 31 December 2018. Total sensitivity is measured to rand rate moves in South Africa and to local currency moves in the subsidiaries in the rest of Africa and Aldermore.

PROJECTED NII SENSITIVITY TO INTEREST RATE MOVEMENTS

	As at 31 December 2018		
	Change in projected 12-month NII		
R million	**FRB SA**	**Subsidiaries in the rest of Africa and the bank's foreign branches**	**Total FirstRand**
Downward 200 bps	**(2 163)**	**(627)**	**(2 790)**
Upward 200 bps	**1 623**	**452**	**2 075**

	As at 31 December 2017		
	Change in projected 12-month NII		
R million	FRB SA	Subsidiaries in the rest of Africa and the bank's foreign branches	Total FirstRand
Downward 200 bps	(2 072)	(569)	(2 641)
Upward 200 bps	1 504	399	1 903

	As at 30 June 2018		
	Change in projected 12-month NII		
R million	FRB SA	Subsidiaries in the rest of Africa and the bank's foreign branches	Total FirstRand
Downward 200 bps	(3 045)	(339)	(3 384)
Upward 200 bps	2 551	540	3 091

Assuming no change in the balance sheet and no management action in response to interest rate movements, an instantaneous, sustained parallel 200 bps decrease in interest rates would result in a reduction in projected 12-month NII of R2 790 million. A similar increase in interest rates would result in an increase in projected 12-month NII of R2 075 million.

ECONOMIC VALUE OF EQUITY

An EVE sensitivity measure is used to assess the impact on the total NAV of the group as a result of a shock to underlying rates. Unlike the trading book, where a change in rates will impact fair value income and reportable earnings of an entity when a rate change occurs, the realisation of a rate move in the banking book will impact the distributable and non-distributable reserves to varying degrees and is reflected in the NII margin more as an opportunity cost/benefit over the life of the underlying positions. As a result, a purely forward-looking EVE measure applied to the banking book, be it a 1 bps shock or a full-stress shock, is monitored relative to total risk limits, appetite levels and current economic conditions.

The EVE shocks applied are based on regulatory guidelines and comprise a sustained, instantaneous parallel 200 bps downward and upward shock to interest rates. This is applied to risk portfolios as managed by Group Treasury which, as a result of the risk transfer through the internal funds transfer pricing process, capture relevant open risk positions in the banking book. This measure does not take into account the unrealised economic benefit embedded as a result of the banking book products which are not recognised at fair value.

The following table:

- highlights the sensitivity of banking book NAV as a percentage of total capital; and
- reflects a point-in-time view, which is dynamically managed and can fluctuate over time.

BANKING BOOK NAV SENSITIVITY TO INTEREST RATE MOVEMENTS AS A PERCENTAGE OF TOTAL GROUP CAPITAL

	FirstRand Bank			FirstRand		
%	**As at 31 December 2018**	As at 31 December 2017	As at 30 June 2018	**As at 31 December 2018**	As at 31 December 2017	As at 30 June 2018
Downward 200 bps	**2.80**	2.74	3.07	**2.23**	2.10	2.35
Upward 200 bps	**(2.50)**	(2.39)	(2.69)	**(1.99)**	(1.84)	(2.05)

The increase in NAV sensitivity in this year is attributable to an increase in both structural as well as tactical hedges. The group has increased its endowment book hedge position relative to the prior period in line with its macroeconomic outlook.

Structural foreign exchange risk

INTRODUCTION AND OBJECTIVES

Foreign exchange risk is the risk of an adverse impact on the group's financial position or earnings or other key ratios as a result of movements in foreign exchange rates impacting balance sheet exposures.

The group is exposed to foreign exchange risk both as a result of on-balance sheet transactions in a currency other than the rand, as well as through structural foreign exchange risk from the translation of its foreign operations' results into rand. The impact on equity as a result of structural foreign exchange risk is recognised in the foreign currency translation reserve balance, which is included in qualifying capital for regulatory purposes.

Structural foreign exchange risk as a result of net investments in entities with a functional currency other than rand is an unavoidable consequence of having offshore operations and can be a source of both investor value through diversified earnings, as well as unwanted volatility as a result of currency fluctuations. Group Treasury is responsible for actively monitoring the net capital invested in foreign entities, as well as the rand value of any capital investments and dividend distributions.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> Continued to strengthen principles for the management of foreign exchange positions and funding of the group's foreign entities. > Monitored the net open forward position in foreign exchange exposure against limits in each of the group's foreign entities.	> Continue to assess and review the group's foreign exchange exposures and enhance the quality and frequency of reporting.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

Reporting and management for the group's foreign exchange exposure and macro-prudential limit utilisation is centrally owned by Group Treasury as the clearer of all group currency positions. Group Treasury is also responsible for oversight of structural foreign exchange risk with reporting through to group ALCCO, a subcommittee of the RCC committee. Refer to the governance structure in the *interest rate risk in the banking book* section.

ASSESSMENT AND MANAGEMENT

The ability to transact on-balance sheet in a currency other than the home currency (rand) is governed by in-country macro-prudential and regulatory limits. In the group, additional board limits and management appetite levels are set for this exposure. The impact of any residual on-balance positions is managed as part of market risk reporting (see traded market risk section). Group Treasury is responsible for consolidated group reporting and utilisation of these limits against approved limits and appetite levels.

Foreign exchange risk in the banking book comprises funding and liquidity management, and risk mitigating activities. To minimise funding risk across the group, foreign currency transactions are matched, where possible, with residual liquidity risk managed centrally by Group Treasury, and usually to low levels (see *funding and liquidity risk* section). Structural foreign exchange risk impacts both the current NAV of the group as well as future profitability and earnings potential. Economic hedging is undertaken where viable, given market constraints and within risk appetite levels. Where possible, hedge accounting is applied. Any open positions are included as part of market risk in the trading book.

NET STRUCTURAL FOREIGN EXPOSURES AND SENSITIVITY

The following table provides an overview of the group's exposure to entities with functional currencies other than rand and the pre-tax impact on equity of a 15% change in the exchange rate between the South African rand and the relevant functional foreign currencies. There were no significant structural hedging strategies in the current period. The increase in sterling exposure from 31 December 2017 was attributable to the acquisition of Aldermore on 1 April 2018. The increase in Ghanaian cedi from 30 June 2018 was attributable to the injection of capital into First National Bank Ghana to meet the increased regulatory minimum requirement.

NET STRUCTURAL FOREIGN EXPOSURES

	As at 31 December 2018		As at 31 December 2017		As at 30 June 2018	
R million	**Exposure**	**Impact on equity from 15% currency translation shock**	Exposure	Impact on equity from 15% currency translation shock	Exposure	Impact on equity from 15% currency translation shock
Functional currency						
Botswana pula	**4 558**	**684**	3 941	591	4 410	661
United States dollar	**4 346**	**652**	3 578	537	4 168	625
Sterling	**17 732**	**2 660**	3 369	505	14 667	2 200
Nigerian naira	**1 535**	**230**	994	149	1 349	202
Australian dollar	**342**	**51**	756	113	385	58
Zambian kwacha	**737**	**111**	805	121	805	121
Mozambican metical	**433**	**65**	536	80	370	56
Indian rupee	**719**	**108**	659	99	676	101
Ghanaian cedi	**1 282**	**192**	371	56	365	55
Tanzanian shilling	**404**	**61**	563	85	413	62
Common Monetary Area (CMA) countries*	**6 560**	**984**	6 176	926	6 533	980
Total	**38 648**	**5 798**	21 748	3 262	34 141	5 121

* *Currently Namibia, Swaziland and Lesotho are part of the CMA. Unless these countries decide to exit the CMA, rand volatility will not impact these countries' rand reporting values.*

Equity investment risk

INTRODUCTION AND OBJECTIVES

Equity investment risk is the risk of an adverse change in the fair value of an investment in a company, fund or listed, unlisted or bespoke financial instruments.

Equity investment risk in the group arises primarily from equity exposures from private equity and investment banking activities in RMB, e.g. exposures to equity risk arising from principal investments or structured lending.

Other sources of equity investment risk include strategic investments held by WesBank, FNB, Aldermore and FCC. These investments are, by their nature, core to the individual businesses' daily operations and are managed as such.

Ashburton Investments, the group's asset management business, also contributes to equity investment risk. This risk emanates from long-term and short-term seeding activities both locally and offshore. Short-term seeding of new traditional and alternative funds exposes the group to equity investment risk until the funds reach sufficient scale for sustainable external distribution. The timeline for short-term seeding is defined in the business cases for the funds and typically range between one and three years.

Long-term seeding is provided if there is alignment with the business strategy, the business case meets the group's internal return hurdle requirements, and the liquidity and structure of the funds imply that an exit will only be possible over a longer period, aligned with the interests of other investors in these funds. Long-term investments, such as investment in private equity and real estate, will only be exited at the end of the investment horizon of the funds. This maturity period typically ranges from five to eight years post investment into the fund.

REGULATORY DEVELOPMENTS

The BCBS published the standard on *Capital requirements for banks' equity investments in funds* in December 2013, which requires banks' equity investment risk exposures in funds to be risk weighted using the following approaches with varying degrees of risk sensitivity:

- look-through approach;
- mandate-based approach; and
- fall-back approach.

To ensure that banks have appropriate incentives to enhance the management of exposures, the degree of conservatism increases with each successive approach. The BCBS also incorporated a leverage adjustment to RWAs derived from the above approaches to appropriately reflect a fund's leverage. The date of implementation of this standard in South Africa by the PA is 1 October 2019. The group is refining its processes to comply with the standard.

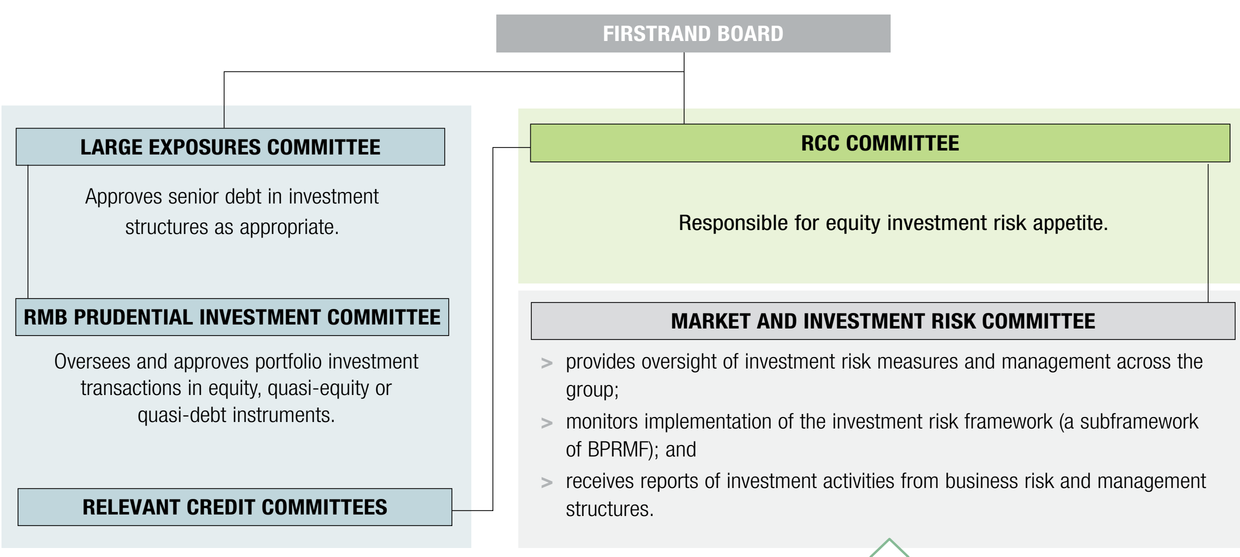
The overall quality of the investment portfolio remains acceptable and is within risk appetite.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> The period was characterised by some realisations and R800 million of new private equity investments. The quality of the investment portfolio remains acceptable and within risk appetite. > The unrealised value of RMB Private Equity's portfolio remained unchanged at R3.7 billion (December 2017: R3.4 billion; June 2018: R3.7 billion)	> Continue to explore opportunity to exit the last remaining non-performing exposures in the RMB Resources portfolio. > Final preparations for the introduction of the new BCBS standard for the treatment of investments in funds.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

EQUITY INVESTMENT RISK GOVERNANCE STRUCTURE



BUSINESS RISK AND MANAGEMENT STRUCTURE

Corporate and Institutional FRM executive committee

- sets and monitors risk appetite and risk limits for RMB investment activities.

Corporate and Institutional RCC committee

- independent oversight of RMB's investment activities; and
- supported by RMB CRO and deployed risk managers.

Investment risk oversight committee

- assesses quality, size and performance of RMB's investment portfolio.

Retail and Commercial executive committee, WesBank strategic executive committee and FCC executive committee

- monitor and manage respective investments through financial reporting process.

