

# FINANCIAL STABILITY REVIEW

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2020



SOUTH AFRICAN RESERVE BANK



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This issue of the *Financial Stability Review* would typically focus on the six-month period ending 31 December 2019. However, a significant portion of this issue reviews more recent developments due to their potential financial stability implications. Data may include own calculations made specifically for the purposes of this publication.

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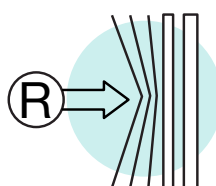
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## Illustrative summary

**South Africa's financial system has remained resilient in the face of a challenging environment.**



Over the past decade, financial regulation has been enhanced.



As a result, financial firms have significant buffers in place to absorb shocks.



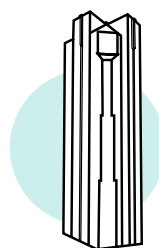
COVID-19 has placed an extraordinary strain on the economy.



The resulting fall in asset prices and pressure on borrowers poses a risk to financial stability.



The SARB has taken measures to ensure that financial markets function effectively and credit provision continues.



The SARB stands ready to take additional action, should the need arise.



**Ongoing cooperation between firms and regulators is required to ensure that incipient risks are detected and addressed timeously.**

## The purpose of the *Financial Stability Review*

The primary objective of the South African Reserve Bank (SARB) is to protect the value of the local currency in the interest of balanced and sustainable economic growth in South Africa. In addition to this, the SARB's function and mandate of protecting and enhancing financial stability in the Republic of South Africa is affirmed in the Financial Sector Regulation Act 9 of 2017 (FSR Act).

In pursuit of its financial stability mandate, and to promote a stable financial system, the SARB publishes the *Financial Stability Review (FSR)* twice a year. The publication aims to identify and analyse potential risks to financial system stability, communicate such assessments, and stimulate debate on pertinent issues. The SARB recognises that it is not the sole custodian of financial stability, but that it coordinates and contributes significantly towards a larger effort involving government, other regulators, self-regulatory agencies, organs of state and financial market participants. In line with the requirements of the FSR Act, both the Minister of Finance and the Financial Sector Oversight Committee (FSOC) provide comments on the *FSR* prior to publication.

## Defining 'financial stability'

'Financial stability' refers to a financial system that espouses confidence through its resilience to systemic risks and its ability to efficiently intermediate funds.

Financial stability is not an end in itself, but is regarded as an important precondition for sustainable economic growth and employment creation.

# Executive summary

**Since the previous *Financial Stability Review (FSR)*, global and domestic financial conditions have deteriorated substantially.** Positive market sentiment in late 2019 and early 2020, supported by a ratification of the Brexit deal in the United Kingdom (UK) and a phase-one trade agreement between the United States (US) and China, was short-lived.

**Since February 2020, the rapid spread of the novel coronavirus (COVID-19) pandemic and growing concerns about its economic impact have given rise to a high degree of risk aversion.** In March 2020, global and domestic financial markets recorded sharp price declines. Market volatility spiked to levels last seen during the global financial crisis and reduced liquidity in some markets followed. Riskier borrowers in financial markets are facing tighter financing conditions as a result.

**Globally, large-scale, coordinated economic stimulus measures within countries have contributed to a recent financial markets stabilisation.** In the face of an impending global recession, central banks and governments across the world have undertaken economic stimulus measures, including reductions in short-term interest rates and increased government support for businesses and households. Advanced economy central banks have also implemented large-scale quantitative easing. Most prominently, the US Federal Reserve has injected more than US\$2 trillion of liquidity into the global financial system since February 2020. As a result of these actions, volatility in global financial markets moderated somewhat in April 2020 and financial asset prices showed signs of stabilisation, albeit at significantly lower levels than at the start of the year. However, it remains to be seen how effective these measures will be in lifting the global economy out of recession.

**Disruptions caused by COVID-19 locally and internationally are exacerbating South Africa's long-standing macroeconomic vulnerabilities.** South Africa fell into a recession at the end of 2019 following an extended period of slow growth linked to electricity constraints, low business confidence and policy uncertainty. In light of COVID-19, the South African Reserve Bank (SARB) gross domestic product (GDP) growth forecast has been revised sharply lower to -7% for 2020, a decline more severe than the -1.5% recorded in 2009 at the height of the global financial crisis.



This economic shock comes at a time of rising fiscal risk. In March 2020, Moody's Investors Service (Moody's) cut South Africa's sovereign credit rating to sub-investment grade. The agency cited structurally weak economic growth and increasing public debt in its decision, as it became the final major credit rating agency to move the country's sovereign credit rating to sub-investment grade status.

**The domestic financial system is currently under stress, but remains resilient.** Both banks and non-bank financial institutions have experienced strain as a result of recent declines in financial asset prices. Bank depositors have been exhibiting a strong preference for short-term deposits, thereby reducing the supply of term funding available to banks. Increases in non-performing loans (NPLs), insurance policy lapse rates and withdrawals from investment funds are expected over the coming months. Cumulatively, the effects of COVID-19 are likely to drive down the profitability of financial firms.

**South Africa's large financial institutions have substantial buffers in place to absorb the COVID-19 shock.** Major regulatory reforms have been undertaken over the past decade to enhance the resilience of the financial sector. As a result, financial firms have built up significant capital and liquidity buffers, which can be used to absorb short-term losses or funding stress during this extraordinary time.

**The SARB has taken actions to ensure the continued effective functioning of the financial system.** Since March 2020, the SARB has increased the provision of short- and medium-term funding to the banking sector, to address strains in the wholesale funding market. Some regulations have been temporarily relaxed to allow banks to draw down on their capital and liquidity buffers, and to encourage a continued flow of credit into the economy. The SARB has partnered with government and various commercial banks to give effect to a loan guarantee scheme, which will temporarily increase the supply of credit to small and medium enterprises (SMEs) to allow them to cover their operating costs, while also providing for appropriate risk-sharing between banks and government. The SARB has also moved to address signs of dysfunction in the government bond market by purchasing securities in that market.<sup>1</sup> Finally, cumulative repurchase rate (repo rate) reductions totalling 275 basis points since the start of 2020 are expected to support the debt repayment capacity of firms and households. A variety of additional policy tools is available should further measures to support financial stability be required.

<sup>1</sup> These purchases are taking place in the secondary market.

# Chapter 1: Financial stability risks and system resilience

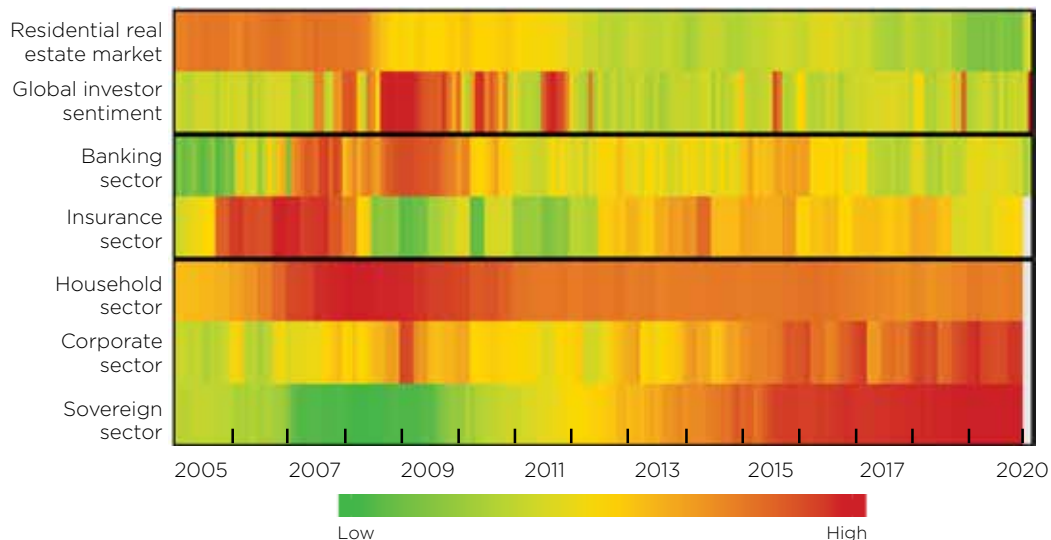
## Risk assessment

**The South African Reserve Bank (SARB) monitors a wide range of sectors, asset markets and financial intermediaries for signs of financial stability risk.** No single indicator can provide a comprehensive view of financial stability risk, thus a multitude of quantitative tools is used to support a qualitative assessment of risk.

**The financial stability heat map (Figure 1) is a visual depiction of various risk indicators.** It provides an easy-to-interpret overview of the evolution of risk across different parts of the economy. Box 1 outlines the key elements of the heat map.

**The data in the heat map are released with a lag, so they do not capture the full effects of COVID-19.** Depending on the scale and duration of the economic shock caused by COVID-19, the heat map could change substantially over the coming months. Grey areas in the heat map reflect sections for which data are not yet available.

Figure 1: Financial stability heat map





### Box 1: The financial stability heat map explained

**A heat map is a diagram with data values represented by colours.** It provides a compact and easy-to-grasp depiction of a large amount of data, making it easier to identify patterns and trends.<sup>1</sup> The heat map is a useful tool for financial stability risk analysis, as it provides a broad overview of the financial system over time.

**The South African Reserve Bank (SARB) relies on best practice for transforming data into a visual depiction of risk.** Following the methodology of Arbatli and Johansen (2017),<sup>2</sup> raw indicators are transformed so that the increases in each indicator can be interpreted as an increase in risk. This entails normalising each indicator so that all the observations are in the range of 0-1.<sup>3</sup> If a normalised indicator equals 0.6, for example, it means that 60% of the historical values of the indicator are less than or equal to the most recent observed value. Indicators are aggregated into categories. The category average is then mapped to a continuous colour bar, where 0 is green and 1 is red.

#### The South African heat map currently consists of seven categories:

- The **residential real estate market category** consists of two indicators: the annual growth rate of the Standard Bank House Price Index, and mortgage loans as a share of total loans.
- The **global investor sentiment category** consists of the Chicago Board Options Volatility Index (VIX) as a one-sided and double-sided indicator of risk appetite. The VIX is included as a double-sided indicator because both high and low values could point to increased vulnerability.<sup>4</sup> Thus, the two-sided VIX goes red when approaching both 0 and 1, and green as it approaches 0.5.
- The **banking sector category** consists of five indicators, namely: averages for the sector-wide value of assets to equity, impaired advances to gross loans and advances, the liquidity coverage ratio (LCR), the assets-to-gross-domestic-product (GDP) gap, and the credit-to-GDP gap. This category provides a composite measure of the buffers in the banking sector to both solvency risk (the equity buffer) and liquidity risk (the LCR), as well as an indication of the level of credit risk building up in the system.
- The **insurance sector category** comprises five indicators, all sector-wide, namely: the assets-to-GDP gap, the combined ratio<sup>5</sup> (non-life), growth in gross written premiums (life and non-life), the individual lapse ratio (life), and the solvency capital requirement (SCR) (life and non-life). This category provides a composite measure of the degree of risk taking by insurers, the growth in new business, underwriting profits, and buffers in place to absorb an adverse shock.
- The **household sector category** consists of three indicators: the debt-service-cost-to-disposable-income ratio, the debt-to-disposable-income ratio, and the debt-to-GDP ratio.

1 L. Wilkinson, and M Friendly, 2009, 'The history of the cluster heat map', *The American Statistician* 63(2), pp 179-184.

2 E C Arbatli and R M Johansen, 2017, 'A heat map for monitoring systemic risk in Norway', *Norges Bank staff memo* 10.

3 This normalisation is done on the basis of each indicator's empirical cumulative distribution function.

4 For example, see the 'Volatility paradox' discussion in: M Brunnermeier and Y Sannikov, 2011, 'A macroeconomic model with a financial sector', *American Economic Review* 104(2), pp 379-421.

5 The combined ratio is an indicator of the underwriting profit. It is calculated as net claims and expenses incurred divided by net premiums written.



- The **corporate sector category** comprises three indicators for the non-financial corporate (NFC) sector: the debt-to-GDP ratio, the debt-to-net-operating-profit ratio, and the interest coverage ratio.<sup>6</sup>
- The **sovereign sector category** makes use of a single indicator: the gross government debt-to-GDP ratio.

**The heat map is an important input into the SARB's financial stability monitoring process.** Its relative simplicity presents both pros and cons. On the one hand, it provides a broad, consistent view of changes in certain financial variables over time. On the other hand, it only includes a subset of financial variables, and it aggregates these variables without assigning weights to them. Therefore, risk build-up in other areas of the economy, or in only one indicator, might be missed. Also, trend changes in some variables can occur, which may send misleading signals in the heat map (many indicators are assumed to be mean-reverting). It is therefore important to use the heat map alongside various other risk identification tools. The heat map is a 'living' indicator and is updated from time to time in line with international best practice.

<sup>6</sup> The interest coverage ratio demonstrates the degree to which a firm's earnings before interest and taxes (EBIT) cover its annual interest expenses.

**The heat map suggests rising risk in the household, corporate and sovereign categories.** In the sovereign category, this reflects a persistent increase in debt (as a share of gross domestic product (GDP)) over the past decade. In the household and corporate categories, slow income growth has given rise to fragility among certain categories of borrowers. Meanwhile, the banking and insurance sectors appear less at risk in the heat map because of their relatively high profitability ratios (despite these having come down in recent years) as well as substantial capital, solvency and liquidity buffers.

**The outlook for the economy has deteriorated, and debt servicing risks have increased.** Since the previous *Financial Stability Review (FSR)*, domestic bond yields have increased, equity prices have fallen, and the exchange rate has depreciated significantly. These market moves have raised the cost of obtaining finance in capital markets. The SARB has responded to the deteriorating outlook with repurchase rate (repo rate) reductions totalling 275 basis points so far in 2020. As a result, the repo rate is currently at a record low of 3.75%. While this has translated into reduced borrowing costs for those with repo-linked debt, the recent downturn in economic activity is expected to weaken the ability of borrowers to service debt and to reduce both the demand for, and supply of, credit. The financial stability risks associated with episodes of tighter market-based financing conditions and a fall in GDP growth tend to be much greater if they follow a period of risk build-up in the financial system.

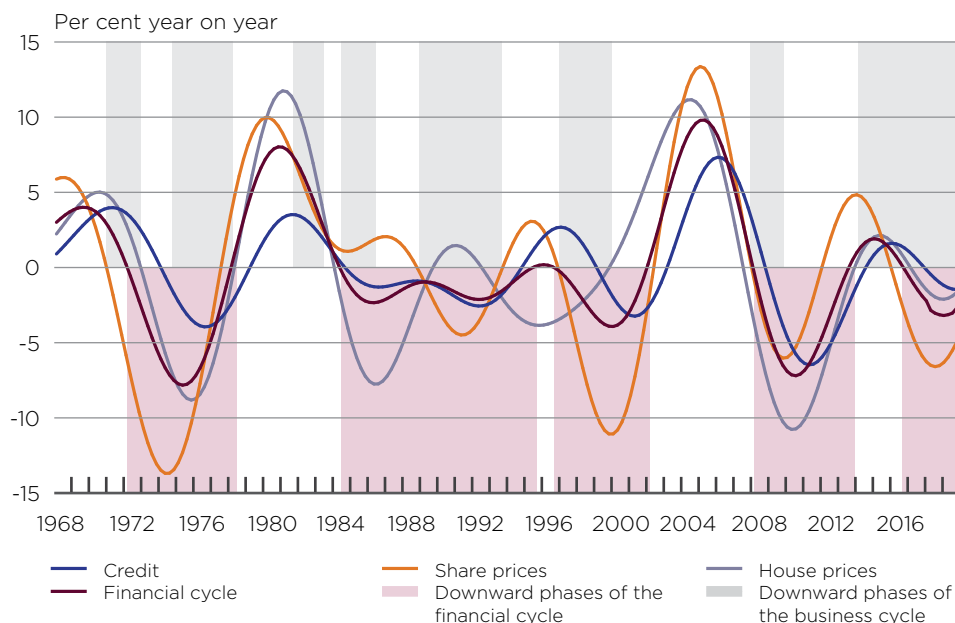


**An important indicator of overall risk build-up in the financial system is the financial cycle.** The financial cycle is measured by the co-movement of a set of financial variables, including credit growth, real estate price growth and equity price growth. Upward phases of the financial cycle are typically associated with rising financial stability risk. The financial cycle is currently in a downward phase, which began in the fourth quarter of 2016 (see Figure 2). Furthermore, all three subcomponents are in a downward phase. This suggests that the COVID-19 shock has not come at a time of excessive risk taking.

**An indicator of risk build-up in the private sector is the credit-to-GDP gap.**<sup>2</sup> This indicator is used as a key input into the Financial Stability Committee's (FSC) decisions over the use of the countercyclical capital buffer (CCyB).<sup>3</sup> The credit-to-GDP gap is currently slightly negative as credit extension has been below its long-term trend since 2015 (see Figure 3). Disaggregating this measure, one can see that household credit has been growing well below trend, while corporate credit growth has been roughly in line with its historical trend (corresponding to a gap of zero).

**Private sector credit does not appear to have been excessive in the recent past.** However, some household and corporate borrowers are facing elevated debt levels and debt service problems. While certain borrowers are excessively leveraged, the primary challenge faced by the private sector is one of slowing income growth and a weak business environment.

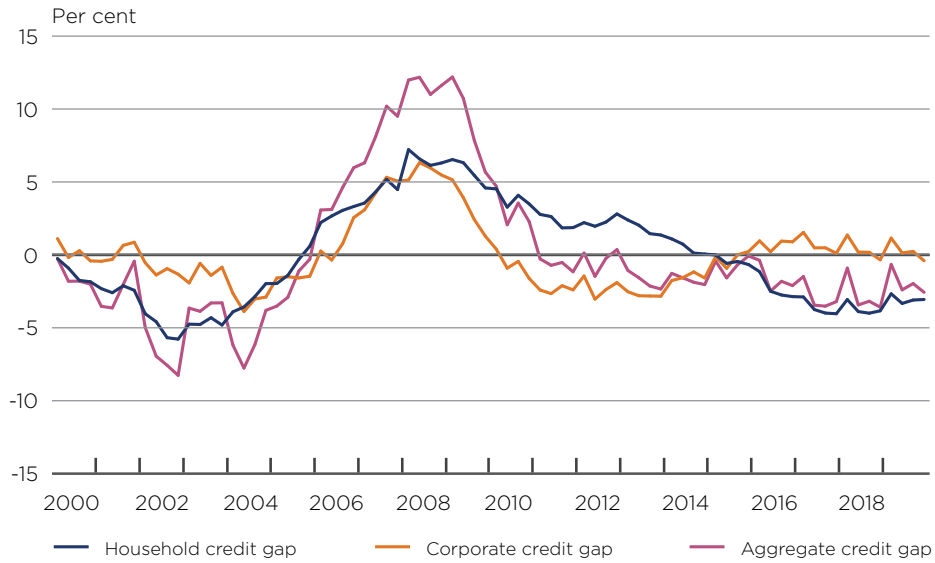
**Figure 2: The South African financial cycle**



Source: SARB

- The credit-to-GDP gap is defined as the difference between the private credit-to-GDP ratio and its long-run trend.
- The countercyclical capital buffer (CCyB) is a capital buffer that is applied to the banking sector when credit growth is above trend, to encourage the building of buffers during times of exuberance. The CCyB is intended to be released if credit growth falls sharply, to cushion the impact of a downturn in lending.

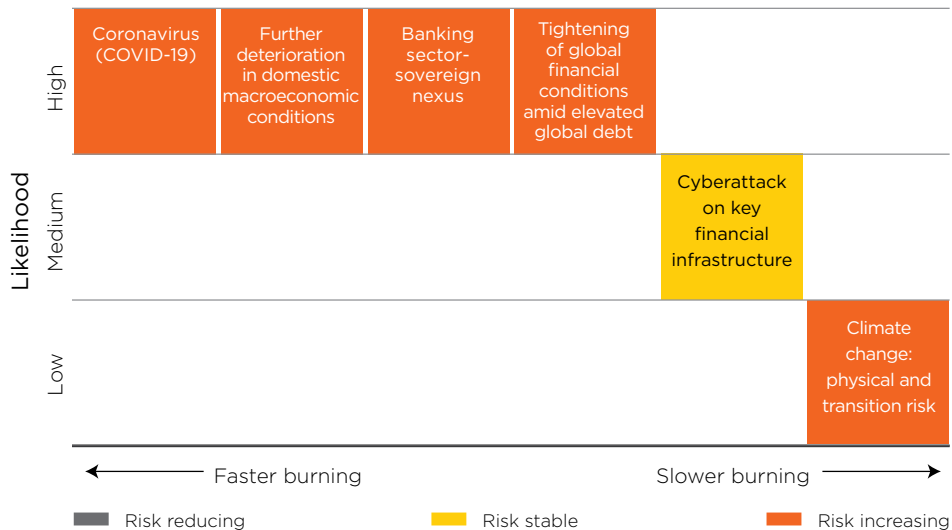
**Figure 3: The credit-to-GDP gap**



Source: SARB

**The SARB’s risk assessment matrix (RAM) captures the main risks to financial stability over a medium-term horizon.** These risks are identified using quantitative indicators (including those discussed above) as well as a qualitative assessment by the FSC of the SARB. Financial stability risks are categorised on the basis of their likelihood of occurring.<sup>4</sup> The current RAM has an unusually large number of high-likelihood risks, reflecting the particularly challenging domestic and global environment. Each of the risks captured in the RAM is briefly discussed below.

**Figure 4: Risk assessment matrix**



Source: SARB

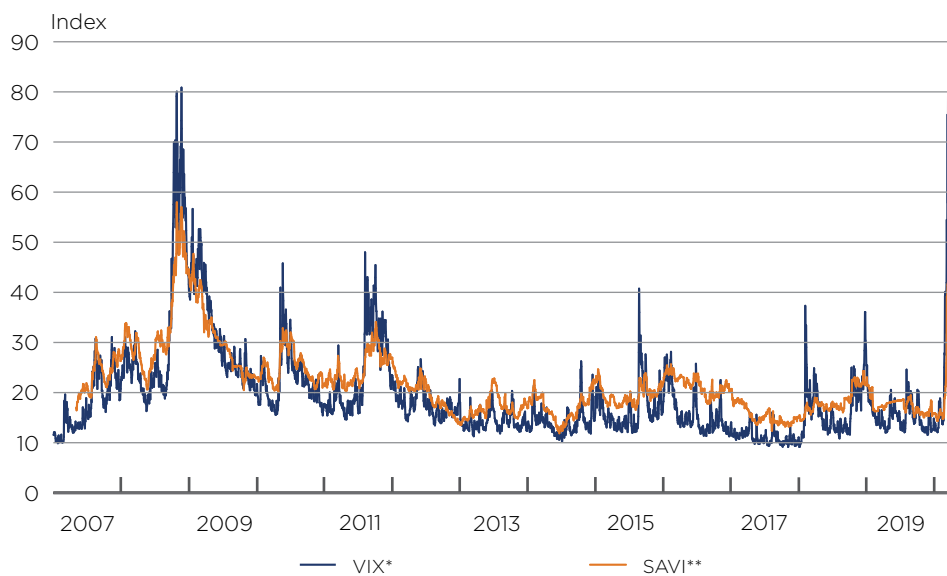
<sup>4</sup> In other words, likelihood in this context does not speak to the probability of an event occurring, but rather to the probability that an event will cause financial instability in the absence of any policy intervention.

## COVID-19

**COVID-19 has created a health emergency, but also significant financial stability risks.** The virus has spread quickly across the world, forcing South Africa's government, along with many others, to institute containment measures, including a shutdown of non-essential activity. The resulting shock to the economy has been swift and pronounced.

**Financial markets have responded rapidly to the potential economic impact of COVID-19.** Volatility in financial markets has reached levels last seen during the global financial crisis (see Figure 5). The JSE Limited (JSE) All-Share Index (Alsi) shed 12% and the JSE Financials Index 32% during the first four months of 2020. The rand depreciated by 33% against the United States (US) dollar over the same time frame. Risky assets in other parts of the world have experienced losses of a similar magnitude. Illiquidity in some markets has made price discovery and trading more challenging, potentially inhibiting the efficiency of financial intermediation.

**Figure 5: Global and domestic measures of financial market volatility**



\* The Chicago Board Options Volatility Index (VIX) is a proxy for US equity market volatility.  
\*\* The South African Volatility Index (SAVI) is a proxy for South African equity market volatility.

Source: Bloomberg

### **The short-run cost of COVID-19 will be significant for the financial sector.**

Banks have already recorded losses on their holdings of financial assets, and are expected to experience an increase in non-performing loans (NPLs) over the coming months.<sup>5</sup> The insurance sector is likely to face higher policy lapse rates as well as higher payout costs for claims relating to, among other things, business interruption, income protection, travel insurance, death and morbidity. Asset growth across the sector is also expected to be curtailed.

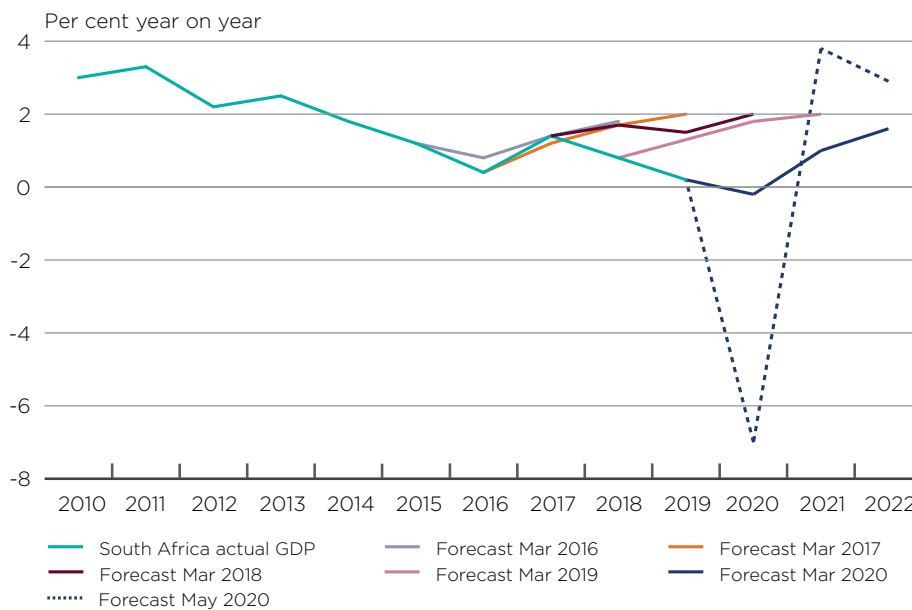
<sup>5</sup> A non-performing loan (NPL) is defined as a loan that is 90 or more days overdue.

**COVID-19 also poses longer-term financial stability risks.** These risks depend, to a large extent, on the duration and severity of the economic and health impact of the virus. For example, business continuity could be affected if infection rates reach elevated levels. The longer economic activity is curtailed, the greater the risk that the economy will not return to its pre-virus state. Chapter 2 provides a more detailed discussion of the financial stability risks associated with the virus.

## A further deterioration in domestic macroeconomic conditions

**GDP growth in South Africa has persistently surprised to the downside in recent years.** Economic activity has underperformed relative to the SARB's expectations (and those of most analysts), resulting in continuous downward revisions to the growth outlook (see Figure 6). At the end of 2019, the economy was in a technical recession and in the longest business cycle downturn on record. Clearly, the COVID-19 pandemic struck at a time of macroeconomic vulnerability. The SARB expects a GDP contraction of 7% in 2020, the first full-year growth decline since 2009. This represents a substantial shock to the economy, as the worst full-year GDP growth performance in South Africa's post-World War II history was -2.1% in 1992.

