

# Financial Stability Review

September 2011



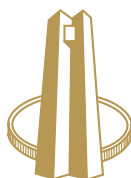
South African Reserve Bank

90<sup>th</sup>

Anniversary

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September 2011



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This issue of the *Financial Stability Review* focuses mainly on the six-month period ending June 2011. However, selected developments up to 30 September 2011 are also reported on. Data may include own calculations made for purposes of this publication.

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ISSN 1811-2226

Produced by the Strategy and Communications Department



South African Reserve Bank

**Financial Stability Review September 2011**

## Purpose of the *Financial Stability Review*

The South African Reserve Bank (the Bank) defines its primary objective as the achievement and maintenance of price stability in the interest of balanced and sustainable economic growth in South Africa. In addition to this, the Bank's role and mandate in overseeing and maintaining financial stability was reaffirmed by the Government. In pursuit of this objective and to promote a stable financial system, the Bank publishes a semi-annual *Financial Stability Review*. The publication aims to identify and analyse potential risks to financial system stability, communicate such assessments and stimulate debate on pertinent issues. The Bank recognises that it is not the sole custodian of financial system stability, but contributes significantly towards, and co-ordinates a larger effort involving the government, other regulators, self-regulatory agencies and financial market participants.

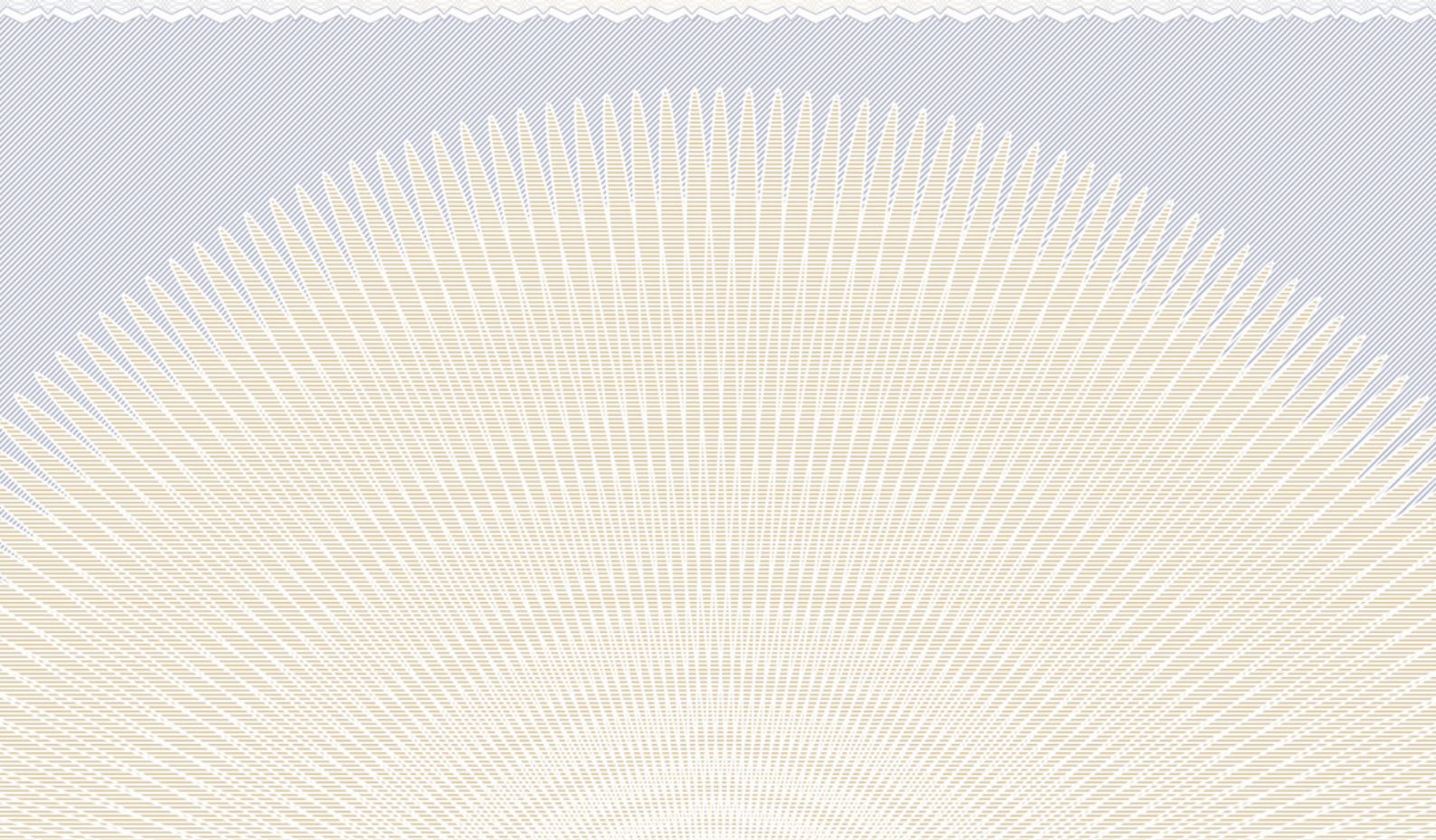
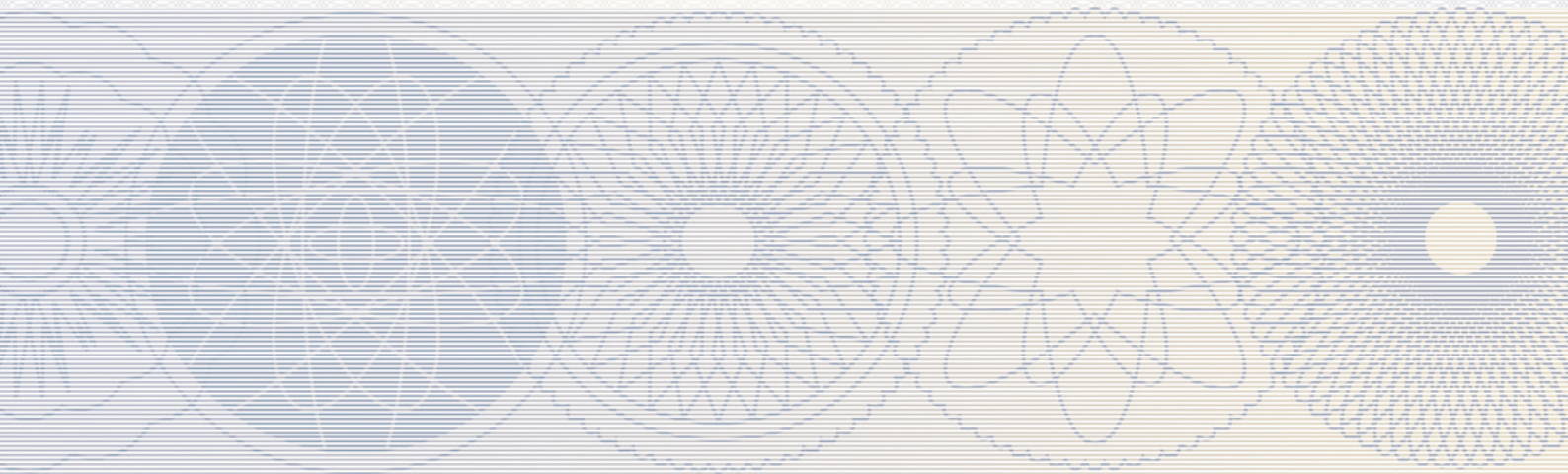
## Defining financial stability

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

'Financial stability' is defined as the smooth operation of the system of financial intermediation between households, firms and the government through a range of financial institutions. Stability in the financial system would be evidenced by (i) an effective regulatory infrastructure, (ii) effective and well-developed financial markets, and (iii) effective and sound financial institutions. In its pursuit of financial stability, the Bank relies on market forces to the fullest possible extent and believes that any of its actions taken to contain systemic risk should be at the minimum level required to be effective.

Financial instability, conversely, could manifest through banking failures, intense asset-price volatility or the collapse of market liquidity and, ultimately, in a disruption in the payment and settlement system. Financial instability affects the real sector due to its links to the financial sector. It has the potential to cause significant macroeconomic costs, as it interferes with production, consumption and investment, and, therefore, defeats national goals of broader economic growth and development.







# Contents

Overview .....	1
Introduction .....	4
Financial stability developments and trends .....	5
International macrofinancial developments.....	5
Financial and economic developments in advanced economies.....	5
Economic growth.....	5
Vulnerabilities in peripheral euro area countries.....	6
Banking-sector fragility.....	9
Financial market developments.....	10
Real-estate markets .....	11
The fiscal deficit in the United States.....	12
Financial and economic developments in emerging-market and developing economies.....	12
Emerging-market economies .....	12
Africa, sub-Saharan Africa and the Southern African Development Community region.....	14
Domestic macroprudential analysis .....	17
Indicators of real economic activity.....	17
Confidence in the financial services sector .....	18
Banking sector .....	18
Insurance sector.....	23
Bond and equity markets .....	25
External sector .....	27
Corporate sector .....	29
Household sector .....	31
Residential real-estate sector.....	35
Infrastructure and regulation.....	37
Update on policy, and legislative and infrastructural developments affecting the South African financial system .....	37
Macroprudential regulatory developments from selected jurisdictions and an update on South Africa's adoption of a twin peaks financial regulatory regime .....	37
The impact of Basel III on the South African banking sector .....	38
Release of the microinsurance policy document.....	38
Consumer Protection Act: Final enforcement guidelines and exemptions.....	39
Credit Rating Services Bill .....	39
Financial Markets Bill .....	40
Developments in the payment systems arena: Vision 2015 and access to the settlement and clearing network.....	40
Treating Customers Fairly programme update .....	41
Exchange-traded funds and their implications for systemic risk.....	41
Note on the countercyclical capital buffer and its possible application in South Africa.....	43
Introduction.....	43
An overview of the countercyclical capital buffer.....	43
Preliminary steps in developing a countercyclical capital buffer framework.....	44
The common reference guide for the countercyclical capital buffer .....	44
Calculating the credit-to-GDP gap for South Africa.....	45
Extending the range of macroeconomic indicator variables.....	46
Macroprudential banking-sector indicators and variables.....	47
Concluding remarks.....	49
References .....	50



## Boxes

1	Aid packages to debt-burdened euro area countries .....	7
2	South African banking sector's credit exposure to selected peripheral European countries.....	8
3	Stress-testing exercise in Europe .....	9
4	Sub-Saharan Africa: Improving risk perceptions and growing investor interest .....	16
5	Computation of the banking stability index.....	21

## Figures

1	Quarterly growth in real GDP .....	6
2	Credit default swap spreads .....	8
3	Deposits at the ECB, and Euribor and OIS rates .....	10
4	VIX, US dollar index and world market capitalisation .....	10
5	US commercial banks' delinquencies for real-estate loans .....	11
6	House price indices in the US and UK .....	12
7	PMI manufacturing overall indices for selected EMEs .....	13
8	Thomson Reuters/Jefferies CRB Index and selected commodity prices .....	14
9	Sub-Saharan Africa: Real GDP growth and contributions to GDP growth .....	15
10	Financial Services Index and its components.....	18
11	Banking stability index .....	20
12	Network systemic importance index .....	22
13	Free assets-to-capital-adequacy requirement of long-term typical insurers .....	23
14	Individual lapses and surrenders for long-term typical insurers .....	24
15	Selected domestic bond yields .....	25
16	Non-resident purchases of domestic bonds and equities .....	26
17	Bond yield curve .....	26
18	Equity indices .....	27
19	Reserve-adequacy ratios .....	28
20	Liquidations .....	30
21	EDFs, impairment ratios and credit to corporations .....	31
22	Household income growth and income-gearing ratio.....	32
23	Household financial assets and net wealth .....	32
24	Income-gearing ratio and insolvencies.....	34
25	Credit standing of consumers.....	34
26	House price index .....	35

## Tables

1	Long-term foreign currency sovereign rating downgrades in selected peripheral European countries .....	7
2	Selected indicators of real economic activity.....	17
3	Selected indicators of the South African banking sector .....	19
4	Sectoral distribution of credit to the private sector .....	22
5	Selected indicators for short-term typical insurers .....	24
6	Reserve-adequacy ratios .....	28
7	Selected indicators for the corporate sector .....	29
8	Business confidence index .....	30
9	Selected indicators for the household sector .....	33
10	Indicators of residential real-estate activity .....	35





## Overview

This issue of the *Financial Stability Review* focuses mainly on the six-month period ending June 2011, and selected developments up to 30 September 2011 are also reported on. Since the release of the March 2011 *Financial Stability Review*, global economic growth has remained at subdued levels, especially in advanced economies, and global macrofinancial conditions have deteriorated significantly. In many cases policy announcements and aid packages have disappointed and failed to eliminate contagion. Serious downside risks remain and have caused high levels of uncertainty. These include the negative economic outlook in advanced economies, the uncertainty caused by fiscal consolidation measures in the United States (US) and peripheral euro area countries, and the spread of the sovereign debt crisis to the central parts of Europe and the European banking system.

Growth in global economic output remains subdued and uneven as growth in emerging-market economies (EMEs) still outperforms growth in advanced economies. Economic growth moderated further in advanced economies as weak data in the US, fiscal consolidation measures and fragility in financial institutions impacted negatively on overall sentiment. Fears of a possible second recession have now replaced the earlier confidence of a self-sustaining recovery. In the euro area a persistent economic slowdown among smaller economies is spreading to larger economies where the economic output remains at low levels. A worrying feature of the current global environment is the synchronised nature of the economic downturn in many advanced economies and the potential impact it might have on growth and stability in the rest of the world.