Ashburton Investments audit, risk and compliance committee | **Ashburton Investments FRM** | **Ashburton Investments business forum**

- monitors fund investment activity; and
- reviews reports on investment positions.

- monitors fund investments approved by Ashburton Investments FRM committee;
- capital limits approved by ALCCO;
- investment limits approved by MIRC; and
- Ashburton Investments capital committee reports on positions and monitors fund and investment performance.

ASSESSMENT AND MANAGEMENT

MANAGEMENT OF EXPOSURES

The equity investment risk portfolio is managed through a rigorous evaluation and review process from inception to exit of a transaction. All investments are subject to a comprehensive due diligence, during which a thorough understanding of the target company's business, risks, challenges, competitors, management team and unique advantage or value proposition is developed.

For each transaction, an appropriate structure is put in place which aligns the interests of all parties involved through the use of incentives and constraints for management and other investors. Where appropriate, the group seeks to take a number of seats on the company's board and maintains close oversight through monitoring of operations and financial discipline.

The investment thesis, results of the due diligence process and investment structure are discussed at the investment committee before final approval is granted. In addition, normal biannual reviews are performed for each investment and crucial parts of these reviews, such as valuation estimates, are independently peer reviewed.

RECORDING OF EXPOSURES– ACCOUNTING POLICIES

All equity investments in scope of IFRS 9 are measured at fair value in the statement of financial position, with value changes recognised in profit or loss, except for those equity investments for which the entity has elected to present value changes in 'other comprehensive income'. There is no 'cost measurement' exemption for unquoted equities.

If an equity investment is not held for trading, an entity can make an irrevocable election at initial recognition to measure it at fair value through other comprehensive income with only dividend income recognised in profit or loss.

Despite the fair value requirement for all equity investments, IFRS 9 contains guidance on when cost may be the best estimate of fair value and also when it might not be representative of fair value.

Consistent with the group's accounting policies, the consolidated financial statements include the assets, liabilities and results of operations of all equity investments where the group has control of the relevant activities and the ability to use that control to affect the variable returns received from the entity.

Equity investments in associates and joint ventures are included in the consolidated financial statements using the equity-accounting method. Associates are entities where the group holds an equity interest of between 20% and 50%, over which it has the ability to exercise significant influence, but not control. Joint ventures are entities in which the group has joint control over the relevant activities of the joint venture through a contractual agreement.

MEASUREMENT OF RISK EXPOSURES AND STRESS TESTING

Risk exposures are measured in terms of potential loss under stress conditions. A series of standardised stress tests are used to assess potential losses under current market conditions, adverse market conditions, as well as severe stress/event risk conditions.
These stress tests are conducted at individual investment and portfolio level.

In the private equity portfolio, the group targets an investment profile that is diversified along a number of pertinent dimensions, such as geography, industry, investment stage and vintage.

Economic and regulatory capital calculations are augmented by regular stress tests of market values and underlying drivers of valuation, e.g. company earnings, valuation multiples and assessments of stress resulting from portfolio concentrations.

REGULATORY AND ECONOMIC CAPITAL

The simple risk weighted method under the market-based approach (250% (Basel III investments in financial entities), 300% (listed) or 400% (unlisted)) is applied with the scalar (where appropriate) for the quantification of regulatory capital. Under the Regulations, the risk weight applied to investments in financial, banking and insurance institutions is subject to the aggregate and individual value of the group's shareholding in these investments and also in relation to the group's qualifying CET1 capital.

For economic capital purposes, an approach using market value shocks to the underlying investments is used to assess economic capital requirements for unlisted investments after taking any unrealised profits into account.

Where price discovery is reliable, the risk of listed equity investments is measured based on a 90-day ETL calculated using RMB's internal market risk model. The ETL risk measure is supplemented by a measure of the specific (idiosyncratic) risk of the individual securities per the specific risk measurement methodology.

EQUITY INVESTMENT RISK VALUATIONS

The period under review was characterised by some realisations and R800 million of new private equity investments. The quality of the investment portfolio remains acceptable and within risk appetite. The unrealised value of the RMB Private Equity portfolio at 31 December 2018 was R3.7 billion (December 2017: R3.4 billion; June 2018: R3.7 billion).

The table below shows the equity investment risk exposure and sensitivity. The 10% sensitivity movement is calculated on the carrying value of investments, excluding those subject to the ETL process and including the carrying value of investments in associates and joint ventures.

INVESTMENT RISK EXPOSURE AND SENSITIVITY OF INVESTMENT RISK

R million	**As at 31 December 2018**	As at 31 December 2017	As at 30 June 2018
Listed investment risk exposure included in the equity investment risk ETL process	**13**	55	1
Estimated sensitivity of remaining investment balances			
Sensitivity to 10% movement in market value on investment fair value	**308**	217	245
Cumulative gains realised from sale of positions in the banking book during the year	**691**	437	2 046

CR10: EQUITY POSITIONS IN THE BANKING BOOK UNDER MARKET-BASED APPROACH (SIMPLE RISK WEIGHT METHOD)

	As at 31 December 2018				
R million	**On-balance sheet amount**	**Off-balance sheet amount**	**Risk weight**	**Exposure amount**	**RWA**
Categories					
Exchange-traded equity exposures*	**20**	**–**	**300%**	**20**	**63**
Private equity exposures*	**5 895**	**162**	**400%**	**6 057**	**25 681**
Subtotal	**5 915**	**162**		**6 077**	**25 744**
Financial and insurance entities	**4 687**	**–**	**250%**	**4 687**	**11 719**
Total	**10 602**	**162**		**10 764**	**37 463**

* *RWA includes 6% scalar.*

	As at 31 December 2017				
R million	On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount	RWA
Categories					
Exchange-traded equity exposures*	318	–	300%	318	1 011
Private equity exposures*	5 765	215	400%	5 980	25 357
Subtotal**	6 083	215		6 298	26 368
Financial and insurance entities	3 599	–	250%	3 599	8 998
Total	9 682	215		9 897	35 366

* *RWA includes 6% scalar.*

** *Line 7 of table OV1: overview of RWA includes R3 489 million of other assets and, therefore, differs from subtotal.*

	As at 30 June 2018				
R million	On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount	RWA
Categories					
Exchange-traded equity exposures*	112	–	300%	112	355
Private equity exposures*	5 662	198	400%	5 860	24 846
Subtotal	5 774	198		5 972	25 201
Financial and insurance entities	3 739	–	250%	3 739	9 347
Total	9 513	198		9 711	34 548

* *RWA includes 6% scalar.*

The following tables include the investment valuations and regulatory capital requirements.

INVESTMENT VALUATIONS AND ASSOCIATED REGULATORY CAPITAL REQUIREMENTS

	As at 31 December 2018		
R million	**Publicly quoted investments**	**Privately held investments**	**Total**
Carrying value of investments	**20**	**10 744**	**10 764**
Per risk bucket			
250% – Basel III investments in financial entities	**–**	**4 687**	**4 687**
300% – listed investments	**20**	**–**	**20**
400% – unlisted investments	**–**	**6 057**	**6 057**
Latent revaluation gains not recognised in the balance sheet*	**–**	**748**	**748**
Fair value	**20**	**11 352**	**11 372**
Total unrealised gains recognised directly in the balance sheet through equity instead of the income statement*	**–**	**–**	**–**
Capital requirement**	**7**	**4 209**	**4 217**

* *These unrealised gains or losses are not included in Tier 1 or Tier 2 capital.*

** *Capital requirement calculated at 11.255% of RWA (excluding the bank-specific capital requirements) and includes capital on investments in financial entities.*

	As at 31 December 2017		
R million	Publicly quoted investments	Privately held investments	Total
Carrying value of investments	318	9 579	9 897
Per risk bucket			
250% – Basel III investments in financial entities	–	3 599	3 599
300% – listed investments	318	–	318
400% – unlisted investments	–	5 980	5 980
Latent revaluation gains not recognised in the balance sheet*	–	607	607
Fair value	318	10 186	10 504
Total unrealised gains recognised directly in the balance sheet through equity instead of the income statement*	–	–	–
Capital requirement**	112	3 822	3 934

* *These unrealised gains or losses are not included in Tier 1 or Tier 2 capital.*

** *Capital requirement calculated at 10.750% of RWA (excluding the bank-specific capital requirements) and includes capital on investments in financial entities.*

	As at 30 June 2018		
R million	Publicly quoted investments	Privately held investments	Total
Carrying value of investments	112	9 599	9 711
Per risk bucket			
250% – Basel III investments in financial entities	–	3 739	3 739
300% – listed investments	112	–	112
400% – unlisted investments	–	5 860	5 860
Latent revaluation gains not recognised in the balance sheet*	–	5 679	5 679
Fair value	112	15 278	15 390
Total unrealised gains recognised directly in the balance sheet through equity instead of the income statement*	–	4	4
Capital requirement**	40	3 832	3 872

* *These unrealised gains or losses are not included in Tier 1 or Tier 2 capital.*

** *Capital requirement calculated at 11.208% of RWA (excluding the bank-specific capital requirements) and includes capital on investments in financial entities.*

Insurance risk

INTRODUCTION AND OBJECTIVES

Insurance risk arises from the inherent uncertainties of liabilities payable under an insurance contract. These uncertainties can result in the occurrence, amount or timing of the liabilities differing from expectations. Insurance risk can arise throughout the product cycle and is related to product design, pricing, underwriting or claims management.

The risk arises from the group's third-party insurance operations housed in FirstRand Insurance Holdings Limited. Currently insurance risk arises from the group's long-term insurance operations, underwritten through its subsidiary, FirstRand Life Assurance Limited (FirstRand Life), and short-term insurance operations, underwritten through its subsidiary, FirstRand STI Limited (FirstRand Short-term Insurance).

FirstRand Life currently underwrites funeral policies, accidental death plans, risk policies, credit life policies (against FNB credit products) and health cash plans. FirstRand Life also writes linked-investment policies. There is, however, no insurance risk associated with these policies as these are not guaranteed. These policies are all originated through FNB.

FirstRand STI currently underwrites legal plans and is in the process of developing further short-term insurance products. These policies are also originated through FNB.

Funeral policies pay benefits upon death of the policyholder and, therefore, expose the group to mortality risk. The underwritten risk policies and credit life policies further cover policyholders for disability and critical illness, which are morbidity risks. Credit life policies also cover retrenchment risk. Health cash plans pay a benefit per day that a policyholder is hospitalised. As a result of these insurance risk exposures, the group is exposed to catastrophe risk, stemming from the possibility of an extreme event linked to any of the above. Legal plans provide legal assistance or pay for legal fees on the occurrence of events as specified in the policies.

For all the above, the risk is that the decrement rates (e.g. mortality rates, morbidity rates, etc.) and associated cash flows are different from those assumed when pricing or reserving. These risks can further be broken down into parameter risk, random fluctuations and trend risk, which may result in the parameter value assumed differing from actual experience.

Policies underwritten by FirstRand Life and FirstRand STI are available through FNB's distribution channels. Some of these channels introduce the possibility of anti-selection which also impacts the level of insurance risk.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> First policies sold on FirstRand's short-term insurance licence. > Growth in the book of risk policies. > Annual own risk and solvency assessment (ORSA) prepared for FirstRand Life, FirstRand STI and FirstRand Insurance Holdings. > Implementation of the new Insurance Act, 2017.	> Embedment of risk appetite. > Setting up of risk management processes and tools for short-term insurance business.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

FirstRand Life and FirstRand STI are wholly-owned subsidiaries of FirstRand Insurance Holdings, which in turn is a wholly-owned subsidiary of the group. FirstRand Life is an approved long-term insurer, in terms of the Long-term Insurance Act and an approved group entity under section 52 of the Banks Act. FirstRand STI is an approved short-term insurer, in terms of the Short-term Insurance Act 53 of 1998.