**Figure 6: Annual GDP growth and the evolution of the SARB forecast**



Source: SARB

**The decline in domestic growth over the past five years is mostly due to structural factors.** The SARB's estimate of the economy's growth potential has fallen consistently, from approximately 3% for 2014 to 0.6% for 2019. Structural challenges – including skills shortages, infrastructure constraints (particularly in the energy sector) and policy uncertainty – have curbed the capacity of the economy to grow. While the SARB does anticipate an

economic recovery after COVID-19 is contained, it is likely to be a relatively muted one due to these structural constraints. GDP is expected to grow by 3.8% in 2021 and 2.9% in 2022. The projection of a sharp contraction in 2020 and a relatively weak recovery implies that the level of real GDP in 2022 is likely be lower than that of 2018. As a result, financial firms could face challenges rebuilding capital buffers if they are worked down over the coming months. Should the economic downturn be deeper or more protracted than currently expected, financial stability risks will escalate.

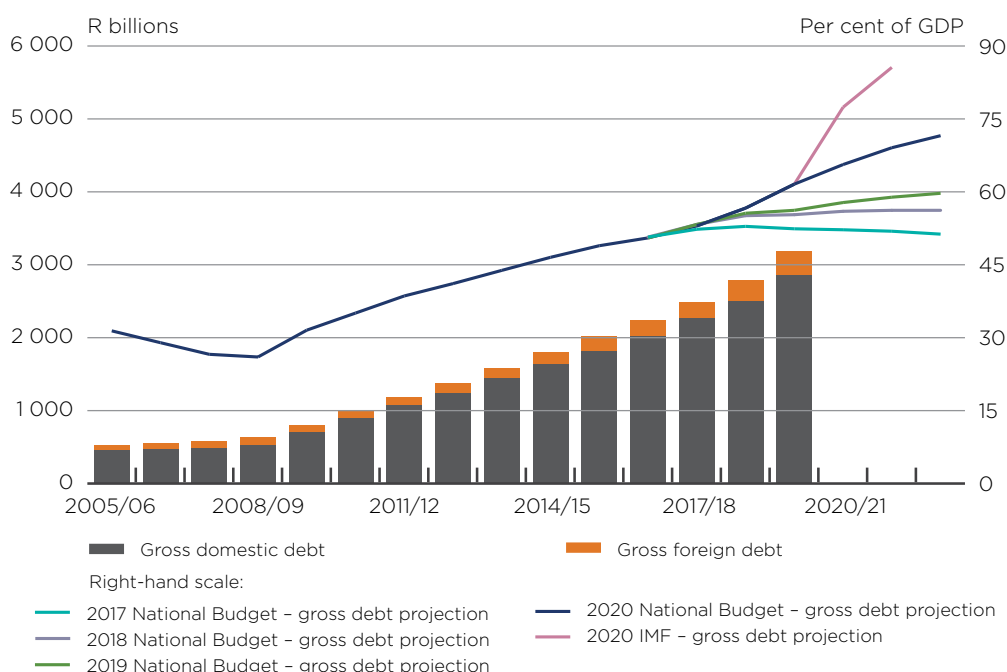
## Banking sector-sovereign nexus in South Africa

**The financial soundness of the banking sector and the sovereign are closely linked.** Linkages operate in both directions and include the facts that: government is the single largest debtor of the domestic banking sector, government financing costs influence those of the private sector, the actions of government affect the economy and the performance of the financial sector, and government typically acts as a backstop to the banking sector in the event of a bank failure.

**The banking sector-sovereign nexus is presently a threat to financial stability due to government's large and increasing financing requirements.**

The 2020 National Budget projected a budget deficit of 6.8% of GDP for the current fiscal year, which would have been the largest in South Africa's post-apartheid history. However, since the National Budget was tabled in February, the economic outlook has deteriorated, and government has announced a substantial fiscal stimulus package in response to the COVID-19 outbreak. Therefore, public expenditure is likely to be significantly higher than initially expected and tax revenues are set to underperform.

**Figure 7: South Africa's government debt-to-GDP ratio**



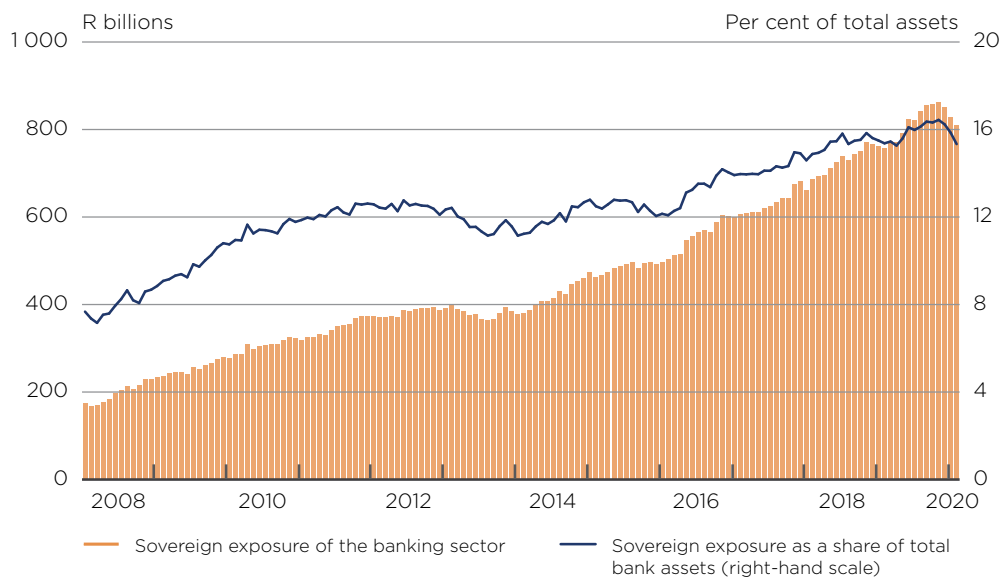
Sources: IMF and NT

As a result, the International Monetary Fund (IMF) has projected that South Africa's government budget deficit will reach 13.3% of GDP in 2020 and 12.7% of GDP in 2021. Given these large deficits, the IMF expects a rapid increase in gross government debt to 85.6% of GDP in 2021.<sup>6</sup> If this forecast does transpire, government debt as a share of GDP will have trebled over a 12-year period.

**South Africa's sovereign credit ratings have all been lowered to sub-investment grade.** In March 2020, Moody's Investors Service (Moody's) became the last major credit rating agency to reduce South Africa's local and foreign currency credit rating to sub-investment grade. As a result, South Africa's government bonds were excluded from the FTSE World Government Bond Index (WGBI) on 1 May 2020. This is an index passively tracked by a large number of investors globally. Moreover, many international bond funds are mandated to invest only in securities with a credit rating above investment grade. Consequently, the credit rating downgrade is expected to reduce the potential pool of investors into South Africa's government bonds, with negative implications for government's long-term cost of borrowing.

**At the same time that sovereign creditworthiness has deteriorated, banking sector exposures to the sovereign have increased.** Sovereign exposures account for more than 15% of total banking sector assets, having roughly doubled over the past 12 years.<sup>7</sup> Therefore, deteriorating fiscal metrics appear to have translated into adverse investor perceptions of the banking sector's creditworthiness.

**Figure 8: South African banks' sovereign exposure as a share of total assets**



<sup>6</sup> International Monetary Fund, 2020, Fiscal Monitor. <https://www.imf.org/en/Publications/FM/Issues/2020/04/06/fiscal-monitor-april-2020>

<sup>7</sup> Sovereign exposures include loans and securities with the central government, municipalities, the central bank and public sector entities as counterparties.



This has the effect of pushing up bank funding costs (all other things equal) and, in turn, is placing upward pressure on borrowing costs for the end users of finance.

**Banks are increasingly accounting for the risks associated with their sovereign exposures.** The Basel standards for bank capital requirements include a national discretion that allows jurisdictions to apply a zero-risk weight to sovereign exposures denominated and funded in domestic currency, regardless of their inherent risk. South Africa exercises this discretion. All domestic banks that follow the standardised approach to modelling credit risk apply a zero-risk weight to their sovereign exposures, hence they hold no capital against these exposures. Conversely, the domestic banks that use the internal ratings-based (IRB) approach to modelling credit risk (including most of the country's largest banks) apply a non-zero-risk weight to their sovereign exposures. As these banks continuously model risks in their portfolios rather than applying standard guidelines, IRB banks' risk weights for sovereign exposures have been increasing in line with the rising public debt burden and deteriorating sovereign credit ratings. Sovereign risk weights generally serve as a floor for other exposures. Therefore, IRB banks are having to hold more capital against not only their sovereign exposures, but some of their private sector loans too. This is expected to constrain lending and increase the cost of credit over time.

**Government has historically acted as a backstop to the banking sector.** During previous bank failures, government has, on occasion, been required to provide equity injections or guarantees to either recapitalise a bank or ensure that its depositors are compensated (up to a predefined amount). The SARB and National Treasury (NT) are in the process of establishing a deposit insurance and bank resolution framework, which will reduce the requirement for public sector funds to be mobilised in the event of a bank failure. However, the Financial Sector Laws Amendment Bill, which gives effect to these changes, has not yet been promulgated. Consequently, a public sector backstop may be required should a bank face solvency challenges as a result of COVID-19. This could place further pressure on the public sector's balance sheet and may result in the provision of a more limited backstop than would be the case if government had more fiscal space.

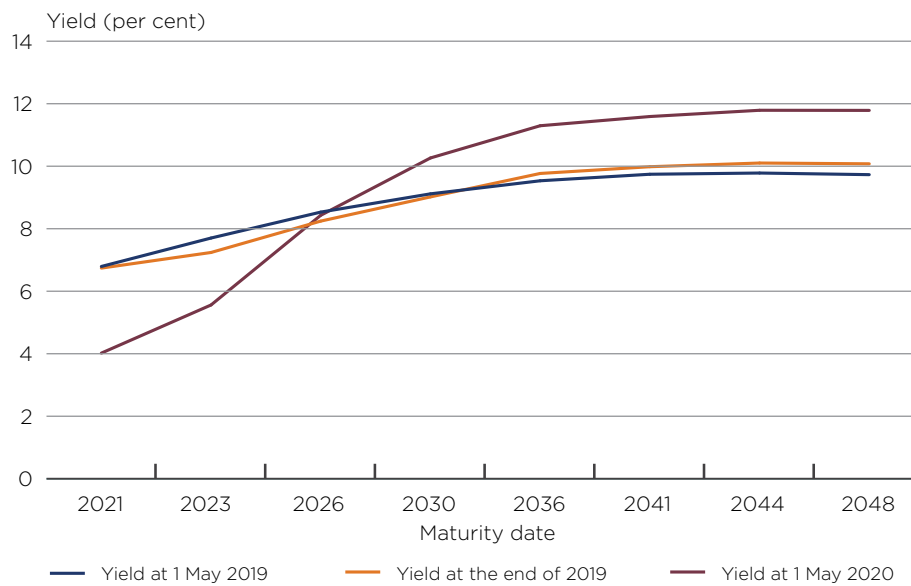
**Many private sector debt instruments are priced relative to sovereign bonds.** It is common in financial markets for a corporate bond to be issued at a yield relative to a similar-maturity government bond. Therefore, further public debt accumulation can be expected to raise the benchmark for other market-based financing costs. This could make it more expensive for some private sector borrowers to refinance their debt and invest in new projects. Moreover, the SARB sets monetary policy with the South African country risk premium in mind. A higher equilibrium level of country risk is associated with a higher repo rate, all things equal.<sup>8</sup>

<sup>8</sup> The South African Reserve Bank's (SARB) estimate of the country risk premium is derived from a measure of sovereign borrowing costs known as the EMBI+ spread. The neutral country risk premium is a key input into the SARB's calculation of the neutral real interest rate. The neutral real interest rate is the theoretical rate required to achieve the inflation target and a zero-output gap in an equilibrium setting. For more on this issue, see the SARB's *Monetary Policy Review* of October 2019.



**Government's borrowing costs have increased in response to mounting fiscal risk.** The sharp increase in government's funding requirements alongside heightened risk aversion across financial markets has resulted in substantially higher government bond yields, particularly for longer-duration debt (see Figure 9). As a result, the spread between short- and long-term borrowing costs is at a historically elevated level. Should longer-term bond yields remain elevated, government may be forced to adjust its fiscal stance.<sup>9</sup>

**Figure 9: The South African government bond yield curve**



Source: Bloomberg

**The banking sector-sovereign nexus poses three key risks to financial stability at this stage.** First, rising fiscal risks are placing upward pressure on borrowing costs across the economy, potentially exacerbating the adverse effects of COVID-19. Second, the capacity of government to provide a backstop to the banking sector is limited, which could make the sector more vulnerable to contagion. Third, the fiscal deficit for the current year is the largest in a century and will need to be reduced considerably over the medium term. This fiscal adjustment could impair the economic recovery from COVID-19.

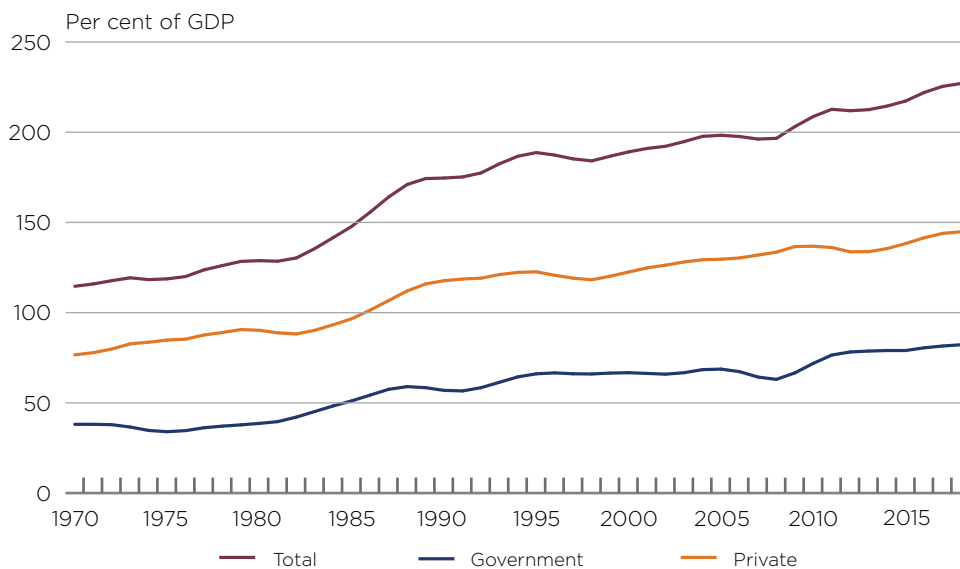
<sup>9</sup> See the 'Government' section of Chapter 3 (Sectoral overview) for further details on this matter.

## Tightening of global financial conditions amid elevated global debt

**Global financial conditions have been loose for a number of years.** A long period of historically low interest rates and large-scale central bank asset purchases in advanced economies have given rise to a low-cost and high availability of financing. In particular, low interest rates have encouraged a ‘search for yield’ by investors, leading many investment firms to allocate funds to riskier assets in an attempt to generate their targeted returns.

**The global stock of debt has been increasing consistently and is at an all-time high.** Both government and private sector debt has been rising steadily at the global level. Vulnerabilities are emerging as the sustainability of debt is, in certain cases, premised on a low interest rate environment and high levels of global liquidity. The World Bank recently pointed out that the upward drift in the current global debt cycle (which began in 2010) has reached proportions not seen in any of the previous three cycles, all of which ended in a regional or global crisis.<sup>10</sup> Risks are particularly pronounced for emerging market economies, where debt has increased the fastest.

**Figure 10: Rising global debt**



Data were calculated using the current US dollar-denominated GDP weights. They are shown as a three-year moving average.

Sources: IMF and World Bank

<sup>10</sup> World Bank, 2019, *Global waves of debt: causes and consequences*. <https://www.worldbank.org/en/research/publication/waves-of-debt>.

### The recent bout of risk aversion has placed pressure on some borrowers.

Higher-risk borrowers in capital markets have experienced a rise in their relative cost of borrowing as investors have moved into safe-haven assets. These higher borrowing costs have been partially alleviated by aggressive monetary policy easing measures by advanced economies, including short-term interest rate cuts, quantitative easing, and the provision of low-cost, longer-term credit to the banking sector. Such aggressive measures are imperative to support economic growth during this extraordinary shock. However, they may also give rise to greater financial stability risk over the medium term if they facilitate increased risk taking by financially vulnerable entities. This, in turn, could make such entities even more susceptible to changes in financing conditions in future.

**Figure 11: Financial conditions indices for selected advanced economies**



A higher level for the financial conditions index is associated with tighter financial conditions.

Source: Bloomberg

## A cyberattack on key financial infrastructure

### Technological dependency continues to increase in the financial sector.

Technology is an important tool for enhancing efficiencies, reducing longer-term operating costs, and allowing for improved risk analysis. But the ever-increasing connectivity of systems and stakeholders through technology also poses increased risk should a firm's systems become compromised.

### Financial institutions are attractive targets for cyberattacks because of their crucial role in intermediating funds.

In a large-scale global survey of business risks conducted by Allianz for 2020, cyber-related incidents were ranked as the number-one risk for the financial services industry.<sup>11</sup>

<sup>11</sup> Allianz, 2020, *Risk barometer*. <https://www.agcs.allianz.com/content/dam/onemarketing/agcs/agcs/reports/Allianz-Risk-Barometer-2020.pdf>.

**Cyberattacks can impact financial institutions' systems and data through three main channels: integrity, confidentiality and availability.**<sup>12</sup> Integrity challenges relate to the abuse of systems and/or data, for example through fraud. Confidentiality issues are caused by unauthorised third-party access to data. Availability issues arise as a result of disruptions to the functioning of financial systems and infrastructure. In each case, firms can incur substantial direct and indirect losses.<sup>13</sup>

**Cyberattacks on financial institutions are attempted daily.** The vast majority of attacks does not pose a systemic risk. Nor have there been any cyberattacks, domestically or globally, that have resulted in financial instability.<sup>14</sup> However, attacks that are able to spread across many institutions, access large amounts of sensitive data or disrupt important financial market infrastructures could pose a risk to financial stability. Furthermore, attacks that significantly erode public confidence in a financial institution could precipitate a systemic crisis, even if they do not cause meaningful direct harm to an institution. An example of this type of risk was the rapid withdrawal of deposits from one of Bulgaria's largest banks in 2014, which was linked to phishing emails claiming the bank was experiencing a liquidity problem.<sup>12</sup>

## Climate change: physical and transition risks

**The focus of policymakers globally has shifted to COVID-19, but climate change is still one of the biggest threats facing the world today.** It is causing long-term variations in temperatures and weather patterns, threatening everything from food security to national infrastructure.

**From a financial stability perspective, the SARB is concerned about two distinct classes of climate risk:**

- **Physical risks:** The increasing frequency and severity of climate change-related events may cause substantial losses for banks, insurance companies and other financial institutions with exposure to the affected industries or assets. An example of this type of risk is a flood which damages property, causing losses to the company which provided insurance for the property.
- **Transition risks:** These are the financial risks associated with an adjustment towards a lower-carbon economy. Changes in public preferences, policy, business models and global standards related to environmental issues can cause a large and rapid reassessment of the value of certain assets and income streams. This can have serious implications for investors and

<sup>12</sup> A Bouveret, 2018, 'Cyber-risk for the financial sector: a framework for quantitative assessment', *International Monetary Fund Working Paper 18/143*.

<sup>13</sup> Indirect losses may occur, for example, as a result of legal action taken by third parties whose data were compromised.

<sup>14</sup> P Warren, K Kaivanto, and D Prince, 2018, 'Could a cyberattack cause a systemic impact in the financial sector?', *Bank of England Quarterly Bulletin 2018 Q4*.

financial institutions if they have large exposures to assets whose values have been drastically written down (often referred to as 'stranded assets').

**Transition risks are arguably more important from a financial stability perspective.** This is due to the economy's significant reliance on coal-powered energy, raw-mineral exports, and the production of fuel and related products. As a result of this reliance, South Africa is one of the largest carbon emitters per unit of GDP output. Shifting expenditure and investment decisions, driven by a global imperative to reduce greenhouse gas emissions, could result in large revaluations of carbon-intensive assets and activities in South Africa. According to the Climate Policy Initiative think tank, 'South Africa faces transition risks approaching R1.8 trillion in present value terms if the world achieves a path consistent with the Paris [climate accord] targets'.<sup>15</sup>

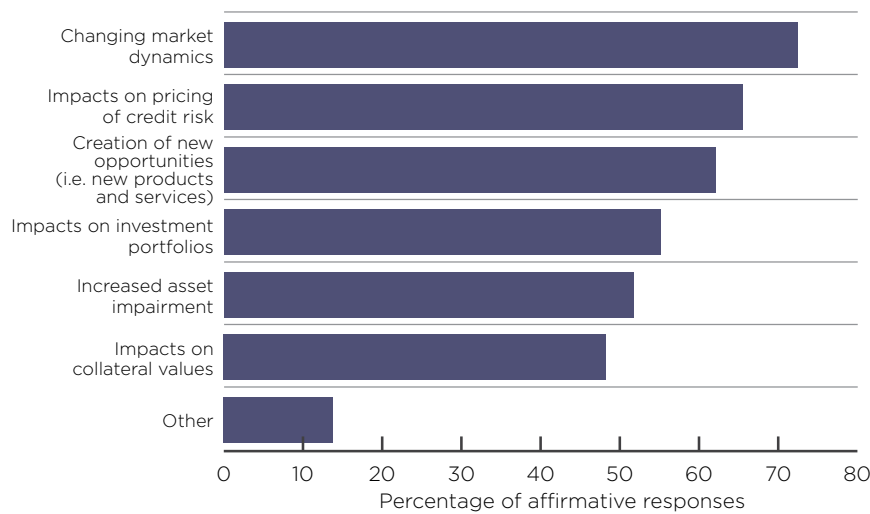
**It remains difficult to predict the timing and magnitude of future climate-related financial stability risks.** This is because both physical and transition risks are difficult to forecast. It is made even more challenging by the fact that climate risk disclosures by the South African financial sector remain limited, and these exposures have not been stress-tested against different physical and transition risk scenarios.

**A recent survey of the banking and insurance sectors by the Prudential Authority (PA) shows that the industry is concerned about climate risks.** Half of the life insurers surveyed indicated that climate change is likely to impact on their investment portfolios, while slightly more than half of the non-life insurers expect it to result in increased liability claims. Banks are also sensitive to climate impacts, with two-thirds of those surveyed indicating that climate change will affect their pricing of credit risk. While the risks are significant, climate change also presents opportunities for the sector.

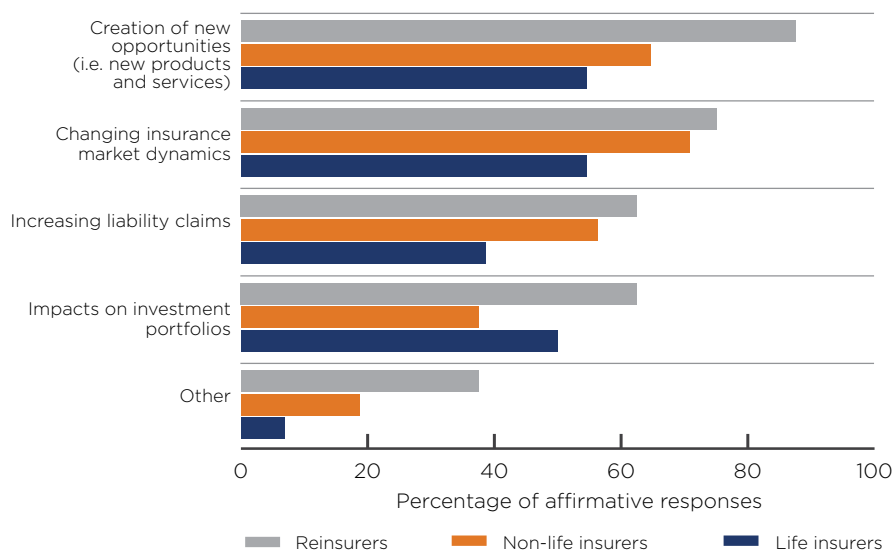
**Adapting business models and risk management practices to account for climate change is imperative.** Enhanced disclosures and new approaches to modelling climate risk are required. Some financial firms are more advanced than others in this regard. The SARB is actively engaging with the financial sector on this issue.

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<sup>15</sup> Climate Policy Initiative, 2019, *Understanding the impact of a low carbon transition on South Africa*. <https://climatepolicyinitiative.org/wp-content/uploads/2019/03/CPI-Energy-Finance-Understanding-the-impact-of-a-low-carbon-transition-on-South-Africa-March-2019.pdf>.

**Figure 12: Areas that banks believe will be affected by climate change**

Source: PA

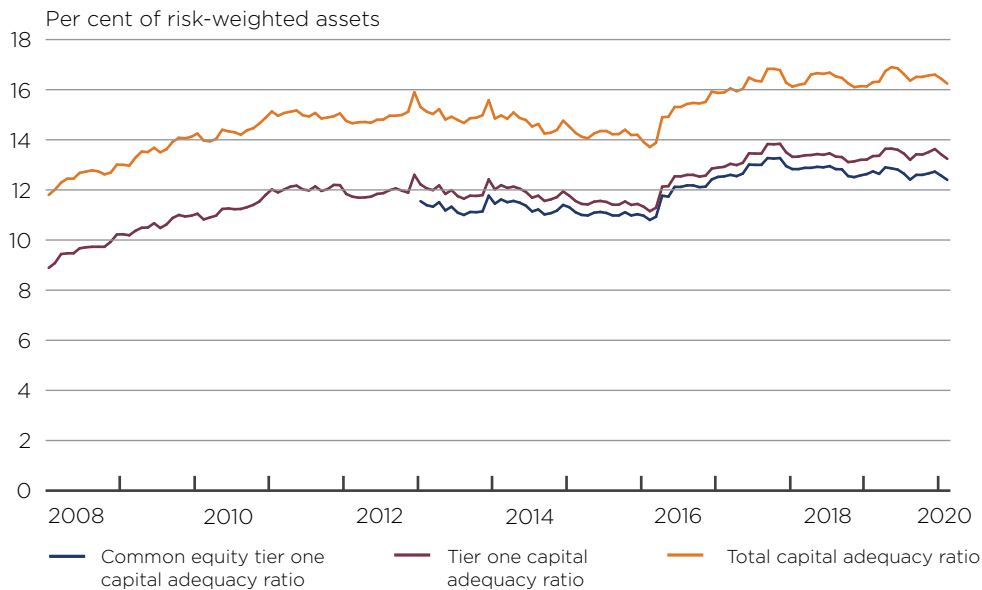
**Figure 13: Areas that insurers believe will be affected by climate change**

Source: PA

## Resilience statement

**South Africa's financial system is facing a challenging environment, but remains resilient.** The SARB has put in place a comprehensive regulatory framework, which has ensured that financial firms have substantial capital and liquidity buffers in place to absorb shocks.<sup>16</sup> For example, the total capital adequacy ratio (CAR) of the banking sector has increased by more than a third since 2008 (see Figure 14). Capital buffers allow firms to absorb losses during periods of stress, like the one currently being experienced, which reduces the likelihood of a sharp contraction in credit provision.

<sup>16</sup> Further information on these buffers and other regulatory enhancements is provided in Chapter 2.