EMEs remained important drivers of global economic growth and although growth is expected to slow down in 2011, there is no evidence of a decoupling occurring. Industrial production is also slowing down and forward-looking indicators show that economic activity is not as strong as initially anticipated. Although capital inflows to EMEs were not excessively strong in the first half of 2011, these flows still present policy challenges to EMEs. This was especially true when the volatile nature of capital flows was confirmed as risk aversion set in and flows reversed rapidly during the second half of 2011. Countries in sub-Saharan Africa (SSA) continue to grow at significantly higher rates than the global average. Growth in the region has predominantly been driven by private consumption underpinned by the emerging middle-income group. High and sustainable economic growth in SSA economies is, however, dependent on global growth and stable financial markets.

Banking-sector vulnerabilities in the US and the euro area remain a concern as the credit quality of the sovereign debt holdings of large European banks deteriorates and persistent negative sentiment in real-estate markets continue to pose risks to US banks. Approaching large financial needs and rising funding costs are fuelling fears of continued synchronised deleveraging and the potential negative impact on economies in the euro area. The European Banking Authority (EBA) stress test did not address concerns about the deterioration in the credit portfolios of banks in Europe. Uncertainty in financial markets increased in the second half of 2011 as concerns about counterparty risks in interbank markets reappeared. Financial market volatility increased sharply in the third quarter of 2011 as global risk aversion set in, fuelled by uncertainties in the US and European sovereign debt markets, and disappointing global economic data.

Lower economic growth rates were also seen in South Africa, as the growth rate of real gross domestic product (GDP) slowed considerably in the second quarter of 2011, mainly as a result of negative growth in the manufacturing, and the mining and quarrying sectors. The slowdown in economic growth in advanced economies, commodity price volatility and the high unemployment rate were some of the challenges faced by the South African economy. In the financial services sector, however, the level of confidence rose somewhat in the second quarter of 2011, mainly driven by higher confidence levels in retail banking, investment banking and specialised finance.

The banking sector plays a key role in the stability of the financial system. The South African banking sector remained stable and well placed to withstand vulnerabilities and future adverse shocks. The sector remains highly concentrated compared to other countries. Bank share prices were volatile during the period under review and the sector's capital-adequacy ratio (CAR) exceeded the regulatory requirement. Growth in gross loans and advances was positive, albeit at subdued levels. The level of impaired advances appeared to have peaked and the declining trend is expected to be sustainable.



Although profitability of the sector improved marginally in 2011, it remained well below pre-crisis levels, mainly due to increasing expenses. The ratio of operating expenses to gross income is well above the long-term threshold but did improve marginally in the second quarter of 2011. The newly computed banking stability index suggests stability in the banking sector in the past 18 months, mainly underpinned by sound capital-adequacy and liquidity levels.

The performance of the South African insurance industry was hampered by negative developments in advanced economies and volatile investment markets. Long-term insurance companies are, nevertheless, well capitalised, and surrenders and lapses as a percentage of new policies declined. The industry needs to comply with new regulations, such as the Solvency Assessment and Management (SAM) regime and the Treating Customers Fairly (TCF) requirements, which are expected to be implemented almost concurrently.

Domestic bond and equity markets are often the channel through which global developments are transmitted that could lead to increased volatility and financial instability. The domestic bond market was volatile during the first nine months of 2011. This reflects global risk events such as deteriorating financial and economic conditions, especially in Europe, concerns about moderating global GDP growth and possible spillover effects into the domestic economy. After gaining strongly in 2010, the JSE Limited (JSE) All-Share Index (Alsi) declined somewhat in the year to September 2011, in line with global equity markets, amid higher global risk aversion. Non-residents were net purchasers of domestic bonds for the first eight months of 2011, before a sharp turnaround and a sell-off in domestic bonds by non-residents since early September 2011, due mainly to higher risk aversion towards EME assets.

Corporates and households are important customers of banks, and adverse developments in these sectors could increase the vulnerability of banks and the financial system. Credit extended to the corporate sector showed signs of recovery in the first half of 2011 as the growth rate of credit extended to the sector increased further in the second quarter of 2011, albeit at a pedestrian pace. Investment by private business enterprises, proxied by gross fixed capital formation, increased for the fourth successive quarter in the second quarter of 2011. Despite these positive developments there was still a significant drop in the level of business confidence in the second and third quarters of 2011.

As far as households are concerned, indebtedness has been declining since the fourth quarter of 2010, but remains at elevated levels. The debt-service ratio has declined significantly and households should be able to take advantage of the low interest rate environment to reduce their debt. Although household balance sheets are strengthening, consumer confidence remains at low levels, contained by pessimism about the expected performance of the economy, given the negative global economic outlook.

The South African banking sector is heavily exposed to the real-estate sector. Although year-on-year nominal house price growth regained momentum in the second quarter of 2011, the pace of growth remained low as the indebtedness of households and uncertainty in property markets contributed to a delayed reaction to lower levels of interest rates. It is expected that the resurgence in residential real-estate activity and higher levels of growth in house prices could only be sustained following improvements in the financial position of households.

Recent developments that enhanced the robustness of the financial regulatory environment in South Africa include the publication of final enforcement guidelines and exemptions for the Consumer Protection Act (CPA), the release of the Credit Rating Services Bill (CRS Bill) for public comment, the Financial Markets Bill (FM Bill) that will replace the Securities Services Act, the release of the TCF Roadmap document, and the release of a policy document on a microinsurance regulatory framework for South Africa. The announcement of the twin peaks financial regulatory model in South Africa and the implementation of Basel III for the South African banking sector will further strengthen regulatory measures already in place and address possible regulatory gaps domestically.

In South Africa, the credit-to-GDP gap appears to be a potentially useful instrument for assisting authorities in making countercyclical capital buffer (CCB) decisions, but it has distinct limitations. Therefore, authorities should be careful about using this instrument exclusively and in a mechanical

or uniform way. It is evident that national authorities would have to use their own discretion and consider other indicators as encouraged by the Basel Committee on Banking Supervision (Basel Committee) guidance document.

The overall assessment from the analyses in the *Financial Stability Review* is that the South African financial system is generally sound, but continues to be exposed to a volatile and uncertain global environment. Although South Africa's financial system is expected to be fairly resilient to the contagion effects that could result from developments in the global economy, certain risks remain. The sovereign debt crisis in peripheral euro area countries, and its spread to the rest of Europe and financial institutions in the region is the main risk to which the South African financial system is currently exposed. Although South African banks and other financial institutions have limited exposure to peripheral euro area countries, the impact of the global slowdown in economic growth could impact severely on the South African economy and the domestic financial system.



## Introduction

This issue of the *Financial Stability Review*, which focuses mainly on the six-month period ended June 2011, comprises two main sections, namely (i) financial stability developments and trends, and (ii) infrastructure and regulation.

The first section starts with an overview of current international macrofinancial conditions. It contains a discussion of the major developments in the international, emerging-market and regional environment that may influence financial stability in South Africa. This section concludes with an analysis of the main developments in the South African financial system, focusing specifically on the sectors that have a significant bearing on the stability of the domestic financial system.

The second section focuses on the financial system infrastructure and regulation, and starts with an update on financial policy, and legislative and infrastructural developments affecting the South African financial system. Also included in this section is a discussion on exchange-traded funds (ETFs) and their implications for systemic risk.

Finally, this issue of the *Financial Stability Review* also contains a note on the countercyclical capital buffer and its potential application in South Africa.



# Financial stability developments and trends

## International macrofinancial developments

This section provides an overview of macroeconomic and financial developments in advanced economies, EMEs and Africa, and analyses how these developments have impacted, and could potentially impact, on the financial system in South Africa.

The global economy remains frail and financial risks have increased substantially over the past few months. Economic growth rates remain at moderate levels, insufficient to ensure a sustainable recovery. Although economic activity in EMEs still outperforms that of advanced economies, there is no evidence of a decoupling occurring. Recent economic and financial developments present serious downside risks, and have caused uncertainty and high levels of volatility in financial markets. These developments include the recognition that the outlook for economic growth in advanced economies is not as encouraging as previously believed; the US fiscal consolidation process and the resultant ratings downgrade of US debt; and the spread of the European debt crisis not only from the periphery to the central parts of Europe, but also possibly to the European banking system.

With global financial risks intensifying and policy options becoming more limited, purposeful and co-ordinated action by means of strong, unified and credible leadership is needed to restore confidence in the global financial system. Although such action would imply significant financial commitments by governments and central banks, the costs might be low compared to the effects of a further slowdown, a possible recession, and the harmful effects that this could have on financial systems globally.

## Financial and economic developments in advanced economies

### Economic growth

Financial stability is closely interlinked with, and could be significantly affected by, fluctuations in economic activity. During the period under review economic growth moderated further in advanced economies as weak economic data in the US and the ongoing sovereign debt crisis in Europe impacted negatively on overall sentiment. In the US the economic recovery had gained momentum during 2010 and it was believed that by the end of that year the US economy would be on a self-sustaining recovery path. Initially, the slowdown in the US economy in the first half of 2011 was seen as a temporary setback, attributed to supply-side issues as a result of the natural disasters in Japan. However, it soon became evident that this outlook was overly optimistic, and despite a further round of quantitative easing<sup>1</sup> and the extension of tax cuts, US economic growth continued to decline. US economic growth for the second quarter of 2011 remained weaker than expected at 1,3 per cent from a revised level of 0,4 per cent in the first quarter. Fears of a possible second recession have now replaced the earlier confidence of a sustainable recovery. The US Federal Reserve's introduction of additional stimulus measures<sup>2</sup> and the announcement that the policy rate would likely remain accommodative until mid-2013 were further evidence of the weakening US economy.

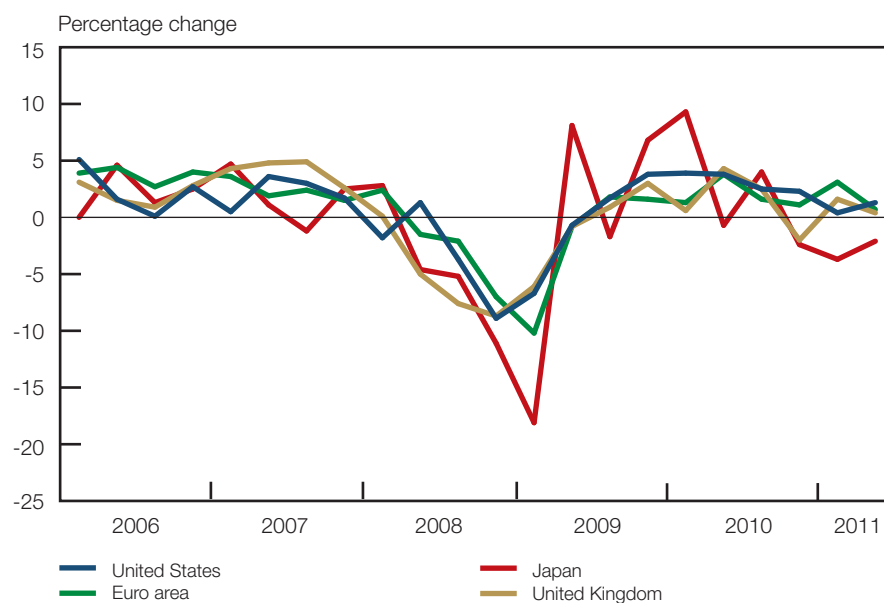
In the euro area economic growth remains weak and disproportionate between countries, with Central and Eastern European countries producing relatively higher economic growth rates than in the rest of Europe. Growth in Spain and Italy, for example, has slowed partly because of austerity programmes to curb debt and/or fiscal deficits. In these and other peripheral European countries a pattern of financial contagion and fragile confidence has raised risks and restrained economic growth prospects. A persistent downturn among the smaller economies of the 17-nation currency bloc is now spreading to core economies that have long supported the region's fragile recovery, such as Germany and France. Germany, which until recently was the driving force of growth in Europe, only managed economic growth of 0,1 per cent in the second quarter of 2011. The euro area as a whole could average growth of only about 0,7 per cent in the second quarter of 2011.

1 The US\$600 billion quantitative easing (QE) programme announced in November 2010 came to an end in June 2011.

2 In September 2011 the Federal Open Market Committee decided to purchase US\$400 billion worth of Treasury securities with remaining maturities of between 6 and 30 years, and to sell an equal amount of Treasury securities with remaining maturities of less than 3 years by the end of June 2012.



Figure 1 Quarterly growth in real GDP



Source: Bloomberg

3 The Chartered Institute of Purchasing and Supply, *Slower Growth of UK Service Sector Signalled Again in August: Jobs Cut at Marked and Accelerated Pace* (Stamford: The Chartered Institute of Purchasing and Supply, September 2011).

Economic growth in other advanced economies also remains frail. For instance, the United Kingdom's (UK) services sector slowed at its fastest pace in more than a decade in August 2011,<sup>3</sup> as firms' confidence in future business weakened to a one-year low. Economic growth in the UK subsequently declined to 0,4 per cent in the second quarter of 2011. In Japan the contraction in economic output persisted in the second quarter of 2011. Japan's Purchasing Managers' Index (PMI) fell to a three-month low, indicating a still-faltering recovery from the effects of the earthquake and tsunami in March 2011.

A worrying feature of current developments is the synchronised nature of the downturn in many advanced economies. Although it is not clear whether recessionary conditions will return, advanced economies appear to be in a stalled state. This raises serious concerns for a number of reasons. First, there could be a significant impact on growth and stability in the rest of the world. Second, an interrupted recovery and global slowdown in economic growth could exacerbate the debt issues in many countries, especially if further fiscal stimulus is provided. Third, a global economic slowdown could cause spill-over effects to financial systems that have not yet fully recovered from the effects of the financial crisis.