FirstRand Insurance Holdings' board committees include an audit and risk committee, an asset, liability and capital committee, and a remuneration committee. The asset, liability and capital committee is responsible for:

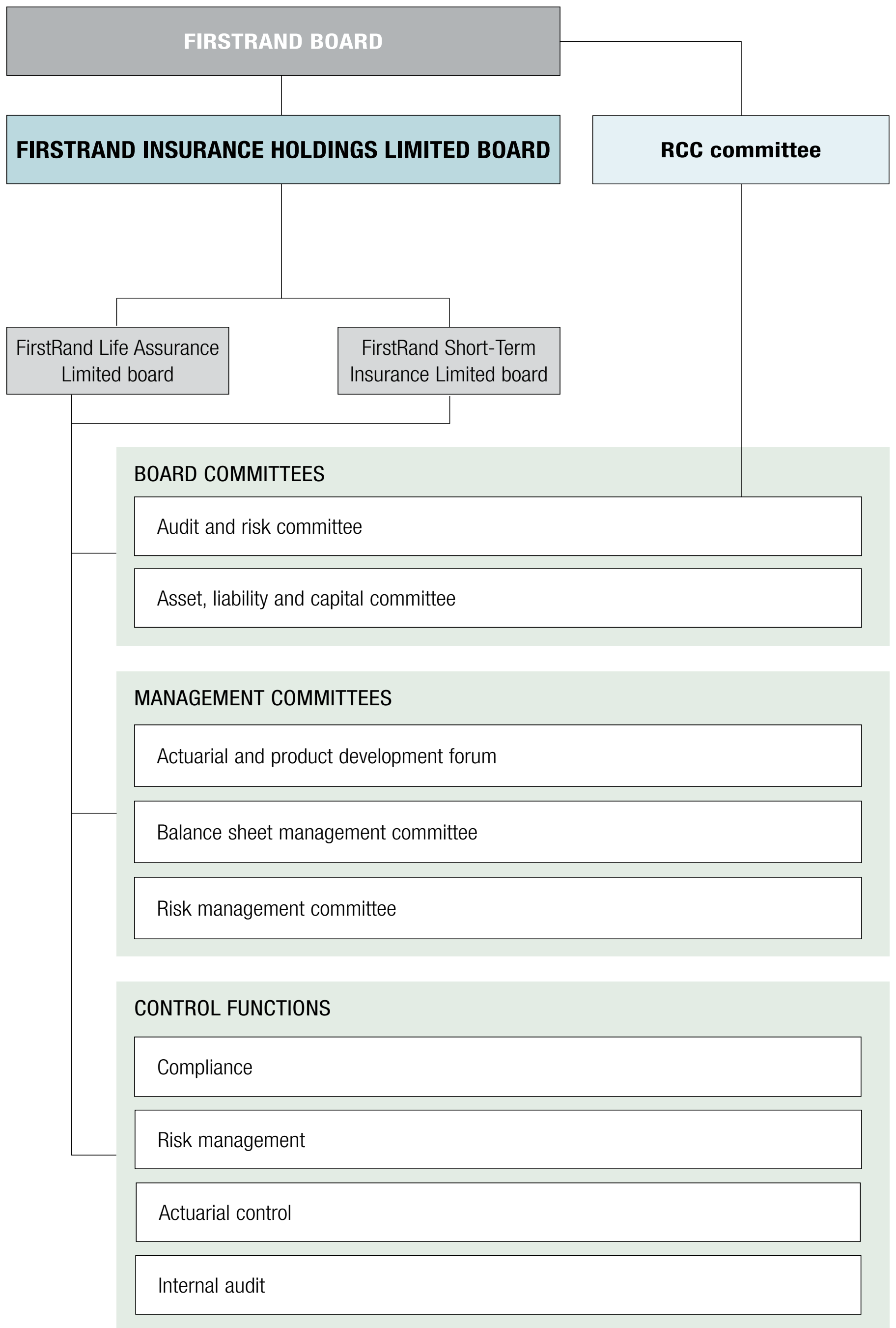
- providing oversight of the product suite;
- approving new products;
- financial resource management; and
- governance and challenging inputs, models and results of pricing and valuations.

To ensure consistency within the group, FirstRand Life, FirstRand STI and FirstRand Insurance Holdings have the same board and there are common members in the group committees. Relevant group, and retail and commercial segment committees have oversight of and receive feedback from appropriate FirstRand insurance committees.

An important component of the management of insurance risk is the control function required to be set up, namely compliance, risk management, actuarial and internal audit.

The following graph illustrates the insurance risk governance structures in FirstRand Insurance Holdings.

INSURANCE RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

FNB manages insurance risk to be within its stated risk appetite. This is translated to risk limits for various risk metrics that can be monitored and managed by management.

The assessment and management of risk focuses on two main areas, namely:

- product design and pricing; and
- the management of the in-force book.

Ensuring that insurance risk is priced correctly and understood is an important component of managing insurance risk. This is achieved through the following measures.

- Rigorous and proactive risk management processes to ensure sound product design and accurate pricing, including:
  - independent model validation;
  - challenging assumptions, methodologies and results;
  - debating and challenging design, relevance, target market, market competitiveness and treating customers fairly;
  - identifying potential risks;
  - monitoring business mix and mortality risk of new business; and
  - thoroughly reviewing policy terms and conditions.
- Risk policies sold to FNB's premium customer segment are underwritten. This allows underwriting limits and risk-based pricing to be applied to manage the insurance risk. Where specific channels introduce the risk of anti-selection, mix of business by channel is monitored. On non-underwritten products, insurance risk can be controlled through lead selection for outbound sales.
- The design of appropriate reinsurance structures is an important component of the pricing and product design to keep risk exposure within appetite.

The assessment and management of insurance risk of the in-force book uses the following methodologies, including advisory and mandatory actuarial methodologies.

- Insurance risk is managed through monitoring and reporting the frequency and severity of claims by considering incidence rates, claims ratios and business mix.
- For FNB, the actuarial valuation process involves the long-term projection of in-force policies and the setting up of insurance liabilities. This gives insight into the longer-term evolution of the risks on the portfolio. Adequate reserves are set for future and current claims and expenses. Where actual benefits are different from those originally estimated, actuarial models and assumptions are updated to reflect this. This is fed back into the pricing process.
- There are also reinsurance agreements in place to mitigate various insurance risks and manage catastrophe risk.
- Asset/liability management is performed to ensure that assets backing insurance liabilities are appropriate and liquid.
- Stress and scenario analyses are performed to provide insights into the risk profile and future capital position.

The management of insurance risk is governed by several policies and there are processes, tools and systems in the business to assess and manage insurance risk.

ORSA is defined as the entirety of the processes and procedures employed to identify, assess, monitor, manage and report on short- and long-term risks that FirstRand Insurance Holdings faces or might face, and to determine the own funds necessary to ensure that overall solvency needs are met at all times and are sufficient to achieve its business strategy. An ORSA report is produced annually.

CAPITAL

Capital for insurance activities is calculated on the current regulatory basis, solvency assessment and management basis and the group's economic basis. Target levels for capital coverage are specified in the risk appetite statement and have been met over the period under review. Capital is risk sensitive and is also used to understand the exposure to insurance risk.

Operational risk

INTRODUCTION AND OBJECTIVES

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

The group continuously evaluates and enhances existing frameworks, policies, methodologies, processes, standards, systems and infrastructure to ensure that the operational risk management practices are practical, adequate, effective, adaptable, and in line with business needs, regulatory developments and best practice, given known and emerging risks.

OPERATIONAL RISK OBJECTIVES AND PROGRAMME

KEY OBJECTIVES

> The group's objective is to build an effective and forward-looking operational risk management programme to support the group in the execution of its strategy.

- Prioritise operational risk management activities to support execution of strategy and strengthen key controls.
- Embed simple, efficient and effective risk management tools.
- Provide forward-looking and dynamic operational risk management information used in business decision-making.
- Embed third-party risk management discipline.
- Prepare the risk management community in the group for increased management of risks associated with digitisation.
- Enhance operational risk management awareness within the organisation.
- Assess the impact of operational risk-related regulatory developments and ensure compliance.

OPERATIONAL RISK MANAGEMENT PROGRAMME COMPONENTS

- establishment, review and implementation of operational risk management framework and policies;
- operational risk management tools and processes (including risk identification, assessment and quantification);
- operational risk analytics and capital;
- operational risk management IT system and management information;
- operational risk projects/initiatives;
- operational risk governance and reporting; and
- operational risk management advisory and support services to business.

PERIOD UNDER REVIEW AND FOCUS AREAS

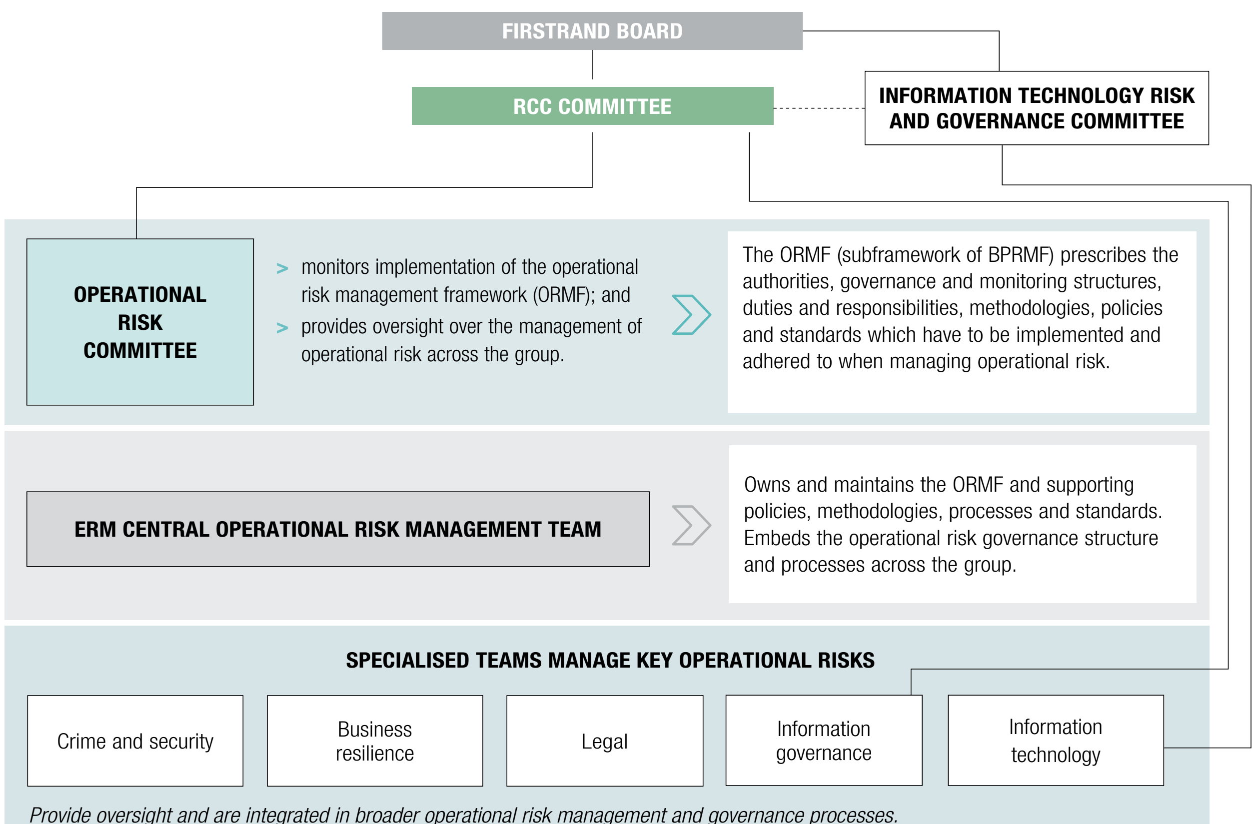
There are ongoing control improvement initiatives aimed at addressing key operational risk themes, mitigating emerging risks and improving operational risk maturity. The progress on these initiatives and impact on the operational risk profile is tracked and reported on regularly at business and group level through the management, combined assurance and risk governance processes and are also considered part of the operational risk appetite setting and risk scenario processes. Risk management programmes are continuously reviewed and enhanced to focus on identified key risks and emerging risks based on changes in the internal and external environments.

The principal operational risks currently facing the group are:

- **cyber risk** (including information security), given the growing sophistication of cyberattacks locally and globally;
- **technology risk**, due to the pace of technology change and increasing digitisation;
- **commercial and violent crime** (including internal fraud);
- **execution, delivery and process management risk** (risk of process weaknesses and control deficiencies) as the business continues to grow and evolve; and
- **third-party risk** due to lack of direct control over external service providers.

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> Enhanced risk management procedures related to critical vendors, outsourcing and key intragroup insourcing. > Coordinated group-wide cyber incident response planning. > Validated the quality of operational risk information derived through implementation of operational risk tools. > Guided and tracked group-wide actions and initiatives to comply with BCBS 239. > Ongoing improvements to the review, governance and oversight of cloud services. > Process automation projects continued to reduce manual processes and improve controls. > Continued to review, test and align risk mitigation strategies to combat cybercrime and ensure that controls are adequate and effective. > Refined processes and improved data quality and records management practices.	> Embed cloud risk management programme to manage the use and governance of cloud services efficiently, within the group's operational risk appetite and in terms of regulatory requirements. > Integrate operational and IT risk processes and approaches for greater efficiency and alignment. > Enhance scenario-based cyber incident response planning. > Improve efficiencies in the risk assessment of vendors across the vendor life cycle. > Enhance value and use of operational risk management system and information and analysis for business. > Address gaps relating to BCBS 239. > Prioritise operational risk management activities to support execution of strategy and strengthen key controls. > Continuously assess the risks inherent in increasing digitisation and innovative business solutions and facilitate management thereof. > Align IT and related frameworks with changing business models and the technology landscape. > Focus on holistic operational resilience. > Improve information management capabilities and the control environment, and roll out awareness programmes on records management, data quality and data privacy management.