**Figure 14: Average capital adequacy ratios for the domestic banking sector**

Sources: PA and SARB

### The SARB conducted a common scenario stress test of the banking sector in 2018.

The stress test included two severe but plausible macroeconomic scenarios, and was conducted on the six largest banks.<sup>17</sup> One scenario assumed a sharp recession and a relatively rapid recovery (the so-called ‘V-shaped scenario’), with GDP growth over the four worst consecutive quarters of the scenario averaging -4.8%. The other scenario modelled a longer but shallower downturn (the so-called ‘L-shaped scenario’), with a recession that lasted almost three years. Over the three-year horizon for both scenarios, all banks maintained adequate levels of capital without taking mitigating actions. On average, the banking sector’s capital position is currently similar to where it was when the stress test was conducted. It is difficult to compare the scenarios in the stress test with the current economic projections, as the scenarios were based on different assumptions and a different starting point for the economy. Nevertheless, the stress test results do highlight the resilience of the banking sector to a severe shock.

### Financial stability and the stability of market prices are not the same.

Financial stability requires that financial institutions are able to intermediate funds in an uninterrupted manner and that confidence in the financial system remains intact. Volatility in the price of financial assets such as equities and currencies does not pose a threat to financial stability as long as these movements do not unduly affect the solvency and liquidity positions of financial intermediaries or their clients. Some degree of price volatility is part of a well-functioning financial system because it reflects a repricing of

<sup>17</sup> The 2018 common scenario stress test focused on both the solvency position and the liquidity profile of the South African banking sector. For more detail, refer to the second edition of the *Financial Stability Review* of 2018.



assets as market participants react to changing conditions. Price movements encourage ongoing market activity and provide signals to intermediaries, which are important for the efficient allocation of capital. South Africa's relatively sophisticated financial markets facilitate hedging and risk transfer, which limits the vulnerability of market participants to volatility. However, should volatility lead to significant losses, excessive falls in collateral values or the failure of markets, it could pose a financial stability risk.

**The SARB has a number of measures in place to limit the direct exposure of banks to market risk.** While market movements will have some effect on the financial performance of banks, various regulations are currently in place to limit exposure to currency and equity price movements.

## SARB policy actions in response to COVID-19

**The SARB has adopted various policy measures in response to the economic impact of COVID-19.** These measures are all temporary and are intended to ensure that the financial sector remains stable for the duration of the shock caused by COVID-19.

**The SARB has made additional liquidity available to the banking sector.** After detecting strain in certain funding markets during March 2020, the SARB implemented a range of changes to its money market liquidity management operations. First, supplementary intraday overnight repurchase (repo) operations were introduced to provide intraday liquidity support to banks. Second, the main repo facilities were extended to include maturities of up to 12 months (significantly longer than the usual 7 days). Third, the lending and borrowing rates on standing facilities (the rates at which the SARB provides loans to, and takes deposits from, the commercial banks) were adjusted lower, to make borrowing from the SARB relatively cheaper and to reduce the attractiveness of depositing surplus cash at the SARB. This has encouraged on-lending by commercial banks and has discouraged the hoarding of liquidity. These measures straddle both monetary policy and financial stability policy as they are aimed at ensuring an effective transmission of monetary policy through the financial markets as well as the availability of sufficient liquidity for market participants.<sup>18</sup>

**The SARB has moved to purchase government bonds in the secondary market.** Purchases are being conducted across different maturities, with the aim of enhancing the functioning and liquidity of that market. Government bonds form the bedrock of the domestic financial system due to their importance as collateral in many transactions, a liquid asset used by banks for regulatory compliance, and a reference against which other financial assets

<sup>18</sup> For further details on the liquidity support measures introduced by the South African Reserve Bank (SARB) during March 2020, see the following press release on the SARB's website: <https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/9805/Further%20amendments%20to%20the%20money%20market%20liquidity%20management%20strategy%20of%20the%20SARB.pdf>

are priced. The sustained financing of government is also dependent on a well-functioning bond market. It is important to note that this intervention should not be regarded as quantitative easing, as it is not a monetary policy measure aimed at boosting inflation, but a technical intervention to ensure that the market continues to function smoothly.

**The PA has eased bank capital requirements.** The systemic risk capital buffer requirement (also known as Pillar 2A) has been temporarily reduced to zero from April 2020. The Pillar 2A buffer was previously set at 1% of the risk-weighted assets (RWAs) for all banks.<sup>19</sup> Banks have also been allowed to breach their capital conservation buffer requirement (set at 2.5% of RWAs) for the duration of the shock to economic activity caused by COVID-19. Prior to these changes, the weighted average minimum capital requirement for the banking sector (including all additional regulatory buffers) was 13.5% of RWAs. The sector was operating with a total CAR in excess of 16% at the start of 2020.

**The PA has adjusted the regulatory treatment of loans that are restructured as a result of COVID-19.** Up-to-date loans to retail clients as well as small and medium enterprises (SMEs) that are expected to remain in good standing after the disruptions caused by the virus end, have been allowed to restructure, for example through a payment holiday, without banks having to hold additional capital against these loans. This measure has allowed banks to provide temporary relief to financially sound clients. Forcing banks to increase their holdings of capital against such loans would likely exacerbate the effects of the current economic slowdown.

**The PA has reduced the liquidity coverage ratio (LCR) requirement for banks, from 100% to 80%.** The LCR requires banks to hold sufficient high-quality liquid assets (HQLAs) to cover a 30-day period of liquidity stress (high levels of funding withdrawals). This liquidity buffer is in place to be drawn down during exceptional circumstances. The recent financial market stress has caused the market price of banks' HQLAs (mostly government debt securities) to fall; at the same time the maturity profile of bank funding has shortened. Because of the way in which the LCR is calculated, increased short-term funding reduces banks' LCR level and raises the amount of HQLAs that has to be held to meet the requirement. In order to avoid a situation in which banks are increasingly forced to buy more government debt securities instead of facilitating a flow of credit to the private sector, banks have been allowed to operate with a lower LCR until market conditions normalise.

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<sup>19</sup> For further details on banks' capital requirements and the types of bank capital, refer to Chapter 2.



### **The SARB has partnered with NT to implement a loan guarantee scheme.**

A R200 billion loan guarantee scheme was introduced in April 2020. It will be underwritten by NT and implemented by the SARB in conjunction with the major commercial banks. Firms with a turnover of less than R300 million are eligible for loans through the scheme. The primary intention of the scheme is to provide finance to SMEs, so that they can continue to pay their operational expenses during this difficult time. The loans will cover up to three months of operating costs. Repayment of interest and capital will start six months after the initial drawdown of the loan. The scheme allows for risk and profit sharing between government and commercial banks. Applicants will be screened by banks and will only be eligible if they are up-to-date on their other loan obligations.<sup>20</sup>

### **The FSC has not opted to impose any macroprudential limits on the financial sector since the previous FSR.**

Macroprudential instruments are typically used to contain risk build-up in the financial system. The FSC is of the view that credit growth and the overall levels of risk taking are well contained. The recent COVID-19-related shock to the financial system has caused various strains, which the SARB is addressing through the microprudential regulations and financial market operations described above.

<sup>20</sup> For further details on the loan guarantee scheme, see the following press release on National Treasury's website: [http://www.treasury.gov.za/comm\\_media/press/2020/20200424%20Loan%20guarantee%20National%20Treasury.pdf](http://www.treasury.gov.za/comm_media/press/2020/20200424%20Loan%20guarantee%20National%20Treasury.pdf)

## **Box 2: The effects of a capital and liquidity requirement reduction – a stylised explanation**

**Banking sector regulation is complex and contains many caveats.** To explain the broad idea behind a capital and liquidity requirement reduction, this Box will adopt a stylised approach, which may not be accurate to the letter of the law but which captures the essence of the regulations.

**Let us start by looking at capital.** Capital, in an accounting sense, is the difference between the assets and liabilities of a firm, also known as 'shareholders' equity'. Regulatory capital is slightly different, as it is tiered based on quality and the ability to absorb losses. Tier one capital (the highest-quality kind) is expected to be the most loss-absorbing, in that it should allow a bank to continue functioning (rather than becoming insolvent) when losses are incurred. Tier one capital roughly approximates to shareholders' equity (or assets minus liabilities), with some adjustments for elements that are not expected to be loss-absorbing (e.g. goodwill and intangible assets). According to regulation, this capital is required to be held at a specified level relative to risk-weighted assets (RWAs).

**But what are RWAs?** A risk weight is applied to all bank exposures (which are mostly loans). This risk weight is adjusted based on the riskiness of the underlying exposure. Risk weights can vary between 0% and 1250% of the loan value. The riskier the exposure, the higher the risk weight and the higher the amount of regulatory capital that the bank must hold. It is important to note that, during an economic downturn, as more borrowers fail to repay loans (or are expected to do so), the risk weights for these loans will increase. Therefore, in tougher times, banks automatically have to hold more capital for the same loans compared to the amount of capital held



for those loans in normal times. The banking sector as a whole had approximately R5.7 trillion worth of assets at the end of 2019 (of which most were loans). However, it had approximately R3 trillion worth of RWAs.

**So why reduce the minimum capital requirement?** When banks experience losses, for example due to an increase in the share of loans that are unlikely to be paid back, their capital base is eroded. If a bank is operating close to its minimum capital requirement, it will face a choice: either raise more capital by issuing shares (or other capital instruments) in the market (in the process potentially diluting existing shareholders), or reduce the size of RWAs, so that capital relative to RWAs becomes larger. Given that bank share prices have fallen, on average, by about 45% since February 2020, raising capital by issuing new shares is not a very attractive proposition. Among other things, it would put even more downward pressure on share prices. Therefore, banks are much more likely to try and reduce their RWAs if they are operating close to the minimum capital requirement.

**There are basically two ways of reducing RWAs.** Banks can either reduce the average risk weight of their exposures, or they can just reduce the total size of their exposures. In either case, this is likely to result in less lending, especially to riskier projects. While banks should not take on excessive risk, some risk taking is inherent in banking. As discussed in Chapter 1, it does not appear as if aggregate risk taking by banks has been excessive in recent years. Therefore, a further reduction in risk taking, and in the size of bank loan portfolios, would depress the financial cycle and weigh on economic growth. By reducing the minimum capital requirement, banks are provided with additional scope to maintain their lending, even if some short-term losses are incurred. The majority of capital requirements remains, so banks still have substantial buffers in place should they experience losses beyond what the current capital requirement reductions provide for.

**What about liquidity requirements? How do they work?** The liquidity coverage ratio (LCR) is in place to ensure that if a large share of bank deposits is withdrawn at the same time (over a period of 30 days, to be exact), the bank will have enough assets that can be quickly turned into cash to be able to pay out these depositors. To calculate the LCR, the Prudential Authority (PA) looks at the different types of deposits and other funding instruments issued by a bank, determines whether they can be withdrawn in the next 30 days, and calculates what the risk of a full withdrawal is likely to be. Banks are required to hold high-quality liquid assets (HQLAs) against the value of the funds that can be, and are likely to be, withdrawn over a 30-day period of liquidity stress (high levels of funding withdrawals). HQLAs consist largely of public sector debt securities and debentures issued by the South African Reserve Bank (SARB), as these are the instruments that are most traded and most likely to retain their value during periods of financial stress. The importance of government bonds for their liquid-asset properties is a key reason for the SARB's recent interventions in the bond market.<sup>1</sup>

**So why reduce the LCR now?** Banks are currently experiencing a shift in their wholesale deposits (those provided by large corporations, especially asset managers). The shift involves a move from longer-term to shorter-term deposits. This is being driven largely by risk aversion. Non-banks realise that they may need additional liquid assets on hand to satisfy their own requirements for cash being created by the extraordinary economic climate. Therefore, while long-term bank deposits do not have any implications for the LCRs of banks, a shift to short-term deposits means that banks are seeing their LCRs reducing towards the minimum regulatory requirement.

<sup>1</sup> The interventions addressed dysfunction in the bond market, which, if sustained, would have compromised the ease with which government bonds could be traded and converted into cash.



**When banks face a breach of their LCR requirements, three alternatives are available.**

First, banks could reduce the size of their balance sheets (by making fewer loans). Less funding would then be required, making it possible to reduce the quantum of short-term deposits to ensure that the LCR remains above the minimum required level. Second, banks could attempt to attract longer-term deposits to substitute for the short-term ones. However, under the current circumstances, long-term deposits are difficult to attract, which means that banks would have to significantly increase the interest rates paid on these deposits to attract a sufficient amount. This would risk placing profitability under pressure, and might force banks to raise their lending rates to compensate for the higher funding costs. Higher lending rates would reduce the degree of stimulus provided by the recent repurchase rate (repo rate) reductions, an undesirable outcome. Third, banks could shift the composition of their assets away from illiquid assets (those not easily converted into cash) towards high-quality liquid ones. In general terms, this would involve a shift away from longer-term private sector loans towards shorter-term government debt. Such a shift would reduce credit access for businesses and households, potentially constraining a recovery in economic activity.

**Liquidity buffers are meant for a rainy day, and that day has arrived.** The LCR has been lowered to reduce the likelihood that banks rapidly curtail lending, attract much higher funding costs and/or shift the composition of their lending away from longer-term private sector loans. Nevertheless, at 80% the LCR requirement remains high enough for banks to retain a sufficient liquidity buffer in the event of further liquidity strains.

**Box 3: The key financial stability policy committees**

There are two key committees currently in place to monitor risks and oversee policy in the area of financial stability. One is internal to the South African Reserve Bank (SARB): the Financial Stability Committee (FSC). The other has a broader membership across South Africa's financial regulators: the Financial Stability Oversight Committee (FSOC).

**The Financial Stability Committee**

The FSC's aim is to operationalise the SARB's mandate of protecting and enhancing financial stability. In particular, it is tasked with ongoing financial stability risk monitoring, the development and implementation of policies to mitigate financial stability risks, and the restoration of financial stability if a systemic risk does materialise.

The *Financial Stability Review (FSR)* is the mechanism through which the FSC communicates its assessment of risks and any policy actions taken to address these risks.

The FSC has the following members:

- the SARB Governor (Chair);
- the three SARB Deputy Governors;
- other members of the SARB's Monetary Policy Committee (MPC); and
- heads of the SARB's policy departments (eight in total).

**The Financial Stability Oversight Committee**

The FSOC is a statutory committee consisting of various financial regulators, whose aim is to support the SARB in protecting and enhancing financial stability. It serves as a forum for these regulators to exchange views and share information on financial stability-related matters.



The FSOC may advise the SARB and National Treasury (NT), and may make recommendations to other organs of state, on appropriate steps to promote financial stability.

The FSOC meets at least twice a year, and consists of the following members:

- the SARB Governor (Chair);
- the SARB Deputy Governor responsible for financial stability;
- the Chief Executive Officer (CEO) of the Prudential Authority (PA) (currently also a SARB Deputy Governor);
- the Commissioner of the Financial Sector Conduct Authority (FSCA);
- the CEO of the National Credit Regulator (NCR);
- the Director-General of NT;
- the Director of the Financial Intelligence Centre (FIC); and
- a maximum of three additional persons appointed by the SARB Governor.

## Regulatory developments with financial stability implications

**The PA released the Large Exposures Framework (LEX) for public comment in May 2019.** It is aimed at providing a consistent basis for banks to measure, aggregate and control exposures to single counterparties or to groups of connected counterparties across their books and operations. The framework aims to limit the maximum exposure and potential loss that a bank could face in the event of a sudden counterparty failure. The PA is in the process of considering the public comments received before releasing the final draft of the framework. The LEX is expected to be implemented on 1 April 2021.

**As part of the 2020 Budget speech, the Minister of Finance announced substantial changes to South Africa's capital flow management framework.<sup>21</sup>** These changes involve a shift from the current negative bias framework, in which all foreign exchange transactions are prohibited except those included in the Currency and Exchanges Manual for Authorised Dealers, to a positive bias framework, in which all cross-border transactions are allowed, with the exception of a short list of exclusions aimed at preserving financial stability and combating illicit financial flows.

**The key capital flow management measures for preserving financial stability will remain.** These include the following:

- Cross-border foreign exchange activities will continue to be conducted through authorised dealers in foreign exchange regulated by the SARB.
- The prudential limits on the foreign exposures of institutional investors will remain intact.
- Banks' unhedged foreign currency exposures will remain limited to 10% of net qualifying capital and reserve funds, and will continue to be regulated by the PA.

The new capital flow management framework and accompanying regulations are expected to come into effect in 2021.

<sup>21</sup> The announced change to the framework is available on National Treasury's website, at <http://www.treasury.gov.za/documents/national%20budget/2020/review/Annexure%20E.pdf>



## Chapter 2: Themes

**This Chapter delves deeper into two themes that are currently top-of-mind in financial stability.** The themes are: 1) the financial stability implications of COVID-19, and 2) the ways in which banking sector resilience was enhanced over the past decade.

### Theme 1: The financial stability implications of COVID-19

**COVID-19 is not only a public health risk, but also a significant financial stability threat.** This section outlines the potential channels through which the virus may lead to financial instability. Possible mitigants and amplifiers to these channels of transmission are also discussed.

**Three main financial stability channels of transmission for the virus have been identified.** These are: the direct effects on human health, the impact of disruptions to economic activity, and financial market-related risks.

**The human health aspect of the virus could threaten operating capacity in the financial sector.** Should COVID-19 spread widely, financial infrastructure and service providers could struggle to operate in an environment of high absenteeism. Given the interconnectedness of the financial system and the reliance on certain firms to provide key services, financial stability may be disrupted by the disease itself. The degree to which most financial institutions have adopted technology is a partial mitigant against this risk. However, skilled staff remain an important part of financial service provision. The absence of staff can also make a firm more vulnerable to other risks, such as cyberattacks and fraud.

**The health impact could also have adverse effects on the insurance industry.** Various lines of insurance could be affected by the virus, including life insurance as well as disability, business interruption and credit life insurance. The insurance industry is adequately capitalised to absorb higher-than-expected claim levels. However, certain firms with high exposure to these business lines could come under stress. The SARB is closely engaged with the industry on this issue.

**The macroeconomic impact of the virus and the precautions taken against it are projected to be very significant for South Africa.** The resilience of the economy is hampered by a lack of fiscal space, which has constrained government's ability to provide stimulus in response to the challenging economic outlook. COVID-19 also comes at a time of relative fragility for



many borrowers. Weaker new business growth is expected for financial firms in 2020. However, the main negative impact on the sector is likely to occur through a rise in non-performing loans (NPLs). The deterioration in loan performance is expected to come through with a lag. As such, the full effect may only become apparent in late 2020 or early 2021. The economic effects of COVID-19 are being felt disproportionately across the economy, with certain sectors (such as hospitality and retail) being affected more than others.

**The duration of the constraints on economic activity will determine the longer-term risks.** A key risk for the economy is that large-scale business closures and job losses may ensue during the period of COVID-19-related disruption. If this becomes the case, the economy may not recover to its previous level of potential output once the virus has been contained. This could limit the future earnings prospects, and debt service capacity, of both households and firms. Furthermore, the possibility of slower medium-term growth increases if financially weak firms remain afloat but are not profitable enough to invest in new capacity or productivity-enhancing processes.<sup>22</sup>

**Banks and insurers are generally well positioned to absorb this shock.** Capital and solvency buffers provide space for financial firms to continue operating even as business conditions deteriorate. However, should economic activity remain weak after the immediate health emergency is over, the financial sector may face challenges in rebuilding buffers.

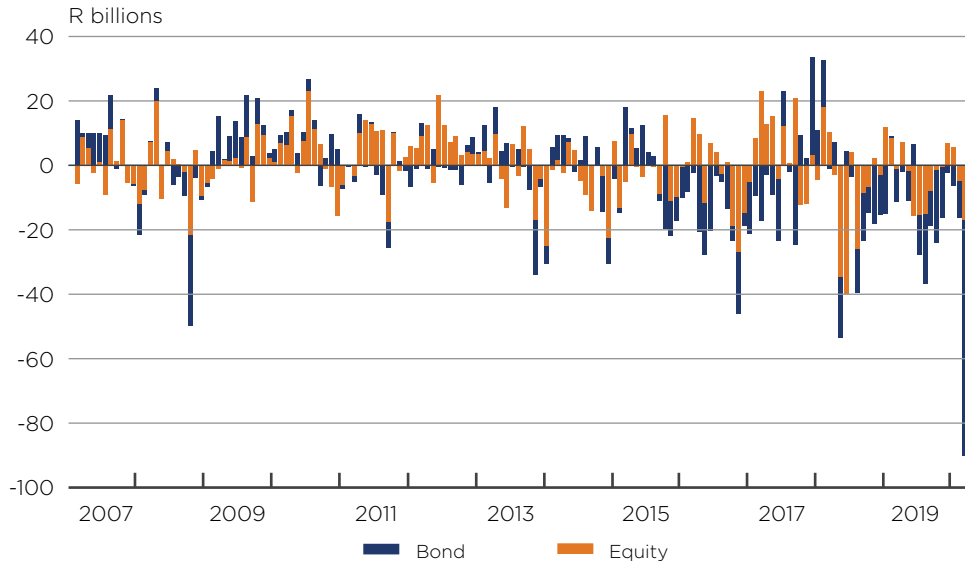
**Non-resident portfolio flows into South Africa have contracted sharply.** As risk aversion towards emerging markets has spread, a new record for non-resident portfolio outflows from South Africa in a single month was recorded in March 2020. Approximately R90 billion in foreign capital flowed out of the bond and equity markets during that month. Further non-resident outflows occurred in April, but the magnitude was significantly smaller at just over R24 billion. Non-resident outflows have been concentrated in the bond market, suggesting that foreigners were responding to South Africa's sovereign credit rating downgrade and rising fiscal risk. The foreign selling of local assets has put significant downward pressure on the prices of these assets and has contributed to reduced liquidity in various financial markets.

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22 Examples of this were seen in Japan after its financial crisis in the 1990s. For more on this issue, see: R Banerjee and B Hofmann, 2018. *Bank for International Settlements (BIS) Quarterly Review*. [https://www.bis.org/publ/qtrpdf/r\\_qt1809g.pdf](https://www.bis.org/publ/qtrpdf/r_qt1809g.pdf)



**Figure 15: Non-resident portfolio flows into South Africa’s bond and equity markets**

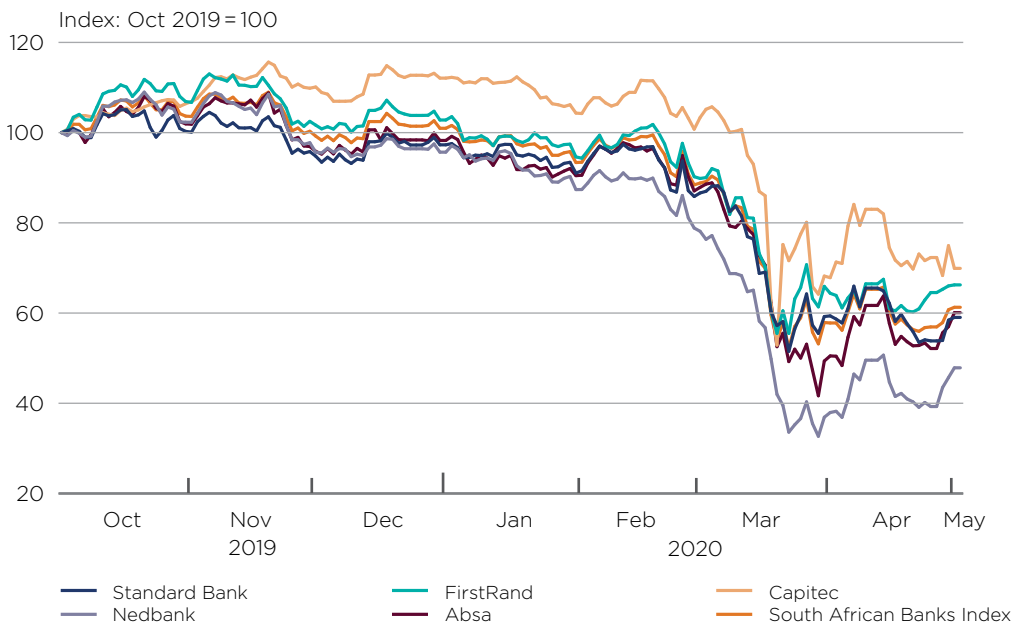


Source: JSE

**Substantial financial market losses pose risks to both financial institutions and their customers.**

Financial institutions have recorded mark-to-market losses on some trading portfolios as a result of the sharp asset price declines recorded since February 2020. Margin calls have also become more common in this environment of heightened volatility. Aside from the direct trading losses experienced by certain financial firms, lower asset prices affect the value of underlying collateral under credit agreements (such as home loans) and reduce the net wealth of borrowers, increasing their credit risk.

**Figure 16: South African bank share prices**



Source: Bloomberg



**Asset price movements have created some financing cost pressure for banks.** Market-based costs of funding have increased in line with heightened risk aversion. For example, the cost of raising equity funding has increased as banks' share prices have fallen. A lower share price means that more shares need to be issued to raise a given rand amount, thereby diluting existing shareholders to a greater extent and reducing a bank's return on equity.

**Figure 17: Rand/dollar exchange rate**

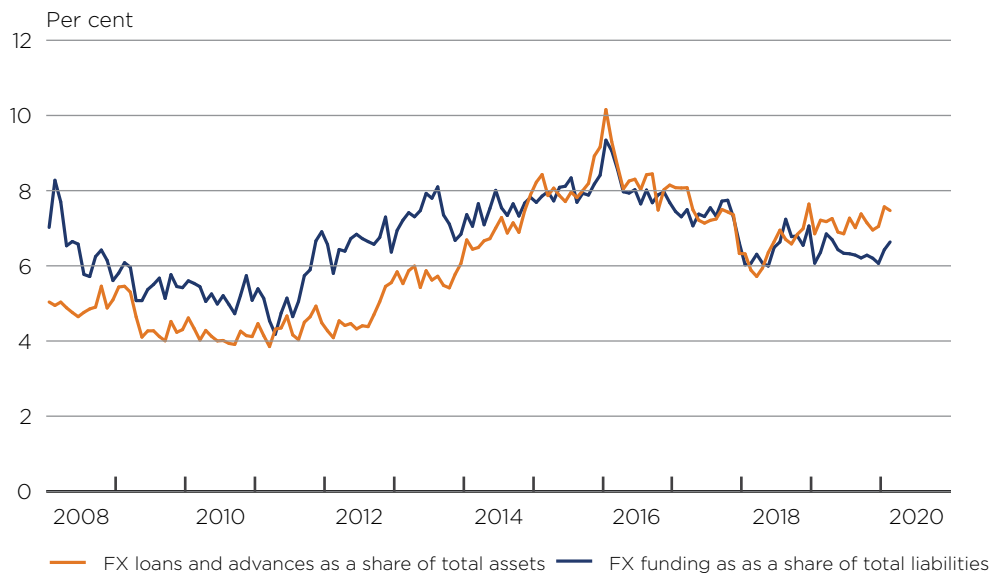


Source: Bloomberg

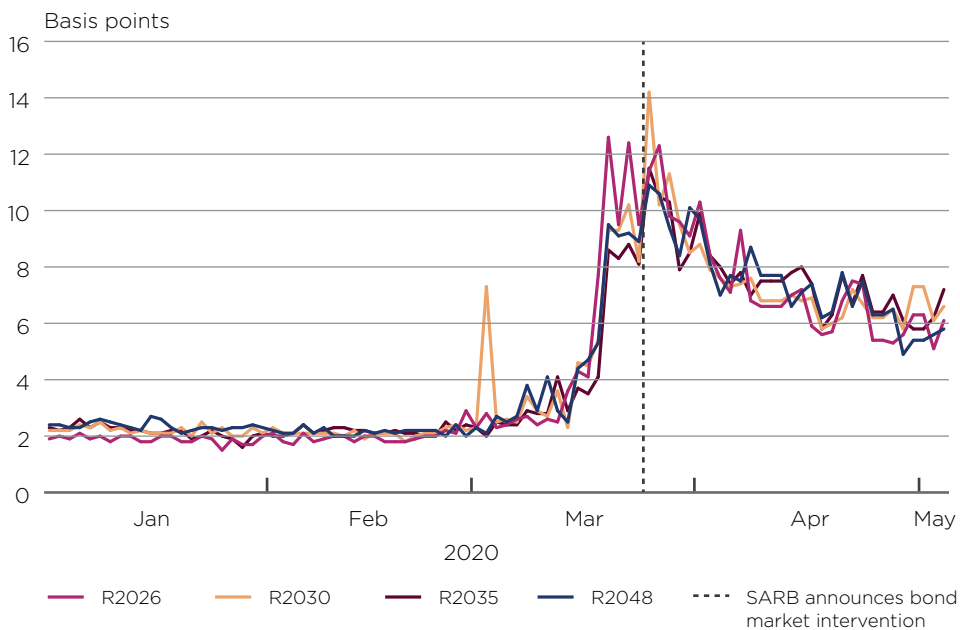
**Foreign currency-denominated borrowing and capital repayment costs have increased in line with the depreciation of the rand against advanced economy currencies.** In South Africa, regulations prohibit banks from having unhedged foreign currency exposures in excess of 10% of net qualifying capital and reserve funds. At the sector level, banks' foreign currency loans and foreign currency liabilities are of a similar size (see Figure 18). Thus, the aggregate impact of the recent exchange rate depreciation on the financial position of banks has been relatively limited. Differences across firms in terms of the currency and maturity profile of the balance sheet imply, however, that exchange rate effects will be more significant for certain institutions.