### Vulnerabilities in peripheral euro area countries

The sovereign debt problems of the peripheral euro area countries continue to cause uncertainty and vulnerabilities in the region. Policy announcements and aid packages have generally disappointed the markets and failed to eliminate contagion (see Box 1). Moreover, austerity programmes could be politically unsustainable and may result in a decline in economic growth rates, which would then reinforce the prevailing negative debt dynamics. Although rumours of a possible Greek default have been dismissed several times, markets remain sceptical about the ability of politicians and regulators to come up with a plausible solution. Economic growth in Greece contracted by 7,3 per cent in the second quarter of 2011, creating further uncertainty about the sustainability of austerity measures. The sovereign credit ratings of Greece<sup>4</sup> and other peripheral euro area countries have been downgraded on several occasions since January 2011 (see Table 1 for recent downgrades), reflecting concerns that it will be difficult to reach the political agreements that are needed for structural reforms and fiscal consolidation. Proposed austerity measures have led to political turmoil and uprisings in several European countries.

4 Greece currently has the lowest credit rating among rated sovereigns.

### Box 1 Aid packages to debt-burdened euro area countries

The European Financial Stability Facility (EFSF) was created in May 2010 when Europe's finance ministers approved a comprehensive rescue package worth €750 billion. The mandate of the EFSF is to safeguard financial stability in the euro zone by raising funds in capital markets to finance loans to euro area member states.

In 2010 the financial crisis turned into a sovereign debt crisis, with the attention focused on Greece. Greece was granted a loan of €110 billion in May 2010, conditional on the implementation of severe austerity measures. The Greek bailout was followed by an €85 billion rescue package for Ireland in November 2010 and a €78 billion bailout package for Portugal in May 2011. Moody's downgraded Portugal's credit rating to "junk" status, warning that the country would not be able to meet the reform requirements of the €78 billion International Monetary Fund (IMF)/European Union (EU) bailout and would require a second package.

In May 2011 the sovereign debt crisis resurfaced, mainly due to concern over the refinancing of Greek public debt. Following public protests in response to austerity measures, the crisis situation was somewhat brought under control in late June 2011 after the Greek government had managed to pass a package of new austerity measures, while EU leaders pledged a second support package to the country. Greece unveiled additional austerity measures in September 2011 to secure the next €8 billion instalment of bailout loans from the €110 billion rescue package. Once again, the announcement was met by protests.

The European Central Bank also purchased bonds of ailing governments through the securities markets programme (SMP) that started with Greece in May 2010 and was subsequently extended to Ireland and Portugal. The programme was reactivated to buy Spanish and Italian bonds in August 2011.

**Table 1 Long-term foreign currency sovereign rating downgrades in selected peripheral European countries**

	September 2011			January 2011			Notches downgraded		
	Moody's	S&P*	Fitch	Moody's	S&P*	Fitch	Moody's	S&P*	Fitch
Greece .....	Ca	CC	CCC	Ba1	BB+	BBB-	9	9	7
Ireland .....	Ba1	BBB+	BBB+	Baa1	A	BBB+	3	2	0
Portugal.....	Ba2	BBB-	BBB-	A1	A-	A+	7	3	5
Spain.....	Aa2	AA	AA+	Aa1	AA	AA+	1	0	0
Italy .....	Aa2	A	AA-	Aa2	A+	AA-	0	1	0

\* S&P: Standard & Poor's

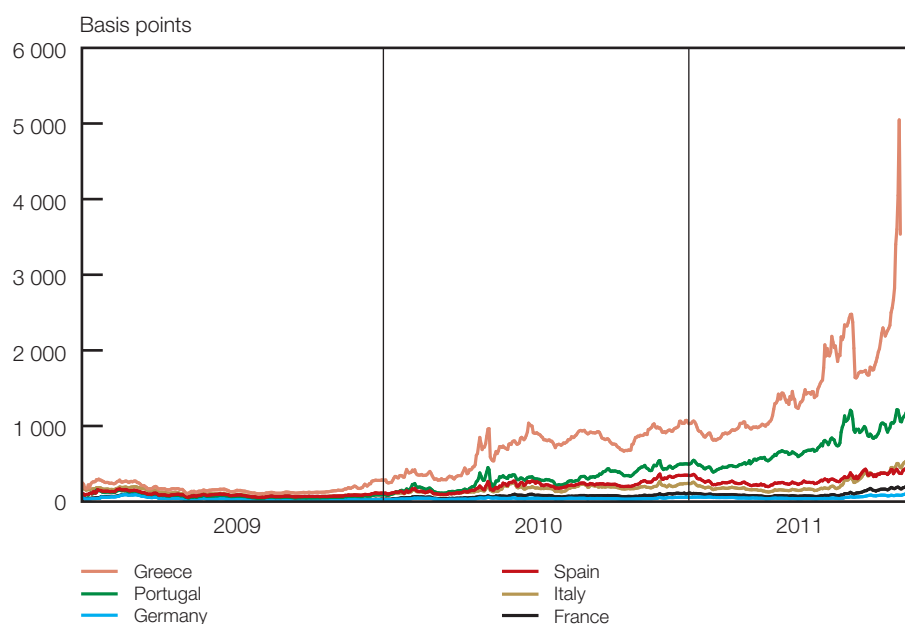
Sources: Bloomberg and own calculations

Sovereign debt and credit default swap (CDS) spreads have continued to increase (see Figure 2), undermining the credibility of austerity measures in turn. As a result of the lack of decisive action taken by the authorities, debt issues in these countries have now resulted in a spillover to the broader European region. Spain and Italy have been impacted, and the exposure of banks in France and Germany to the debt of the peripheral euro area countries has confirmed the interconnected nature of these European economies. According to the Bank for International Settlements (BIS), banks outside Greece, Ireland, Portugal and Spain hold loans and guarantees to the value of US\$1,7 trillion in these countries' governments and financial institutions.<sup>5</sup> European sovereign default risk remains a major threat to global economic performance and financial stability. Fragility in banking systems of other advanced economies could also impact negatively on the stability of the global financial system. The South African banking sector's exposure to peripheral Europe is limited, with the total exposure to debt-burdened European countries amounting to less than 1 per cent of the total banking sector's credit exposure (see Box 2).

5 Available at <http://mobile.bloomberg.com/news/2011-09-13/deposit-flight-from-european-banks-means-collateral-risk-piling-up-at-ecb>.



Figure 2 Credit default swap spreads



**Box 2 South African banking sector's credit exposure to selected peripheral European countries**

The Bank Supervision Department in the South African Reserve Bank (the Bank) conducted a survey of South African banks' credit exposure to counterparties with legal jurisdiction in selected European countries as at 30 June 2011. The aggregated results of the survey are shown in Table B2.

**Table B2 South African banking sectors' exposure to selected peripheral European countries as at 30 June 2011**

Country	Number of South African banks with exposure	Net exposure (including collateral) <sup>1</sup> (R millions)
Greece .....	3	98,17
Ireland .....	4	242,24
Portugal.....	5	86,15
Spain.....	3	516,64
<b>Total exposure to selected peripheral European economies ....</b>		<b>943,21<sup>2</sup></b>

1 Net exposure refers to aggregate on- and off-balance-sheet credit exposure, repurchase agreements and derivative instruments after applying collateral

2 Figures may not add up to the total due to rounding

The South African banking sector's total credit exposure to selected peripheral European economies amounted to slightly less than R1 billion, or 0,03 per cent of total banking-sector credit exposure. The majority of this exposure was to financial institutions (including banks) with limited exposure to corporates. No direct exposure was reported to sovereign counterparties.



## Banking-sector fragility

Several large European banks remain vulnerable to deterioration in the credit quality of their sovereign debt holdings. In addition, rising funding costs are fuelling fears that banks might be forced to reduce lending, which could impact negatively on already struggling economies. Banks in several European countries have difficulty in securing liquidity as politicians and regulators have not been able to calm investors' fears and general scepticism about banks' exposure to sovereign debt across the southern euro area. Furthermore, the high-profile stress test conducted by the EBA in July (see Box 3) did not address investors' concerns that banks would not be able to withstand a default by a European government or a severe deterioration in their credit portfolios across the region.

### Box 3 Stress-testing exercise in Europe

The 2011 European Union (EU) stress-testing exercise was conducted between March and June 2011, and the results were published by the European Banking Authority (EBA) on 15 July 2011. The objective of the tests was to assess the resilience of the EU banking system and the specific solvency of individual institutions by using hypothetical stress events. The sample was broadly similar to the group of banks in the 2010 EU stress tests and included 90 banks,<sup>6</sup> covering over 65 per cent of the EU banking sector's total assets, and at least 50 per cent of the national banking sectors in each EU member state. Banks were included in the exercise in descending order of their market shares by total assets in each member state, without any omissions.

The exercise was carried out on consolidated year-end 2010 figures for both banking and trading books. Bank solvency was defined in terms of core Tier 1 capital, with a 5 per cent threshold, and was assessed under a baseline scenario and an adverse scenario, which had been developed by the EU Commission and the European Systemic Risk Board (as established by the European Central Bank). The baseline scenario included macroeconomic conditions that were consistent with European Commission forecasts, while the adverse scenario included a marked deterioration of macroeconomic variables. Furthermore, the adverse scenario included additional declines in certain EU sovereign bond prices from end-2010 levels.

Of the 90 banks, 8 failed the tests (5 Spanish, 2 Greek and 1 Austrian) with a combined capital shortfall of €2,5 billion. Under the adverse scenario, the aggregate core Tier 1 capital ratio was estimated at 7,7 per cent in 2012, in comparison to a value of 9,8 per cent in the baseline scenario.

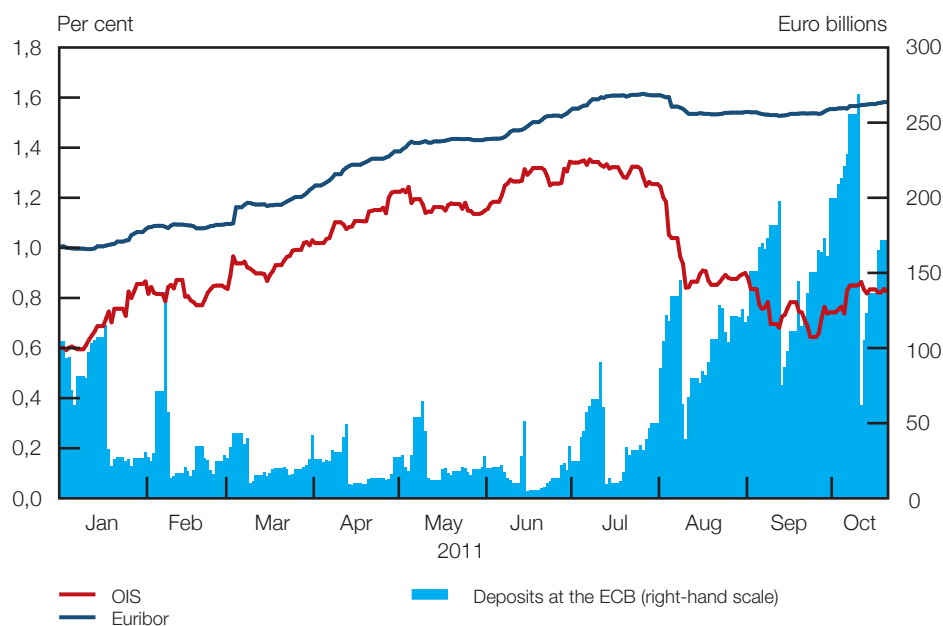
Similar to the stress tests of 2010, the stress tests of 2011 were criticised for not testing the event of a sovereign default. Nevertheless, the main contribution of 2011's exercise is the high degree of disclosure of banks' data. A new addition to the EBA's 2011 stress tests was the comprehensive data provided on banks' loan books and other assets. This included data on sovereign debt holdings and cross-border exposures to private sector loans, which revealed the non-domestic bank exposures to peripheral Europe's debt.

6 Originally, 91 banks were included in the sample, but Germany's Landesbank Hessen-Thüringen (Helaba) refused to allow the EBA to publish its results in full, stating that the EBA's data "would lead to a halving of the core capital without legal grounds".

Several warning signals have appeared since uncertainty increased in financial markets from the middle of 2011. First, CDS spreads have increased to close to historical highs in August 2011 for French, Italian and Spanish banks, trading at even wider ranges than during 2008. Second, concerns about counterparty risks in interbank markets have reappeared. The three-month interbank lending rates for euros are at their highest levels since 2009. Similarly, the difference between the three-month euro interbank offered rate (Euribor) and the overnight indexed swap (OIS) rate (a measure of banks' reluctance to lend to one other) has been at its highest since April 2009. Another concern is the growing use of the European Central Bank's (ECB) overnight deposit facility. This means that banks are depositing liquidity with the central bank, rather than lending it to other banks. Third, bond purchases by the ECB also increased sharply.