ORGANISATIONAL STRUCTURE AND GOVERNANCE



MEASUREMENT OF OPERATIONAL RISK

BASEL APPROACHES

FirstRand applies **AMA** for its domestic operations. Offshore subsidiaries and operations continue to use **TSA** for operational risk and all previously unregulated entities that now form part of FRIHL, Ashburton Investments and Aldermore follow **BIA**.

Under **AMA**, FirstRand uses a sophisticated statistical model for the calculation of capital requirements, which enables a more accurate risk-based measure of capital for business units on AMA. Operational risk scenarios (covering key risks that, although low in probability, may result in severe losses) and internal loss data are direct inputs into this model.

Scenarios are derived through an extensive analysis of the group's operational risks in consultation with business and risk experts from across the group. Scenarios are cross-referenced to external loss data, internal losses, key risk indicators, process-based risk and control identification and assessments, and other pertinent information about relevant risk exposures. To ensure ongoing accuracy of risk and capital assessments, all scenarios are reviewed, supplemented and/or updated semi-annually, as appropriate.

The loss data used for risk measurement, management and capital calculations are collected for all seven Basel event types across various internal business lines. Data collection is the responsibility of business units and is overseen by the operational risk management team in ERM.

The modelled operational risk scenarios are combined with modelled loss data in a simulation model to derive the annual, aggregate distribution of operational risk losses. Basel Pillar 1 minimum capital requirements are then calculated (for the group and each operating business) as the operational VaR at the 99.9th percentile of the aggregate loss distribution, excluding the effects of insurance, expected losses and correlation/diversification.

Capital requirements are calculated for each business using the AMA capital model and then allocated to legal entities in the group based on gross income contribution ratios. This split of capital between legal entities is required for internal capital allocation, regulatory reporting and performance measurement purposes.

TSA and **BIA** capital calculations are based on a multiplication factor applied to gross income, as specified by Basel and PA regulations. These capital calculations and allocations do not make use of any risk-based information.

Business practices continuously evolve and the operational risk control environment is, therefore, constantly changing to reflect the underlying risk profile. The assessment of the operational risk profile and exposures and associated capital requirements take the following into account:

- changes in the operational risk profile, as measured by the various operational risk tools;
- material effects of expansion into new markets, new or substantially changed products or activities as well as the closure of existing operations;
- changes in the control environment – the group targets a continuous improvement in the control environment, but deterioration in effectiveness is also possible due to, for example, unforeseen increases in transaction volumes or pace of change;
- changes in organisational structure resulting in the movement of businesses and/or products from one business area to another; and
- changes in the external environment, which drive certain types of operational risk (e.g. rising civil protest actions, electricity supply shortages, increasing unemployment, etc.).

ASSESSMENT AND MANAGEMENT

OPERATIONAL RISK ASSESSMENT AND MANAGEMENT TOOLS

The group obtains assurance that the principles and standards in the operational risk management framework are adhered to by the three lines of control model, which is integrated in operational risk management. In this model, business units own the operational risk profile as the first line of control. In the second line of control, ERM is responsible for consolidated operational risk reporting, policy ownership and facilitation, and coordination of operational risk management and governance processes. GIA, as the third line of control, provides independent assurance on the adequacy and effectiveness of operational risk management processes and practices.

In line with international best practice, a variety of tools are employed and embedded in the assessment and management of operational risk. The most relevant of these are outlined in the following chart.

OPERATIONAL RISK ASSESSMENT AND MANAGEMENT TOOLS

PROCESS-BASED RISK AND CONTROL IDENTIFICATION AND ASSESSMENT

- the risk and control assessment per product/service based on key business processes;
- integrated in day-to-day business and risk management processes; and
- used by business and risk managers to identify and monitor key risks and assess effectiveness of existing controls.

KEY RISK INDICATORS

- used across the group in all businesses as an early warning risk measure;
- highlight changing trends in exposures to specific key operational risks; and
- inform operational risk profiles which are reported periodically to the appropriate management and risk committees, and are monitored on a continuous basis.

INTERNAL/EXTERNAL LOSS DATA

- capturing internal loss data is a well-entrenched discipline within the group;
- internal loss data reporting and analyses occur at all levels with specific focus on root causes, and process analysis and corrective action; and
- external loss databases are used to learn from the loss experience of other organisations and are also an input into the risk scenario process.

RISK SCENARIOS

- risk scenarios are widely used to identify and quantify low-frequency, extreme loss events;
- senior management actively participates in the risk scenario reviews; and
- results are tabled to the appropriate risk committees and are used as input into the capital modelling process.

FirstRand uses an integrated and reputable operational risk system in which all operational risk assessment and management tools have been automated to provide a holistic view of the group's operational risk profile.

OPERATIONAL RISK EVENTS

As operational risk cannot be avoided or mitigated entirely, frequent events resulting in small losses are expected as part of business operations (e.g. external card fraud) and are budgeted for appropriately. Business units minimise these losses through continuously monitoring and improving relevant business and control practices and processes. Operational risk events resulting in substantial losses occur less frequently and the group strives to minimise these and limit the frequency and severity thereof within its risk appetite levels through appropriate risk mitigation. Operational losses are measured and reported against the agreed operational risk appetite levels on a regular basis and necessary reviews are conducted to establish root causes and put in place appropriate action plans to prevent or reduce the risk of reoccurrence.

OPERATIONAL RISK MANAGEMENT PROCESSES

A number of key risks exist for which specialised teams, frameworks, policies and processes have been established and integrated into the broader operational risk management and governance programmes as described in the following diagram.

KEY SPECIALIST RISK AND MANAGEMENT PROCESSES

	BUSINESS RESILIENCE	LEGAL	IT
Management	> Operations should be resilient against severe disruptions from internal failures or external events. > Business continuity strategies include regular review of business continuity plans (including disaster recovery plans) and testing. > Disruptions or incidents are assessed and reported to the relevant risk stakeholders.	> Creation and ongoing management of contractual relationships. > Management of disputes and/or litigation. > Protection and enforcement of property rights (including intellectual property). > Account for the impact of law or changes in the law as articulated in legislation or decisions by the courts.	> Protection of information systems against unauthorised access, destruction, modification and use. > Ensuring confidentiality, availability and integrity of systems that maintain, process and disseminate this information. > Systems are continuously assessed for vulnerabilities and reported to relevant risk and business stakeholders.
Committees and frameworks	> Business resilience steering committee (a subcommittee of the operational risk committee). > Practices are documented in the business resilience policy and standards.	> Compliance with legislation managed by RCRM. > Legal risk committee (subcommittee of operational risk committee), and subcommittees of the legal risk committee. > Legal risk management framework and subframeworks and policies.	> Information technology risk and governance committee (board committee). > IT governance framework and information security policy.

	INFORMATION GOVERNANCE	CRIME AND SECURITY	RISK INSURANCE
Management	> Information is a valuable asset. > Focus on quality and protection of information against unauthorised access, destruction, modification, use and disclosure. > Ensure confidentiality, availability, integrity, sensitivity of and accountability for all information.	> Covers internal (employees) and external crime and physical security. > Contains criminal losses with enhanced controls and introduction of improved real-time detection models. > Mitigates the growing cybercrime threat with measures to improve resilience against cyberattacks through integrated approach across multiple disciplines.	> Structured insurance risk financing programme in place for material losses from first-party risks. > Insurance refined through risk profile assessment, change in group strategy or markets. > Cover for professional indemnity, directors' and officers' liability, crime, public and general liability, assets, etc.
Committees and frameworks	> Information governance committee (subcommittee of the RCC committee). > Information governance framework, risk data aggregation and risk reporting framework and acceptable use of information resources policy.	> Crime and security function reporting to FNB CRO with a group mandate. > Integrated crime management framework and physical security framework.	> Cover through FirstRand Insurance Services Company (the group's wholly-owned first-party insurance company).

RISK INSURANCE

The group has a structured insurance risk financing programme in place, which has been developed over many years, to protect the group against unexpected material losses arising from non-trading risks. The programme is designed, where appropriate, to complement the risk management strategy to protect against the identified risks which can affect the group's financial performance or position and, therefore, negatively affect shareholder value.

The insurance risk programme is continuously refined through ongoing assessment of changing risk profiles, organisational strategy and growth, and international insurance markets. The levels and extent of insurance cover is reviewed and benchmarked annually.

The group's insurance-buying philosophy is to self-insure as much as is economically viable in line with its risk appetite and to only protect itself against catastrophic risks through the use of third-party insurers.

The insurance programme includes, *inter alia*, cover for operational risk exposures, such as professional indemnity, directors' and officers' liability, crime, public and general liability, assets, etc. This protection extends across the group and into the subsidiaries in the rest of Africa. The group does not consider insurance as a mitigant in the calculation of capital for operational risk purposes.

Regulatory and conduct risk

INTRODUCTION AND OBJECTIVES

Regulatory risk refers to the risk of statutory or regulatory sanction, material financial loss or reputational damage as a result of failure to comply with any applicable laws, regulations or supervisory requirements.

Conduct risk arises when employees and directors behave in a manner that would not be considered fair to other employees, financial market participants, clients or other societal stakeholders.

The group expects ethical behaviour that contributes to the overall objective of prudent regulatory compliance and risk management by striving to observe both the spirit and the letter of the law. Management's ownership and accountability contributes to this through providing responsible financial products and services, and treating customers fairly. The ethics and compliance culture embraces standards of integrity and ethical conduct which affect all stakeholders of the group, both internal and external.

Governments increasingly recognise the importance of ethical conduct in banking and, as a result, are developing regulation to enforce standards and hold business leaders accountable for their actions.

The group endorses a risk philosophy which takes cognisance of the importance of ethical conduct. If an organisation's culture is compromised or it is not competently managed, compliance controls will be less effective and become a source of unnecessary cost without the benefits of risk mitigation.

Leadership is required to integrate ethics and conduct risk objectives into commercial strategies. For this reason, strategy and leadership and the intersect with culture and conduct are continuously evaluated.

FirstRand's RCRM function is tasked with the management of the group's regulatory and conduct risk.

REGULATORY AND CONDUCT RISK MANAGEMENT OBJECTIVE AND APPROACH

OBJECTIVE

Ensure business practices, policies, frameworks and approaches across the group are consistent with applicable laws and that regulatory and conduct risks are identified and proactively managed.

APPROACH

- Maintain an effective and efficient regulatory and conduct risk management framework with sufficient operational capacity to assess financial products and services against fair market conduct principles, and promote and oversee compliance with legislative and best practice requirements.
- Ensure appropriate policies, standards and processes are in place to mitigate risk of abuse of the group's banking platforms for unlawful purposes.
- Train employees to ensure a high level of understanding and awareness of applicable legal and regulatory frameworks pertaining to the group's business activities.

Compliance with laws and regulations applicable to the group's operations is critical to the group as non-compliance may have potentially serious consequences and lead to both civil and criminal liability, including penalties, claims for loss and damages and restrictions imposed by regulatory authorities.

Ethical conduct is core to FirstRand's commitment of acting responsibly. Unethical conduct carries regulatory, legal, financial and reputational risk and therefore FirstRand's RCRM function is committed to appropriately managing ethics and conduct risk.

Applicable laws and other requirements include:

- Financial Sector Regulation Act, 2017
- Banks Act, 1990 and related Regulations;
- Companies Act, 2008;
- Competition Act, 1998;
- Collective Investment Schemes Control Act (CISCA), 2002;
- Financial Intelligence Centre (FIC) Act, 2001;
- Long-term Insurance Act, 1998;
- Short-term Insurance Act, 1998;
- Insurance Act, 2017;
- Financial Advisory and Intermediary Services (FAIS) Act, 2002;
- National Credit Act (NCA), 2005;
- Consumer Protection Act, 2008;
- Financial Markets Act (FMA), 2012;
- Foreign Account Tax Compliance Act, 2010;
- Protection of Personal Information Act (PoPIA), 2013;
- Prevention and Combating of Corrupt Activities Act (PRECCA), 2004;
- King Code of Governance Principles for South Africa, 2016 (King IV); and
- JSE rules and directives.