**Financial market pricing has become volatile, with signs of illiquidity having emerged.** Liquidity in certain segments of South Africa's financial markets has declined. This has occurred even in typically well-traded markets. For example, in late March 2020, bid-offer spreads (an indicator of market liquidity) for government bonds (which are among the most actively traded securities) reached levels approximately seven times larger than their historical average. Following the SARB's interventions in the government bond market, these spreads have narrowed, but they remain wider than usual. Bid-offer spreads in the market for negotiable certificates of deposit (NCDs), which are short-term debt instruments issued by commercial banks, have increased significantly as well. Recent financial market pressures have also resulted in reduced corporate bond issuance.



**Figure 18: Share of foreign currency bank liabilities and loans**

Sources: PA and SARB

**Figure 19: Bid-offer spreads for government bonds across different tenors**

Sources: Bloomberg and SARB

**Market risks linked to illiquidity and fire sales are being closely monitored.**

A common cause of financial crises is liquidity risk in banking. As banks undertake liquidity transformation (sourcing relatively short-term funding to provide longer-duration loans), risks can emerge if access to funding (liabilities) declines sharply while the value of loans outstanding (assets) remains. This can be caused by concern over the financial soundness of a bank or simply by pressure on financial market participants who provide funding to the bank. In extreme scenarios, funding risks can morph into solvency challenges if

banks are forced to sell assets at a loss in order to provide liquidity to those seeking to withdraw funding from the bank. This is known as a ‘fire sale’.

**Actions have been taken to manage funding risks.** Regulations have forced banks to extend the duration of their funding in recent years, and have encouraged the accumulation of instruments that can be converted to cash in the event of a funding squeeze. As previously discussed, the SARB has provided additional short- and medium-term funding to the banking sector as a further precaution against short-term deposit withdrawals. The SARB continues to monitor funding risks closely.

**There is a high degree of uncertainty around the longer-term impact of COVID-19 on the financial sector.** While the financial system is currently assessed to be stable, a protracted economic and financial disruption caused by the virus could threaten financial stability directly or indirectly. The SARB has a variety of additional tools available to address incipient risks, and is ready to use them if the need arises.

## Theme 2: How the banking sector became more resilient over the past decade

**In response to the vulnerabilities brought to the fore by the global financial crisis, the international regulatory community developed a wide-ranging reform agenda.**<sup>23</sup> The focus of the post-crisis policy response was on four core areas: building more resilient financial institutions, ending too-big-to-fail, making derivatives markets safer, and enhancing the resilience of non-bank financial intermediation (NBFI).<sup>24</sup>

**One of the immediate concerns under the theme of ‘building more resilient financial institutions’ was the fragility of a number of globally active banks.** Financial regulators from across the world, led by the Basel Committee on Banking Supervision (BCBS), embarked on a detailed programme to reform the Basel II accord and developed what is known as Basel III.

**It has been almost 10 years since Basel III was announced.** This is an opportune time to review the banking regulation implemented over the past decade and assess whether it has improved the resilience of the domestic banking sector.

**Basel III consists primarily of reforms to strengthen the capital and liquidity standards of banks.** It was phased in over a number of years starting in 2013. The key innovations of the framework were to:

- Enhance the quality and quantity of bank capital.
- Revise the way in which some risks are calibrated in the capital requirement framework.

<sup>23</sup> Reform proposals were expanded to include the insurance sector, ratings agencies, hedge funds, interest rate benchmarks, compensation practices and accounting standards.

<sup>24</sup> For more details about these core areas of reform (and other areas of reform), as well as progress with their implementation, refer to the Financial Stability Board’s (FSB) *5th Annual Report on [the] Implementation and Effects of the G20 Financial Regulatory Reforms*, available on the FSB website.



- Introduce macroprudential capital buffers, including additional buffers for systemically important banks and time-varying buffers to increase resilience during credit booms.
- Institute a leverage limit.
- Introduce a framework for measuring and mitigating liquidity risk.

**South Africa, as a member of the Group of twenty (G20), supports the global regulatory reforms and is committed to implementing them timeously.** South Africa was among the ‘early adopters’ of the Basel III reforms in January 2013. Table 1 illustrates the Basel III framework implementation timelines as well as (non-) compliance with the core reforms (green means ‘compliant’ and amber ‘not compliant’).

**Table 1: South Africa’s implementation of Basel III reforms**

Basel reform	BCBS framework release	BCBS full implementation	South Africa’s implementation
Risk-based capital	December 2010	1 January 2013	January 2013
Liquidity coverage ratio	January 2013 (revised)	January 2019	January 2013
Countercyclical capital buffer	December 2012	January 2016	January 2016
Requirements for global systemically important banks	July 2013	January 2019	January 2016
Requirements for domestic systemically important banks*	October 2012	January 2019	January 2016
Large Exposures Framework	April 2014	January 2019	Pending (April 2021)
Leverage ratio	January 2014	January 2018	July 2016
Net stable funding ratio	October 2014	January 2018	January 2018

\* National discretion is allowed for domestic systemically important banks (D-SIBs). However, national authorities are required to comply with the same phase-in arrangements as the global systemically important bank (G-SIB) framework.

**South Africa is already compliant with the most important capital, leverage and liquidity rules, and has imposed additional requirements for domestic systemically important banks (D-SIBs).** The large exposures framework (LEX), which was originally meant to be implemented in January 2019, is still outstanding. The indicative timelines for LEX were released in a November 2019 Guidance Note,<sup>25</sup> but the final date for implementation has been moved to 1 April 2021 due to COVID-19.

**A key focus area of Basel III is to strengthen the capital base of the banking sector to enhance the capacity to absorb losses.** This has involved raising the capital adequacy requirements of banks and upgrading the quality of capital. Capital quality was improved by increasing the share of common equity tier one (CET1) capital,<sup>26</sup> simplifying and harmonising the categories of tier two

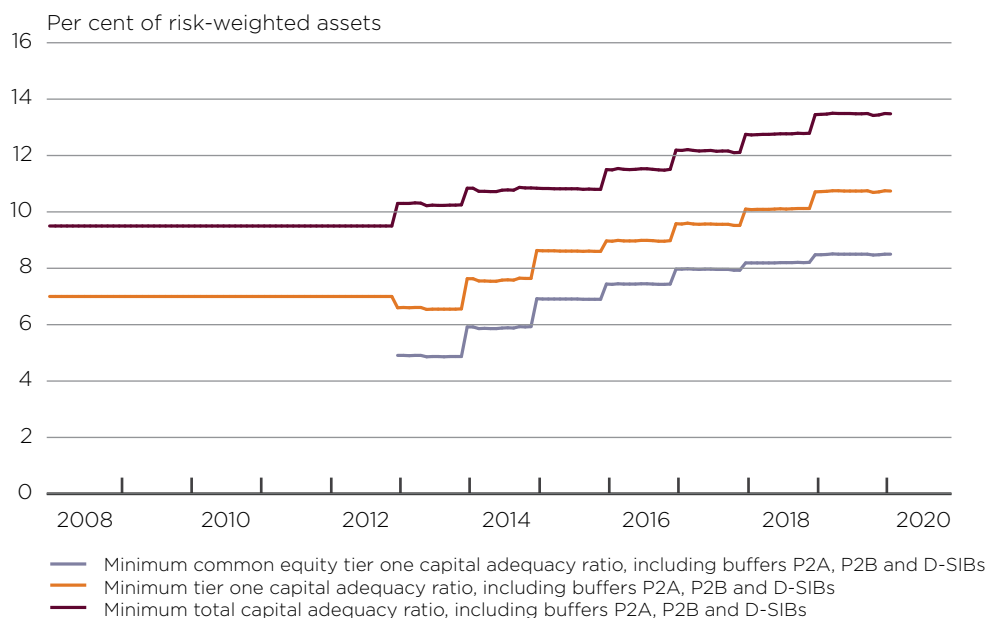
25 This Guidance Note is available on the South African Reserve Bank’s (SARB) website, at <http://www.resbank.co.za/Publications/Detail-Item-View/Pages/Publications.aspx?sarbweb=3b6aa07d-92ab-441f-b7bf-bb7dfb1bedb4&sarblst=21b5222e-7125-4e55-bb65-56fd3333371e&sarbitem=9602>

26 Common equity tier one (CET1) capital is largely made up of retained earnings and common shares issued by the bank. CET1 capital is considered the highest-quality form of capital because of its ability to absorb losses immediately when they occur.

capital,<sup>27</sup> and abolishing tier three capital.<sup>28</sup> Tier one capital is intended to provide loss absorption for a bank when it remains a going concern, while tier two capital is gone-concern capital. Thus, if a bank fails, tier two capital must absorb losses before depositors and other creditors do. The value of enhancing the quality and quantity of tier one capital is that banks can absorb larger shocks while remaining a going concern. An additional safeguard against bank failures was introduced in the form of a capital conservation buffer, which added a further CET1 capital requirement of 2.5% of RWAs. This buffer is over and above the basic 4.5% of RWAs CET1 minimum requirement. All banks were also required to hold a systemic risk buffer (also known as the Pillar 2A requirement) of 1% of RWAs (of which at least half must include CET1 capital).

**The PA uses supervisory discretion in adding capital requirements to individual banks.** The PA sets additional capital requirements for D-SIBs to account for the increased risk that their failure could cause to the financial system. The PA also sets additional individual capital requirements (also known as Pillar 2B requirements) for all banks based on the level of risk that each bank is exposed to. These individual capital requirements complement the base minimum Basel III requirements to ensure that banks have adequate capital for their specific needs.

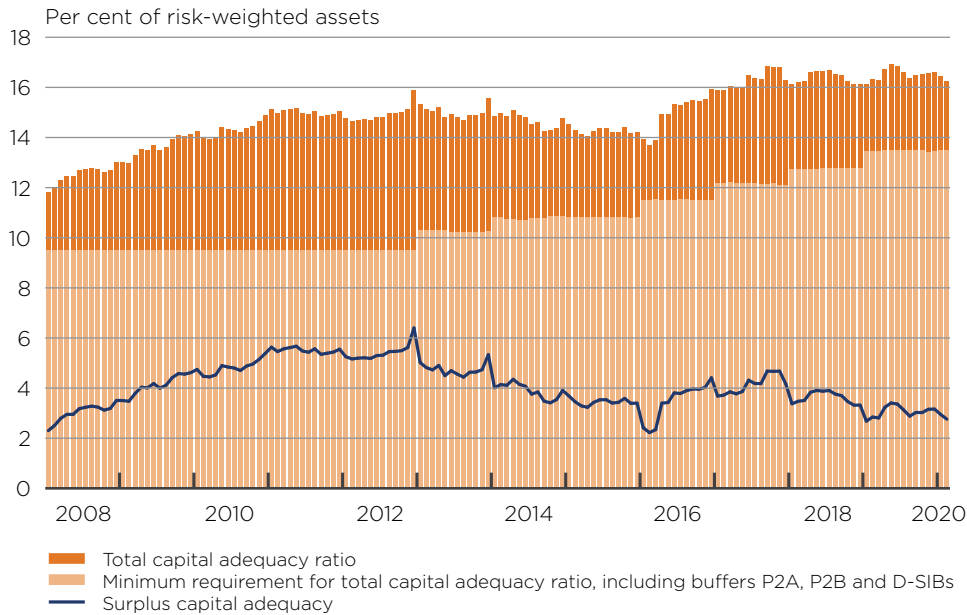
**Figure 20: Minimum banking sector capital requirements, including all additional buffers**



<sup>27</sup> Tier two capital includes provisions against non-performing loans, hybrid instruments and subordinated term debt.

<sup>28</sup> Under Basel II, tier three capital included lower-quality unsecured and subordinated debt instruments, which are potentially subject to large revaluations during a financial shock.

**Figure 21: Capital adequacy in the banking sector relative to the minimum requirement**



**The CCyB is an important addition to the base minimum capital requirements during periods of strong credit growth.** Its intention is to reduce the procyclicality of banking by increasing capital requirements during times when credit growth consistently exceeds economic growth. This is the only major regulation that is expected to be time-varying. The recommended range for the CCyB is between 0% and 2.5% of CET1 capital.<sup>29</sup> South Africa implemented its CCyB framework in 2016, although to date it has not opted to raise the CCyB above 0%.

**The implementation of Basel III has significantly enhanced the capital position of the South African banking sector.** The total CAR for the sector at the start of 2008 was just below 12%; it increased to more than 16% by February 2020. The quality of capital has also increased, with tier one capital accounting for 82% of total capital in February 2020, up from 75% in 2008.

**The average CET1 ratio for the South African banking sector is in line with international peers.** The BCBS's Monitoring Report of 2019 (based on 2018 data) found that the 86 largest global banks had an average CET1 ratio of 12.7%. The average CET1 ratio for the South African banking sector in 2018 was slightly higher, at 12.8%.<sup>30</sup>

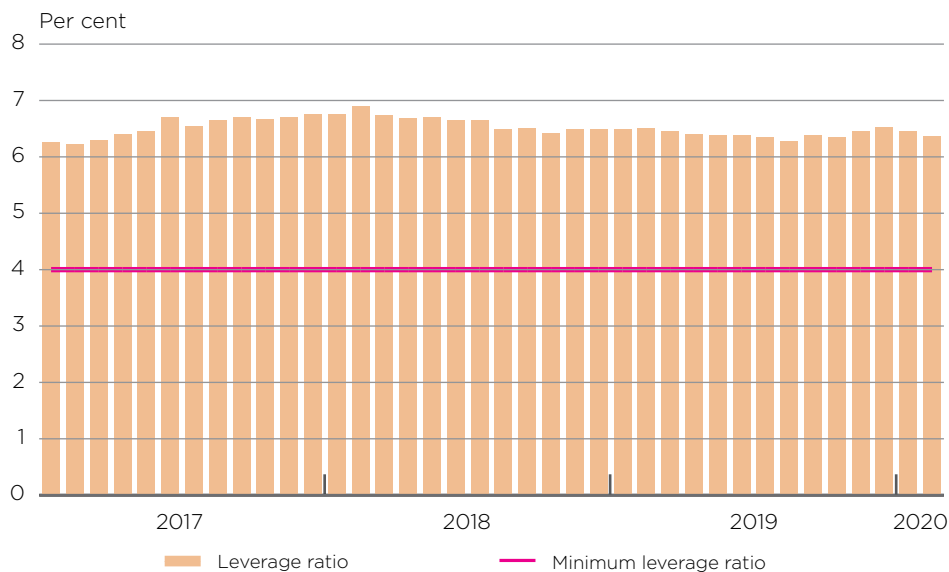
29 See the South African Reserve Bank's (SARB) Circular 8 of 2015, available on its website: <https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/7005/C8%20of%202015.pdf>

30 Basel Committee on Banking Supervision, 2019, *Basel III Monitoring Report*. <https://www.bis.org/bcbs/publ/d449.htm>

**The SARB will temporarily reduce the Pillar 2A buffer and allow banks to breach the capital conservation buffer.** For the duration of the shock to economic activity caused by COVID-19, the SARB will drop the Pillar 2A buffer from 1% to 0% of RWAs. Furthermore, should the need arise for individual banks to dip into their capital conservation buffer, they will be allowed to do so following consultation with the PA. The PA has the power to limit the payment of dividends and share buy-backs should firms breach the capital conservation buffer. The PA has also recommended that all banks limit dividend and bonus payments at this time to preserve capital.

**The Basel III leverage ratio serves as a backstop to the risk-based capital requirements.** While CARs are measured as capital divided by RWAs,<sup>31</sup> the leverage ratio is calculated as capital divided by total exposures. It is regarded as a backstop because it ensures that a minimum level of capital is held by banks regardless of the nature of their lending. This is important because the risk weights assigned to some bank assets may not always reflect the true risk of the exposure. Since its implementation on 1 July 2016, the leverage ratio in the domestic banking sector has consistently exceeded the minimum requirement of 4% set for domestic banks (see Figure 22).

**Figure 22: Leverage ratio of the banking sector**



Source: PA

**In some instances, South African banking regulatory requirements have been set above the requirements stated in the Basel III rules.** For example, the leverage ratio required for banks in South Africa is 4% (the BCBS requirement is 3%), and the basic minimum tier one capital ratio is set at 6.75% (relative to the 6% BCBS requirement).

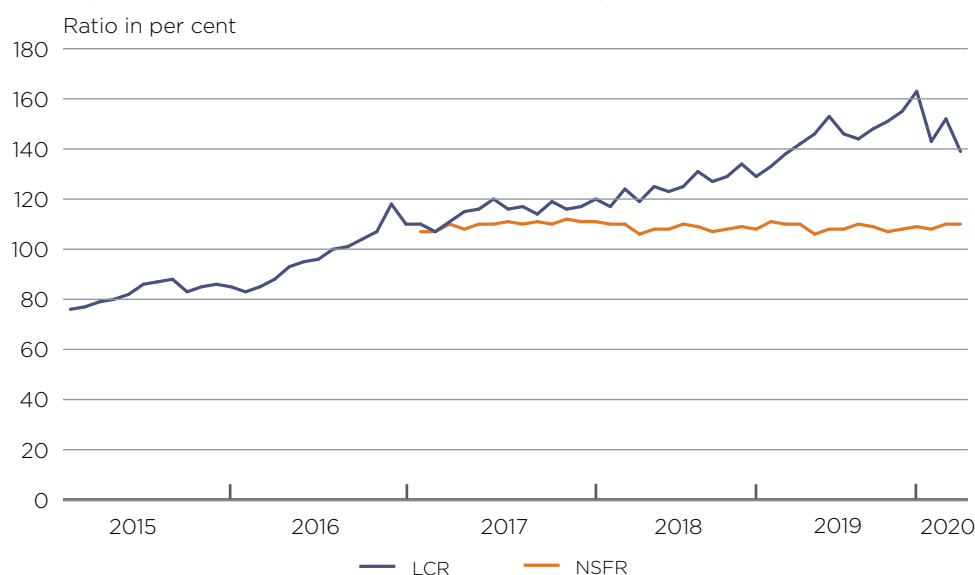
<sup>31</sup> Assets receive a risk weight based on the type of asset and the creditworthiness of the borrower.



**A second key component of Basel III is the introduction of two liquidity standards.** The liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR) were introduced as safeguards against short-term funding outflows and excessive maturity transformation risks respectively. The intention of the LCR is to ensure that banks have sufficient HQLAs on hand to convert to cash so as to withstand larger-than-usual funding withdrawals for a period of up to 30 days. It is measured as the ratio of HQLAs to potential 30-day withdrawals in a liquidity stress scenario. The focus of the LCR is on short-term liquidity needs. The NSFR has a longer-term focus, and is aimed at banks (re) structuring their balance sheets to better match the duration of funding with that of lending. It is calculated as the proportion of available stable funding (ASF) relative to required stable funding (RSF). ASF includes the liabilities and capital of the institution that are expected to remain on its balance sheet for more than one year. RSF is the amount of stable funding a firm requires given the maturity profile of its assets.

**The LCR was phased in from 1 January 2015, with the minimum requirement set at 60%.** The minimum requirement was then increased in equal annual increments of 10%, reaching the final minimum requirement of 100% on 1 January 2019. In 2019, the banking sector held approximately R1 trillion of HQLAs, consisting mostly of rand-denominated government and central bank debt securities.

**Figure 23: LCRs and NSFRs for the banking sector**



The NSFR figures reflected are a simple average of the five largest banks.

Sources: PA and SARB

**South Africa implemented the NSFR standard on 1 January 2018, and the banking sector has been meeting the 100% requirement since this date.**<sup>32</sup>

The NSFR has addressed one of the structural weaknesses on the funding side of the domestic banking sector's balance sheet, namely a significant reliance on shorter-term (potentially unstable) wholesale funding.

**With the implementation of Basel III, the domestic banking sector has improved the quality of its capital, and has built up sizeable capital and liquidity buffers.** In addition, the domestic banking sector's liabilities have slowly become longer in duration and have skewed towards more stable funding sources. These developments, together with the implementation of the other reforms alluded to in this Chapter, have made the banking sector significantly more resilient over the last decade. Additional research and policy development to further improve the resilience of the sector remains an ongoing priority.

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<sup>32</sup> The SARB informed the BCBS that it would be using a slightly amended methodology, adapted for domestic purposes, in its implementation of the NSFR standard.

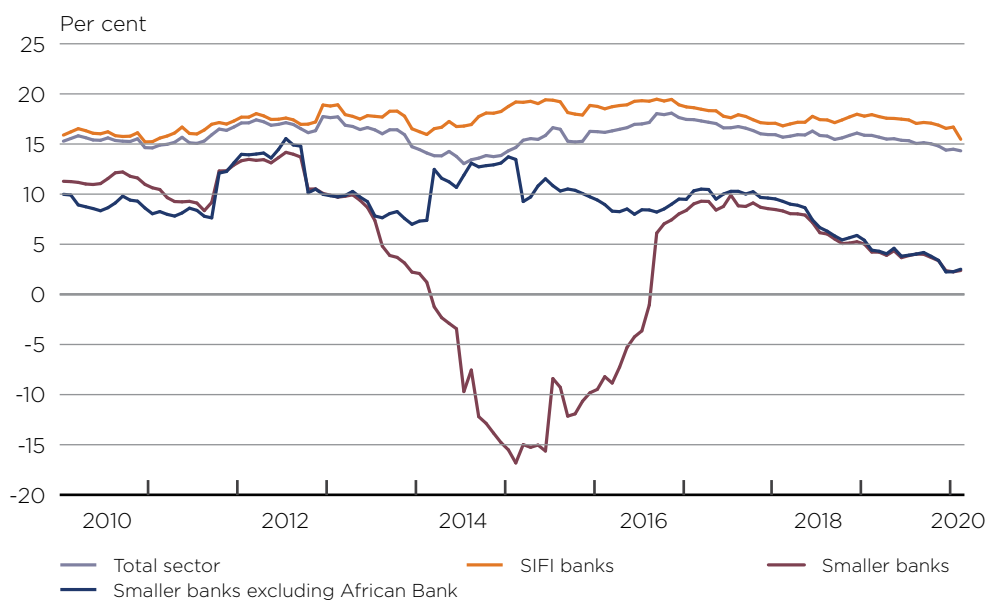
## Chapter 3: Sectoral overview

### Banking sector

#### Profitability is an important contributor to the banking sector's resilience.

This is because retained earnings are a key source of new loss-absorbing capital. Over the last decade, the banking sector's profitability, as indicated by the return on equity (ROE),<sup>33</sup> has never declined below 12%. By international standards, this reflects a relatively high level of profitability. After peaking at just over 18% in November 2016, the sector's ROE gradually declined to reach 14.3% in February 2020, the lowest level in five years. South Africa's six systemically important financial institution (SIFI) banks<sup>34</sup> are highly exposed to the local economy (their domestic assets accounted for almost 90% of their total assets as of December 2019). Therefore, the gradual slowdown in domestic economic growth has been a key driver of the lower ROE.

**Figure 24: The banking sector's return on equity**



#### The ROE of smaller banks<sup>35</sup> is below the sector average, and has deteriorated more markedly in the past year.

Smaller banks' ROEs have also shown more volatility in recent years. In particular, smaller banks' average ROE fell sharply during 2014 as African Bank was placed under curatorship. Over the past year, the average ROE has been placed under pressure, in part by the licensing of new entrants who are currently loss-making (as is typical for a

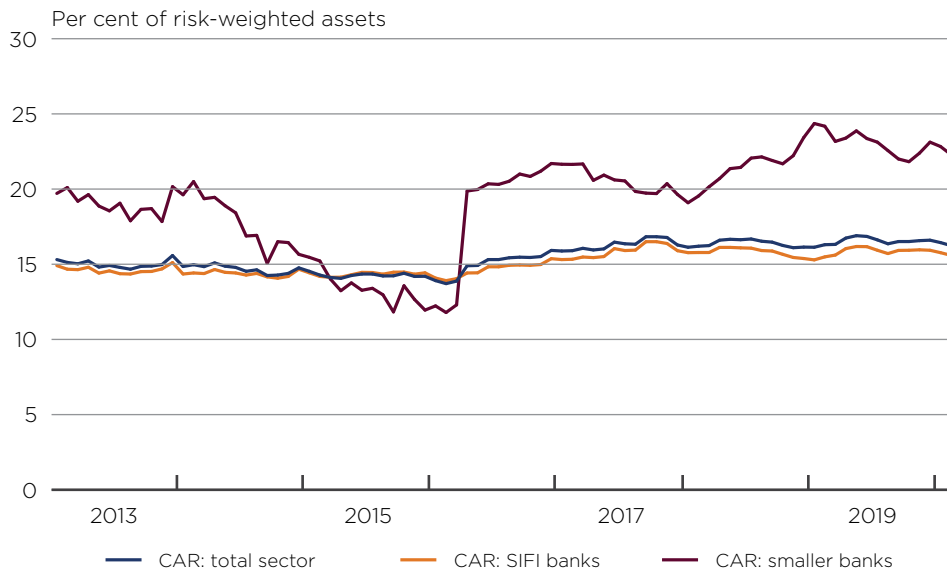
<sup>33</sup> ROE is calculated as profit after tax, adjusted for non-trading and capital items as a percentage of equity attributable to equity holders.

<sup>34</sup> The SARB designated the following six banks as systemically important financial institutions (SIFIs) in 2019: Absa, Capitec Bank, FirstRand Bank, Investec, Nedbank and Standard Bank. See also the second edition of the *Financial Stability Review* of 2019 for further details on the designation.

<sup>35</sup> Smaller banks are all licensed deposit takers, other than SIFIs.

start-up bank). Smaller banks are arguably more vulnerable to the domestic economic environment because their business models are not as diversified as those of larger banks (both geographically and in terms of product lines). Although smaller banks may not pose systemic risk individually, collectively they can introduce systemic risk if concerns about the safety and soundness of one bank spread to others. A key mitigant to the challenges currently faced by smaller banks is the higher average CARs of these banks (see Figure 25).