Figure 3 Deposits at the ECB, and Euribor and OIS rates



Source: Bloomberg

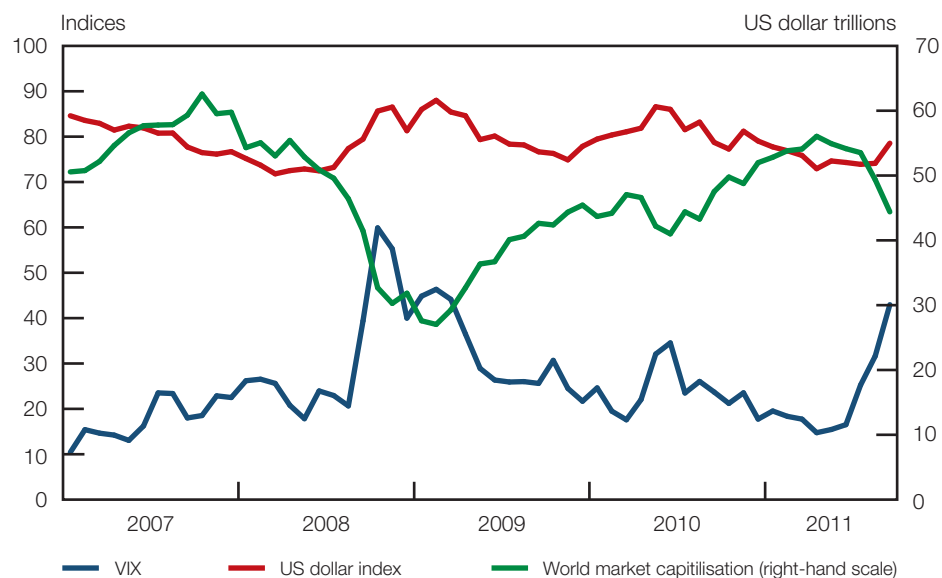
Finally, US money-market funds are reducing their exposure, especially to short-term European bank paper. Indications of increased counterparty risk could lead to a further loss of confidence and a liquidity crisis, which could translate into a credit crisis with negative feedback effects to the real sector of the economy.

### Financial market developments

After subsiding between June 2010 and April 2011, financial market volatility increased sharply in the third quarter of 2011, as shown by the Chicago Board of Options Exchange (CBOE) Volatility Index (VIX).<sup>7</sup> Global risk aversion at the beginning of the second half of 2011 prompted investors

7 VIX is a symbol for the Chicago Board of Options Exchange Volatility Index and measures implied volatility of the S&P's 500 index for equities over the next 30-day period.

Figure 4 VIX, US dollar index<sup>1</sup> and world market capitalisation



1 The US dollar index indicates the general international value of the US dollar by averaging the exchange rates between the US dollar and six major world currencies, namely the euro, Japanese yen, British pound, Canadian dollar, Swedish krona and Swiss franc

Source: Bloomberg



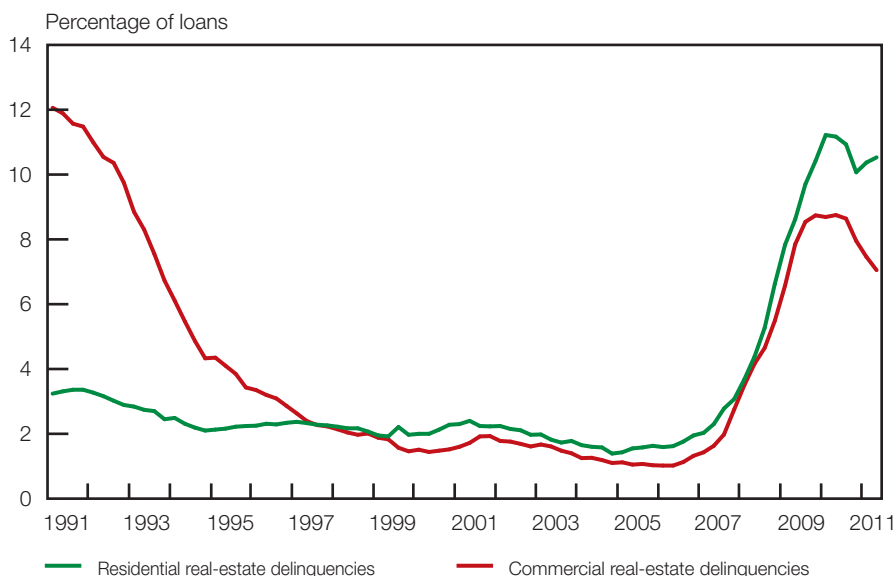
to discard risky assets, including equities, and return to so-called safe-haven assets. Equity markets, especially in EMEs were negatively influenced by uncertainties in the US and European sovereign debt markets, while disappointing global economic data further fuelled risk aversion. In this risk-averse environment, world market capitalisation, after reaching its highest level since mid-2008 in April 2011, fell by roughly US\$9,7 trillion between April and September 2011 (see Figure 4).

The US dollar continued to depreciate in the first quarter of 2011 amid expectations of low US interest rates. However, towards the end of the second quarter of 2011, the US dollar strengthened in extremely volatile market conditions. Safe-haven currency flows were not limited to the US dollar, as the Japanese yen and the Swiss franc also appreciated when market sentiment deteriorated. In response, the Swiss National Bank imposed an explicit limit in September 2011 on how much the Swiss franc could appreciate against the euro.

## Real-estate markets

Persistent negative sentiment in real-estate markets continues to pose threats to already-fragile economies and financial systems, for instance, the ratio of delinquent loans<sup>8</sup> to total loans for residential and commercial real estate in the US has increased sharply since the start of the global financial crisis in 2007. Although delinquencies of commercial real-estate loans moderated to about 7 per cent of total commercial loans in the second quarter of 2011, delinquencies of residential real-estate loans remain at elevated levels and continue to pose a significant downside risk to banks' balance sheets.

**Figure 5** US commercial banks' delinquencies for real-estate loans



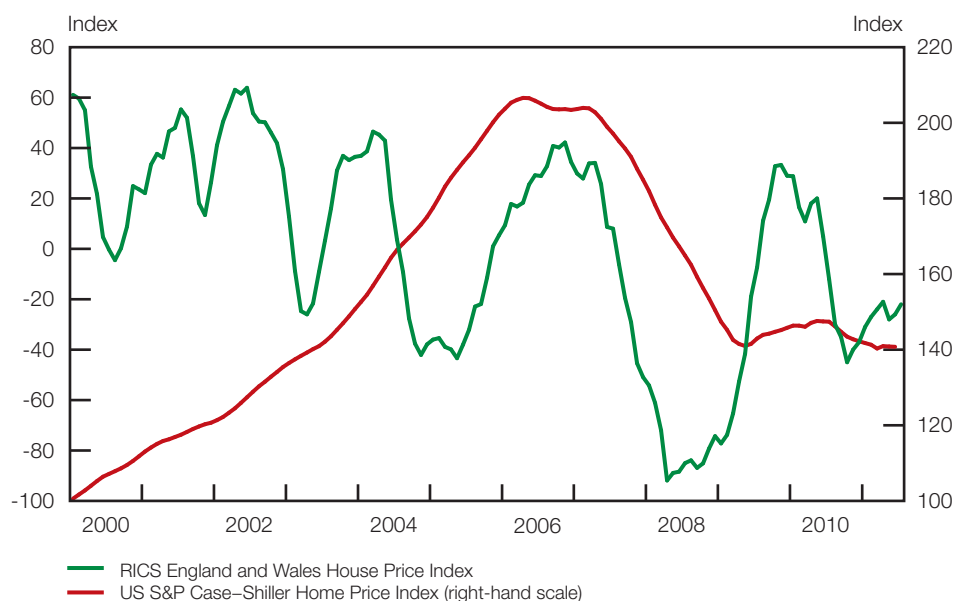
Source: United States Federal Reserve System

Furthermore, the Case-Shiller Home Price Index remains at subdued levels and low house prices continue to weaken household balance sheets. Although US policy-makers have made a significant effort to sustain the fragile recovery and restore financial-sector health, falling house prices are still suppressing consumption expenditure by households. In the UK, the number of real-estate agents and surveyors anticipating price declines still exceeds those expecting price increases, causing the Royal Institute of Chartered Surveyors (RICS) House Price Index to remain in negative territory, despite a recovery in early 2011.

<sup>8</sup> A delinquent loan is a loan that is 30 to 60 days past its due date, without any payments having been made.



Figure 6 House price indices in the US and UK



Source: Bloomberg

## The fiscal deficit in the United States

General uncertainty and high levels of volatility in global financial markets were further fuelled by the US debt-ceiling debate. During May 2011, the US Treasury Department formally informed the US Congress that the country's debt limit of US\$14,29 trillion had been reached and that it could not guarantee payment of all the government's bills after 2 August 2011. A US debt default was avoided when the US Senate raised the debt ceiling as part of a debt agreement in early August 2011, which provides for increasing the borrowing limit into 2013 by US\$2,1 trillion. The agreement also requires spending cuts – spread over ten years – and the establishment of a congressional committee to recommend a deficit-reduction package by late November 2011. Furthermore, automatic spending cuts may enforce US\$2,4 trillion in spending reductions over the next decade. Despite the deficit-reducing agreement, Standard and Poor's (S&P) downgraded the US's long-term credit rating by one notch to AA+ on 6 August 2011, citing concerns about growing budget deficits.

## Financial and economic developments in emerging-market and developing economies

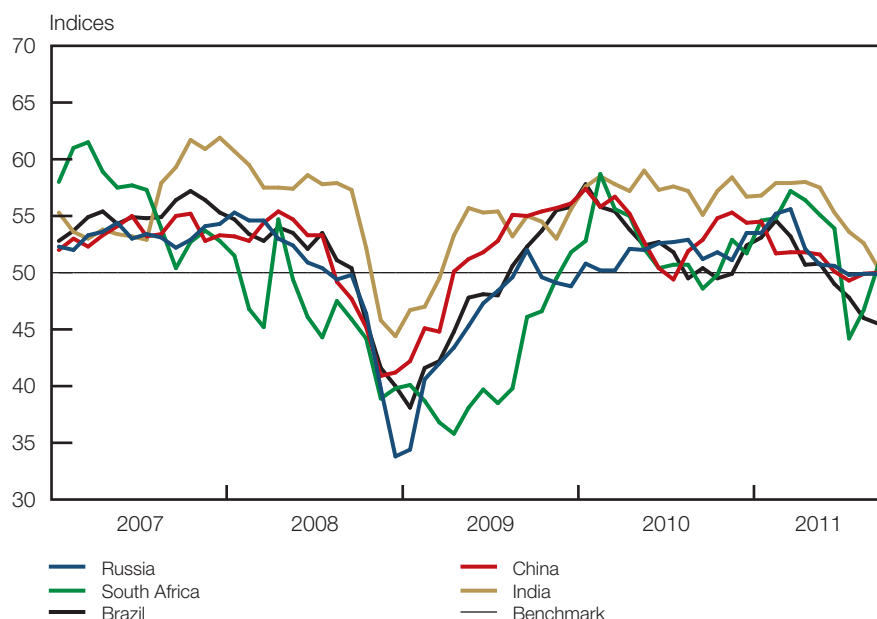
### Emerging-market economies

Economic growth in emerging and developing economies is expected to slow to 6,4 per cent in 2011; down from 7,3 per cent in 2010.<sup>9</sup> Relatively high commodity and energy prices are fuelling inflation and inflation expectations in EME countries, keeping real local currency bond yields under pressure. Overheating pressures in Brazil, India and China intensified in the first half of 2011 and, in response, central banks have tightened monetary policy.

Recently, however, signs of lower inflation rates appeared in certain EMEs, with inflation in China falling to 6,1 per cent in September 2011 after reaching the fastest pace in three years (6,5 per cent) in July 2011. Furthermore, industrial production is slowing down and forward-looking indicators, such as PMIs, indicate that economic activity is not as strong as it was at the beginning of 2011. China's overall PMI fell to below 50 in July 2011 and recovered to a level of 50 in September. India's PMI is still above 50, but has been declining since the second quarter of 2011. In Brazil, the PMI fell below 50 in June 2011 and has been decreasing ever since.

9 International Monetary Fund, *World Economic Outlook* (Washington DC: IMF, September 2011).

Figure 7 PMI manufacturing overall indices<sup>1</sup> for selected EMEs<sup>2</sup>



- 1 Index values above 50 index points indicate expansion, while index values below 50 index points indicate contraction  
 2 Seasonally adjusted

Source: JPMorgan

Despite a general slowdown in economic growth across the global economy in the second quarter of 2011, economic growth rates in EMEs are expected to remain at higher levels than in advanced economies. Relatively higher economic growth rates and higher interest rates continue to attract foreign capital inflows to EMEs, and it is expected that private capital inflows to EMEs will increase from US\$990 billion in 2010 to US\$1 041 billion in 2011.<sup>10</sup> Even though capital inflows to EMEs in the first half of 2011 were not excessively strong by historical standards, they were dominated by portfolio and bank-related flows, and the volatile nature of these flows implies that they could reverse rapidly if investors took fright.<sup>11</sup> Furthermore, capital inflows still present policy challenges to a number of EMEs, especially in countries that are already facing rising inflation pressures and asset-price growth amid appreciating exchange rates. Authorities in certain EMEs have, for example, expressed concerns that the low interest rate environment in advanced economies limits their policy options, since higher interest rates attract countervailing capital inflows. More recently, however, flows into bonds and equities in EMEs have retreated noticeably amid general risk aversion.

EMEs are major producers and consumers of commodities, and are therefore sensitive to commodity price instability. The strong rebound in commodity prices, which started in the second half of 2010 on the back of higher demand, especially from EMEs, was followed by a sharp sell-off in several markets in May 2011 as the grim mood in financial markets spilt over to commodities. According to the Institute of International Finance (IIF),<sup>12</sup> the sell-off could have been the result of speculative investment at the beginning of 2011; a series of disappointing global economic data; monetary tightening in EMEs following persistent inflation concerns; worries over the sovereign debt of the euro area; or a combination of these factors. This movement in commodity prices is reflected in the Thomson Reuters/Jefferies Commodity Research Bureau (CRB) Index, which fell by almost 20 per cent between April and September 2011, eroding gains made at the beginning of 2011.

10 Institute of International Finance, "Capital Flows to Emerging Market Economies" (IIF Research Note, Washington DC: IIF, June 2011).