Ethical conduct promotes effective regulatory and conduct risk management, compliance with applicable laws, regulations and related requirements as a business outcome, and supports integration into business processes. RCRM assists senior management to effectively and expeditiously resolve identified ethics, conduct and compliance issues. RCRM interacts and cooperates closely with other group and business functions, as well as with the group's various regulatory authorities.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> The implementation of the Twin Peaks system of financial regulation in 2018 has resulted in the creation of the PA and the FSCA to govern prudential regulation and market conduct respectively and the SARB is now formally responsible for financial stability. Although most provisions of the Financial Sector Regulation Act, 2017 are now effective, provisions pertaining to the Ombud Council and ombuds, significant owners, financial conglomerates and licencing requirements will become effective on different dates up to 1 April 2019. > The final PoPIA regulations were published by the Information Regulator in December 2018 but will only become effective by way of proclamation in the Government Gazette. Notable requirements from these regulations relate to the additional responsibilities for the information officer of a responsible party and the prescribed forms for an individual (such as a customer) to exercise their privacy rights (i.e. obtaining consent for direct marketing; and submitting requests to object to the processing of their personal information, correction and deletion of their personal information). > Reviewed the outcomes of culture risk assessments, coupled with group engagement assessments. > Oversaw anti-bribery and corruption risk assessments. > Reviewed whistle-blowing trends and adequacy of analysis for the group. > Reviewed culture and conduct risk in specialised areas of FirstRand. > Oversaw clients of interest, deliberations and reviews. > Provided training and created awareness of ethical cutlure. > Enhanced use of systems to prevent trading during closed periods.	> Continue cooperation with regulatory authorities and other stakeholders with significant focus on the implementation of the FIC Amendment Act and FIC's global reporting platform, GoAML, ahead of the Financial Action Task Force mutual evaluation exercise in April 2019. > Continue to make significant investments in people, systems and processes to manage risks emanating from the large number of new and/or amended local and international regulatory requirements, including the FIC Act, NCAA, FAIS Act and PoPIA Act. > Ongoing investment in systems, processes and resources to ensure compliance with anti-money laundering and combating the financing of terrorism (AML/CFT) legislation. > Focus on managing regulatory and conduct risks posed by clients and other external stakeholders. > Management of organisational culture risk detection, prevention and remediation, which supports regulatory and conduct risk management. > Continue to work closely with regulators and industry on the authenticated collections project, the main objective of which is to prevent debit order abuse. > Manage risks associated with illicit cross-border flows. > Review market conduct maturity and associated platform developments. > Focus on emerging culture risks and appropriate responses to the regulatory framework. > Oversee implementation of business conduct programme with a focus on whistle-blowing and client due diligence. > Oversee activity in the financial markets via the group's personal account trading programme. > Actively manage conflicts of interest and repositioning of the associated programme. > Manage ethics and reputational risk introduced to the group by third parties.

REGULATORY UPDATE

BANKING LEGISLATION

As a member of the BCBS, the SARB and the PA are committed to ensuring that the South African regulatory and legislative frameworks relating to the prudential regulation and supervision of banks and banking groups remain compliant with international standards and best practice. Changes in international standards and requirements, such as the large volume of regulatory changes implemented subsequent to the 2008 global financial crisis, normally result in amendments to the South African prudential regulatory framework for banks and banking groups, most notably, in amendments to the Regulations. These, including the Basel III phase-in arrangements, largely resulted in previous prudential regulatory changes and new and/or amended requirements and standards. In this regard, the Regulations are currently again in the process of being amended. In line with the above, various other documents, frameworks and requirements that impact materially on the regulation and supervision of banks, banking groups and financial conglomerates are being issued by the international standard-setting bodies on an ongoing basis, which will, going forward, result in revised, additional and/or new regulatory requirements.

TWIN PEAKS

In terms of the Twin Peaks system of financial regulation in South Africa, implemented in 2018, equal focus is placed on prudential and market conduct regulation with separate but equally important focus on financial stability. In this regard, the SARB assumed responsibility in terms of a comprehensive mandate for financial stability, whilst the PA and the FSCA, as the two key pillars of the Twin Peaks system of financial regulation, govern prudential regulation and market conduct respectively. To ensure a well-managed and non-disruptive transition, certain provisions of the Financial Sector Regulation Act are being phased in up to 1 April 2019. These relate to provisions pertaining to the Ombud Council and ombuds, significant owners, financial conglomerates, licencing requirements in terms of this act, as well as fees and levies.

TWIN PEAKS POLICY PRIORITIES AND IMPLEMENTATION

POLICY PRIORITIES
Financial stability
Enhancement of safety and soundness of financial institutions
Consumer protection and market conduct
Expanding access to financial services through inclusion
Combating financial crime

DESIRED OUTCOMES
Financial systemic stability
Strengthened financial regulatory system and structures
Sound market conduct, micro- and macro-prudential regulation
Strengthened operational independence, governance and accountability of regulators
Effective cooperation, collaboration and support among the SARB, the PA, the FSCA, the NCR, the FIC and the Competition Commission

TWIN PEAKS IMPLEMENTATION

Phase 1

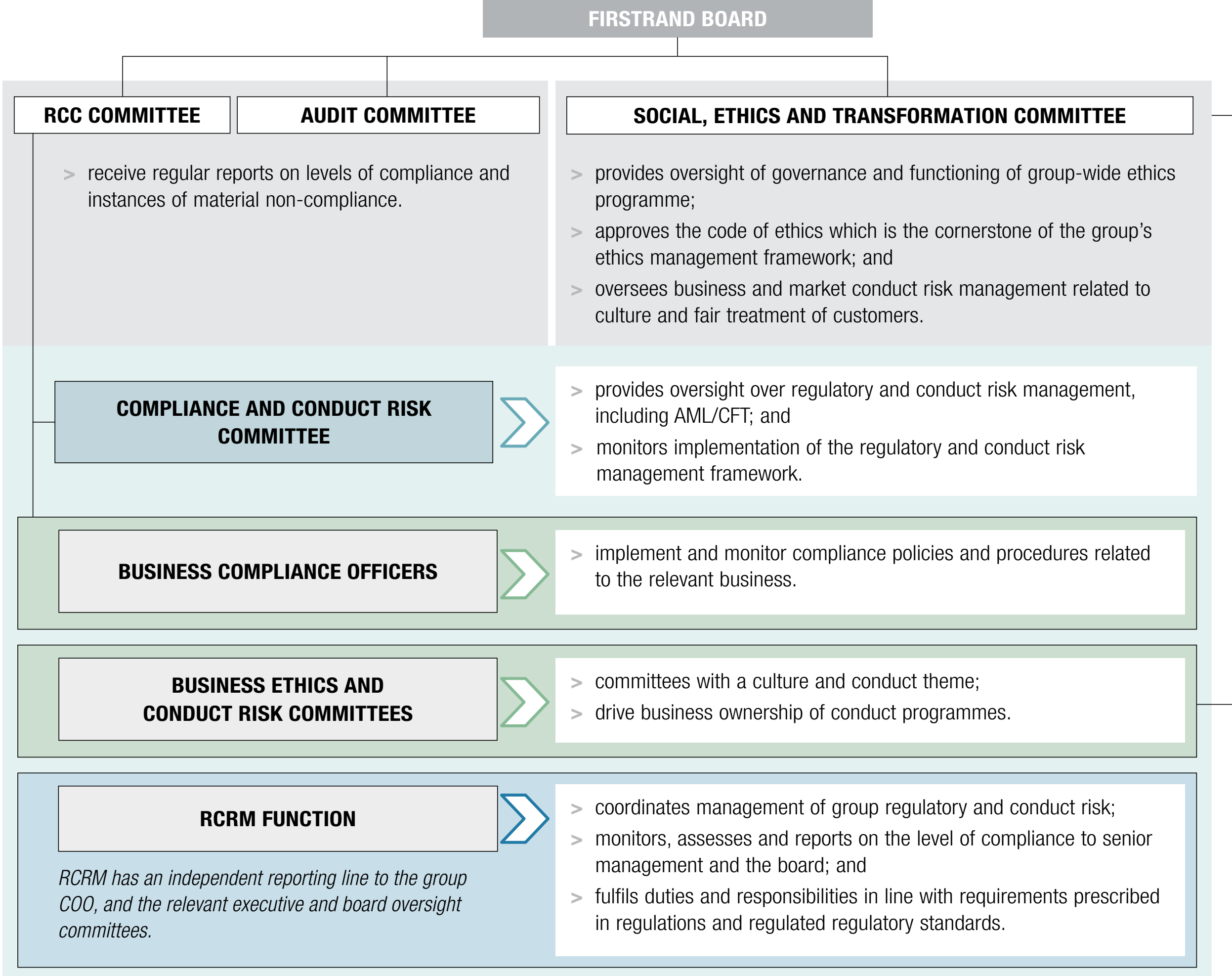
- effectively implemented on 1 April 2018; and
- provision of Ombud Council and ombuds, significant owners, financial conglomerates, licencing requirements in terms of the Financial Sector Regulation Act, fees and levies to be phased in.

Phase 2

- creation of a harmonised system of licensing, supervision, enforcement, customer complaints (including ombuds), appeals, and consumer advice and education across the financial sector;
- ongoing amendments of current regulatory requirements and the introduction of new regulatory instruments; and
- introduction of new legislation and licencing procedures, where required.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

REGULATORY AND CONDUCT RISK GOVERNANCE STRUCTURE



RCRM's mandate is to facilitate the management of compliance with statutes and regulations. To achieve this, RCRM has implemented appropriate governance arrangements, including structures, policies, processes and procedures, to identify and manage regulatory and supervisory risks. RCRM monitors the management of these risks and reports on the level of compliance to the board and our regulators. These include:

- risk identification through determining which laws, regulations and supervisory requirements are applicable to the group;
- risk measurement and mitigation through the development and execution of risk management plans and related actions;
- risk monitoring and review of remedial actions;
- risk reporting; and
- providing advice on compliance and ethics-related matters.

Although independent of other risk management and governance functions, the RCRM function works closely with the group's business units, the public policy and regulatory affairs office, GIA, ERM, external auditors, internal and external legal advisors, and the company secretary's office to ensure effective functioning of compliance processes.

ASSESSMENT AND MANAGEMENT

REGULATORY DEVELOPMENTS AND RCRM FOCUS AREAS

PROTECTION OF PERSONAL INFORMATION (PoPIA)

- In South Africa, PoPIA provides for privacy and protection of personal information held by the group in respect of employees, customers, suppliers and third parties.
- The effective date is yet to be announced. The group continues to devote attention and resources to security safeguards, processing and purpose specification of personal information, quality of personal information held, customer notification and consent, third-party processing of personal information and complaints handling.
- Various privacy laws apply in the different jurisdictions in which the group operates, most notably the General Data Protection Regulations (GDPR) in the UK.
- A GDPR impact assessment was undertaken.

FINANCIAL CRIME RISK MANAGEMENT

- The group's objective is to ensure compliance with the provisions of AML/CFT legislation, the FIC Amendment Act and other requirements pertaining thereto.
- The anti-bribery and corruption programme has been incorporated under the financial crime pillar. It covers risk assessments, training and guidance.
- A number of initiatives are under way in anticipation of changes to PRECCA.
- The ongoing management of the group's automated screening, monitoring and reporting tools, including the implementation of the GoAML interface with the FIC.

MARKET CONDUCT

- The group's market conduct programme amongst others, covers treat customers fairly principles, as well as broader retail and wholesale market conduct requirements such as those pertaining to insurance, CISCA, FAIS and the FMA.
- Ongoing participation in industry and regulatory engagements regarding the Conduct of Financial Institutions Bill and licence framework, as well as the World Bank retail bank diagnostic workstream.
- Project planning, workshops and oversight to implement new fit and proper rules such as classes of business training and debarment rules.
- Internal review of loyalty programme rules to implement treat customer fairly principles. Ongoing review of insurance fee arrangements.

ETHICS OFFICE

- Continuously reinforces a culture of integrity and ethical business practices.
- Maintains focus on the promotion of responsible business, including enhancing and maturing ethics and conduct risk capabilities across the group.
- Promotes training relating to and awareness of the independent whistle-blowing line.
- Provides oversight on personal account trading and conflict of interest management.
- Coordinates and provides advice on client desirability review processes.

FINANCIAL SECTOR REGULATION ACT

- The new framework of the Financial Sector Regulation Act is a complete and comprehensive system for regulating the financial sector and is being implemented in two stages, namely:
  - stage one relates to the Financial Sector Regulation Act provisions which are being phased in from 1 April 2018 until 1 April 2019; and
  - the second stage will focus in the main on streamlining the current and separate activity-based financial sector legislation into consolidated legislation, which will reduce the scope for regulatory arbitrage.