**Figure 25: Capital adequacy ratios for SIFI banks and smaller banks**



Sources: PA and SARB

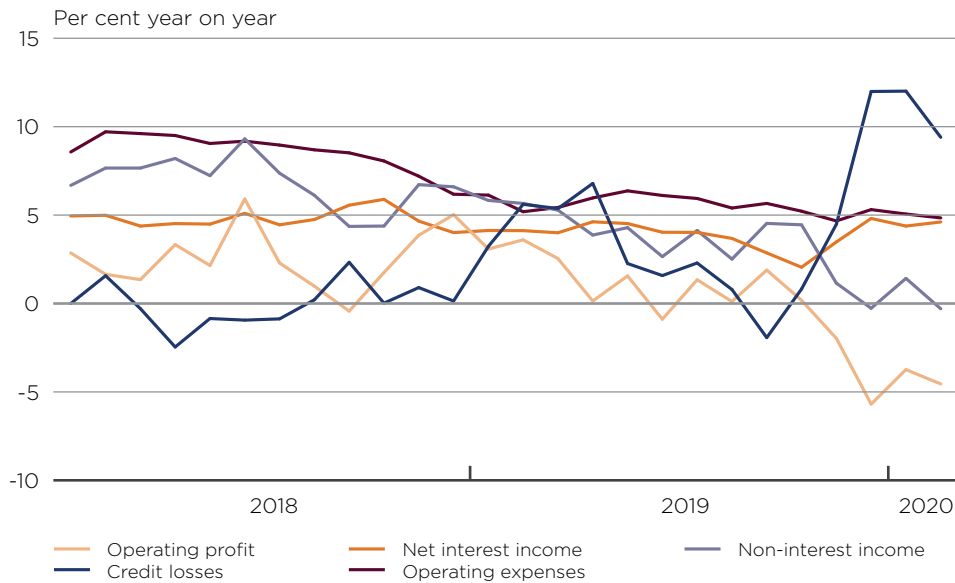
**The sector-wide operating profit<sup>36</sup> has been under pressure since 2017 on the back of weaker revenue growth and increasing credit losses.** Net interest income growth has been fairly stable over the past two years, while non-interest income gains have slowed significantly due to lower dividend income and net trading losses. The change to a forward-looking expected credit loss accounting standard (implemented from January 2018),<sup>37</sup> alongside weaker macroeconomic conditions, has caused increased credit losses. These factors combined have resulted in negative operating profit growth at the sector level since November 2019. It is important to note that operating profit remains positive even though the growth rate is declining.

**Smaller banks' operating profit growth has been contracting since mid-2018.** For 2019 as a whole, smaller banks experienced a 28% drop in operating profit. This trend has continued into 2020. These profit growth declines have been caused by a combination of sustained double-digit growth in operating expenses as well as contractions in both interest and non-interest income growth. Individual banks are taking various measures to address this reduction in profitability, including selective capital allocation, proactive credit collection strategies, and careful management of their cost base.

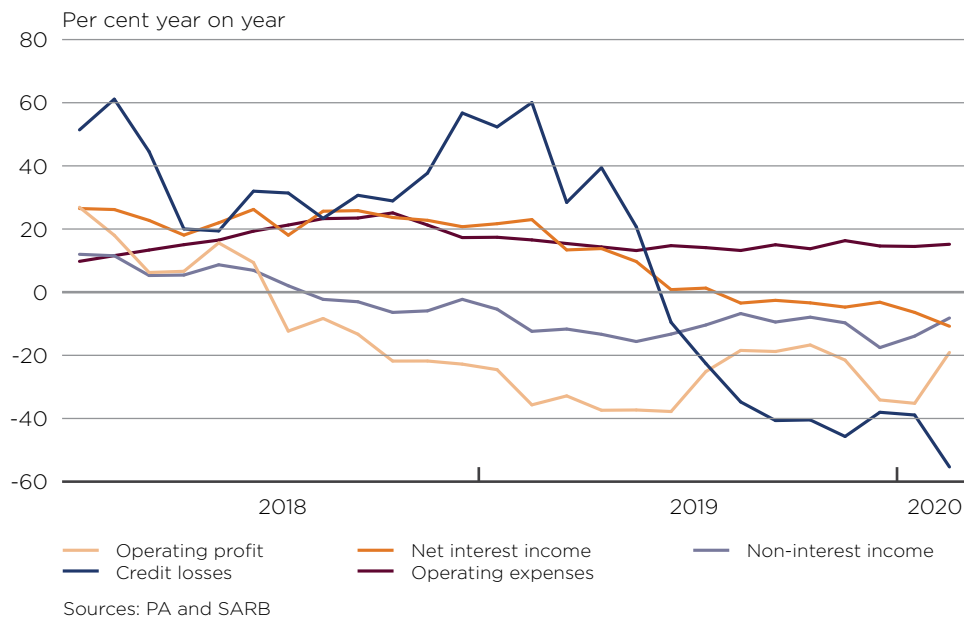
<sup>36</sup> Operating profit/loss is the aggregate of net interest income, non-interest income, credit losses and operating expenses.

<sup>37</sup> This would be International Financial Reporting Standard 9, or IFRS 9.

**Figure 26: Growth in the banking sector's operating profit  
(including subcategories thereof)**



**Figure 27: Growth in smaller banks' operating profit  
(including subcategories thereof)**

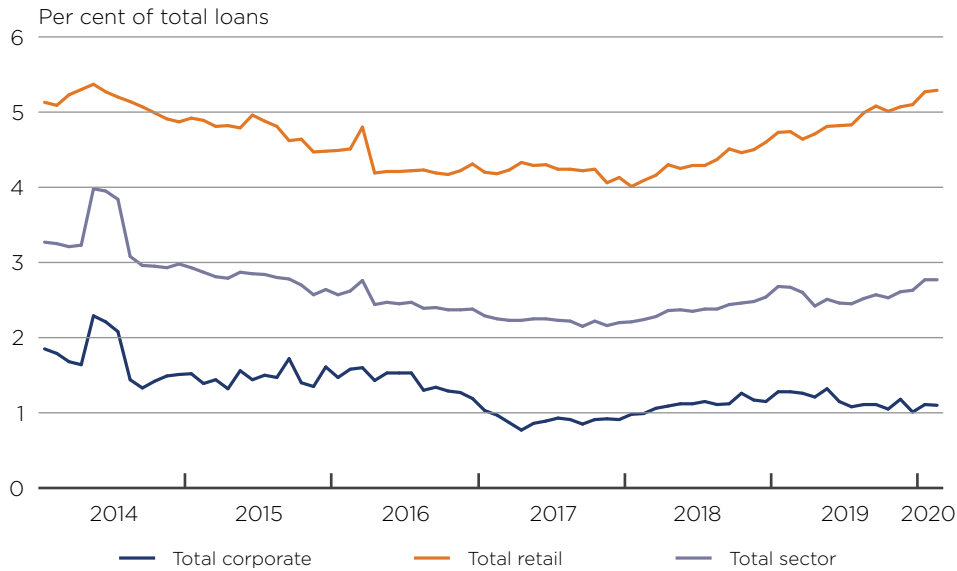


**The repayment capacity of borrowers is under pressure, resulting in higher levels of NPLs.** The 90-days-overdue ratio<sup>38</sup> for most of the sector's loan portfolios has increased since early 2018. The loan portfolios showing the highest stress (in terms of this ratio) are retail unsecured term loans, retail revolving credit (consisting mainly of overdrafts and unsecured loans with a revolving component), and loans to public sector enterprises. The ratio of

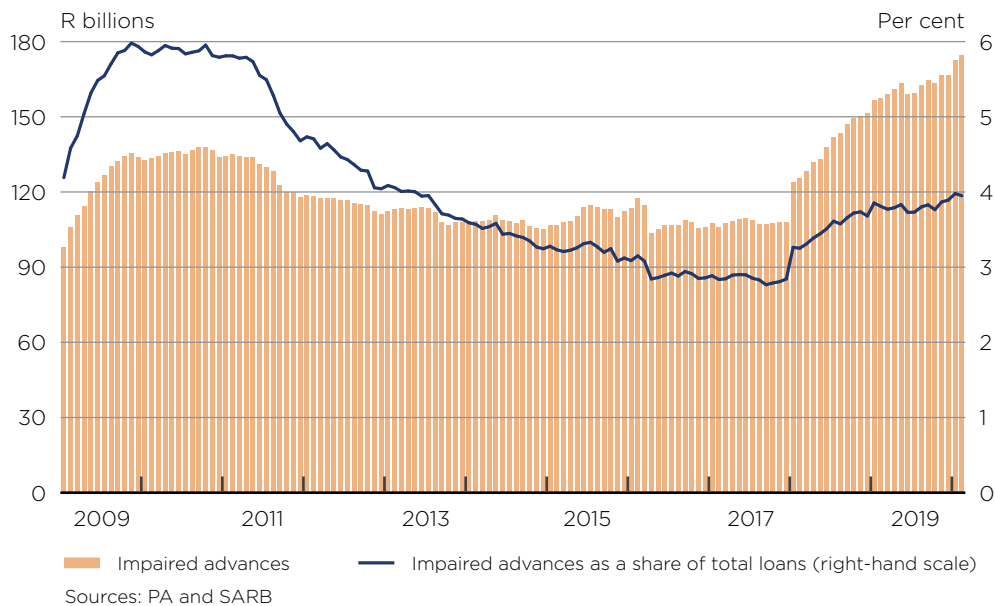
<sup>38</sup> The 90-days-overdue ratio is calculated as 90-days-overdue loans (standardised approach portfolios) and 90-days-overdue exposures at default (internal ratings-based portfolios) as a percentage of on-balance sheet exposures.

impaired advances to on-balance sheet loans and advances (a separate indicator of credit risk in the sector) has also increased since 2018 (see Figure 29).

**Figure 28: 90-days-overdue ratio for the corporate, retail and total loans categories**



**Figure 29: Impaired advances in the banking sector**



**The coverage ratio<sup>39</sup> for the banking sector increased from 41.5% in January 2018 to 44.6% in January 2020.** For most of the asset classes showing significant stress, provisioning has increased over the period. This is a positive sign, because it indicates that banks are proactively responding to increased credit risk.

<sup>39</sup> The coverage ratio is measured as specific impairments as a percentage of impaired advances. The ratio gives an indication of the level of provisioning for each impaired advance: the higher the ratio, the higher the amount of provisions available for impaired loans.

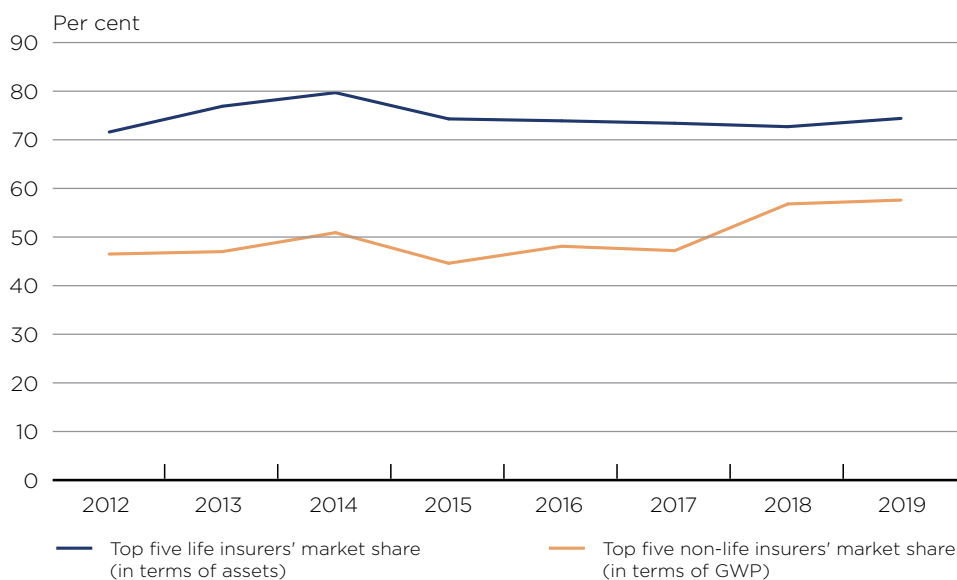
**The banking sector is stable and resilient.** Despite the lower profitability and slightly higher credit losses, the banking sector is in a sound position. The sector remains profitable and well capitalised, but profits are likely to come under pressure in the near term as a result of COVID-19.

## Insurance sector

**Insurance companies are providers of critical financial services that support activity in the real economy.** They contribute to the flow of savings into investment and enable risk transfer by taking on the risks of households and corporates in return for a premium. As a result, their core business is exposed to inherent risk. Distress or default typically arises through inadequate provisions for claims, inadequate capital for unexpected losses from insured events, and volatility in the value of the assets they hold.

**Financial stability risks from the insurance sector arise from disruptions in the provision of critical services or through activities that propagate systemic risk.** Risks are often greater if the insurance sector is concentrated. This is the case in South Africa, particularly in the life insurance sector, where the five largest institutions account for more than 70% of total assets. If one of these dominant companies defaults or fails to cover claims, service provision may be disrupted. Insurance companies can also have a significant impact on the resilience of other parts of the financial sector, especially if funding is stopped or if insurers are unable to meet the claims of other financial institutions.

**Figure 30: Concentration in the insurance sector**



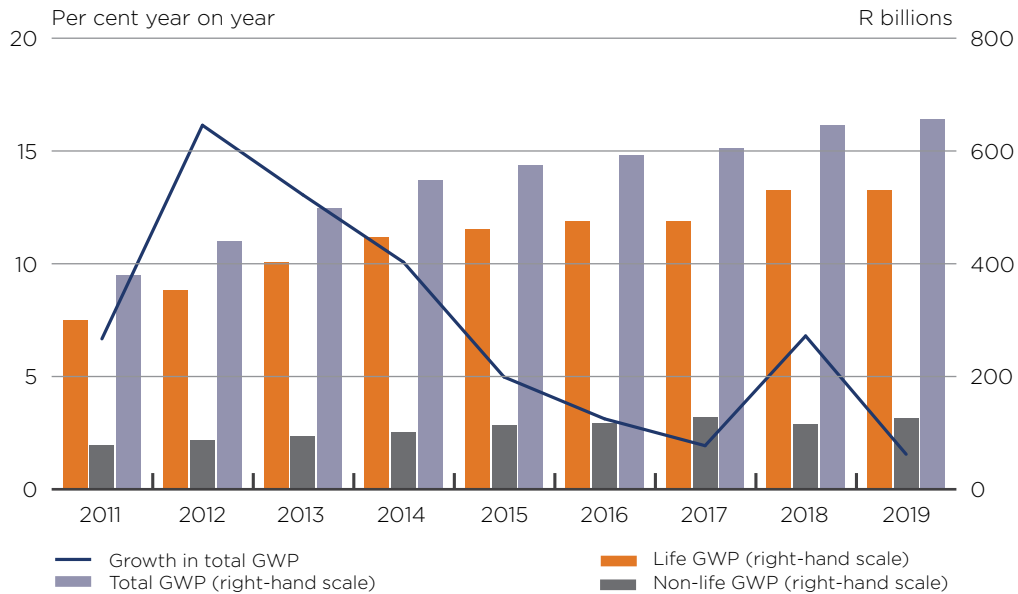
Sources: PA and SARB

**Insurance premium income growth has been on a downward trend since 2012.** The insurance sector's overall gross written premiums (GWPs)<sup>40</sup> grew by only 1.6% in 2019. The growth was driven almost entirely by the non-life

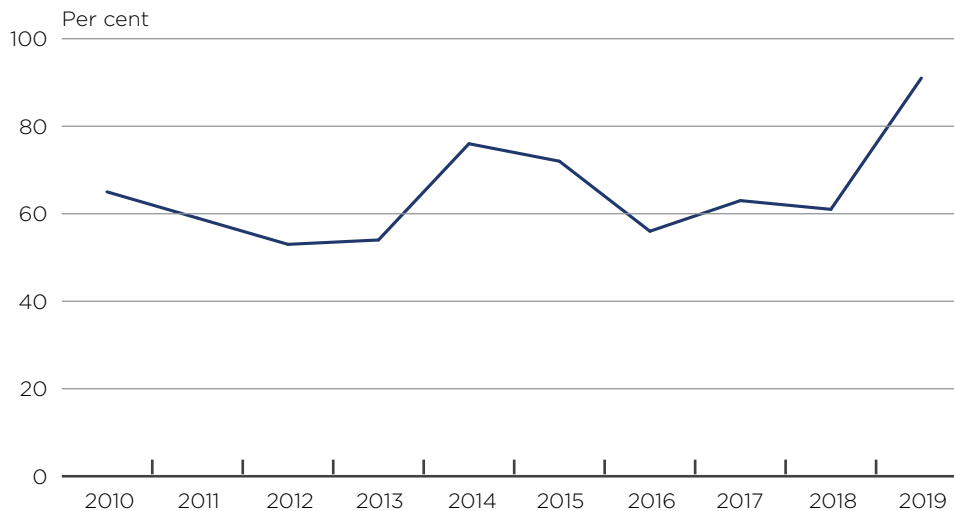
<sup>40</sup> The GWP is the total premium written by an insurer before deductions for reinsurance and ceding commissions.

(or short-term) insurance sector (8.1%), while the life insurance GWPs increased by a paltry 0.1%. The pressure on life insurers has emerged largely as a result of the deteriorating economic backdrop, which in turn has limited new business growth prospects and lifted lapse rates.<sup>41</sup>

**Figure 31: Level and growth rate of gross written premiums**



**Figure 32: Policy lapse ratio for life insurers**



**The non-life insurance industry's underwriting profit<sup>42</sup> margins have declined substantially since 2017.** These results have been significantly affected by increased claims in respect of weather-related and catastrophic events. Moreover, the cost of reinsurance against such events has increased,

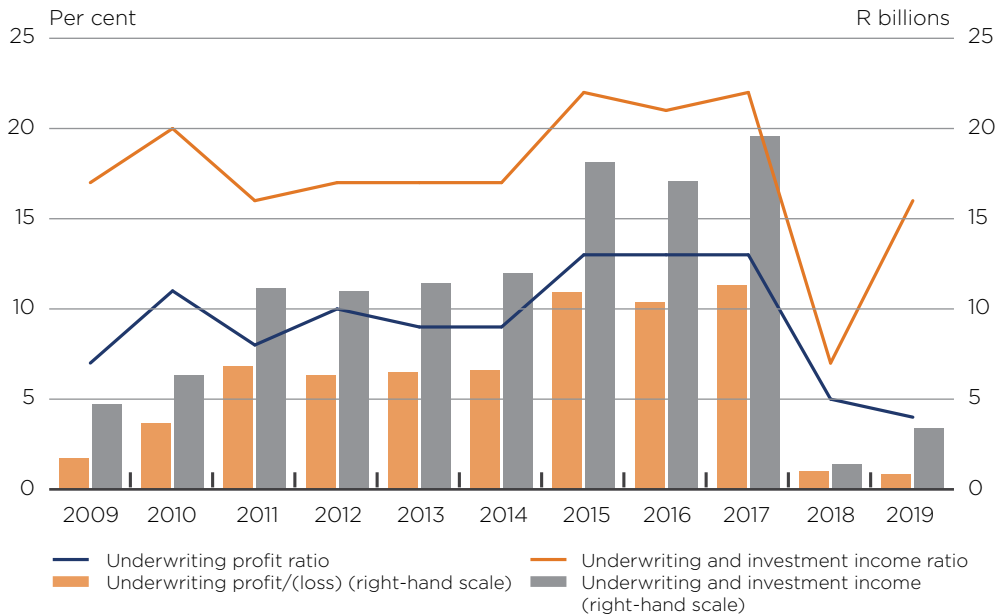
<sup>41</sup> The lapse rate is the rate at which life insurance policies terminate because of clients' failure to pay their premiums.

<sup>42</sup> Underwriting profits are measured as insurance premiums relative to claims and expenses.



in line with the fact that South Africa is no longer viewed as a low-catastrophe region by the reinsurance industry. In 2019, the underwriting profit ratio<sup>43</sup> of the non-life insurance industry fell to a decade-low of 4%.

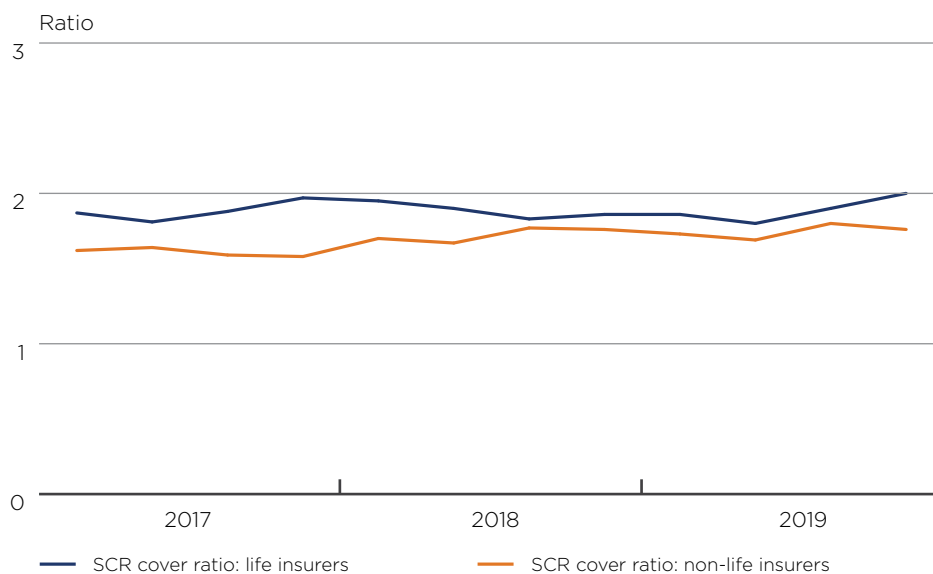
**Figure 33: Underwriting and investment profits of non-life insurers**



Sources: PA and SARB

**The insurance sector remains adequately capitalised.** The solvency capital requirement (SCR) is the main regulatory requirement under the solvency framework, and reflects the amount of own funds that a company requires in order to survive a 1-in-200 year loss event.

**Figure 34: Median solvency capital requirement cover ratios of life and non-life insurers**



Source: PA

<sup>43</sup> The underwriting profit ratio is underwriting profit expressed as a percentage of net earned premiums.

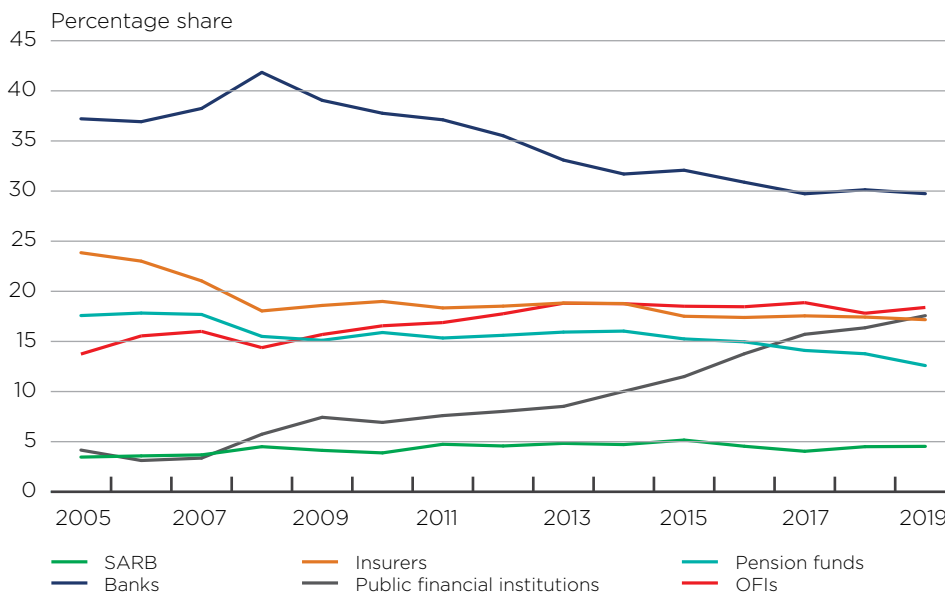
All the registered insurance entities in South Africa have adopted the standardised formula to calculate the regulatory capital requirement. The median SCR level for insurers was well above the requirement of 1 at the end of 2019, reaching a level of 2 for life insurers and 1.8 for non-life insurers.

## Non-bank financial intermediation

**The share of non-banks in total financial intermediation has increased from less than 60% in 2008 to approximately 70% in September 2019.**

Non-bank financial intermediation (NBFI)<sup>44</sup> is conducted by a combination of insurers, pension funds, the SARB, public financial institutions and other financial institutions (OFIs).<sup>45</sup> The shift in the distribution of financial assets across intermediaries has occurred largely due to a rise in the share of assets held by public financial institutions and a decline in the share of banking sector assets.

**Figure 35: Distribution of financial assets between financial intermediaries in South Africa**

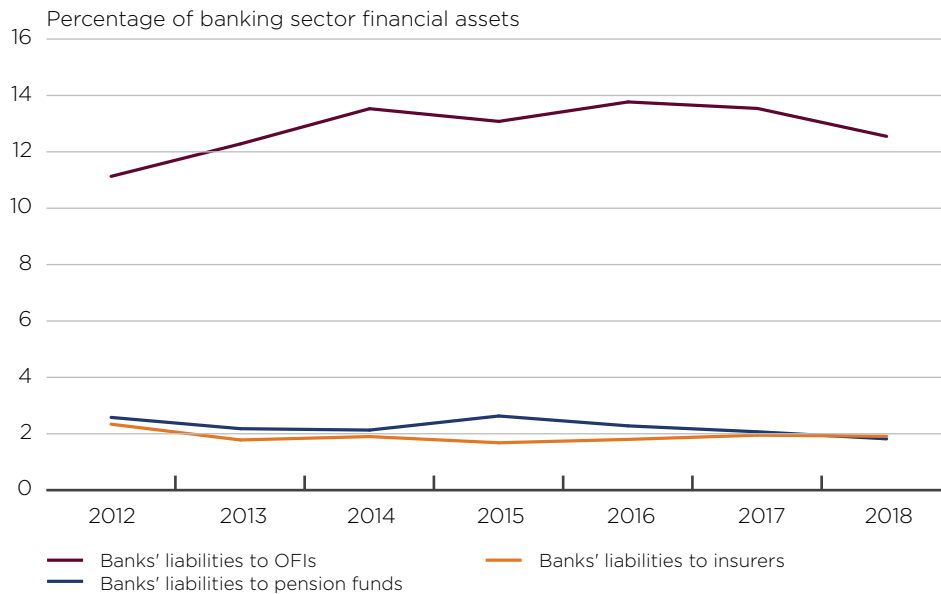


Sources: ASISA, PA and SARB

**OFIs remain a key intermediary in the domestic financial system.** OFIs are closely connected, both with one another and with the rest of the financial sector. Banks and OFIs, for example, have funding channels operating in both directions. Bank funding from OFIs is substantial, ranging between 12% and 14% of total bank financial assets in recent years. Money market funds (MMFs) in particular provide an important share of bank funding. Banks, in return, provide OFIs with liquid assets.

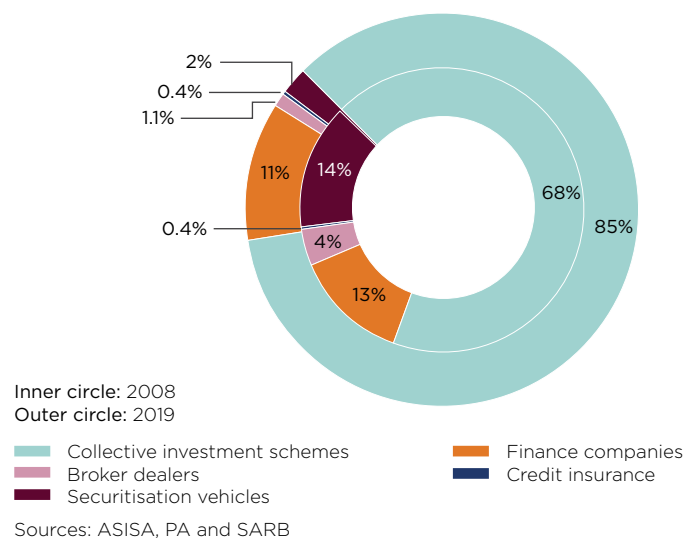
<sup>44</sup> This includes all financial intermediation not conducted by banks.