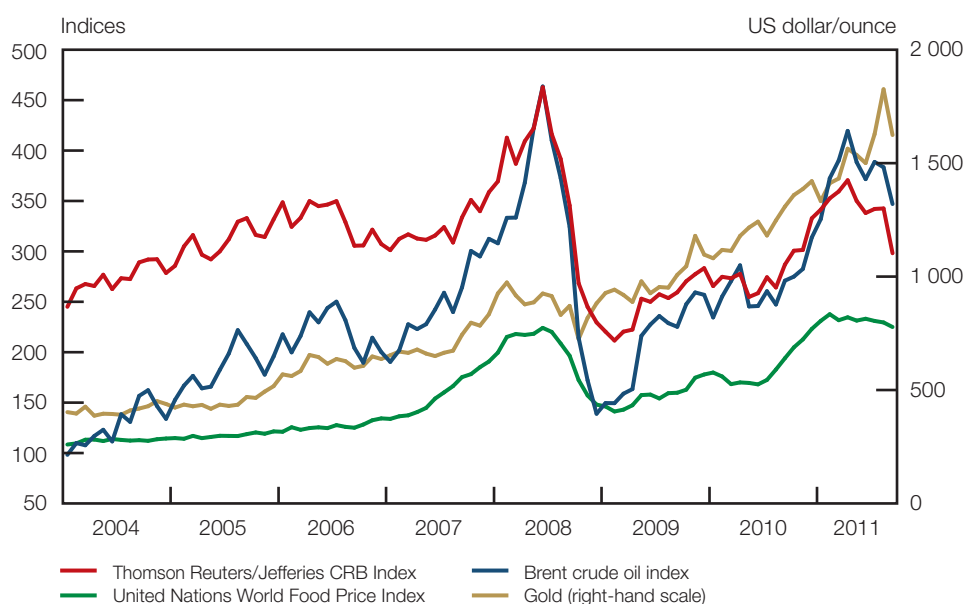
11 International Monetary Fund, *Global Financial Stability Report* (Washington DC: IMF, September 2011).

12 Institute of International Finance, *Global Economic Monitor* (Washington DC: IIF, May 2011).



Among the best-performing commodities in 2011 was gold, with prices increasing sharply at the beginning of the third quarter of 2011 due to safe-haven demand amid increased global uncertainty over economic growth. In the current year up to the end of August, the gold price increased by almost 30 per cent, although prices declined during September. Oil prices also increased sharply between January and April 2011 amid supply concerns due to escalating political tension in the Middle East and North Africa (MENA) region. However, the unwinding of speculative positions in May 2011 and global economic growth concerns led to price decreases. Oil prices were further temporarily impacted by the unexpected announcement by the International Energy Agency in June that 60 billion barrels of oil would be released into the market before the end of July 2011.

**Figure 8** Thomson Reuters/Jefferies CRB Index and selected commodity prices



Source: Bloomberg

13 The FAO Food Price Index is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices (representing 55 quotations), weighted with the average export shares of each of the groups for 2002–2004.

Food prices are not following the general trend of commodity prices, and after reaching its highest level in February 2011 since its inception in 1990, the Food and Agriculture Organization (FAO) Food Price Index<sup>13</sup> has stabilised in recent months. This is expected to support consumption later in 2011 and ease inflation pressures, especially in EMEs. Variability in prices is problematic as it poses fundamental food security risks for consumers and governments. One of the most prevalent effects of volatile food prices is that it negatively affects developing countries' ability to purchase food at stable prices, although it can be argued that higher food prices do provide an opportunity for farmers to produce and invest more. However, when food price volatility is associated with production risks, it ultimately leads to a lower supply.

### Africa, sub-Saharan Africa and the Southern African Development Community region

Mirroring economic growth trends in emerging and developing economies, SSA economies continue to grow at significantly higher rates than the global average. During the first quarter of 2011, three of the largest SSA economies<sup>14</sup> grew at an average rate of 5.7 per cent. Economic growth in the region has predominantly been driven by a strong rebound in private consumption, underpinned mostly by the emergence of the middle-income group with discretionary spending

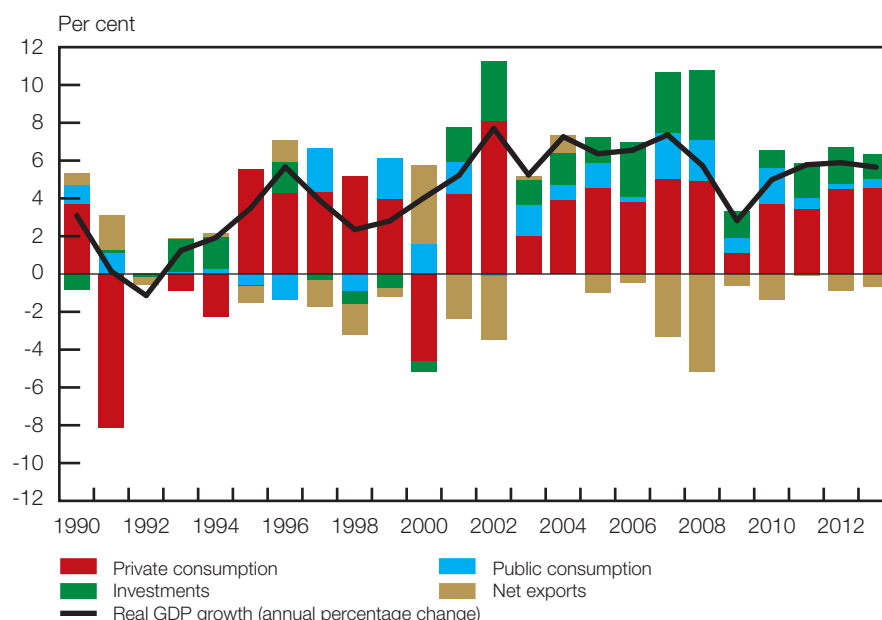
14 Kenya, Nigeria and South Africa (2011 first quarter GDP data obtained from countries' respective statistical offices).



power, and a notable rise in the flow of capital into regional equity and private debt markets. The higher economic growth trajectory also reflects the effect of increasing commodity prices, although this adds to inflationary pressures. While there is evidence of disparities among oil-exporting, middle- and low-income SSA countries, expectations are that real GDP growth rates will average 5,2 per cent in 2011 and 5,8 per cent in 2012.<sup>15</sup>

15 International Monetary Fund, *World Economic Outlook* (Washington DC: IMF, September 2011).

Figure 9 Sub-Saharan Africa: Real GDP growth and contributions to GDP growth



Source: International Monetary Fund

The prospect of high and sustainable economic growth in SSA economies is, however, dependent on the growth performance of advanced economies and stable global financial markets. Further downside risks to the region's economic outlook emanate not only from the trade channel, but also from swings in investor risk appetite, especially amid volatile global financial conditions. With growing interest in Africa due to its improving financial sectors and structural transformation (see Box 4), it appears likely that fluctuations in risk appetite will impact the region increasingly.

The tensions in the MENA region, which are mainly prompted by issues relating to political and socio-economic dissatisfaction, continued in the second and third quarters of 2011. Although the turmoil has somewhat abated in certain MENA countries, the level of uncertainty remains elevated due to the ongoing civil disorder and governmental changes in countries such as Bahrain, Libya and Yemen. In SSA, some economies also face fiscal and political challenges, for example, in Swaziland recent tensions reflecting discontent over the country's political regime have emerged. Swaziland also faces fiscal challenges following a crisis-induced fall in revenue transfers from the Southern African Customs Union and other problems pertaining to fiscal indiscipline. In a move to avert a crisis, the government of Swaziland requested assistance from the South African government. A South African government-guaranteed loan, dependent on certain conditions, was subsequently granted. This has, however, met with some resistance from pro-democracy movements since the loan did not include a written undertaking by the Swaziland government to institute democratic reforms. To date, the Swaziland government has not drawn on the loan as the conditions agreed upon have not been met.

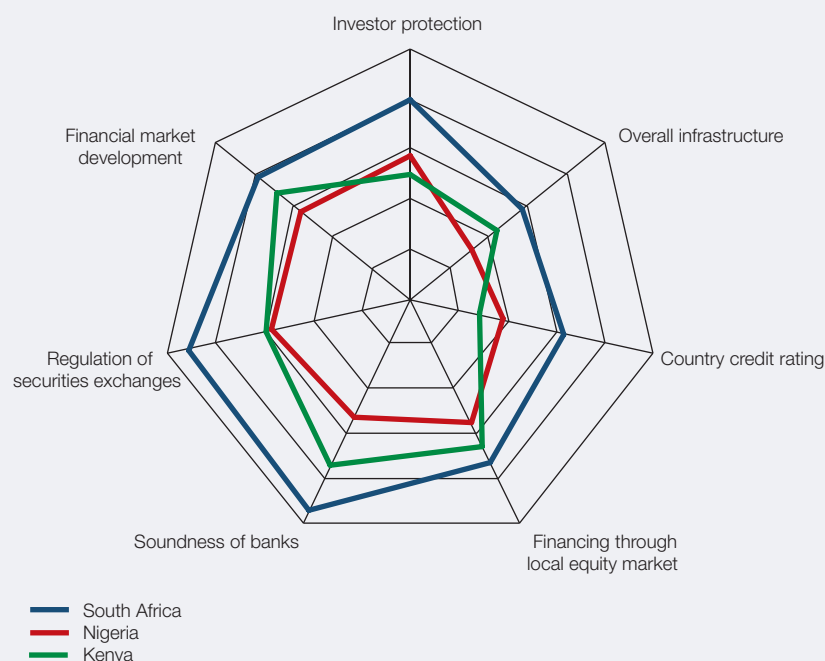


16 World Economic Forum, *Global Competitiveness Report* (Geneva: World Economic Forum, 2010/11).

#### Box 4 Sub-Saharan Africa: Improving risk perceptions and growing investor interest

There has been growing investor interest in sub-Saharan Africa's (SSA) financial assets, reflecting, among other factors, the region's improving credit dynamics, strong and resilient economic performance, and a general improvement in political stability. These, as well as other developments, are leading to persistent change in the political and socio-economic structures that are reducing the region's core vulnerabilities, and thus improving the credit risk profile of the region in its entirety. An assessment conducted by the World Economic Forum,<sup>16</sup> which ranks financial-sector developments of 142 countries, supports this claim. Figure B4 maps out financial-sector developments of three of the largest economies in the region. The indicators used have been standardised so that each indicator assumes a value between zero and one. In the figure a movement away from the centre indicates a stronger position, for example, more advanced infrastructure or a sounder banking system.

Figure B4 Financial-sector developments in sub-Saharan Africa



Source: World Economic Forum, *Global Competitiveness Report 2011/12* and own calculations

The overall development of the region's financial sector and an improved credit risk profile played a major role in channelling the flow of funds into regional capital markets. Capital inflows were further enhanced by the search for yield, due to relatively low interest rates in advanced economies. Most of these inflows were in the form of government securities and private equity, which grew at a significantly higher rate than foreign direct investment flows between 2009 and 2010.<sup>17</sup> Amid near-zero interest rates in developed economies, it is expected that capital inflows will continue to increase in 2011, although risk aversion might moderate this tendency.

The prospect of high economic growth and the emerging middle-income group with discretionary spending power, coupled with financial deepening (the increased provision of financial services), have also served as pull factors to banking institutions. A number of banks, both domestic and international, are showing growing interest in SSA markets, although a survey by PricewaterhouseCoopers<sup>18</sup> showed that issues relating to regulatory requirements and political interference are perceived to deter investment.

17 International Monetary Fund, *Regional Economic Outlook, Sub-Saharan Africa: Back to High Growth?* (Washington DC: IMF, April 2010).

18 PricewaterhouseCoopers, *Unlocking Opportunities: Strategic and Emerging Issues in South African Banking in 2011* (Johannesburg: PricewaterhouseCoopers, June 2011).

## Domestic macroprudential analysis

Macroprudential analysis of the domestic financial sector and its counterparts is an essential part of monitoring and assessing the stability of the financial system. This is done in order to identify broad patterns, growing imbalances and fragilities that usually precede periods of financial instability. The analysis employs both macroprudential and financial soundness indicators (FSIs), which are barometers of the health and stability of the financial system. These indicators cover the banking, insurance, household, corporate and external sectors, and the real-estate, bond and equity markets. The level of real economic activity is also assessed by monitoring selected indicators of real economic activity, given the interconnectedness of the financial and real sectors of the economy. The overall assessment from the analysis is that South Africa's financial system is sound, but continues to be exposed to a volatile and uncertain global environment. South Africa's financial system is, however, expected to be resilient to the contagion effects that could result from developments in the global economy.

### Indicators of real economic activity

The growth rate of real GDP slowed considerably in the second quarter of 2011 to a quarter-on-quarter, annualised and seasonally adjusted rate of 1,3 per cent. This represents a slowdown from an increase of 4,5 per cent in the first quarter of 2011. Negative growth in both the manufacturing, and the mining and quarrying sectors were major contributors to the low growth rate of GDP. The dampened growth rate was partly attributed to the slowdown in economic growth in advanced economies. Although the low growth rate provides a bleak economic outlook, the IMF projects domestic economic growth rates of 3,4 per cent during 2011 and 3,6 per cent during 2012,<sup>19</sup> underpinned by relatively stronger domestic demand. The high unemployment rate remains one of the major challenges faced by the economy, increasing from 25,0 per cent in the first quarter of 2011 to 25,7 per cent in the second quarter. The broad unemployment rate, which includes discouraged work seekers, rose to 36,9 per cent over the same period.<sup>20</sup>

A selected set of indicators of real economic activity reveals a relatively positive outlook. Only the number of building plans passed recorded negative growth in the second quarter of 2011. The motor vehicle industry recorded positive annual growth in both total new vehicle and new passenger car sales for the six months to June 2011. Vehicle industry growth also continued after June, with positive annual growth rates of 30,3 per cent and 26,2 per cent recorded for total new vehicle and new passenger car sales respectively in September 2011.