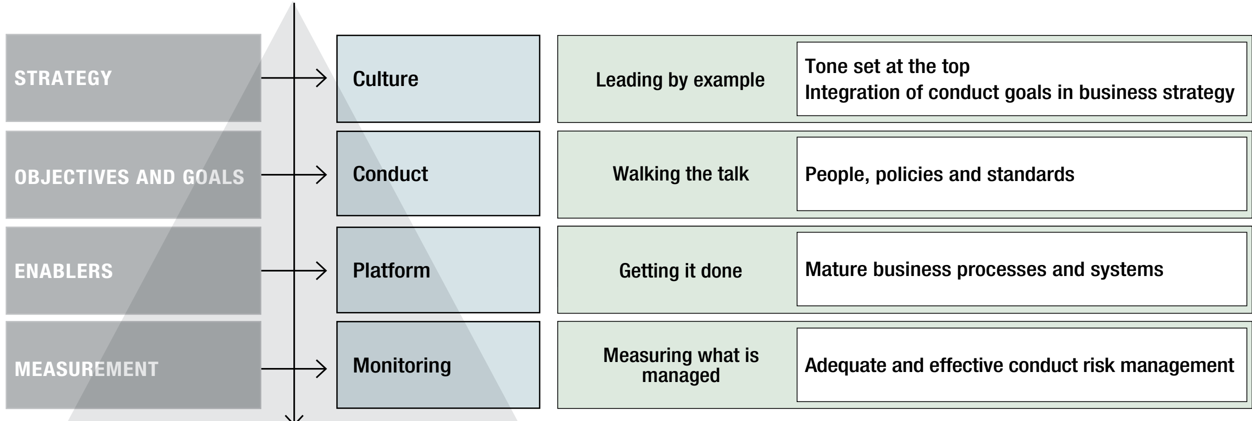
NATIONAL CREDIT AMENDMENT ACT

- Driving the NCAA compliance programme including workshops and training.
- Coordinating regulatory liaison and engagement.
- Ongoing engagement with the regulator relating to topical credit risk areas.
- Participation in Banking Association of South Africa workstreams and discussions in respect of the draft National Credit Amendment Bill.

CONDUCT RISK MANAGEMENT

Conduct risk programmes are integrated into the group with a holistic management approach connecting leadership, business operations and the control environment.

CONDUCT RISK MANAGEMENT APPROACH



In support of a sound risk culture, the group manages conduct risk programmes with appropriate levels of employee training and communication to ensure responsible conduct. The focus area programmes are outlined in the following table.

BUSINESS CONDUCT PROGRAMMES	MARKET CONDUCT PROGRAMMES
> conflicts of interest management (including declarations of interest); > protected whistle-blowing; > personal account trading; and > client desirability reviews.	> retail market conduct; > ethical trading in financial markets; > credit and consumer protection practice; > responsible competitive practices; and > responsible wholesale banking practice.

PUBLIC POLICY AND REGULATORY AFFAIRS OFFICE

In line with the responsibilities of FirstRand Limited as the group's holding company, the public policy and regulatory affairs office facilitates the process through which the board maintains an effective relationship with both local and international regulatory authorities for the group's regulated subsidiaries, offshore branches and representative offices. The office also provides the group with a central point of engagement, representation and coordination in respect of relevant regulatory and public policy-related matters at a strategic level. This function is differentiated from the existing and continuing engagement with regulators at an operational level, i.e. regulatory reporting, compliance and audit. Its main objective is to ensure that senior management executives are aware of key developments relating to public policy, legislation and regulation pertinent to the group's business activities. It also supports the group's directors and executives to proactively identify and discuss emerging policy and regulatory issues which may require attention and risk mitigation from a group perspective. The office achieves its objectives by, amongst other things, establishing and maintaining relationships with government stakeholders and regulators and industry bodies in South Africa and other countries in which the group has a footprint.

This office reports to the head of RCRM and maintains close working relationships with the group COO, RCRM, ERM and business units where specific technical expertise resides.

Other risks

Strategic risk

Risk to current or prospective earnings arising from inappropriate business models, decisions or improper implementation of such decisions.

Any business runs the risk of choosing an inappropriate strategy or failing to execute its strategy appropriately. The group aims to minimise this risk in the normal course of business.

Strategic risk is not a readily quantifiable risk and not a risk that a company can or should hold a protective capital buffer against. The development and execution of business-level strategy is the responsibility of the strategic executive committee and the individual business areas, subject to approval by the board. This includes the approval of any subsequent material changes to strategic plans, budgets, acquisitions, significant equity investments and new strategic alliances.

Business unit and group executive management, as well as Group Treasury and ERM, review the external environment, industry trends, potential emerging risk factors, competitor actions and regulatory changes as part of the strategic planning process. Through this review, as well as regular scenario planning and stress-testing exercises, the risk to earnings and the level of potential business risks faced are assessed. Reports on the results of these exercises are discussed at various business, risk and board committees and are ultimately taken into account in the setting of risk appetite and potential revisions to existing strategic plans.

Business risk

INTRODUCTION AND OBJECTIVES

Risk to earnings, capital and sustainability from potential changes in the business environment as well as planned new business and expansion activities.

Business risk capital stems from:

- potential earnings volatility that is unrelated to other known, material and already-capitalised-for risk types;
- potential lower-than-expected earnings, higher-than-expected operating costs, or both, from an inability to generate sufficient volumes, margin or fees to maintain a positive net operating margin in a volatile business environment; and
- the potential inability to execute on strategy according to the business plan in order to remain sustainable and well capitalised on a forward-looking basis.

The group's objective is to develop and maintain a well-diversified portfolio that delivers sustainable earnings and minimises the chance of adverse, unexpected outcomes.

ASSESSMENT AND MANAGEMENT

The group has a business risk process which aims to create a group-wide shared definition and understanding and to ensure business risk is appropriately identified, monitored, measured and embedded in the risk management activities.

The components of business risk include the following:

COMPONENT	DESCRIPTION
Volume, margin and fee changes	Related to the group's ability to generate sufficient levels of revenue to offset its operating costs.
New business and expansion activities	Risk of downside deviation from planned expansion activities, where franchise value is lower than expected due to lower revenues or higher costs than expected.
Changes in external environment	Related to external changes ranging between political, economic, customers, competition, market, technology and regulations in the environment the businesses operate in.
Internal changes	Related to internal changes in strategy, organisational structure, business model, strategic processes or management.

BUSINESS RISK ASSESSMENT CYCLE

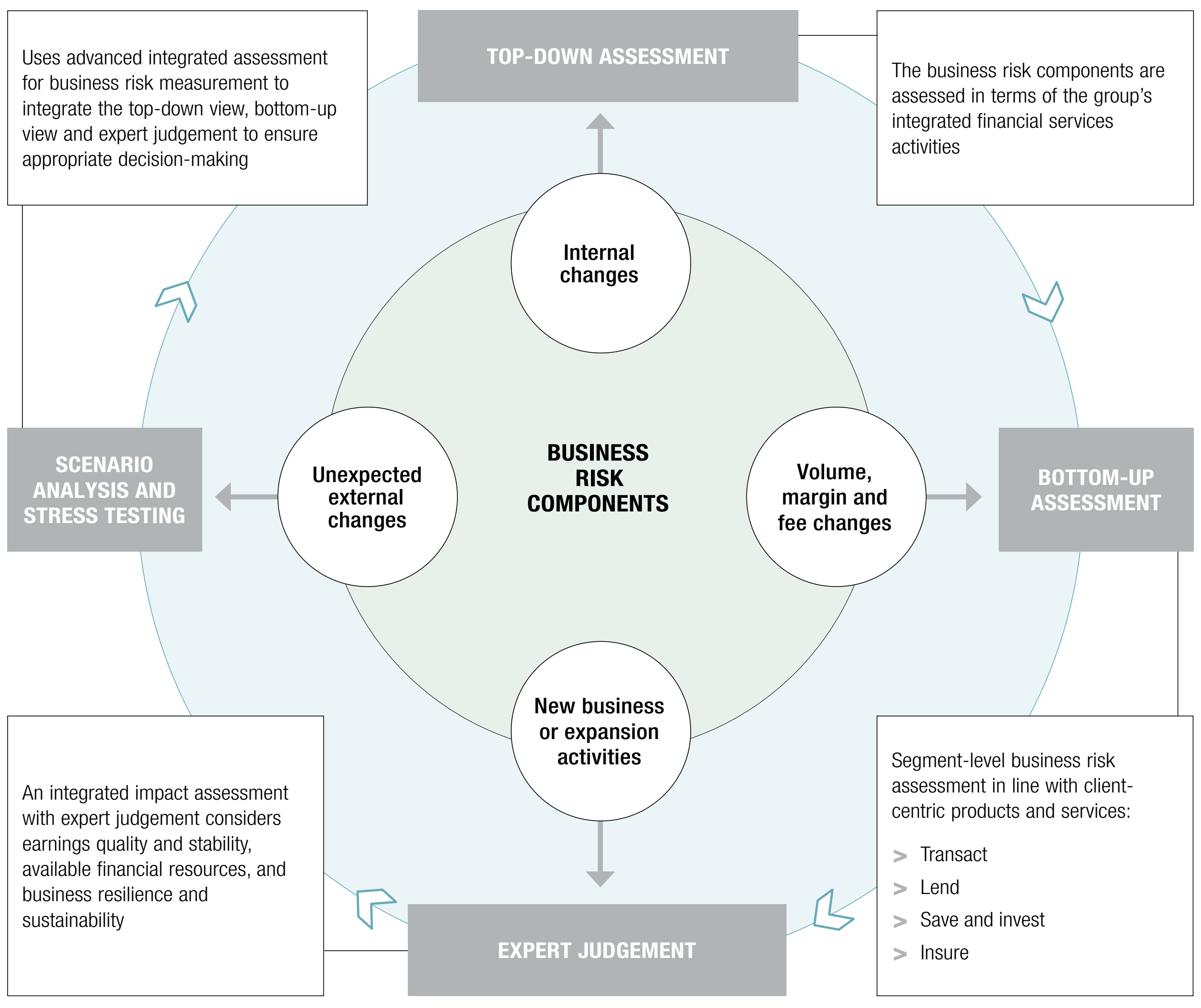
The business risk assessment and management cycle is based on a philosophy that allows integration, alignment and avoiding/minimising possible double counting of the components of business risk in the following processes:

- risk appetite;
- scenario analysis and stress testing; and
- economic capital.

This ensures that there are adequate and transparent processes with integrated tools for monitoring, assessment, measurement and mitigation of risk as well as capitalisation for exposure to unexpected losses. The processes and tools for monitoring business risk provide insight across different points of loss distribution to enable financial resource optimisation.

The components of business risk are considered in each step of the business risk cycle.

BUSINESS RISK IDENTIFICATION ASSESSMENT CYCLE



MEASUREMENT OF BUSINESS RISK CAPITAL

Business risk capital is quantified for economic capital purposes and is calculated for volume and margin changes, expansion activities and unexpected regulatory changes and follows the guidelines of FirstRand's business risk framework. The business risk assessment cycle and approach are incorporated in internal and strategic planning processes supported by the group's management committees and governance structures.

Economic capital estimates for all components of business risk are reported internally to management and externally to the PA on a biannual basis with details of approach, models and methodologies used included in the annual ICAAP submission.

The group has an established process to identify, manage and measure business risk exposure, which ultimately enables the quantification of business risk economic capital.

BUSINESS RISK MEASUREMENT AND MANAGEMENT PROCESS

DEFINITION AND IDENTIFICATION

The first step involves tracking of key risk drivers and factors that could give rise to business risk. In assessing risk exposure from volume and margin changes, the group performs trend analyses of its revenue volatility, pre-tax operating margin, cost-to-income ratio and fixed-to-total cost ratio, and targets a portfolio of low-earnings volatility, and high-margin activities with a variable cost structure.

The risk inherent in expansion activities is managed through the execution of a robust business plan approval process. This includes in-depth scrutiny of business plans, understanding and documentation of risk drivers, risk factors and analysis of root causes that could lead to additional unexpected capital injections, as well as frequent monitoring and reporting of execution variance against the plan.

Continued monitoring of:	Changes to the external environment; volume, margin and fee changes; and new business and expansion activities.

2

MEASUREMENT AND MANAGEMENT

Internal models are used to capture the increasing probability of unexpected losses from the remainder of material risks not captured, mitigated or capitalised for by other Pillar 1 and non-pillar 1 risk types.

The risk exposure is modelled using fit-for-purpose models ranging from stochastic approaches, sensitivity assessment, scenario analysis and stress testing at different levels of the organisation. The outputs of risk measurement are used as input into the risk appetite framework and management decision-making.

Continued monitoring of:	Risk triggers, risk exposure, earnings quality and resilience, cost structures and business model changes.

CAPITALISATION AND MANAGEMENT ACTIONS

FirstRand uses a combination of top-down and bottom-up models to quantify tail risk exposures which are capitalised for. These include risk exposure quantification models and objective qualitative overlay scenarios. In addition, factors proposed by experts for consideration are incorporated into the running of sensitivity assessments, scenario analyses and stress testing model impact assessments. The output of this process is presented to relevant committees for management action.

The group capitalises for downside deviation of residual unexpected losses beyond risk appetite levels at a percentile to achieve a desired credit rating over a one-year time horizon.

Continued monitoring of:	Unexpected losses, earnings volatility, inflexible operating cost structures and unsustainable performance drivers.

CAPITAL ALLOCATION

The last step of the business risk management process involves capital allocation to business units where the risk exposure originates, where it can be controlled and managed, and action can be taken to align with group strategic objectives.

Continued monitoring of:	Increasing capital costs, capital costs that remain inflexible, and expected revenues continuing to be lower than expected costs on a forward-looking basis.

Reputational risk

The risk of reputational damage due to events including compliance failures, pending litigations, underperformance or negative media coverage.