<sup>45</sup> The other financial institutions (OFIs) category includes, among other things, money market funds (MMFs), broker dealers, hedge funds, real estate investment trusts and central counterparties.

**Figure 36: Banking sector funding from non-bank financial intermediaries**

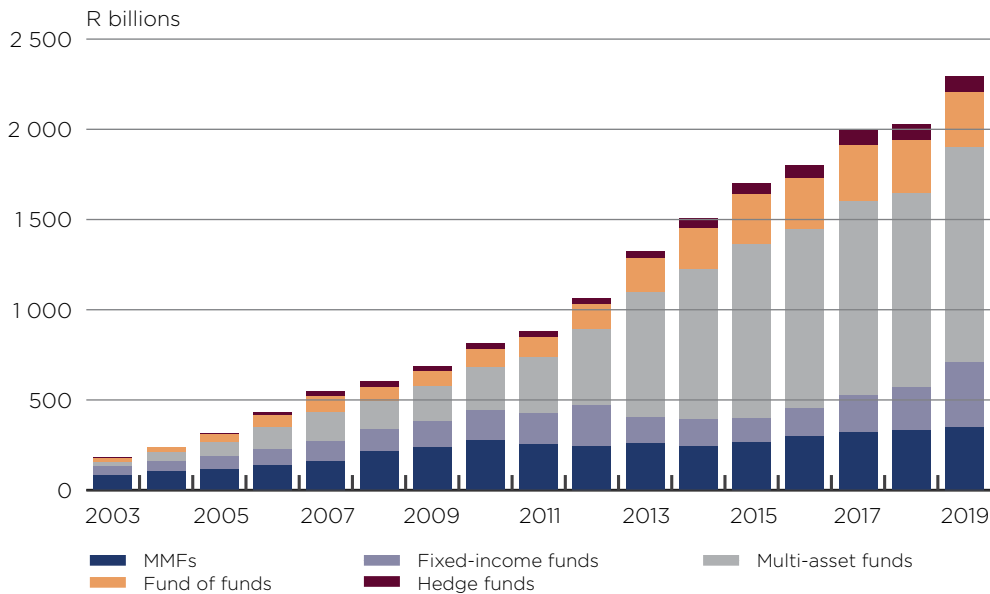
**The narrow measure of NBFi grew by 11% to R2.7 trillion in 2019.** Narrow NBFi consists of credit provision activities similar to those of a bank. In other words, these activities involve maturity or liquidity transformation, leverage, or limited credit risk transfer. Narrow NBFi is classified into five economic functions: collective investment schemes (CISs), short-term finance, broker dealers, credit insurance and securitisation.

**Since 2008, the share of narrow NBFi assets in securitisation vehicles has declined, while CIS assets have grown strongly.** The entities classified into the CIS category include MMFs, other fixed-income funds, multi-asset funds, hedge funds, and a portion of fund of funds (those that are not exposed to equity or real estate).

**Figure 37: Composition of narrow NBFi assets in South Africa**

**CIS assets account for the majority of narrow NBF1.** Just over half of the CIS assets were held in multi-asset funds in 2019. These funds are designed to offer diversification across asset classes within a single portfolio. Significant growth has also occurred in the fixed-income funds category, rising 47% between 2018 and 2019.

**Figure 38: Collective investment scheme assets**



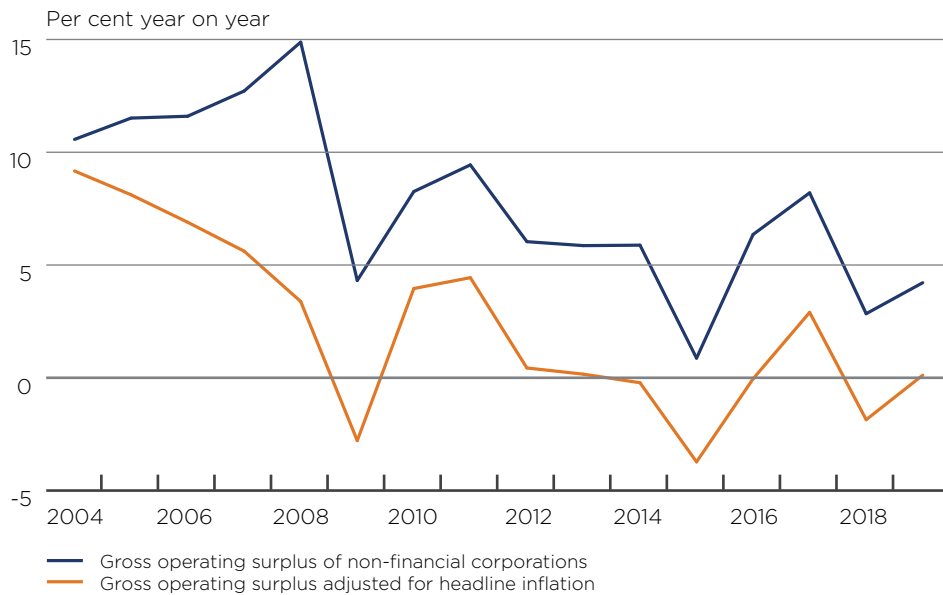
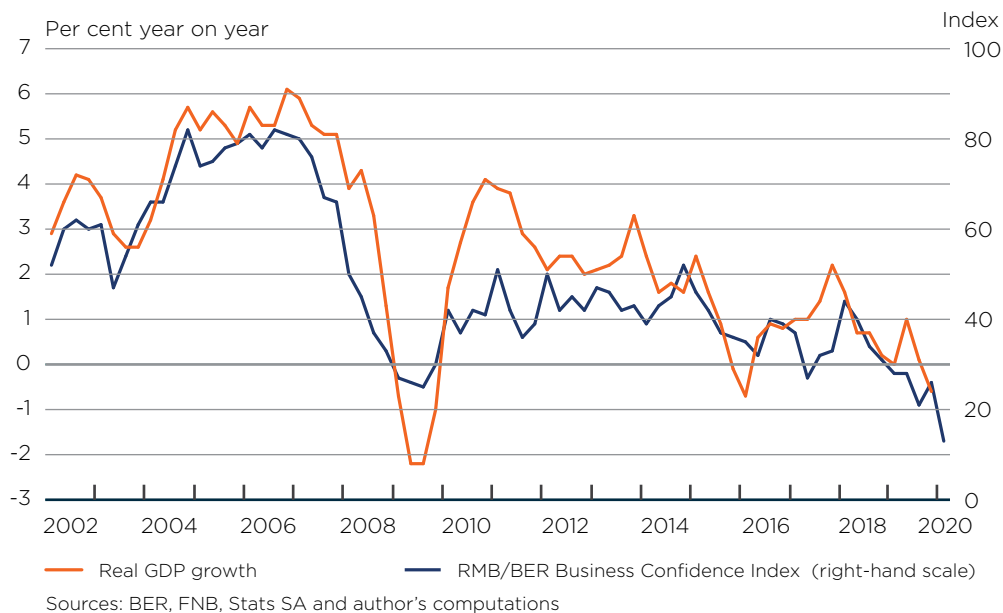
Source: ASISA

**The SARB is closely monitoring developments in the CIS space.** Changes in the asset allocation of some CISs in response to recent market movements have impacted on the availability of term funding for the banking sector. Redemptions from certain CISs may also increase over the coming months. This is likely due to the pressure on employment and income growth currently underway in the economy. Given the importance of certain CISs in providing funding to the banking sector and their linkages with other parts of the financial system, the SARB and other financial regulators are monitoring the activity of CISs.

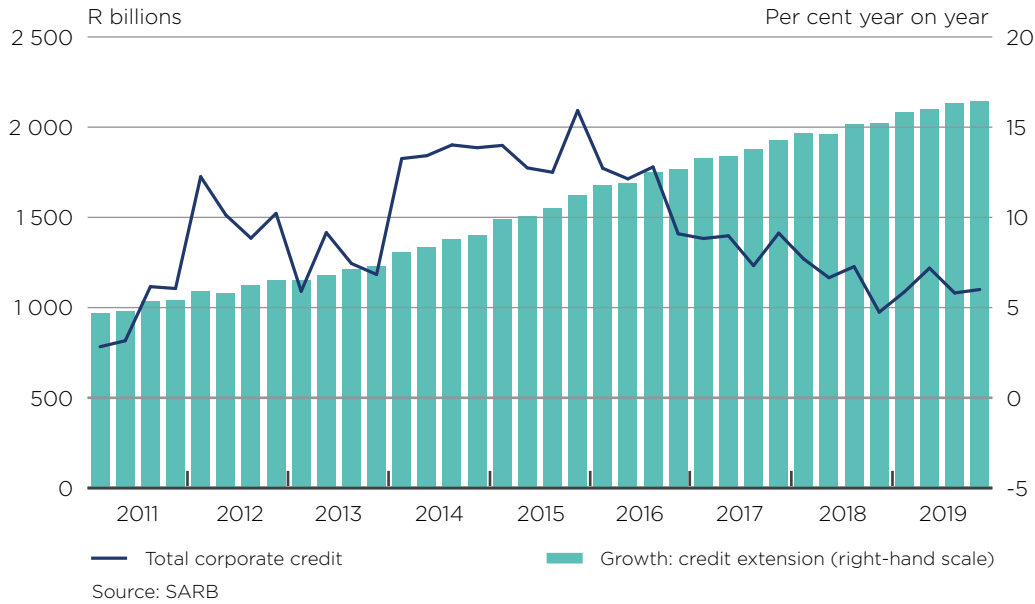
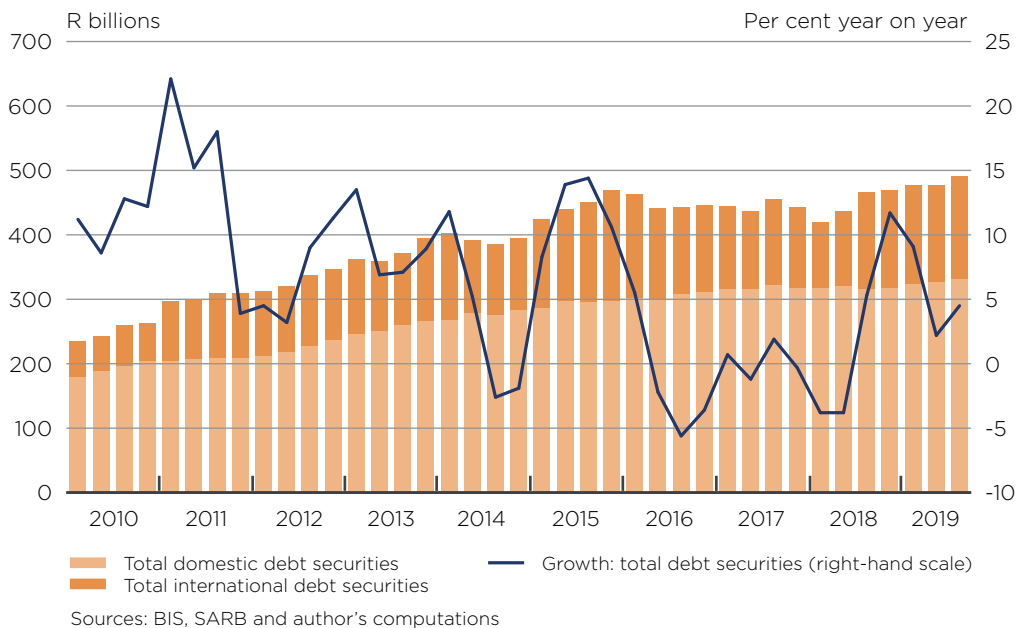
## Non-financial corporates

**Non-financial corporate (NFC) sector earnings growth has been volatile, but is generally following a moderating trend.** The nominal gross operating surplus<sup>46</sup> in the NFC sector grew at a rate of 4.2% in 2019. While this is up from 2.8% in 2018, it is roughly in line with the rate of inflation in 2019. Therefore, NFCs achieved virtually no aggregate real income growth last year. The difficult operating environment is also reflected in the level of business confidence, which fell to a 20-year low in the first quarter of 2020 (see Figure 40).

<sup>46</sup> Gross operating surplus is a proxy for corporate profitability.

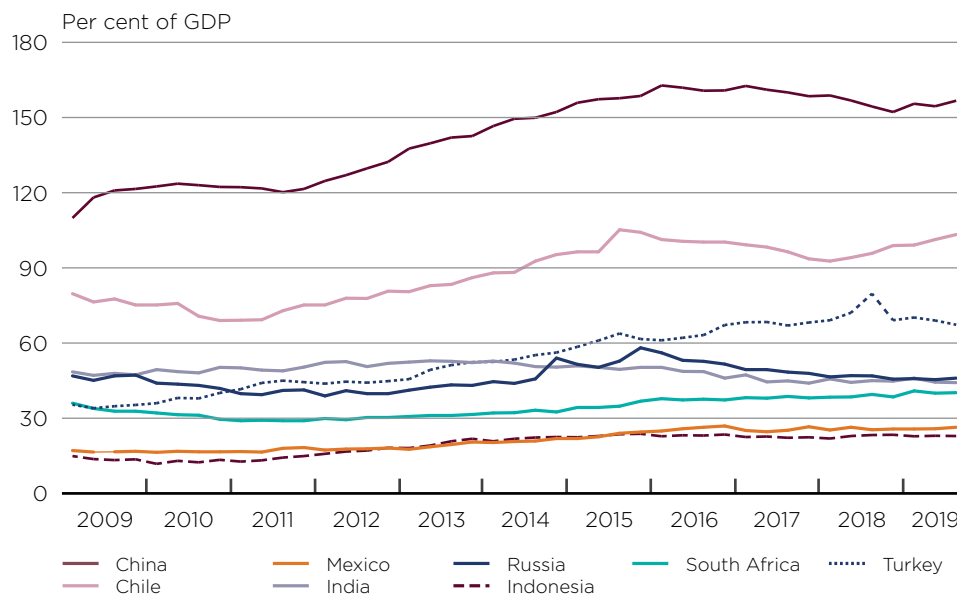
**Figure 39: Non-financial corporates' gross operating surplus****Figure 40: Real GDP growth and business confidence**

**Credit extension to the NFC sector has grown at historically low levels, but remains above earnings growth.** Bank credit disbursements to the sector increased by 6.2% in 2019, down slightly from 6.5% in 2018. NFCs have continued to tap into domestic and international capital markets for additional financing, with the issuance of corporate debt securities increasing by 5.2% in the first three quarters of 2019.

**Figure 41: Bank credit extension to non-financial corporates****Figure 42: Debt securities issued by non-financial corporates**

**Debt accumulation by NFCs has been increasing consistently in recent years.** As observed with many other emerging market economies, the post-global financial crisis increase in NFC debt has been driven more by public than by private firms. Public sector NFC debt has grown almost tenfold since the third quarter of 2006. This trend reversed in 2019, however, with private-firm debt growing at a slightly faster pace than that of public firms. Despite increasing, NFC debt as a share of GDP remains lower in South Africa than in many of its emerging market peers (see Figure 43).

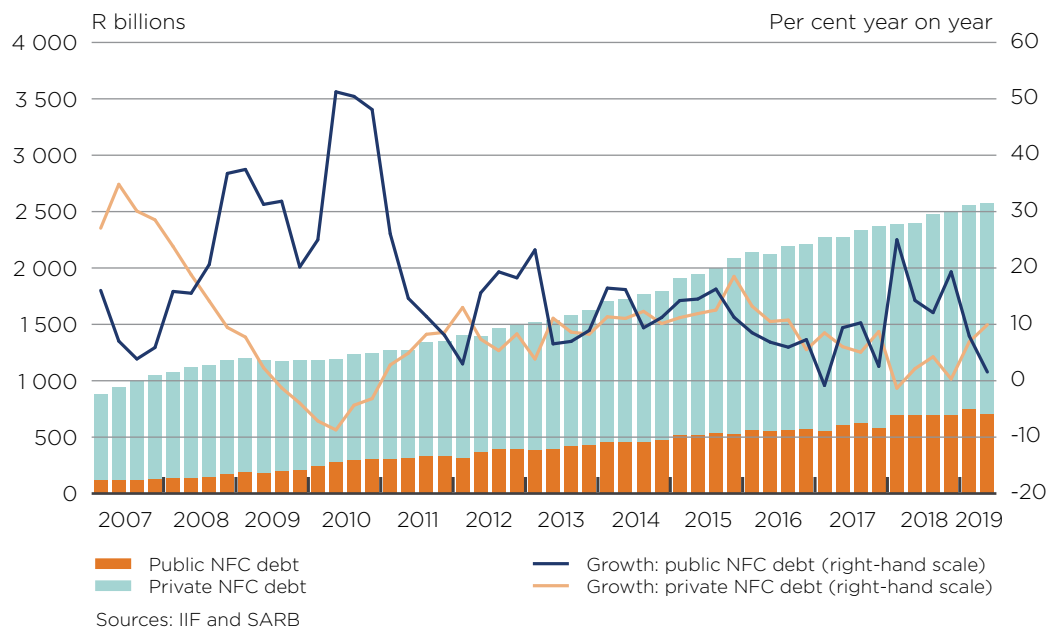
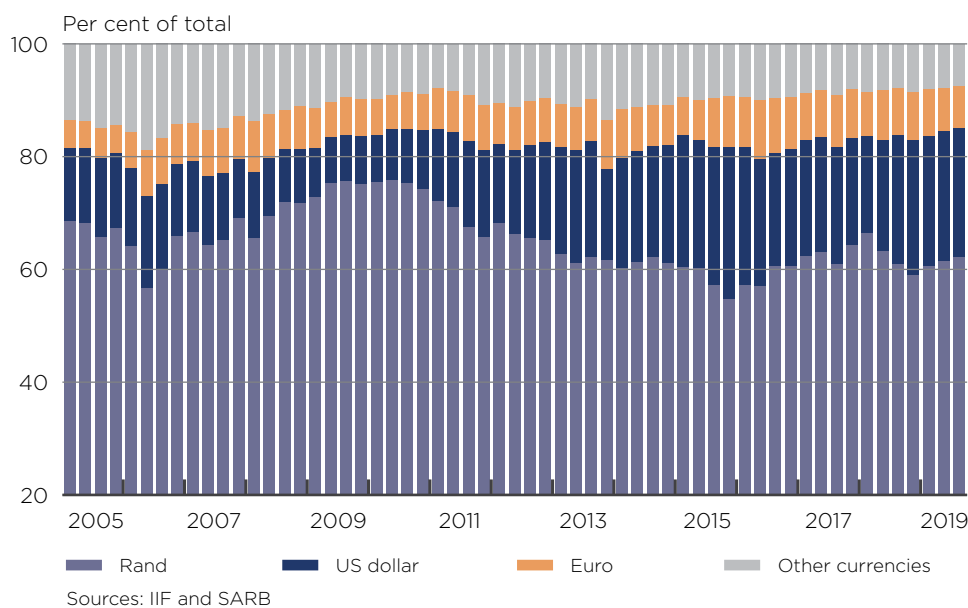
**Figure 43: Selected emerging market non-financial corporate debt-to-GDP ratios**



**NFCs have a large share of foreign currency-denominated debt.**

Approximately 38% of total NFC debt is denominated in currencies other than the rand, the majority being in US dollars (see Figure 45). Currency mismatches on firms' balance sheets can pose significant risks when the exchange rate is depreciating. The extent to which local firms are susceptible to these risks is not entirely clear, as firm-level data on hedging activity are not available. However, aggregate currency risk is likely to be limited for three reasons. First, public NFCs are required to hedge their foreign currency debt. Second, many large corporates in South Africa have natural hedges in place (they generate foreign currency revenues, which can be used to pay foreign currency debts). Third, based on a 2015 survey conducted by NT and RMB Global Markets, more than half of corporates hedge their currency exposures (although not all do so fully).<sup>47</sup> While many NFC balance sheets will be shielded from the recent currency depreciation, residual currency risk remains.

<sup>47</sup> National Treasury and RMB Global Markets, 2015, *Currency risk and risk management in South Africa*.

**Figure 44: Public and private non-financial corporate debt****Figure 45: Currency composition of non-financial corporate debt**

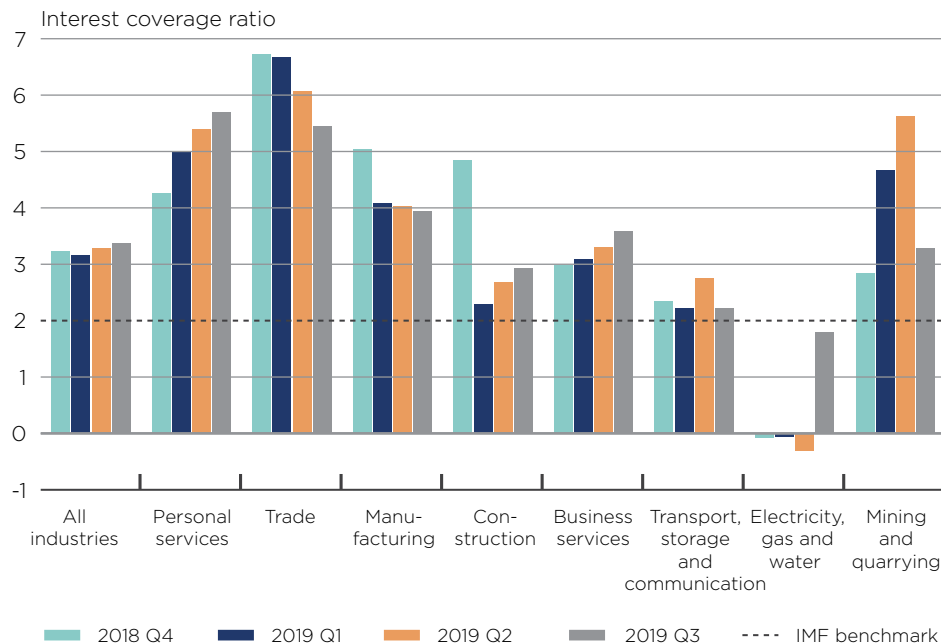
**The aggregated interest coverage ratio of the NFC sector showed a marginal improvement in the third quarter of 2019.**<sup>48</sup> However, deterioration was observed in four out of eight industries. Only one industry (electricity, gas and water) has persistently been operating below the interest coverage

48 The interest coverage ratio estimates a firm's ability to generate enough cash flow to finance its interest expenses on outstanding debt, by dividing a firm's earnings before interest and taxes (EBIT) by its annual interest expenses. A conservative International Monetary Fund (IMF) benchmark identifies firms with income that covers interest expenses by less than two times as 'weak'. According to the IMF, an interest coverage ratio below 1 is defined as a 'technical default'. In such a situation, many of these firms can survive for some time by selling assets to meet their debt obligations, but if their interest coverage ratios remain below 1 for a sustained period of time, they could eventually become insolvent and default on their debt obligations.



ratio benchmark of 2. However, the construction and transport industries are operating relatively close to that level. These are also industries that are likely to be hard-hit by the recent disruptions caused by COVID-19.

**Figure 46: Aggregated and sectoral non-financial corporate sector interest coverage ratio\***



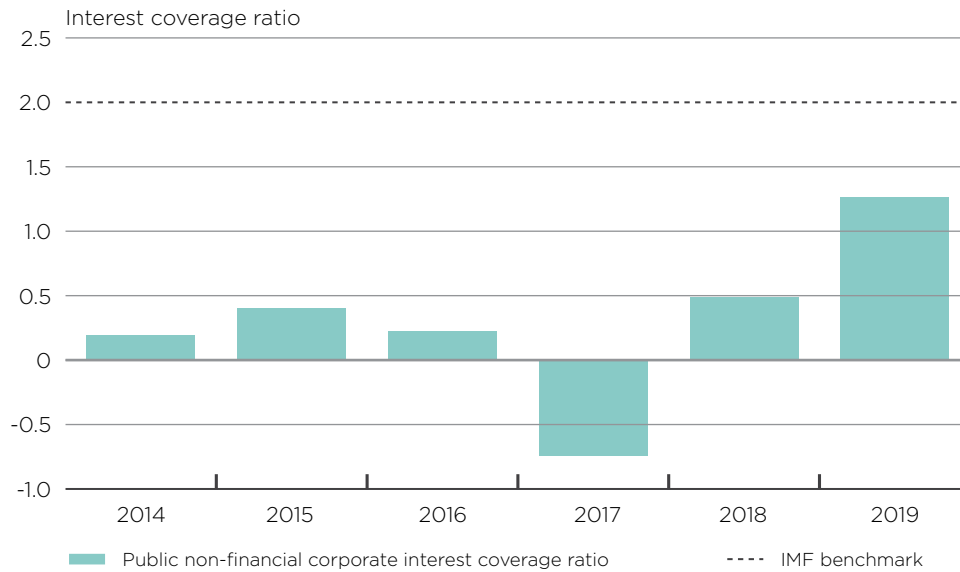
\* This excludes public administration, defence activities and education.

Sources: IMF, Stats SA and author's computations

**The interest coverage ratio for public NFCs has trended below 1 since 2014, before recovering to 1.3 in 2019.** An interest coverage ratio below 1 indicates that, on average, firms have not generated sufficient operating profit to cover their interest expenses. The move to above 1 in 2019 is a positive development. However, the SARB remains concerned about the debt servicing capacity of public sector corporates.

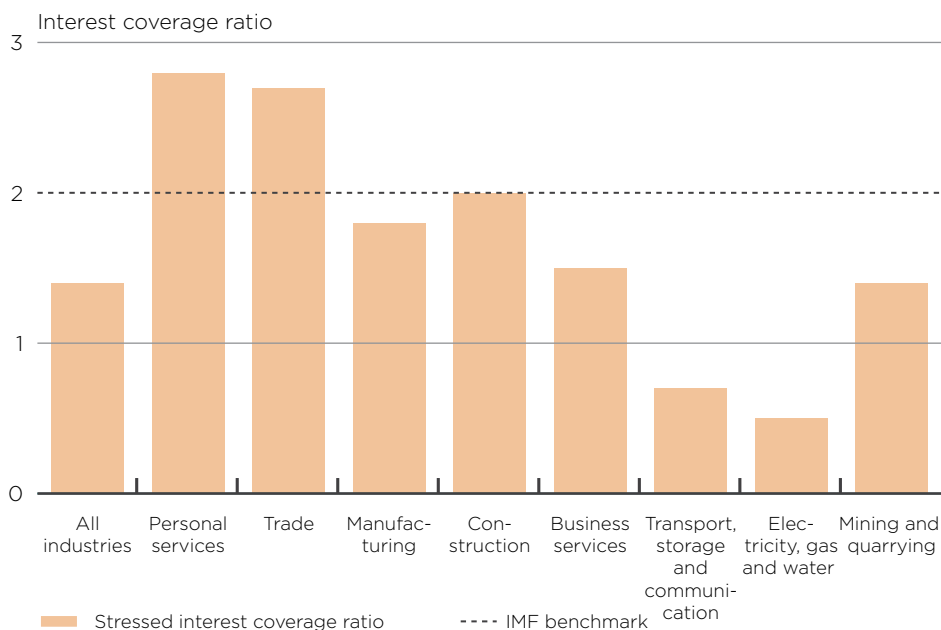
**NFCs are vulnerable to economic and financial shocks.** In order to test the resilience of NFCs, a stress scenario was applied to the NFC sector based on 2019 data. This was done by determining the impact of a combination of a 25% increase in borrowing costs and a 25% decline in earnings.<sup>49</sup> Under this scenario, the economy-wide NFC interest coverage ratio declined to 1.4, significantly below the benchmark for repayment risk. When disaggregated, the interest coverage ratio for all but three industries fell below the benchmark. This highlights the vulnerability of domestic NFCs to interest rate risk and earnings risk.

<sup>49</sup> These shocks are consistent with the high-stress events experienced in emerging markets over the past 10 years, as determined in the April 2014 *Global Financial Stability Report* of the International Monetary Fund (IMF).