**Table 2** Selected indicators of real economic activity<sup>1</sup>

Annual percentage change in monthly indicators

Activity indicators	2010			2011	
	Jun	Sep	Dec	Mar	Jun
Building plans passed .....	15,09	9,12	-2,48	0,74	-1,40
Buildings completed .....	-39,02	-35,30	-39,21	9,55	17,03
Retail sales .....	6,95	6,02	7,55	4,82	2,07
Wholesale trade sales .....	1,95	7,78	7,47	3,64	8,89
New vehicle sales .....	21,04	16,66	30,00	17,09	11,64
New passenger car sales .....	25,74	25,96	38,85	23,55	17,33
Electric current generated .....	4,85	-0,41	1,31	1,45	1,65
Utilisation of production capacity <sup>2</sup> .....	80,44	79,27	80,56	80,57	81,07

1 At constant prices, seasonally adjusted

2 Quarterly indicator, ratio

Sources: Statistics South Africa. Data on new vehicle and new passenger car sales were obtained from the National Association of Automobile Manufacturers of South Africa

19 International Monetary Fund, *World Economic Outlook* (Washington DC: IMF, September 2011).

20 Statistics South Africa, *Quarterly Labour Force Survey* (Pretoria: Statistics South Africa, quarters 1 and 2, 2011).





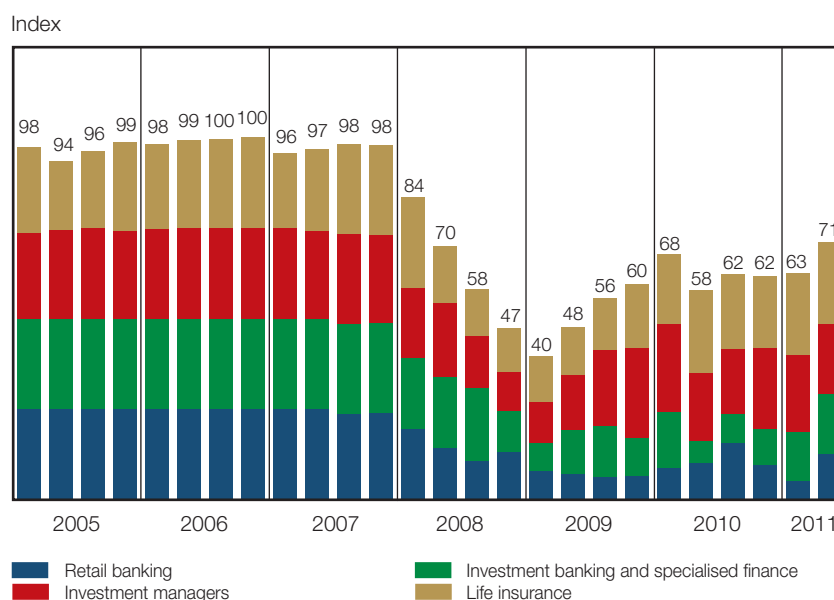
The annual growth rates of retail and wholesale trade sales increased during both the first and second quarters of 2011. The level of activity in the construction sector improved somewhat in the first half of 2011. The annual growth rate of building plans passed turned positive during the first quarter of 2011, but turned negative again in the second quarter. Buildings completed indicated strong positive growth throughout the first half of 2011, after having contracted strongly in 2010.

## Confidence in the financial services sector

The level of confidence in the financial services sector, as measured by the Ernst & Young Financial Services Index,<sup>21</sup> rose noticeably during the second quarter of 2011. The rise was supported by increases in the confidence levels of retail banking, and investment banking and specialised finance, while the confidence level of investment managers decreased and that of life insurers remained unchanged. Rising business volumes, cost curbing and the resultant improvement in income and profits were partly responsible for the higher levels of confidence of retail and investment banking.

21 The Ernst & Young Financial Services Index is calculated as the unweighted average of the retail banking, investment banking and specialised finance, investment management and life insurance confidence indices. The indices that make up this index are based on the results of surveys and are measured on a scale from 0 to 100, where 0 shows "extreme lack of confidence", 50 is "neutral" and 100 shows "extreme confidence".

Figure 10 Financial Services Index and its components



Although the confidence level of investment managers declined marginally in the second quarter, it was still in line with the long-term average confidence levels for the sector. The confidence level of large investment managers declined significantly, but was compensated for by an increase in the confidence level of small investment managers.<sup>22</sup> The decline was mostly attributed to a drop in net inflows of income. Overall, there was an upturn in the level of confidence in the financial services sector.

## Banking sector

The banking sector remained fairly stable during the first half of 2011, well placed to withstand adverse shocks. Meeting some of the more stringent Basel III requirements remains a challenge for banks (see "The impact of Basel III on the South African banking sector" in the Infrastructure and Regulation section on page 38 of this report). Table 3 provides an overview of key indicators for the banking sector. The market share of the four largest banking groups by asset size remained at 84 per cent in June 2011. The Herfindal–Hirschman Index (H-index), a measure of market concentration in the banking sector, increased from 0,187 in March to 0,188 in June 2011, reflecting a high level of concentration, and remained around this level in August.

22 Large investment managers manage firms with assets under management in excess of R20 billion as at 2007, while small investment managers manage firms with assets under management of less than R20 billion as at 2007.



**Table 3** Selected indicators of the South African banking sector<sup>1</sup>

Per cent, unless indicated otherwise

	2011					
	Jan	Feb	Mar	Apr	May	Jun
Market share (top four banks).....	84,20	84,38	84,42	84,32	84,21	84,49
Gini concentration index.....	82,55	82,58	82,61	82,62	82,45	82,58
Herfindahl–Hirschman Index (H-index).....	0,186	0,187	0,187	0,187	0,186	0,188
Banks' share prices (year-on-year percentage change).....	8,48	4,58	-7,14	-3,92	-1,85	0,33
<b>Capital adequacy</b>						
Capital-adequacy ratio .....	15,13	14,96	15,07	15,12	15,17	14,98
Regulatory Tier 1 capital to risk-weighted assets.....	12,02	11,90	12,02	12,13	12,17	12,02
<b>Credit risk</b>						
Gross loans and advances (R billions).....	2 312	2 324	2 327	2 315	2 334	2 362
Impaired advances (R billions) .....	134,36	135,02	134,47	134,08	133,83	131,07
Impaired advances to gross loans and advances .....	5,81	5,81	5,78	5,79	5,73	5,55
Specific credit impairments (R billions).....	43,83	43,74	43,95	44,09	44,26	43,11
Specific credit impairments to impaired advances .....	32,62	32,39	32,68	32,88	33,07	32,89
Specific credit impairments to gross loans and advances.....	1,90	1,88	1,89	1,90	1,90	1,83
<b>Profitability</b>						
Return on assets (smoothed).....	0,97	1,00	1,01	1,03	1,08	1,05
Return on equity (smoothed) .....	14,65	14,93	14,99	15,19	15,69	15,14
Interest margin to gross income (smoothed) .....	48,59	48,41	48,44	48,35	48,34	48,50
Operating expenses to gross income (smoothed) .....	56,56	56,58	56,86	56,85	56,50	56,76
<b>Liquidity</b>						
Liquid assets to total assets (liquid-asset ratio) .....	7,54	7,50	7,54	7,68	8,12	8,24
Liquid assets to short-term liabilities.....	15,29	15,06	15,22	15,50	16,39	16,60
Effective net open foreign-currency position to qualifying capital and reserve funds.....	-0,43	-0,32	-0,40	-0,80	-0,34	-0,22

1 Data for revisions were updated on 30 September 2011. Impaired advances are advances in respect of which the bank has raised specific credit impairments

Sources: South African Reserve Bank. Data on share prices were obtained from the JSE

Bank share prices also remained under pressure in the first half of 2011, partly reflecting developments in the banking sectors of some advanced economies, particularly in Europe, where certain banking systems were still experiencing considerable strain. The recovery of the banking sectors in some parts of Europe has been undermined by market concerns about sovereign debt sustainability and the exposure of banks to sovereign debt.

The sector's CAR remained fairly stable during the period under review, increasing marginally to 15,1 per cent in August 2011. The marginal decrease from March to June was due to the rate of growth in credit risk-weighted exposures exceeding the rate of growth of qualifying capital



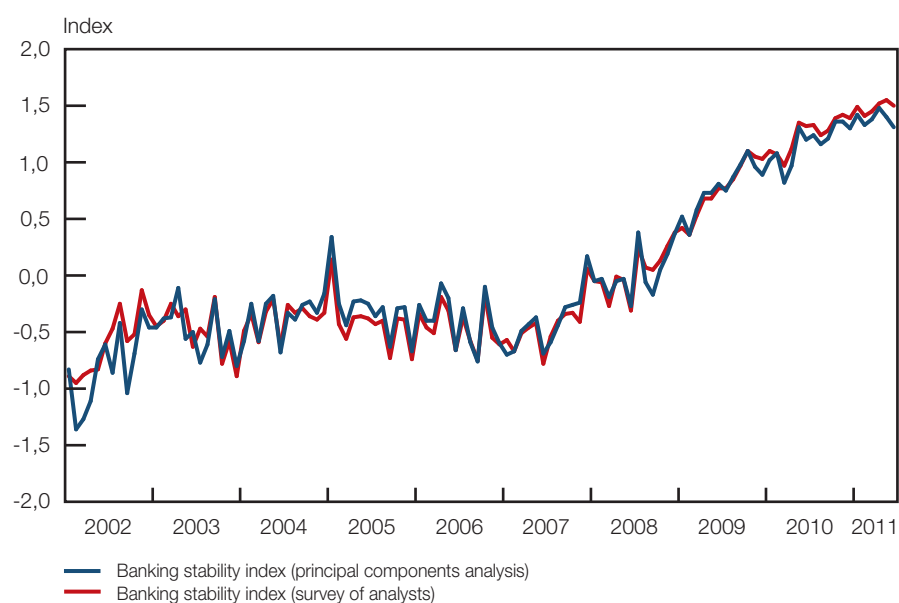
and reserves. In August 2011 reserves increased due to an increase in appropriated profits and retained earnings. The sector's CAR exceeded the regulatory minimum CAR during the period.

Gross loans and advances increased by 4,2 per cent from R2,3 trillion in March to R2,4 trillion in August 2011. There has been continual growth in gross loans and advances since January 2011, albeit at a low rate. Impaired advances decreased by 4,7 per cent from March to August, due to changes to credit models and write-offs. The ratio of impaired advances to gross loans and advances decreased from 5,8 per cent in March to 5,3 per cent in August 2011. Specific impairments amounted to R42,2 billion in August 2011, which is slightly lower than the average for the six months to June 2011 (R43,8 billion).

The profitability of the sector improved marginally with the 12-month moving average for return on equity increasing from 15 per cent in March to 15,3 per cent in August 2011. The average growth in gross operating income for the second quarter (0,8 per cent) exceeded the average growth in operating expenses (0,7 per cent), which resulted in the slight improvement in the operating expenses-to-gross-income ratio during the second quarter of 2011. This improvement continued into the third quarter to 56,7 per cent in August 2011. The ratio remains in excess of 50 per cent and is primarily ascribed to high personnel, information technology and communications costs.

Stability in the banking sector has also been assessed by means of a newly computed composite indicator, namely the banking stability index depicted in Figure 11. The banking stability index was calculated using a core set of financial soundness indicators that cover capital adequacy, asset quality, profitability, liquidity and foreign exposure. Values above zero show periods of above-average stability in the banking sector and values below zero show below-average stability in the banking sector. The upward trend in the banking stability index since January 2010 is due to the gradual accumulation of capital and liquid assets held by banks, both of which have a positive impact on the index. The latest data suggest stability in the banking sector. Box 5 explains the methodology followed to compute the banking stability index.

**Figure 11 Banking stability index**



Sources: South African Reserve Bank and own calculations

## Box 5 Computation of the banking stability index

The use of a single aggregate indicator has become increasingly widespread among central banks as an alternative for evaluating the stability of the financial system. The banking stability index is an aggregate or composite indicator that gives an indication of the performance of the banking sector. It is computed using a carefully selected set of financial soundness indicators of the South African banking sector. The indicators included in the computation are those relating to capital adequacy, asset quality, profitability, liquidity and net open foreign currency position.

The levels of capital adequacy and profitability determine how well financial institutions can cope with shocks to their balance sheets, and are therefore expected to influence the index positively. Asset quality and liquidity reflect the general solvency of financial institutions. Accordingly, deterioration in asset quality affects the index negatively, while increasing liquidity improves the index. The net open foreign currency position indicator captures foreign-exchange risk to which banks are exposed. Therefore, an increase in the indicator is expected to pull down the overall index, that is, affect it negatively.

For the computation of the banking stability index, all the variables were expressed as ratios and standardised by subtracting the mean and dividing the answer by the respective standard deviations. The standardisation of the data enabled the selected weighting technique to select weights based on the inherent variability in the underlying data, rather than on differing nominal units. Two methods were considered for the allocation of weights, namely, the objective principal component analysis (PCA) and the subjective survey of financial stability analysts.

PCA is conducted by examining the variance of each series of indicators and selecting higher weights for those series that vary significantly, so that they influence the weighted sum relatively more. Mathematically, PCA summarises the variation in correlated multivariate attributes to a set of non-correlated components, each of which is a particular linear combination of the original variables.\* The extracted non-correlated components are called 'principal components' (PCs) and are derived in decreasing order so that the first principal component (PC1) explains the largest possible amount of variation in the original data, subject to the constraint that the sum of the squared weights is equal to one.