The group's business is inherently built on trust and close relationships with its clients. Its reputation is, therefore, built on the way in which it conducts business and the group protects its reputation by managing and controlling risks across its operations. Reputational risk can arise from environmental and social issues or as a consequence of financial or operational risk events. The group seeks to avoid large risk concentrations by establishing a risk profile that is balanced within and across risk types. Potential reputational risks are also taken into account as part of stress testing exercises. The group aims to establish a risk and earnings profile within the constraints of its risk appetite, and seeks to limit potential stress losses from credit, market, liquidity or operational risks that may otherwise introduce an undesirable degree of volatility in its financial results and adversely affect its reputation.

Environmental and social risk

Relates to environmental and social issues which impact the group's ability to sustainably implement strategy.

FirstRand has formal governance processes for managing environmental and social risk. These include detailed lending due diligence environmental and social risk analyses (ESRA) programmes, programmes reviewing the impact of natural capital risks on the lending portfolios of the group, implementation of the recommendations of the G20 Task Force on Climate-Related Financial Disclosures, as well as programmes for the management of direct operational environmental risk impacts. Environmental and social risk management processes are formally integrated into the group's risk governance process, which is supported by enterprise-wide social and ethics committee structures.

FirstRand has a dedicated environmental and social risk management team, which manages direct and indirect environmental (inclusive of climate change) and social risk in the group. The team forms part of ERM, which allows for the integration of environmental and social risks into the group risk management processes, identification, management and mitigation of environmental, social and climate-related risks and maximising opportunities in positive impact finance. The environmental and social risk management team:

- measures, monitors and reports on the group's own climate resilience and water, energy and waste management;
- manages the environmental and social risk processes which form part of the credit risk framework; and
- is involved in integrating the UN Sustainable Development Goals into business opportunities.

A dedicated environmental and social conduct forum with representation from the group's operating businesses has a mandate to focus on reviews of initiatives related to positive impact finance (PIF), ESRA, task force on climate-related financial disclosures, climate resilience and environmental footprint. Businesses provide feedback through this forum on current PIF initiatives and the forum allows for sharing of information and experience throughout the group.

FirstRand is an Equator Principles (EP) finance institution. EP forms part of ESRA and is a specific framework for determining, assessing and managing environmental and social risk in project finance transactions. The group's report on environmental and social risk is available on the group's website, www.firstrand.co.za.

A FirstRand exclusions list and sensitive industry matrix has been developed to indicate activities which the group will not finance or where there are restrictions on the financing of these activities, e.g. due to legal constraints, financing restrictions due to international financing agreements, or where the group may suffer reputational damage due to involvement with the specific industries.

Model risk

The use of models causes model risk, which is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports. Model risk can lead to financial losses, poor business and strategic decision-making, or damage to the group's reputation.

The group recognises two types of model risk:

Intrinsic model risk – the risk inherent in the modelling process, which cannot be directly controlled but can be appropriately mitigated. Examples of intrinsic model risk drivers include model complexity, availability of data and model materiality.

Incremental model risk – the risk caused by inadequate internal practices and processes, which can be actively mitigated through quality model documentation, robust governance processes and a secure model implementation environment.

A model is defined as a quantitative method, system, or approach that applies statistical, economic, financial, or mathematical theories, techniques and assumptions to process input data into quantitative estimates. A model generally consists of three components:

- information input component, which delivers assumptions and data to the model;
- processing component, which transforms inputs into estimates; and
- reporting component, which translates the estimates into useful business information.

Model risk exists as models may have fundamental errors and produce inaccurate outputs when assessed against the design objective and intended business use. Model risk may also arise as a result of model results being used incorrectly or inappropriately.

PERIOD UNDER REVIEW AND FOCUS AREAS

PERIOD UNDER REVIEW	RISK MANAGEMENT FOCUS AREAS
> Implemented the group model risk management and reporting framework across risk types. > Continued rollout of model risk management software for credit risk stress testing and credit risk economic capital models. > Commenced rollout of model risk management software for market risk models.	> Roll out model risk management software to remaining credit, operational and market risk models. > Continue to track improvements in model risk management across risk types. > Formalise a risk appetite statement for model risk.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

FIRSTRAND BOARD

RCC COMMITTEE

Reviews reports on the adequacy and robustness of model risk management.

MODEL RISK AND VALIDATION COMMITTEE

- Considers and approves material aspects of model validation work including:
  - credit risk capital models, credit ratings and estimations;
  - internal models for market risk;
  - AMA operational risk models; and
  - economic capital models.
- Monitors implementation of model risk management principles and MRMF for credit, market, operational and other risks.

The model risk management framework for credit, market, operational and other risks outlines the roles and responsibilities across the model life cycle, and risk-sensitive model governance and validation requirements.

Retail and SME retail credit technical committee

Wholesale and SME corporate credit technical committee

Review and approve credit risk models for:

- application and behavioural scorecards;
- provisioning and impairment;
- regulatory and economic capital; and
- stress testing.

Market risk technical committee

Reviews and approves IMA market risk quantitative models, including models for instrument valuation, curve construction, and regulatory and economic capital.

Operational risk technical committee

Validates AMA capital model annually and performs additional validation of model changes.

Other risk technical committee

Reviews and approves economic capital for business risk, other asset risk, model risk, insurance risk and post-retirement medical aid risk.

Group Treasury model risk technical committee

Reviews and approves Group Treasury models including interest rate risk and foreign exchange risk in the banking book, liquidity risk, securitisation risk, funds transfer pricing and associated economic capital.

ERM

- Independent validation of credit risk and economic capital models.

GIA

- Independent assurance of credit risk, operational risk and economic capital models.

ASSESSMENT AND MANAGEMENT

The level of model risk related to a particular model is influenced by model complexity, uncertainty about inputs and assumptions, and the extent to which the model is used to make financial and strategic decisions. The risks, from individual models and in aggregate, are assessed and managed. Aggregated model risk is affected by interaction and dependencies among models, reliance on common assumptions, data or methodologies and any other factors that could adversely affect several models and their outputs simultaneously. As an understanding of the source and magnitude of model risk is key to effective management of the risk, model risk management is integrated into the group's risk management processes.

Various principles are applied in the model risk management process. Risk owners assess which of these principles are applicable to a specific model and determine levels of materiality for model evaluation and validation.

MODEL RISK MANAGEMENT PRINCIPLES

Data and systems	Development	Testing and validation	Monitoring	Governance
> use systems that ensure data and reporting integrity; > use suitable data; > maintain master list of field data; > implement appropriate system controls; and > assess data quality.	> document model design, theory and logic which is supported by published research and industry practice; > challenge of methods and assumptions by experts; and > ensure appropriate conservatism.	> provide independent validation; > review documentation, empirical evidence, model construction assumptions and data; > perform sensitivity analysis; > perform stress testing; and > obtain independent assurance from GIA.	> perform regular stress testing and sensitivity analysis; > perform quantitative outcome analysis; > perform back testing and establish early warning metrics; > assess model limitations; > set and test error thresholds; and > test model validity.	> provided by three lines of control; > approve model risk management framework; > ensure effective management; > ensure approval committees with adequate skills; and > ensure appropriate documentation.

MODEL RISK MEASUREMENT

A scorecard with risk factors based on model risk management principles is used for model risk measurement and quantification of capital. Intrinsic model risk and incremental model risk are assessed and tracked separately, then combined to obtain overall model risk scorecards. The scorecard is tailored for each risk type by applying risk-type specific weightings to each scorecard dimension and by refining the considerations for each dimension to be specific to that risk type.

Each regulatory capital and economic capital model is rated using the model risk scorecard and assigned an overall model risk rating of low, medium or high. These ratings are used to determine the model risk economic capital add-on multiplier, which is applied to the output of capital models to determine the amount of model risk economic capital to be held.

Tax risk

INTRODUCTION AND OBJECTIVES

Tax risk is regarded as any event, action or inaction in the tax strategy, operations, financial reporting or compliance that either adversely affects the entity's tax or business position, or results in unanticipated penalties, assessments, additional taxes, harm to reputation, lost opportunities or financial statement exposure.

Tax risk is further defined as the risk of financial loss due to the final determination of the tax treatment of a transaction by revenue authorities being different from the implemented tax consequences of such a transaction, combined with the imposition of penalties, and/or the sanction or reputational damage due to non-compliance with the various revenue acts, and/or the inefficient use of available mechanisms to benefit from tax dispensations.

FirstRand's long-term strategic objective is to deliver superior and sustainable economic returns to shareholders within acceptable levels of volatility and maintain balance sheet strength. The group's global tax strategy is aligned with these principles. In the course of its business activities, a variety of local and international taxes arise, including corporate income taxes, employees' taxes, value-added taxes, securities transfer taxes, stamp duties, customs duties and withholding taxes to name but a few.

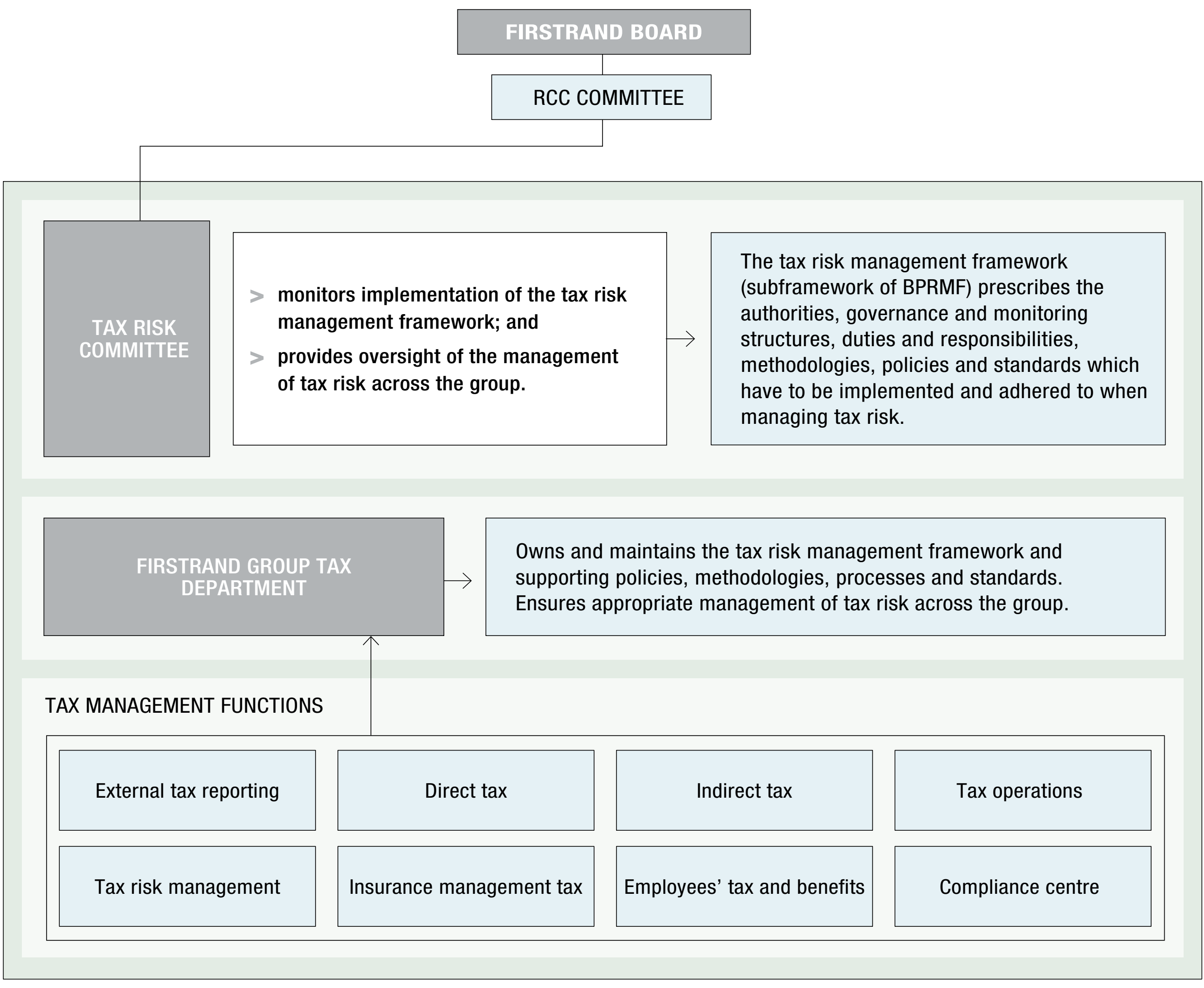
The FirstRand group tax department (FRGT) is mandated by the FirstRand tax risk committee to manage tax risks, including tax-related reputational risk for the group. FirstRand is committed to complying with all taxation laws; influencing tax policy, legislation and practice; developing and implementing value-adding initiatives in a responsible manner, and maintaining effective relationships with all stakeholders. FirstRand acknowledges that to fulfil these values successfully, it is imperative that the group acts with integrity and is committed to responsible and accountable tax risk management.