**Figure 47: Public non-financial corporate interest coverage ratio\***

\* This ratio was calculated from the income statements of selected public firms. The calculation was done at economic-entity level.

Source: SARB

**Figure 48: Interest coverage ratios under a simulated stressed scenario**

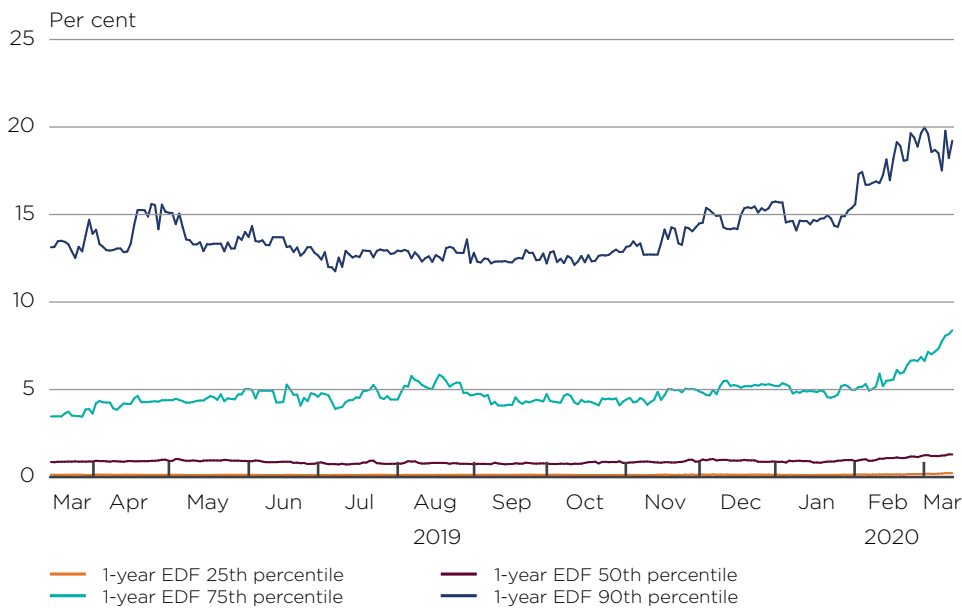
Sources: IMF, Stats SA and author's computations

**Market-based indicators point to increased credit risk in line with elevated NFC indebtedness.** The expected default frequency (EDF)<sup>50</sup> for NFCs has increased significantly over the past year, signalling a deterioration in firms' ability to honour future debt obligations.

<sup>50</sup> The expected default frequency (EDF) measures the probability that a firm will default within a given time horizon (in this case, within a year) by failing to make interest or principal payments. The EDF assesses a firm's ability to service its debt by calculating its probability of default based on the values of the firm's assets and liabilities. The measure is forward-looking, as it uses market-based variables, including equity prices, equity volatilities and default barriers.

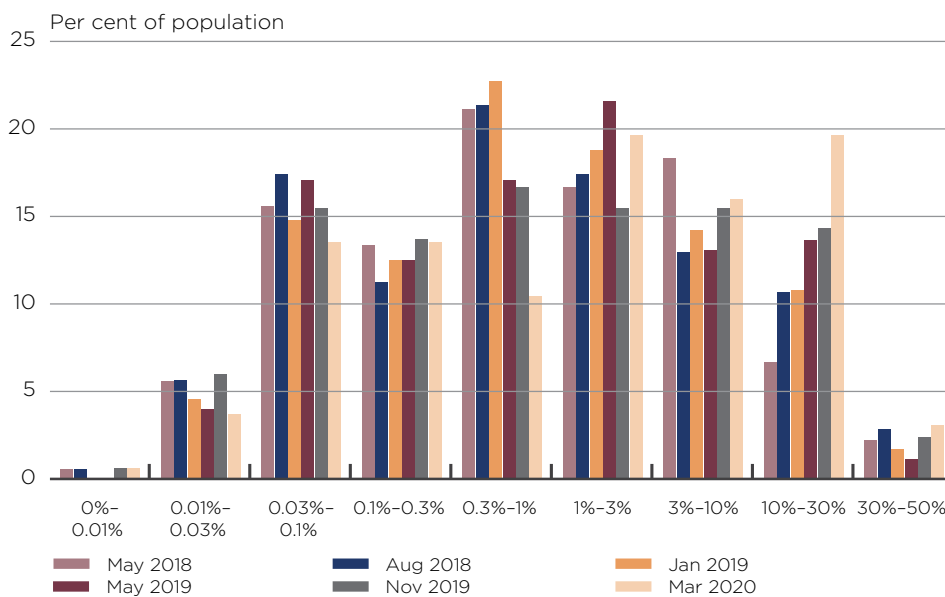
The sector recorded an average EDF of 5.7% in March 2020, significantly higher than the 4.4% recorded at the time of the previous *FSR* in November 2019. Consequently, the sector’s average implied credit rating deteriorated from Caa2 to Caa3.<sup>51</sup> The deterioration has been broad-based. However, the weakest quarter of firms has seen a faster increase in EDFs than the average. Although firms in the mining, construction as well as electricity, gas and water industries continue to record the highest EDFs, there has been an increase in the number of manufacturing, trade and business services firms with EDFs above 20%.

**Figure 49: Expected default frequency of non-financial corporates\***



\* This information is based on a portfolio of 163 non-financial corporates (NFCs).  
Sources: CreditEdge and Moody’s

**Figure 50: Distribution of expected default frequencies**



Sources: CreditEdge and Moody’s

51 The credit rating is based on the correlation between the implied ratings by Standard and Poor’s (S&P) and the EDF credit risk measures.

**The banking sector currently has limited exposure to industries with high EDFs.**

As at December 2019, the domestic banking sector had a total gross credit exposure of approximately 36% to the NFC sector. The weakest-performing firms in terms of the interest coverage ratio and the EDF are public firms and those in the electricity, gas and water industry. These firms account for approximately 4% of the banking sector's total credit exposure. Furthermore, many of these exposures are subject to government guarantees. However, broader-based risks are likely to emerge as a result of slowing economic activity domestically and internationally. The SARB is monitoring this evolving risk closely.

**Table 2: The banking sector's credit exposure to non-financial corporates by industry**

Industry	Per cent
Construction	0.9
Agriculture, hunting, forestry and fishing	1.6
Public entities	1.9
Other	2.2
Electricity, gas and water supply	2.3
Mining and quarrying	2.7
Business services	3.2
Transport, storage and communication	3.3
Manufacturing	5.3
Wholesale and retail trade	6.7
Community, social and personal services	7.6
Total	36.1

Data as at December 2019

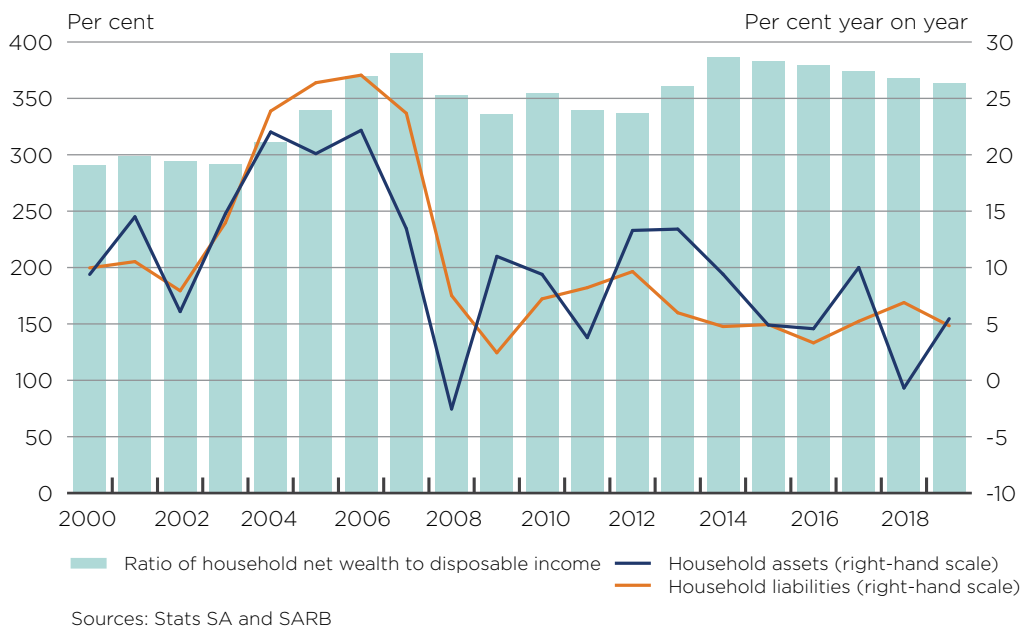
Source: SARB

## Households

**Household finances remain under pressure, in line with challenging economic and labour market conditions.**

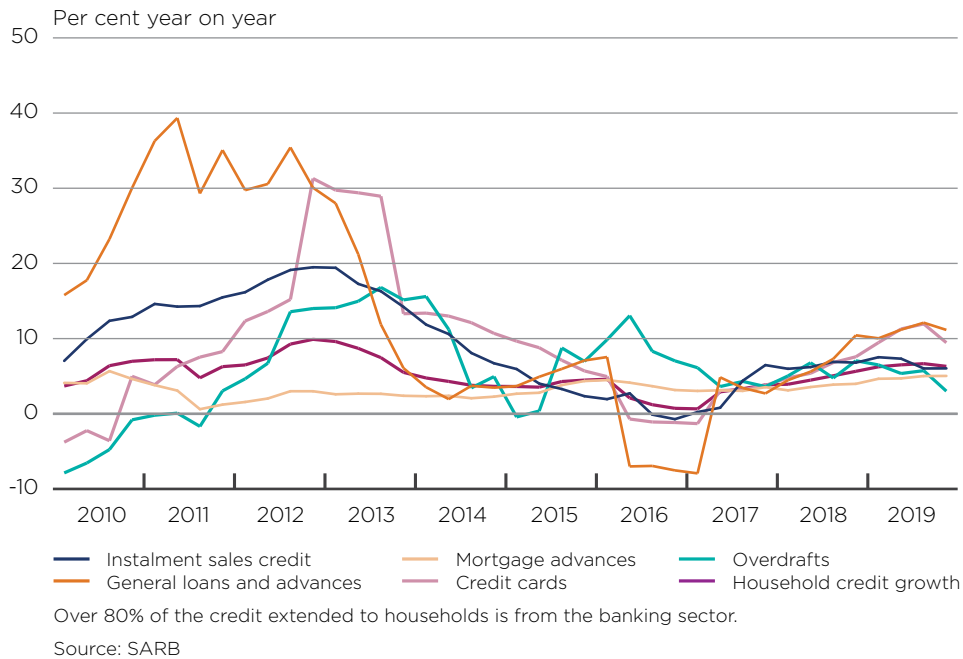
Real disposable income grew by only 0.9% in 2019 (slowing from 1.5% in 2018). Household net wealth gains have also slowed on account of muted asset price gains. As a share of disposable income, household net wealth has been gradually declining since 2014, but remains substantial at 363% (see Figure 52). However, this wealth is unevenly spread across the population, with a significant concentration at the top end of the income distribution.



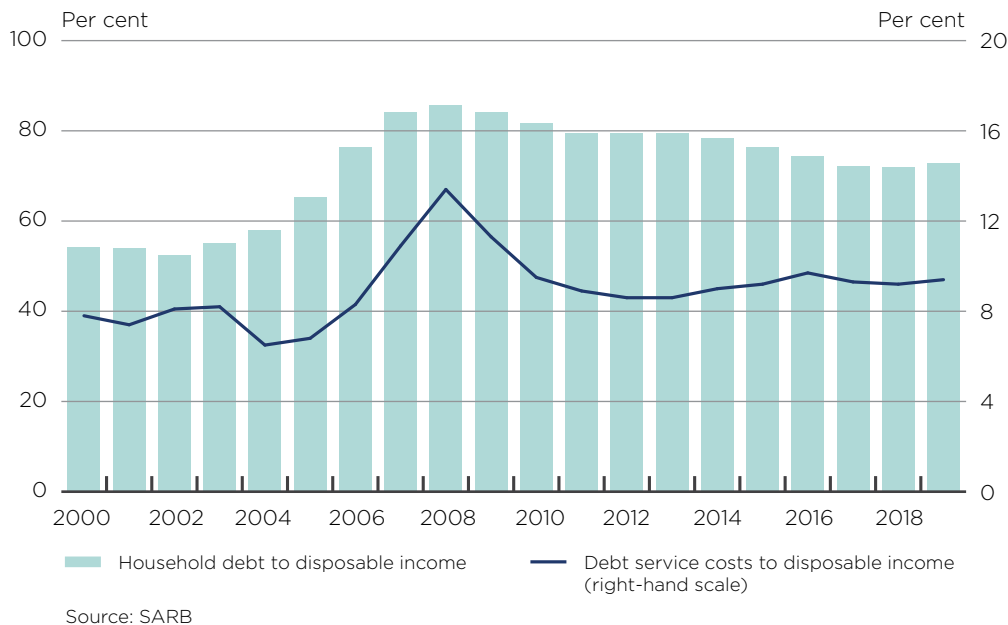
**Figure 51: Household disposable income and consumption expenditure****Figure 52: Household net wealth as a share of disposable income and the growth rate of household assets and liabilities**

**The rate of growth in bank lending to households has edged up over the past two years.** Credit extension to households increased faster than disposable income in 2019, reflecting a trend change. The household debt-to-disposable-income ratio fell consistently between 2009 and 2018 as debt burdens were gradually worked down following a period of excess in the mid-2000s. While the overall debt position of households is more favourable than it was a decade ago, the composition of household debt has moved increasingly towards higher-cost forms of financing. As a result, households are spending, on average, 9.4% of their disposable income on servicing debt, the most since 2016 (see Figure 54).

**Figure 53: Household credit extension from the banking sector by asset type**



**Figure 54: Household debt and debt service costs as a share of income**



**Unsecured credit<sup>52</sup> continued to grow at a faster pace than secured credit in 2019.** The rate of unsecured credit growth accelerated to 10.2% in 2019, up from 6.6% in 2018. Meanwhile, secured credit grew by 5.3% in 2019, increasing slightly from 4.2% in 2018. The relatively high cost of unsecured credit as well as the nature of its use (which is typically for consumption rather than

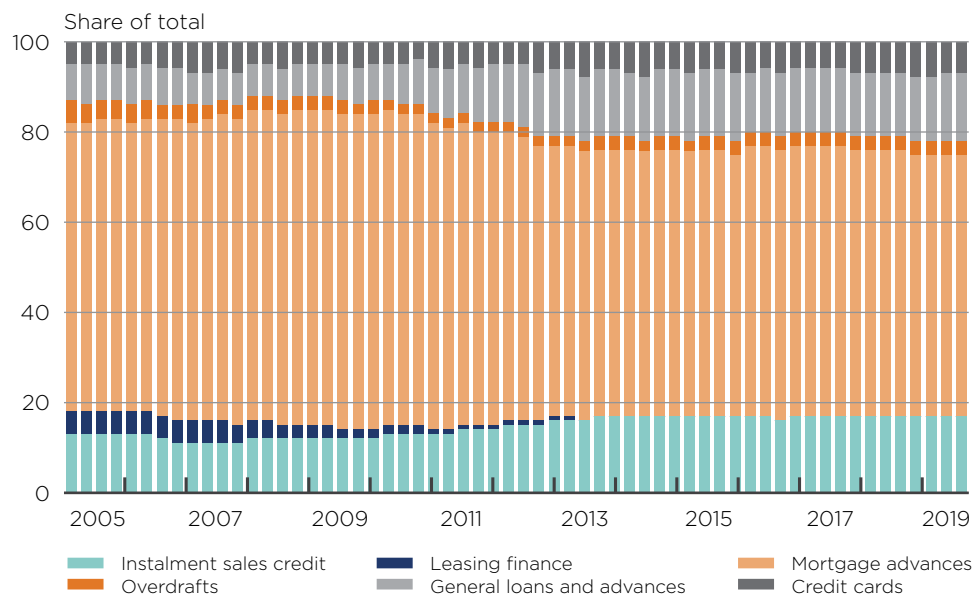
52 Unsecured credit is the sum of general loans, credit cards and overdrafts.

investment) implies that it poses a higher risk than secured credit. This risk is lifted by the fact that the average term of these loans has increased in recent years (see Figure 56). While secured credit is granted mainly to upper-income consumers, unsecured credit is more evenly spread across the income distribution. Nearly one-third of new unsecured credit in 2019 was granted to individuals earning less than R15 000 a month. In contrast, less than 1% of mortgage credit and less than 10% of other secured credit was granted to individuals in that income group.<sup>53</sup> Consequently, the performance of an unsecured credit portfolio is far more dependent on the financial well-being of lower-income consumers.

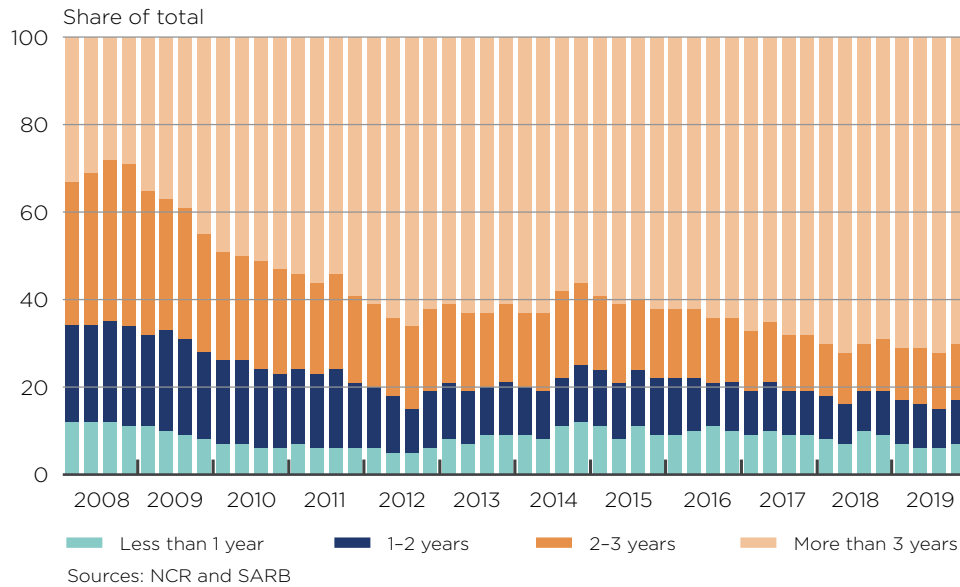
**The SARB is closely monitoring the unsecured category of lending.**

It should be noted that bank provisioning and capital requirements for these types of loans are significantly higher than for secured credit, thus there are substantial buffers in place for the banking sector to absorb shocks to the unsecured credit portfolio.

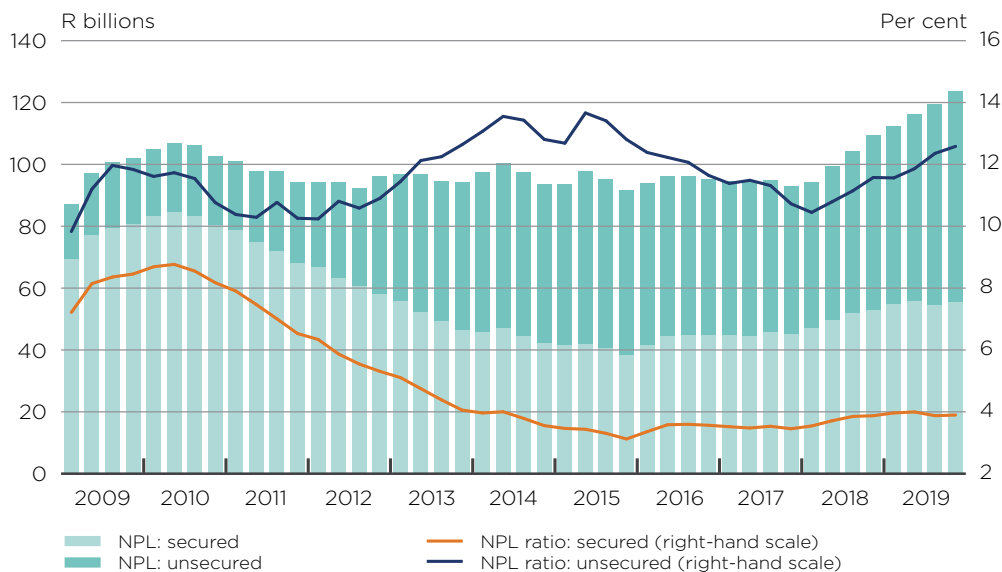
**Figure 55: Share of household credit extension from the banking sector by asset type**



<sup>53</sup> This is based on data from the National Credit Regulator (NCR).

**Figure 56: Share of new unsecured loans based on the term of the agreement****The rate of NPL growth in the household sector accelerated in 2019.**

This was driven by an uptick in the NPL ratio<sup>54</sup> for unsecured credit to over 12% (see Figure 57). The NPL ratio for secured credit has remained stable at around 4% in recent quarters. Unsecured credit is responsible for 54% of total household defaults, despite accounting for only 27% of household debt. The unsecured NPL ratio remains below the levels seen in 2014, but its upward trajectory is of some concern, especially because the economic impact of COVID-19 is likely to push this ratio up further.

**Figure 57: Household non-performing loans\***

\* This Figure shows non-performing loans (NPLs) for the entire financial sector (banks and non-bank credit providers).

Source: NCR

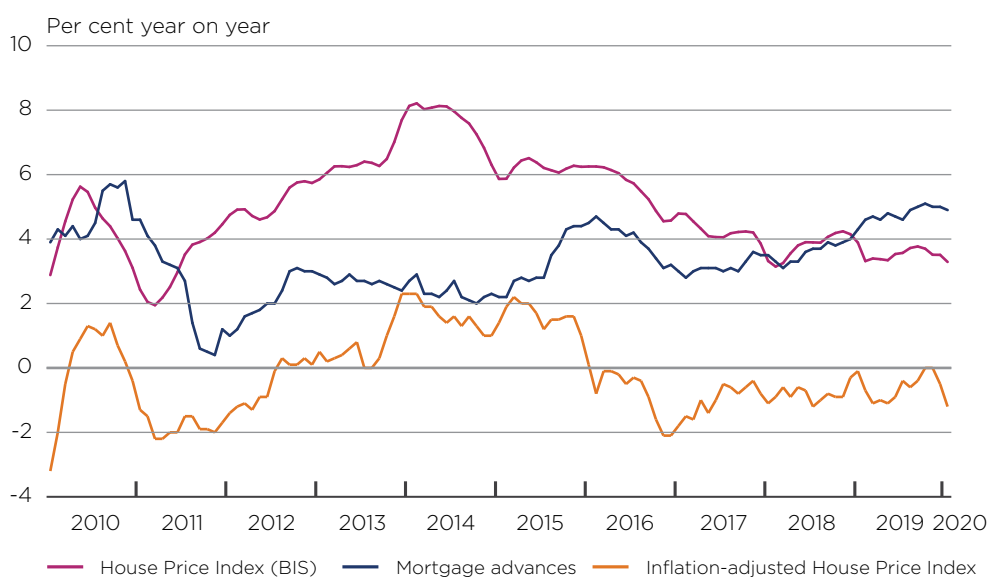
54 The NPL ratio is the ratio of the value of household NPLs to total outstanding household loans.



## Residential real estate

**House price growth has been muted in recent years, increasing at levels below inflation since 2016.** Based on data from the Bank for International Settlements (BIS), nominal house price growth has been moderating since 2018, slowing to an eight-year low of 3.3% year on year in January 2020. This is despite the modest upward trend in mortgage lending of late, which grew at 4.9% in the same month (see Figure 58).

**Figure 58: House price and residential mortgage advances growth**

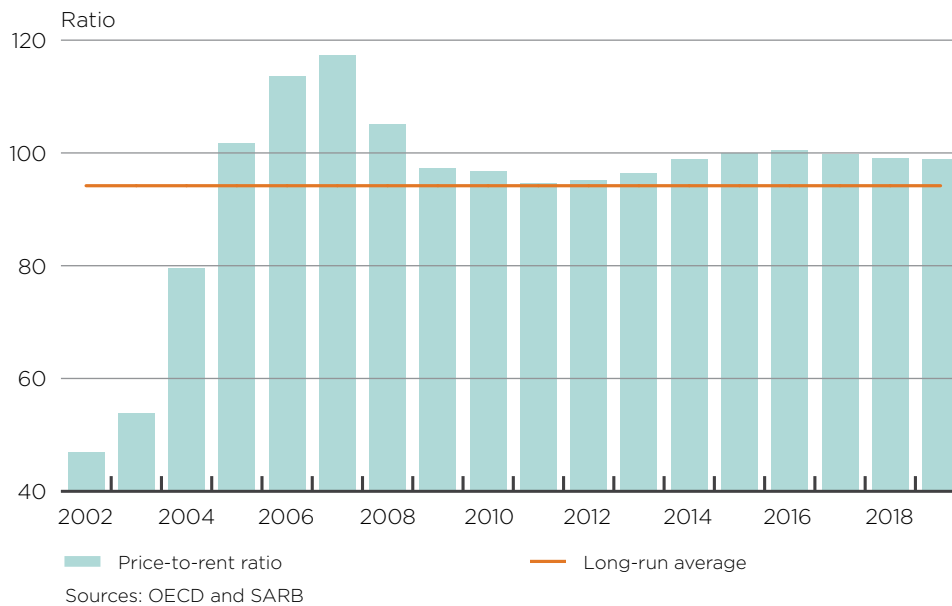
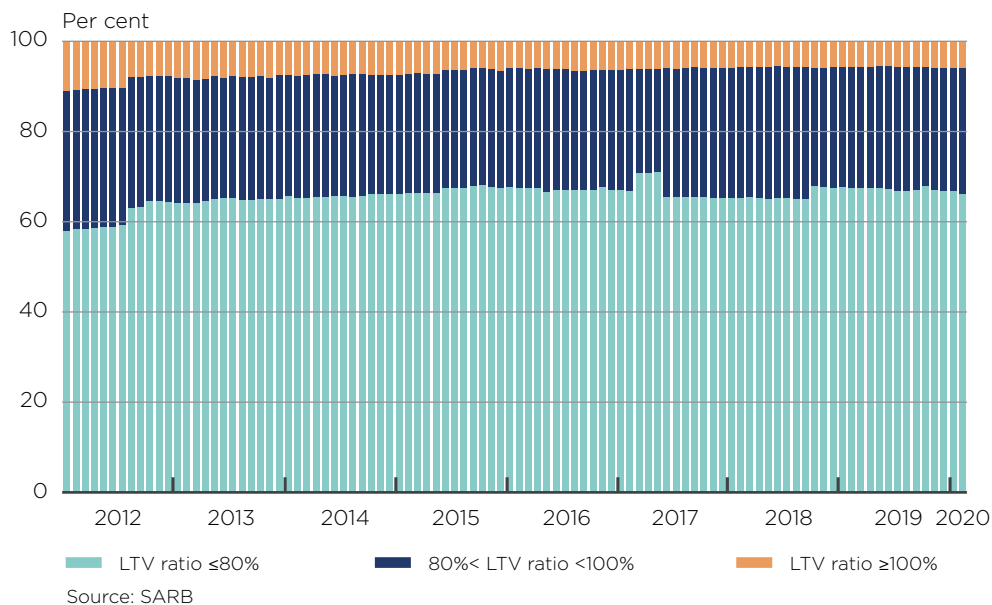


Sources: Absa, BIS, FNB, Stats SA and SARB

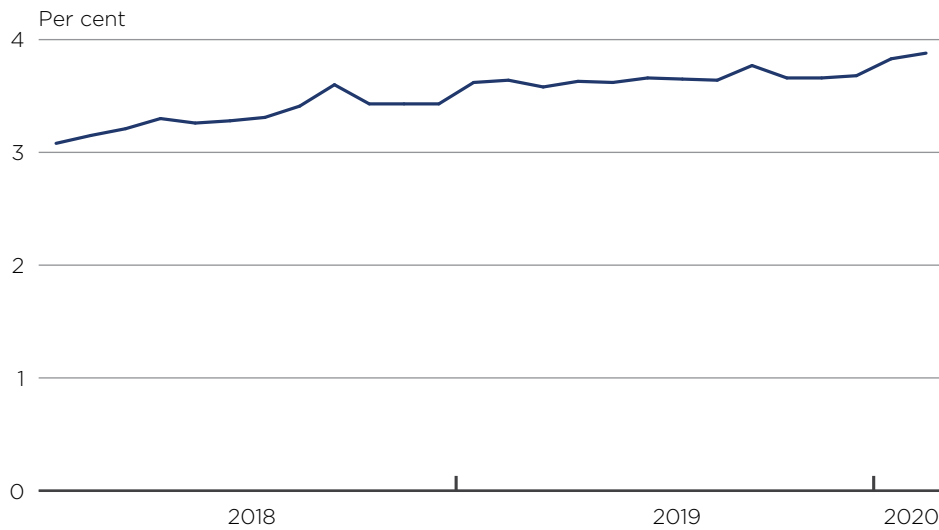
**Residential real estate prices appear fair relative to the cost of renting.** The price-to-rent ratio<sup>55</sup> is slightly above its historical average (see Figure 59). However, it has been declining since 2016.