The second principal component (PC2) is completely uncorrelated with the first component and it is the best summary of variability left after PC1 has explained the dominant variability. Subsequent components capture additional dimensions in the data, and explain smaller and smaller proportions of the variation of the original variables. The higher the degree of correlation among the original variables in the data, the fewer the components required to capture common information.

In the second approach, a survey was conducted among a group of financial stability analysts in order to determine the weights. The results were combined, the average weighting was assigned to each indicator, and the reasoning behind the allocation of such weights was also provided. The sum of the weights of the partial indicators was restricted to 100 per cent. However, the main drawback of this approach, given that the index is updated on a continuous basis to assess the stability of the banking sector, is that it assigns the same weight even in the event that risk drivers might have changed. A possible solution to this problem would be to conduct a survey each time the index is updated.

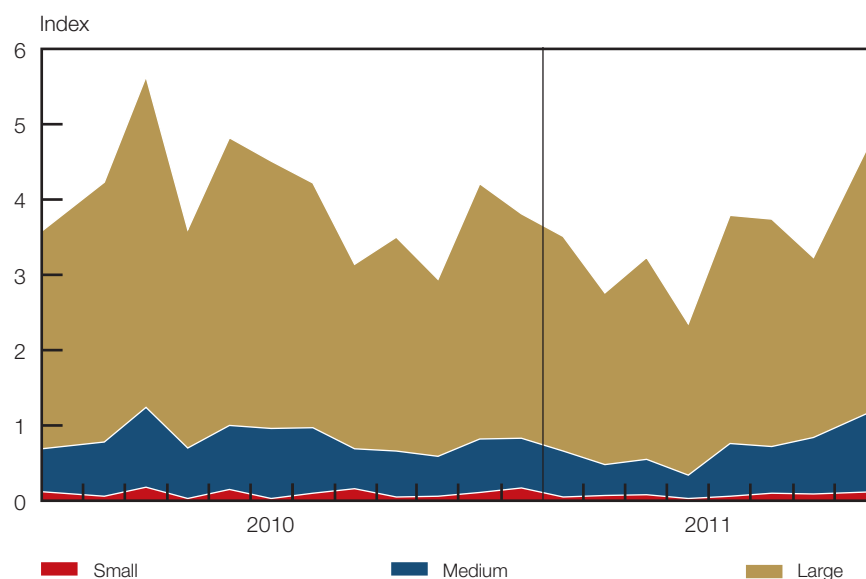
\* Labib, K and V Vemuri, *An Application of Principal Component Analysis to the Detection and Visualization of Computer Networks Attacks*. (Davis CA: Department of Applied Science, University of California, 2004).

The network systemic importance index<sup>23</sup> (NSII) was developed (see March 2011 *Financial Stability Review*) to assess the systemic importance of individual banks. Since the height of the financial crisis in September 2008 the index has declined and a recent update shows that the declining trend continued to the first quarter of 2011. However, with the onset of renewed turmoil in international financial markets in April 2011, the NSII has increased due to increasing interbank market activity. From April to June 2011 banks in the medium group gained higher systemic importance at the expense of banks in the large group. A possible explanation for this behaviour is a precautionary measure of large banks that could be reducing their demand for interbank loans. The interconnectedness of both large and medium banks, measured as their degree, remains stable at a high level. The slight increase in the interconnectivity of medium banks since April 2011 could hint at a reduced willingness of banks to issue large interbank loans. Subsequently, banks in the medium group will take loans from a larger number of banks, thereby increasing the interconnectedness of the banking system as a whole.

23. The NSII is an index that captures the structure of the South African interbank network, combining size, substitutability and interconnectedness as criteria determining the systemic importance of markets and institutions (see South African Reserve Bank, *Financial Stability Review* (Pretoria: South African Reserve Bank, March 2011) for more details).



Figure 12 Network systemic importance index<sup>1</sup>



The sectoral distribution of bank credit (depicted in Table 4) remained fairly consistent, as has been the case historically. At the end of the second quarter of 2011, banks' largest concentration of credit exposure was still to the private household sector, followed by the financial intermediation and insurance sector.

Table 4 Sectoral distribution<sup>1</sup> of credit to the private sector

Per cent

Sector	2010	2011	
	Dec	Mar	Jun
Agriculture, hunting, forestry and fishing .....	1,72	1,79	1,77
Mining and quarrying .....	2,93	3,23	3,41
Manufacturing .....	4,10	4,08	4,25
Electricity, gas and water supply .....	0,91	0,98	0,87
Construction.....	1,22	1,26	1,30
Wholesale and retail trade, hotels and restaurants.....	3,86	3,87	3,97
Transport, storage and communication .....	3,58	3,26	3,36
Financial intermediation and insurance .....	24,83	23,33	22,83
Real estate .....	6,41	6,60	6,52
Business services.....	3,35	3,61	3,61
Community, social and personal services.....	5,16	5,26	5,60
Private households .....	35,14	36,14	36,07
Other .....	6,79	6,59	6,44
<b>Total<sup>2</sup>.....</b>	<b>100,00</b>	<b>100,00</b>	<b>100,00</b>

1 The classification of credit exposure according to the sectors or industries is based on the directives and industries specified in the Standard Industrial Classification of all Economic Activities

2 Figures do not necessarily add up to 100 due to rounding

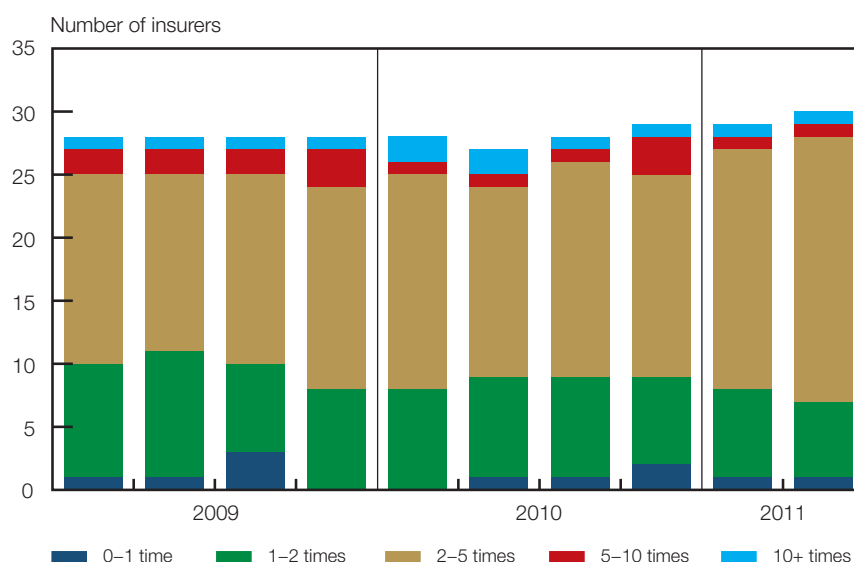
Source: South African Reserve Bank

## Insurance sector

The performance of the South African insurance industry seems to have been hampered by developments in the advanced economies and a volatile investment market. In addition to these economic challenges, the industry has to comply with a wave of new regulations that will be implemented almost concurrently. The SAM regime and the TCF requirements are planned to be in place by 2014. Furthermore, micro-insurance legislation and binder regulations<sup>24</sup> are also on the horizon. Despite these challenges, there have been expansions of more established life and non-life insurers into the rest of Africa. Overall, the industry performed well during the first half of 2011.

The long-term insurance industry remained well capitalised during the period under review, with most insurers' CAR above the minimum requirement (Figure 13). Only 1 out of 30 insurers had a free assets-to-capital-adequacy ratio value of between 0 and 1, suggesting that the life-insurance industry was sound and well positioned to honour benefit payments due to policyholders.

**Figure 13** Free assets-to-capital-adequacy requirement<sup>1</sup> of long-term typical insurers<sup>2</sup>



- 1 'Free assets' refers to the difference between total assets and the sum of total liabilities and required capital. The 'capital-adequacy requirement' is defined as the minimum capital required by the Financial Services Board for the registration of an insurance company and is equivalent to 13 weeks' worth of operating expenses.
- 2 Long-term typical insurers are those insurers that offer most of the six classes of business as defined in the Long-term Insurance Act, 1998 (Act No. 52 of 1998), in the primary market. The figures were not audited.

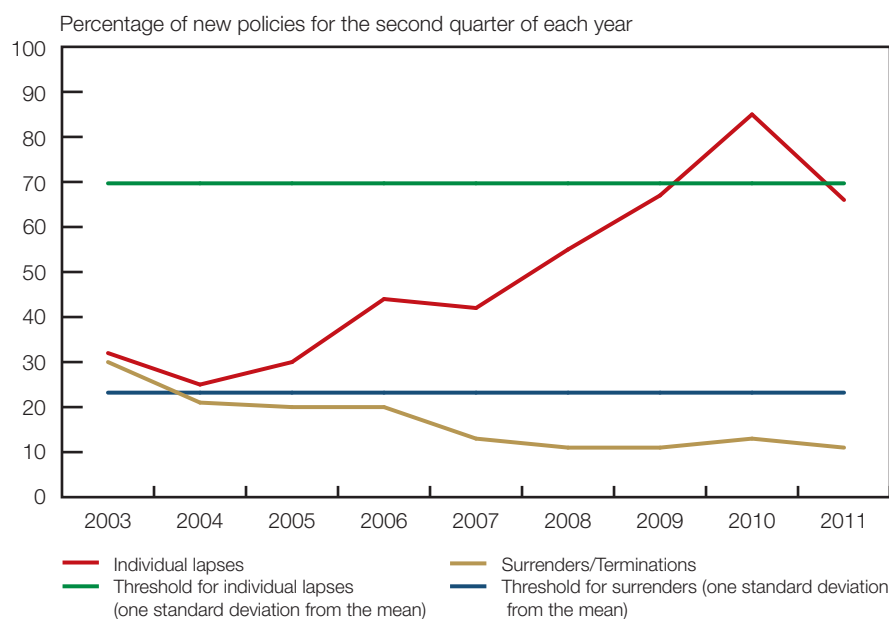
Source: Financial Services Board, *Special Report on the Results of the Long-term Insurance Industry*, various reports

Another positive development was the downward trend of surrenders and individual lapses (expressed as a percentage of the number of new policies issued during the period) (Figure 14). Surrenders decreased from 13 per cent in the second quarter of 2010 to 11 per cent in the second quarter of 2011, while individual lapses decreased from 85 per cent to 66 per cent during the same period. Underwriting profitability also improved somewhat, even though it remained negative.

24 Binder regulations regulate insurers' dealings with third-party entities outsourced for certain insurance functions.



Figure 14 Individual lapses and surrenders for long-term typical insurers<sup>1</sup>



<sup>1</sup> Expressed as a percentage of the number of new policies issued during the period using statistics that were not audited

Source: Financial Services Board, *Special Report on the Results of the Long-term Insurance Industry*, various reports

For the short-term insurance sector underwriting profit increased by 48,7 per cent in the year to June 2011, compared to an annual increase of 60,8 per cent in the year to June 2010. Underwriting and investment income also increased, while the ratio of claims to premium income decelerated compared to a year earlier. However, management expenses and commission (as a percentage of net written premiums) increased in the second quarter of 2011 compared to the preceding quarter. Overall, no eminent imbalances could be identified in the insurance sector during the review period.

Table 5 Selected indicators for short-term typical insurers

	2010			2011	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Net premiums (after reinsurance) <sup>1</sup> .....	5	4	7	11	14
Underwriting profit <sup>1</sup> .....	60,8	79,5	114,6	74,9	48,7
Underwriting and investment income <sup>1</sup> .....	1,7	14,1	33,5	62,3	30,9
Claims <sup>2</sup> .....	63	61	61	62	57
Management expenses and commission <sup>3</sup> .....	31	30	31	31	34
Underwriting profit <sup>3</sup> .....	7	9	9	8	10
Underwriting and investment income <sup>3</sup> .....	14	14	15	15	16
Surplus asset ratio (median) <sup>4</sup> .....	39	40	38	40	39

<sup>1</sup> Year-on-year percentage change

<sup>2</sup> As a percentage of premiums earned

<sup>3</sup> As a percentage of net written premiums

<sup>4</sup> Surplus as a proportion of liabilities

Source: Financial Services Board, *Special Report on the Results of the Short-term Insurance Industry*, September 2010, December 2010, March 2011 and June 2011

## Bond and equity markets

The domestic bond market was volatile in the first nine months of 2011, reflecting global risk events such as deteriorating financial and economic conditions in Europe, heightened concerns about slowing global GDP growth, and possible spillover effects into the domestic economy.

In the first three months of 2011 yields on domestic government bonds increased substantially due to a large sell-off by non-residents and expectations of higher interest rates in response to rising domestic inflationary pressures. The yield on the R157 (2016) bond increased to almost 8,0 per cent in March 2011, from a level of below 7,0 per cent in November 2010.

Since the beginning of April 2011, however, government bond yields declined sharply, largely attributable to an improvement in South Africa's fiscal position and a rebound in non-resident purchases of bonds (particularly on the shorter end of the curve). The decline was also due to favourable interest rate differentials compared to advanced economies, and rising expectations of a reduction in domestic interest rates against the backdrop of weak global and domestic prospects for GDP growth. The yield on the R157 bond reached a low of 6,3 per cent on 6 September 2011.

Figure 15 Selected domestic bond yields



Source: Bloomberg

Since then, there has been another turnaround in the domestic bond market. Government bond yields increased sharply, mainly as a result of higher risk aversion towards EME assets and a resultant sell-off in the domestic bond market by non-residents. Between 1 September and 30 September 2011, yields on the R157 and R186 government bonds increased by 58 and 61 basis points respectively.