ORGANISATIONAL STRUCTURE AND GOVERNANCE

The head of FRGT takes ultimate responsibility for tax risk management for all taxes across the group. The responsibility at a business unit/entity level lies with the chief executive officer and chief financial officer for the relevant business unit or entity, and are responsible for keeping these risks at an acceptable level. To enable the various chief financial officers to fulfil their tax risk management responsibilities, FRGT has deployed a team of tax specialists to fulfil an advisory role regarding tax issues arising within the various business units/entities.

Tax risks, as well as improvements to compliance processes, are reported to the FirstRand RCC committee, which is responsible for the management and monitoring of tax risks, and which reports on tax risk to the board.

TAX RISK GOVERNANCE STRUCTURE



ASSESSMENT AND MANAGEMENT

Tax risk management is the systematic approach to proactively identify, evaluate, manage and report on tax risks and relevant data quality risks within agreed and acceptable parameters, to facilitate the group's tax strategy.

FRGT engages in efficient tax planning that supports business and reflects commercial and economic activity. The group aims to ensure that the tax laws in all of the jurisdictions in which it operates are adhered to and, in so doing, minimises the risk of uncertainty or disputes. Transactions between group entities are conducted on an arm's-length basis and in accordance with the current Organisation for Economic Cooperation and Development (OECD) principles. Where tax incentives or exemptions exist, the group seeks to apply them responsibly in the manner intended by governments and fiscal authorities. FirstRand establishes entities in jurisdictions suitable to hold its offshore operations, considering its business activities and the prevailing regulatory environments in those offshore jurisdictions.

FirstRand seeks to build sustainable working relationships with governments and fiscal authorities, which are based on mutual respect. Where possible, FRGT works in conjunction with fiscal authorities to resolve disputes and engages with governments on the development of tax laws. FirstRand is committed to the principles of openness and transparency in an effort to build trust between the group and the fiscal authorities and aligns with the various systems of tax collection.

The management of tax risks forms part of the group's overall internal control processes. Responsibility and accountability for the group's tax affairs is clearly defined in accordance with the tax risk management framework.

FirstRand is responsible for ensuring that policies and procedures which support the tax risk management framework are in place, maintained and used consistently in all operations and that the global tax team has the skills and experience to implement these appropriately. In this regard, external tax risks arising from legislative and regulatory changes are actively managed, as well as internal tax risks, comprising of compliance and operational risks. Management measures also include controls over compliance processes which are implemented, with their effectiveness being monitored on an ongoing basis.

REGULATORY ENVIRONMENT

Banking Association of South Africa (BASA)	FirstRand is a member of BASA, which represents the banking sector. The BASA tax committee promotes discussions on tax issues relating to the various South African revenue acts, and advocates for tax reforms and ensures that the regulatory and supervisory frameworks address relevant issues.
South African Revenue Service (SARS)	The group complies with the accord that was signed between SARS and BASA to improve tax compliance.
UK Code of Practice on Taxation for Banks	The group subscribes to the UK Code of Practice on Taxation for Banks due to the bank's London branch, to ensure compliance with the law on tax matters in the UK.
Base Erosion and Profit Shifting (BEPS) recommendations	FirstRand filed its country-by-country reports in accordance with the BEPS recommendations issued by the OECD to address the weaknesses in the international tax system.
Foreign Account Tax Compliance Act (FATCA) and Common Reporting Standards (CRS)	FATCA and CRS submissions were successfully submitted to SARS to aid the exchange of information amongst financial institutions.
King IV	The King Committee published the King IV report on 1 November 2016, which the group adopted and has since adhered to in order to achieve sound corporate governance.

Remuneration and compensation

FirstRand's compensation policies and practices observe international best practice and comply with the requirements of the Banks Act, 1990 (Act No. 94 of 1990) and *FSB Principles for Sound Compensation Practices*. In accordance with the requirements of regulation 43 of the Regulations and the Pillar 3 standard, disclosure of the group's compensation policies, practices and performance are included in the remuneration committee report in its annual integrated report, which is published on FirstRand's website, www.firstrand.co.za.

Index of Pillar 3 disclosure templates and Regulation 43

The following table provides a list of the Pillar 3 standard and Regulation 43 disclosure requirements and the respective page numbers where the information is provided in this disclosure.

SECTION AND TABLE	PILLAR 3 STANDARD	BANKS ACT REGULATION/ DIRECTIVE	PAGE
Overview of risk management and risk weighted assets			
OVA Bank risk management approach	✓		10
OV1 Overview of RWA	✓		27
Capital management			
Capital adequacy		Regulation 43	23
Standardised disclosures		Directive 3/2015	30
Funding and liquidity risk			
Funding management		Regulation 43	33
Liquidity risk management		Regulation 43	40
Credit risk			
CRA Qualitative information about credit risk	✓		43
Credit asset by type, segment and PA approach		Regulation 43	46
CR1 Credit quality of assets	✓		47
CR2 Changes in stock of defaulted advances, debt securities and off-balance sheet exposures	✓		48
CRC Credit risk mitigation	✓		49
CR3 Credit risk mitigation techniques	✓		50
CRD Qualitative disclosure of use of external ratings under standardised approach	✓		52
CR4 Standardised approach exposure and credit risk mitigation	✓		78
CR5 Standardised approach exposure by asset class and risk weight	✓		79
CRE AIRB approach qualitative disclosure	✓		51
CR6 Credit risk exposure by portfolio and PD range	✓		55
CR7 Effect on RWA of credit derivatives	✓		75
CR8 RWA flow statement of credit risk exposures under AIRB	✓		76
CR10 Specialised lending	✓		81
Risk analyses		Regulation 43	82
Counterparty credit risk			
CCRA Qualitative disclosure	✓		88
CCR1 CCR exposure by approach	✓		92
CCR2 CVA capital charge	✓		92
CCR3 CCR exposure by regulatory portfolio and risk weights (standardised approach)	✓		93
CCR4 IRB CCR exposure by portfolio and PD scale	✓		94
CCR5 Collateral for CCR exposure	✓		101
CCR6 Credit derivative exposure	✓		102
CCR8 Exposure to central counterparties	✓		102
Securitisation			
SECA Qualitative disclosure	✓		103
SEC1 Securitisation exposure and rating distribution	✓		108
SEC3 Securitisation exposure and associated capital requirements (originator or sponsor)	✓		110
SEC4 Securitisation exposure and associated capital requirements (investor)	✓		112

SECTION AND TABLE	PILLAR 3 STANDARD	BANKS ACT REGULATION/ DIRECTIVE	PAGE
Traded market risk			
Definition, governance, assessment, measurement		Regulation 43	114
MRA Qualitative disclosure for market risk	✓		114
MRB IMA qualitative disclosure	✓		116
MR2 RWA flow statement of market risk exposures under IMA	✓		117
VaR exposure per asset class		Regulation 43	118
MR3 IMA values for trading portfolios	✓		118
MR4 Comparison of VaR estimates with gains/losses	✓		121
MR1 Market risk RWA under standardised approach	✓		122
Non-traded market risk			
Interest rate risk in the banking book	✓	Regulation 43	123
– NII sensitivity	✓	Regulation 43	126
Structural foreign exchange risk		Regulation 43	127
– Net structural foreign exposures		Regulation 43	128
Equity investment risk			
Definition, governance, assessment, measurement		Regulation 43	129
Investment risk exposure and sensitivity		Regulation 43	132
CR10 Equities under simple risk weight approach	✓		132
Investment values and capital		Regulation 43	133
Operational risk	✓	Regulation 43	137
Regulatory and conduct risk		Regulation 43	142
Other risks			
Strategic, business, reputational, environmental and social, model, insurance and tax risks		Regulation 43	149
Remuneration and compensation		Regulation 43	159

Definitions

Additional Tier 1 capital (AT1)	Non-cumulative non-redeemable (NCNR) preference share capital and AT1 capital instruments, as well as qualifying capital instruments issued out of fully consolidated subsidiaries to third parties less specified regulatory deductions.
Business performance and risk management framework (BPRMF)	Highlights the key principles and guidelines applied with respect to the effective management of risk across FirstRand Limited (FirstRand or the group) in the execution of business strategy.
Common Equity Tier 1 capital (CET1)	Share capital and premium plus accumulated comprehensive income and reserves plus qualifying capital instruments issued out of fully consolidated subsidiaries to third parties less specified regulatory deductions. Tier 1 capital less AT1 capital.
Credit loss ratio	Total impairment charge per the income statement expressed as a percentage of average advances (average between the opening and closing balance for the year).
Exposure at default (EAD)	Gross exposure of a facility upon default of a counterparty.
FRB SA	FRB excluding foreign branches.
Loss given default (LGD)	Economic loss that will be suffered on an exposure following default of the counterparty, expressed as a percentage of the amount outstanding at the time of default.
Net income after capital charge (NIACC)	Normalised earnings less the cost of equity multiplied by the average ordinary shareholders' equity and reserves.
Probability of default (PD)	Probability that a counterparty will default within the next year (considering the ability and willingness of the counterparty to repay).
Return on equity (ROE)	Normalised earnings divided by average normalised ordinary shareholders equity.
Risk weighted assets (RWA)	Prescribed risk weightings relative to the credit risk of counterparties, operational risk, market risk, equity investment risk and other risk multiplied by on- and off-balance sheet assets.
Tier 1 ratio	Tier 1 capital divided by RWA.
Tier 1 capital	CET1 capital plus AT1 capital.
Tier 2 capital	Qualifying subordinated debt instruments plus qualifying capital instruments issued out of fully consolidated subsidiaries to third parties plus general provisions for entities on the standardised approach less specified regulatory deductions.
Total qualifying capital and reserves	Tier 1 capital plus Tier 2 capital.

Abbreviations

AIRB	Advanced internal ratings-based approach
ALCCO	Asset, liability and capital committee
ALM	Asset and liability management
AMA	Advanced measurement approach
AML/CFT	Anti-money laundering and combating the financing of terrorism
AT1	Additional Tier 1
AVAs	Additional valuation adjustments
BASA	Banking Association of South Africa
BCBS	Basel Committee on banking supervision
BEPS	Base Erosion and Profit Shifting
BIA	Basic indicator approach
BPRMF	Business performance and risk management framework
C&I	Corporate and Institutional segment
CCF	Credit conversion factors
CCP	Central clearing counterparties
CCyB	Countercyclical buffer
CEM	Current exposure method
CET1	Common Equity Tier 1
CLF	Committed liquidity facility
CMA	Common Monetary Area
CRM	Credit risk mitigation
CRMF	Credit risk management framework
CRS	Common Reporting Standards
CSA	Credit support annexes
CVA	Credit value adjustment
D-SIB	Domestic systemically important bank
EAD	Exposure at default
ECAI	External credit assessment institution
EEPE	Effective expected positive exposure
EMTN	European medium-term note programme
EP	Equator principles
ERM	Enterprise Risk Management
ESRA	Environmental and social risk analyses
ETL	Expected tail loss
EVE	Economic value of equity
FAIS Act	Financial Advisory and Intermediary Services Act
FATCA	Foreign Account Tax Compliance Act
FIC Act	Financial Intelligence Centre Act
FRM	Financial Resource Management
FSB	Financial Stability Board
FSCA	Financial Sector Conduct Authority
GIA	Group Internal Audit
HQLA	High quality liquid asset
IAA	Internal assessment approach
ICAAP	Internal capital adequacy assessment process
IFRS	International Financial Reporting Standards
IMA	Internal models approach
IRA	Internal ratings based
ISDA	International Swaps and Derivatives Association
ISMA	International Securities Market Association
LCR	Liquidity coverage ratio
LGD	Loss given default
NAV	Net asset value
NCAA	National Credit Amendment Act
NCD	Negotiable certificate of deposit
NCNR	Non-cumulative non-redeemable
NIACC	Net income after capital charge
NII	Net interest income
NSFR	Net stable funding ratio
OECD	Organisation for Economic Cooperation and Development
ORMF	Operational risk management framework
ORSA	Own risk and solvency assessment
OTC	Over-the-counter
PA	Prudential Authority
PD	Probability of default
PIF	Positive impact finance
PoPIA	Protection of Personal Information Act
PVA	Prudential valuation adjustments
R&C	Retail and Commercial segment
RBA	Ratings-based approach
RCC committee	Risk, capital management and compliance committee
RCRM	Regulatory and Conduct Risk Management
RSF	Required stable funding
RWA	Risk weighted assets
SA-CCR	Standardised approach for measuring counterparty credit risk
SAM	Solvency assessment and management
SARB	South African Reserve Bank
SARS	South African Revenue Service
SFA	Supervisory formula approach
SMEs	Small and medium enterprises
SOEs	State-owned enterprises
SPV	Special purpose vehicle
SSFA	Simplified supervisory formula approach
Stratco	Strategic executive committee
sVaR	Stressed VaR
TSA	The standardised approach for operational risk
VaR	Value-at-Risk

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