**Banks have adopted a relatively conservative approach to mortgage lending.** Banks have been allocating a declining share of total credit to residential mortgage advances. This ratio has trended down, from nearly 24% in 2012 to 18% currently. Furthermore, nearly two-thirds of the residential mortgage credit extended in recent months was at a loan-to-value (LTV) ratio below 80% (see Figure 60). In other words, these are loans for which a down payment of more than 20% was received. Only around 6% of home loans was extended to borrowers who made no down payment or borrowed an amount greater than the value of the property (an LTV ratio of at least 100%). This indicates that banks will be relatively well insulated in the event of a moderate fall in house prices because the underlying collateral values are, in most cases, above the loan size.

<sup>55</sup> The price-to-rent ratio is one of the measures that can be used to determine the affordability and profitability of owning residential property. It is also used as a metric to assess valuation in real estate markets.

**Figure 59: Residential price-to-rent ratio****Figure 60: Share of residential mortgage loans granted at different loan-to-value ratio levels****Mortgage affordability among households has gradually deteriorated.**

There has been a modest, but consistent, increase in the share of residential mortgage payments that are 90 days overdue, increasing from 3.1% at the start of 2018 to 3.9% in February 2020. A further deterioration in loan quality is expected to come through in the second half of 2020.

**Figure 61: Residential mortgages: 90-days-overdue ratio**

Sources: PA and SARB

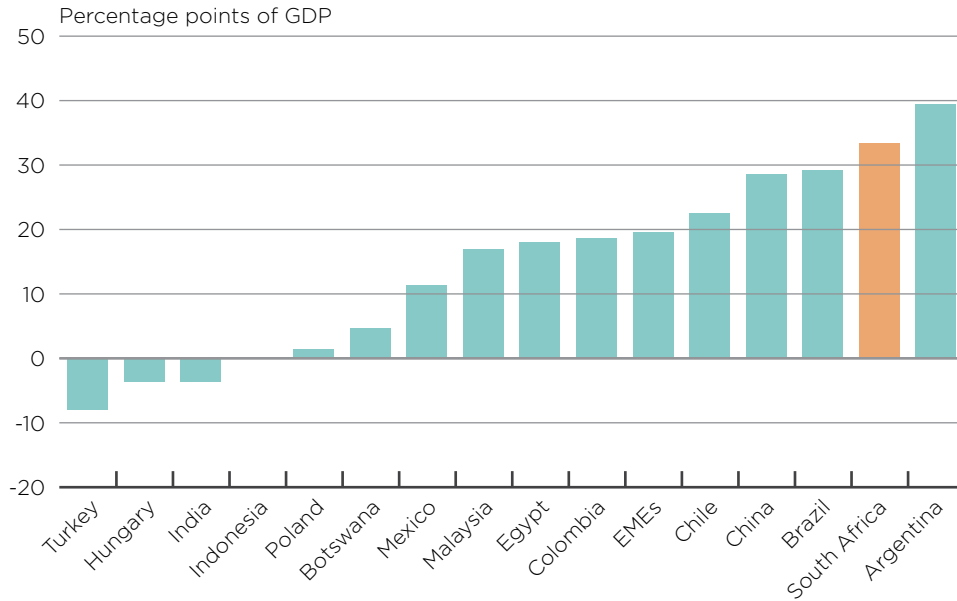
## Government

**Government has announced a large fiscal stimulus package in response to the COVID-19 outbreak.** This package amounts to R500 billion (approximately 10% of GDP), of which R50 billion has been allocated to increased social grants payments for the most needy, R200 billion has been allocated to a loan guarantee scheme, R20 billion has been provided to municipalities for the provision of public services, R20 billion has been set aside for the health sector, R140 billion has been allocated to job protection and job creation, while R70 billion has been allocated to the provision of tax relief for firms. The package includes a significant amount of reprioritised spending as well as the use of some of the surplus funds in the Unemployment Insurance Fund (UIF). Meanwhile, the R200 billion loan guarantee scheme will be a contingent liability of government unless it is required to cover loans that have not performed. Therefore, the level of new government spending in the current fiscal year will likely be in the order of R150 billion (approximately 3% of GDP).

**The upward drift of government debt is set to accelerate.** While South Africa's gross government debt-to-GDP ratio was roughly equal to the emerging market economies' average in 2019, the domestic debt trajectory is a risk. South Africa's public debt increased by more than almost any of its peers between 2008 and 2019 (by 33 percentage points of GDP). In the 2020 National Budget, NT projected a further increase in the debt stock, from the current level of 61.6% of GDP to 71.6% of GDP in 2023. However, the debt stock is likely to rise much faster in light of the economic impact of COVID-19, as well as the fiscal stimulus measures announced by NT in April 2020. IMF projections indicate that the gross government debt-to-GDP ratio will reach 85.6% of GDP by the end of 2021.

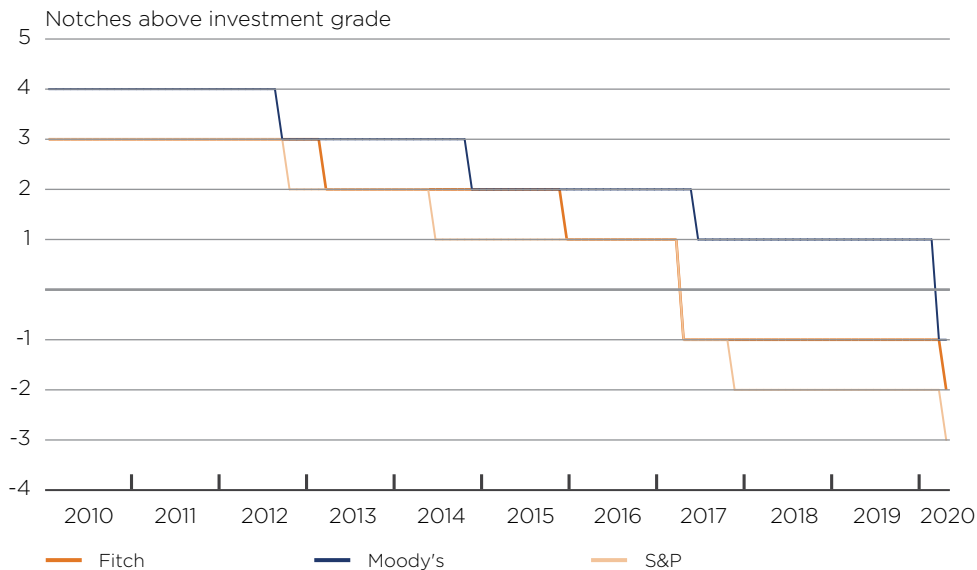


**Figure 62: Change in gross government debt for various emerging market economies 2008-2019**



**As a result of the upward trajectory in debt and weak GDP growth prospects, Moody's downgraded South Africa's sovereign credit rating in March 2020.** South Africa's local and foreign currency sovereign credit ratings from all three major rating agencies are now below investment grade for the first time in more than two decades (see Figure 63). This has resulted in the removal of South Africa's government bonds from the FTSE WGBI, which is likely to constrain demand for government debt.

**Figure 63: South Africa's foreign currency sovereign credit rating history\***



\* In Figure 63, the value 1 corresponds with the lowest investment grade credit rating, while -1 corresponds with the highest non-investment grade credit rating.

Sources: Fitch, Moody's and S&P

Furthermore, Fitch Ratings Inc. (Fitch) and Standard & Poor's (S&P) have downgraded South Africa's foreign currency credit ratings over the past two months, the former to two notches below investment grade and the latter to three notches below investment grade.

**Government bond yields have increased substantially since February 2020.** The yield on the benchmark R2030 bond (maturing in 2030) rose by more than 300 basis points during March 2020. It has since fallen, but in early May 2020 it remained more than 120 basis points above the level at which it had begun 2020 (see Figure 64). The upward move in bond yields and the elevated volatility thereof reflects a combination of risk aversion in global markets, the decision by Moody's to downgrade the sovereign credit rating of South Africa (and the resulting exclusion from the WGBI), and concerns over the economic impact of COVID-19. Although the rising funding costs are a concern, government has several 2020 measures in place to reduce the risk profile of its debt. Three of these are discussed below.

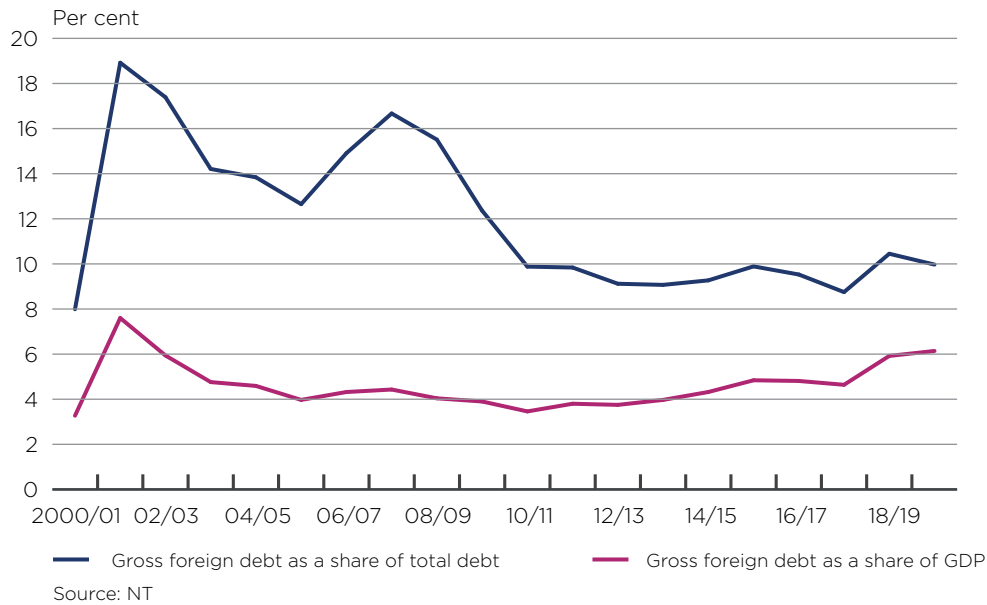
**Figure 64: The R2030 government bond yield**



Source: Bloomberg

**First, most of government's debt is denominated in the rand.** Only about 10% of public debt is foreign currency-denominated, which is a significant strength. This is because debts issued in foreign currency increase vulnerability to exchange rate depreciations, which in turn increase the local-currency value of such debt. Therefore, government's funding strategy has largely insulated it from exchange rate risk. Based on NT data, the SARB estimates that the recent depreciation of the rand against the US dollar from R13.97 at the end of 2019 to R18.81 on 1 May 2020 is likely to have pushed up gross government debt by just over 2 percentage points of GDP (holding other variables constant). This is a relatively small impact given the magnitude of the currency move.



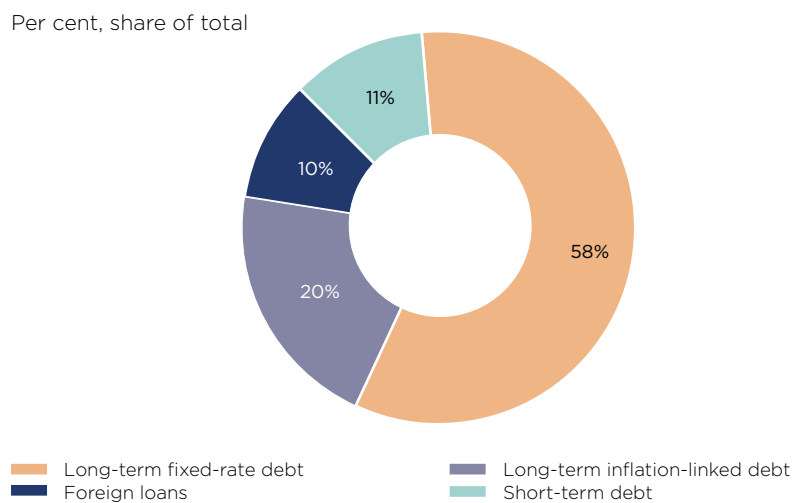
**Figure 65: Foreign currency-denominated sovereign debt**

**Second, the long maturity profile of government debt provides a buffer against rollover risk.**

The average term to maturity of government's debt stock was 13 years at the end of the 2019/20 fiscal year. However, this is projected to decline up to 11.8 years in the 2020/21 fiscal year, as reliance on short-term funding is projected to increase.

**Third, government funding costs change with a lag when bond yields move.**

Almost 60% of government debt consists of fixed-rate long-term bonds (with a maturity longer than one year). Government pays a fixed interest rate on these bonds until they mature. Approximately one-fifth of the debt portfolio consists of long-term inflation-linked bonds.

**Figure 66: The debt portfolio of government as at the end of the 2019/20 fiscal year**

The percentages do not add up to 100% due to rounding

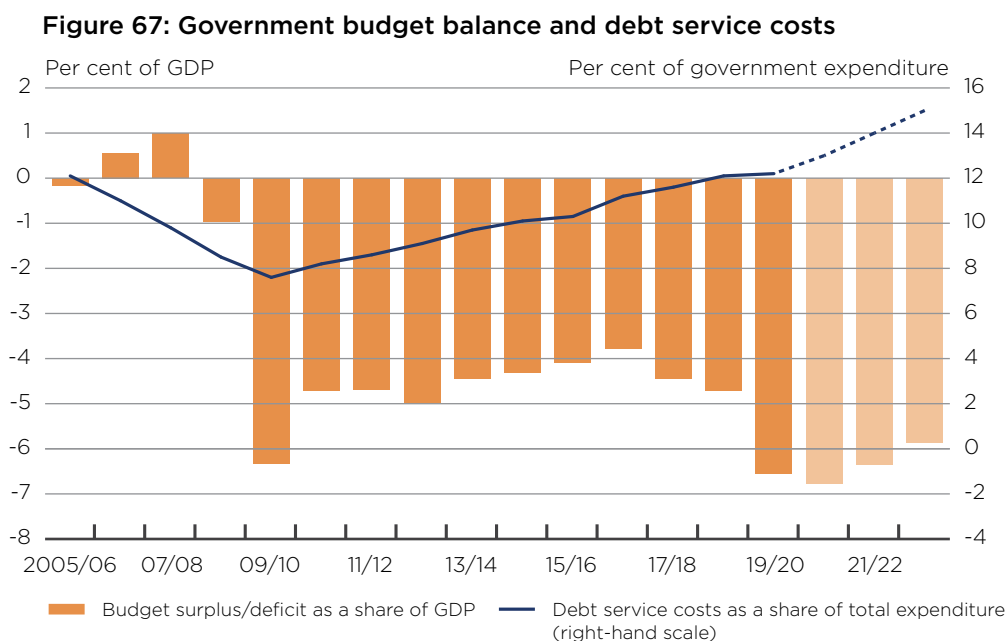
Source: NT

The repayment on these bonds fluctuates in line with inflation. Foreign debt accounts for 10% of the debt portfolio, and is mostly of a longer maturity. The remaining 11% of the portfolio is short-term debt. Therefore, the existing stock of debt is largely protected in the near term from the effect of higher yields in the secondary bond market. However, new debt issuances will attract these higher borrowing costs.

### **Budget deficits have increased, reflecting substantial funding requirements.**

The budget deficit for the 2019/20 fiscal year was the largest in over two decades, reaching 6.5% of GDP. NT forecasts the deficit to widen further, to 6.8% of GDP, in the current fiscal year. In light of the macroeconomic shock caused by COVID-19, the budget deficit will likely exceed 10% of GDP this year, which would make it one of the largest in South Africa's history. Substantial deficits in previous years were the result of increased financial support for state-owned enterprises (SOEs) as well as weaker-than-expected tax revenue growth. Given the challenging macroeconomic backdrop, SOEs are likely to continue facing financial difficulties and may require further government support. The debt default by the Land Bank in April 2020 is a reminder of the feedback loop between government finances and that of SOEs, as Fitch indicated that the weak financial position of the Land Bank was a factor in its decision to downgrade the sovereign credit rating in April 2020.

**The debt service cost of government continues to increase.** Debt service costs account for 13% of government expenditure and 16.4% of revenue in the 2020/21 Budget. This is up from less than 8% of government expenditure in 2009/10. NT projects that the debt service burden will rise to 15% of expenditure by 2023 as interest payments are the fastest-growing item in the Budget.



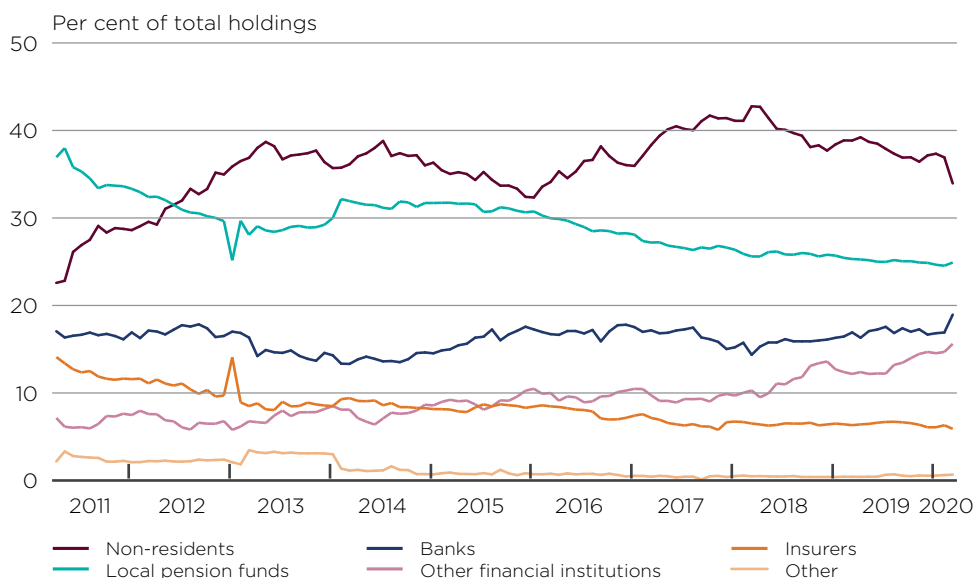
The lighter bars and dotted lines are NT projections. A supplementary budget is expected for this year, which will likely see both budget deficits and debt service costs revised upwards.

Source: NT

As pressure on the fiscus increases, the rising interest bill is likely to crowd out other social and investment spending priorities. This, in turn, may adversely impact on longer-term economic growth prospects, as improvements in the provision of health care, education and infrastructure provide the basis for future GDP growth.

**Non-residents remain the largest holders of government bonds, but their share of holdings has fallen.** In March 2020, the share of government bonds held by non-residents fell to a four-year low of 34% (see Figure 68). These data were collected prior to Moody's sovereign credit rating downgrade, so it is likely that further selling by foreigners has taken place since. Research by the BIS suggests that a significant driver of the sharp increase in South Africa's bond yields since the outbreak of COVID-19 (which has exceeded most of its emerging market peers) is the fact that non-resident holdings of South Africa's bonds are among the highest in emerging markets.<sup>56</sup> As most of South Africa's government bonds are rand-denominated, the rapid depreciation of the local currency has caused significant losses for investors operating in advanced economy currencies. This has likely exacerbated bond selling in recent months. Nevertheless, non-residents continue to hold a larger share of sovereign bonds than either local pension funds (25%) or domestic banks (19%). Therefore, global financial market developments and currency fluctuations can be expected to continue playing an important role in driving government bond yields.

**Figure 68: Holders of South African government bonds**



**Once COVID-19 has been contained, a growth-friendly fiscal consolidation will be necessary to address the rise in public debt.** Should government debt continue to increase unabated, government may face debt service challenges, which could have serious implications for financial stability.

<sup>56</sup> B Hofmann, I Shim and H Shin, 2020, 'Emerging market economy exchange rates and local currency bond markets amid the COVID-19 pandemic'. *Bank for International Settlements Bulletin No. 5*. <https://www.bis.org/publ/bisbull05.htm>



# Appendix: Banking and insurance indicators

## Banking sector indicators

	2015	2016	2017	2018	2019
Market share in terms of assets (five largest banks)	82.51	85.49	90.25	90.24	90.37
Gini concentration index	82.53	82.68	82.91	83.40	83.21
Herfindahl-Hirschman Index (HH-index)	0.181	0.179	0.179	0.178	0.179
Banks' share prices (year-on-year percentage change)	20.78	-10.22	13.49	22.18	-0.88
Total assets (R billions)	4 481	4 857	5 006	5 311	5 769
- Year-on-year percentage change	10.96	8.53	3.08	6.09	8.63
Total loans and advances (R billions)	3 438	3 693	3 791	3 945	4 249
- Year-on-year percentage change	9.70	7.51	2.68	4.05	7.75
Total capital adequacy ratio	14.27	14.98	16.32	16.39	16.53
Tier one capital adequacy ratio	11.50	12.19	13.36	13.32	13.45
Common equity tier one capital adequacy ratio	11.06	11.79	12.89	12.79	12.69
Impaired advances (R billions)*	110.99	114.96	107.86	137.05	161.72
Impaired advances to gross loans and advances	3.23	3.13	2.85	3.47	3.81
Specific credit impairments (R billions)	52.99	47.95	47.16	60.75	73.58
Specific credit impairments to impaired advances	47.78	41.78	43.73	44.27	45.51
Specific credit impairments to gross loans and advances	1.54	1.30	1.25	1.54	1.73
Return on assets (smoothed)	1.12	1.22	1.33	1.31	1.24
Return on equity (smoothed)	15.53	17.05	16.80	15.84	15.31
Interest margin to gross income (smoothed)	55.79	57.02	57.19	56.74	56.80
Operating expenses to gross income (smoothed)	55.22	55.07	55.66	57.19	58.22
Liquid assets to total assets (liquid asset ratio)	9.16	9.27	9.61	10.23	11.05
Liquid assets to short-term liabilities	17.81	18.09	19.01	20.49	22.43
Liquidity coverage ratio	82.77	98.23	116.36	125.13	146.92

All data are averaged for the year shown. All the numbers indicate percentages, unless stated otherwise.

\* Impaired advances are advances in respect of which a bank has raised a specific impairment, and include any advance or restructured credit exposure subject to amended terms, conditions and/or concessions that are not formalised in writing.

Source: SARB

**Insurance sector indicators**

	2015	2016	2017	2018	2019
<b>Market share in terms of assets (five largest life insurers)</b>	74.3	73.9	73.4	72.7	74.4
Market share in terms of gross written premiums (five largest non-life insurers)	44.6	48.1	47.2	56.8	57.6

**Balance sheet**

Total assets: life insurers (R billions)	2 661	2 716	2 915	2 993	3 121
Total assets: non-life insurers (R billions)	135	138	152	150	154
Total liabilities: life insurers (R billions)	2 513	2 562	2 757	2 630	2 750
Total liabilities: non-life insurers (R billions)	76	80	86	85	84

**Profitability**

Gross written premiums: life insurers (R billions)	461	475	476	530	530
Net profit before tax and dividends: life insurers (R billions)*				14	3
Individual lapse ratio: life insurers	72	56	63	61	91
Gross written premiums: non-life insurers (R billions)	114	118	129	116	125
Combined ratio: non-life insurers	77	87	77	96	97
Operating profit ratio: non-life insurers	22	21	22	7	16

**Solvency and capital\***

Solvency capital requirement cover ratio (median): life insurers				1.9	2.0
Minimum capital requirement cover ratio (median): life insurers				4.3	4.2
Solvency capital requirement cover ratio (median): non-life insurers				1.8	1.8
Minimum capital requirement cover ratio (median): non-life insurers				3.9	4.0

All data are averaged for the year shown. All the numbers indicate percentages, unless stated otherwise.

\* These returns are only available from 2018 due to changes in reporting requirements.

Source: SARB

# Abbreviations

Absa	Absa Bank Limited	LEX	large exposures framework
Alsi	All-Share Index	LTV (ratio)	loan-to-value (ratio)
ASF	available stable funding	MMF	money market fund
ASISA	Association for Savings and Investment South Africa	Moody's	Moody's Investors Service
BCBS	Basel Committee on Banking Supervision	MPC	Monetary Policy Committee
BER	Bureau for Economic Research	NBFI	non-bank financial intermediation
BIS	Bank for International Settlements	NCD	negotiable certificate of deposit
CAR	capital adequacy ratio	NCR	National Credit Regulator
CCyB	countercyclical capital buffer	NFC	non-financial corporate
CEO	Chief Executive Officer	NPL	non-performing loan
CET1 (capital)	common equity tier one (capital)	NSFR	net stable funding ratio
CIS	collective investment scheme	NT	National Treasury
D-SIB	domestic systemically important bank	OECD	Organisation for Economic Co-operation and Development
EBIT	earnings before interest and taxes	OFI	other financial institution
EDF	expected default frequency	PA	Prudential Authority
EME	emerging market economy	RAM	risk assessment matrix
FIC	Financial Intelligence Centre	repo	repurchase
Fitch	Fitch Ratings Inc.	RMB	Rand Merchant Bank
FNB	First National Bank	ROE	return on equity
FSB	Financial Stability Board	RSF	required stable funding
FSC	Financial Stability Committee	RWA	risk-weighted asset
FSCA	Financial Sector Conduct Authority	SA	South Africa(n)
FSOC	Financial Sector Oversight Committee	SARB	South African Reserve Bank
<i>FSR</i>	<i>Financial Stability Review</i>	SAVI	South African Volatility Index
FSR Act	Financial Sector Regulation Act 9 of 2017	SCR	solvency capital requirement
FTSE	Financial Times Stock Exchange	SIFI	systemically important financial institution
FX	foreign exchange	SMEs	small and medium enterprises
G20	Group of Twenty	SOE	state-owned enterprise'
GDP	gross domestic product	S&P	Standard & Poor's
G-SIB	global systemically important bank	Stats SA	Statistics South Africa
GWP	gross written premium	UIF	Unemployment Insurance Fund'
H-index	Herfindahl-Hirschman Index	UK	United Kingdom
HQLA	high-quality liquid asset	US	United States
IFRS	International Financial Reporting Standard	VIX	Chicago Board Options Volatility Index
IIF	Institute of International Finance	WGBI	World Government Bond Index
IMF	International Monetary Fund		
IRB	internal ratings-based		
ISSN	International Standard Serial Number		
JSE	JSE Limited		
LCR	liquidity coverage ratio		