After recording net sales of domestic bonds in the first three months of 2011, non-residents resumed purchasing domestic debt in April, in line with the general trend in other EMEs such as Poland, Hungary, Turkey, Russia, Brazil, Indonesia and South Korea. According to data from the JSE, non-residents purchased a net R41,2 billion worth of domestic bonds between April and September 2011.

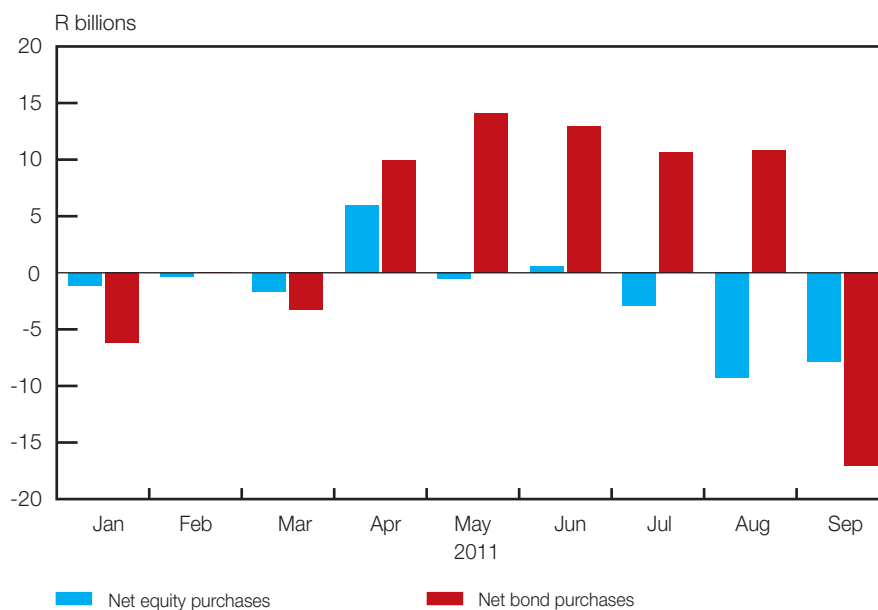
Since early September 2011 there has been a sell-off in domestic bonds by non-residents due to higher risk aversion towards EME assets. In September 2011, non-residents sold a net R17,1 billion worth of domestic bonds.

Looking ahead, the biggest risks to the domestic bond market are a worsening domestic inflation outlook, a sharp slowdown in global and domestic economic growth and heightened risk aversion. This could possibly result in a sharp weakening in the exchange rate of the rand



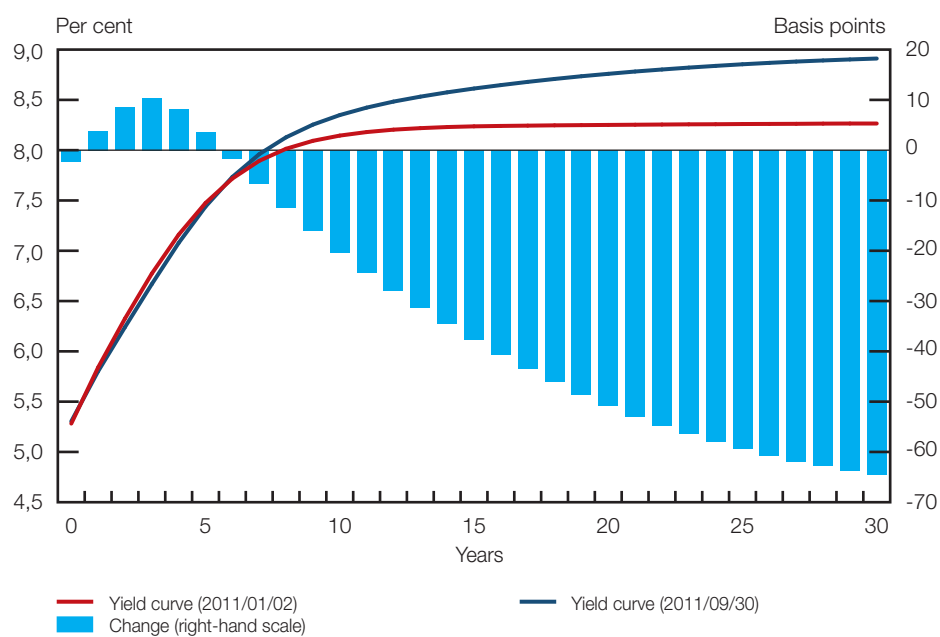
and a sudden stop or quick reversal of portfolio flows which, in turn, could threaten the financing of the country's current-account deficit.

**Figure 16** Non-resident purchases of domestic bonds and equities



In the first six months of 2011, the slope of the bond yield curve was positive. However, expectations for a bigger-than-expected domestic fiscal deficit to be funded mainly by longer-term bonds resulted in an increase in long-term yields. Furthermore, the curve shifted upwards, which was an indication of heightened inflationary pressures.

**Figure 17** Bond yield curve

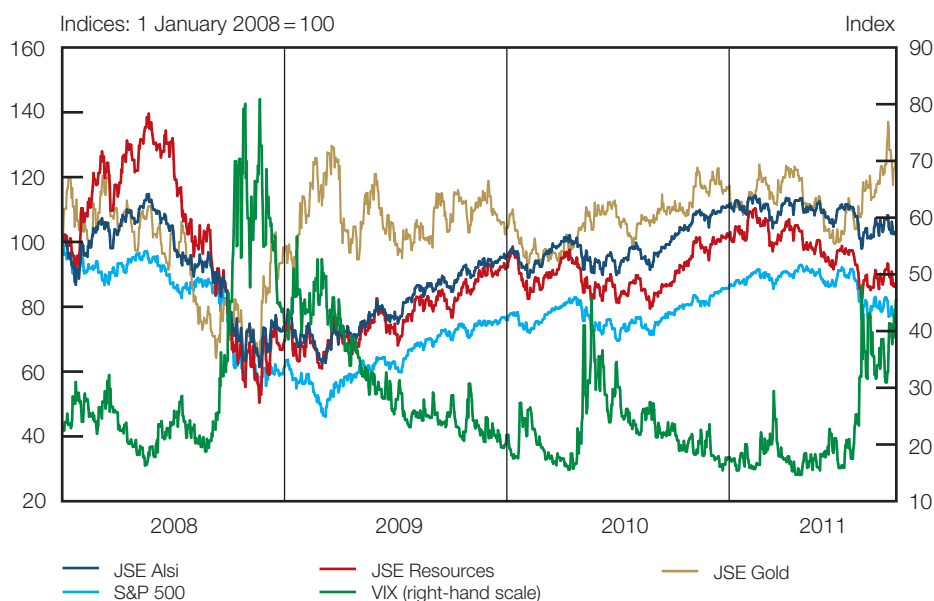


In early September 2011 longer-term yields increased further as a result of risk aversion towards EME assets and a deterioration in the domestic economic outlook, given disappointing second-quarter GDP growth of just 1,3 per cent (quarter-on-quarter annualised) and other weak indicators such as the PMI, and unemployment and manufacturing data.

In line with global equity markets, the JSE Alsi declined by 7,6 per cent in the year to 30 September amid higher global risk aversion, after gaining more than 16 per cent in 2010. Losses were broad based, with the exception of the gold index, which gained 5,2 per cent on the back of a record-high gold price and a weaker exchange rate of the rand, while the resources sector declined by 15,1 per cent as a result of lower commodity prices due to global growth concerns. Losses in the JSE Alsi were limited by the approval of some foreign direct investment (FDI) deals, particularly the Walmart/Massmart deal. In US dollar terms, the Morgan Stanley Capital International (MSCI) Index<sup>25</sup> for South Africa has lost 15,8 per cent for the year to date.

25 The MSCI Index is designed to measure equity markets' performance.

Figure 18 Equity indices



Source: Bloomberg

The strong appetite for domestic equities diminished in 2011 as a result of the deterioration in global and domestic GDP growth. For the year to 30 September 2011 non-residents sold a net R17,2 billion worth of local equities. This was largely in line with the trend in most EMEs as in a sluggish global growth environment investors generally tend to favour bonds over equities.

Looking ahead, the domestic equity market is expected to remain under pressure, due to a slowdown in global growth and contagion fears. The deteriorating economic outlook is expected to be exacerbated by downward revisions to domestic earnings forecasts and price-to-earnings ratios. The latest Bloomberg estimates indicate that analysts are predicting a decrease in the price-to-earnings ratio to 10 times in 2012 from expectations of 11,8 times in 2011. Earnings growth is expected to slow to 13 per cent in 2012 from an estimated 17,1 per cent in 2011.

## External sector

Foreign-exchange reserves allow countries to smooth domestic absorption in response to sudden stops, although they yield a lower return compared to the interest rate paid on the country's long-term debt. As a small open economy, South Africa is vulnerable to a reversal of portfolio flows. In order to estimate the optimal level of reserves for the country, policy-makers often use rules of thumb, such as maintaining reserves equivalent to the value of three months' imports, or ratios such as the Greenspan–Guidotti rule for full coverage of total short-term external debt. The Greenspan–Guidotti rule is premised on the idea that reserves help countries deal with a sudden stop in short-term external capital inflows.



Table 6 Reserve-adequacy ratios

	US\$ millions			Guidotti ratio	Augmented Guidotti ratio
	Gross foreign-exchange reserves <sup>1</sup>	Short-term foreign debt <sup>2</sup>	Current-account deficit		
2009: 1st qr .....	34 108	26 949	-16 664,24	1,27	0,78
2nd qr .....	35 760	26 961	-10 745,22	1,33	0,95
3rd qr .....	39 141	26 776	-10 131,99	1,46	1,06
4th qr .....	39 706	24 852	-9 764,50	1,60	1,15
2010: 1st qr .....	42 007	23 647	-15 401,50	1,78	1,08
2nd qr .....	42 203	21 878	-9 796,86	1,93	1,33
3rd qr .....	44 069	24 031	-12 106,59	1,83	1,22
4th qr .....	43 834	25 198	-4 148,32	1,74	1,49
2011: 1st qr .....	49 266	24 541	-12 930,39	2,01	1,31
2nd qr .....	50 041	23 923	-13 994,15	2,09	1,32

1 Official foreign-exchange reserves comprise gross gold and other foreign-exchange reserves

2 Short-term debt (maturing within a year) includes all external debt by the public authorities, public corporations, monetary authorities, banking and other sectors, and the short-term component of foreign direct investment

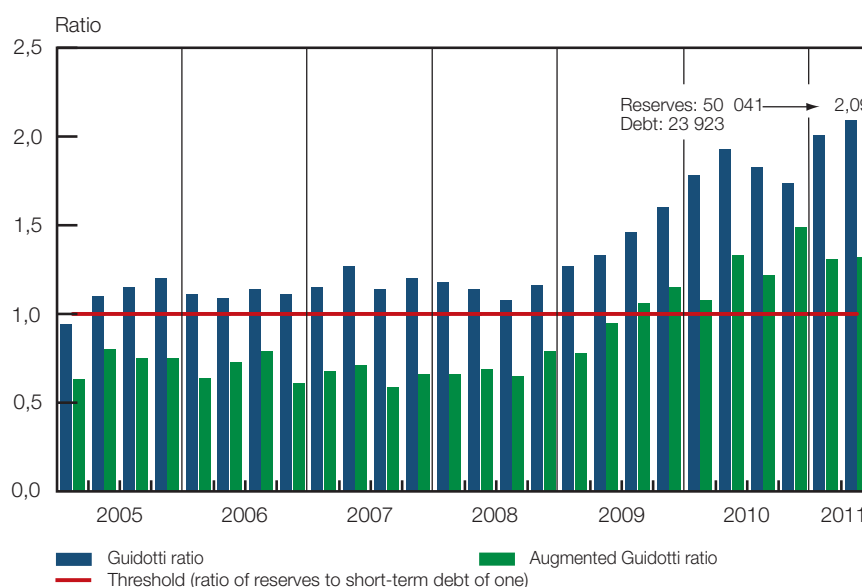
Source: South African Reserve Bank

26 The GR is the ratio of foreign-exchange reserves to short-term external debt.

27 The AGR is obtained by adding the annualised current-account deficit to short-term external debt to provide a measure of a country's total external financing requirements.

In the second quarter of 2011 the Guidotti ratio (GR)<sup>26</sup> showed that available foreign-exchange reserves were more than double the size of the country's short-term foreign debt. The GR was 2,09 and the augmented Guidotti ratio (AGR),<sup>27</sup> which takes into account the current-account deficit, was 1,32 in the second quarter of 2011. Both ratios improved from the first quarter of 2011 and, at these levels, the country could withstand sudden capital outflows fairly well. It would also be able to finance its current-account deficit for a period of one year, as it should be able to finance its total external financing requirements.

Figure 19 Reserve-adequacy ratios<sup>1</sup>



1 Figures for reserves and debt in US dollar millions

Source: South African Reserve Bank

## Corporate sector

There were signs of recovery in the credit extended to the corporate sector in the first half of 2011. The annual bank credit extended to the sector increased further in the second quarter, albeit still at a fairly pedestrian rate. The turnaround in corporate credit growth started in the third quarter of 2010, after a decline of 2,4 per cent in the second quarter of the same year. Investment by private business enterprises, which is proxied by gross fixed capital formation, increased for the fourth successive quarter in the second quarter of 2011. Net operating surplus, an indicator of profitability, also continued to show positive annual growth, although growth moderated in the first half of 2011.

**Table 7** Selected indicators for the corporate sector

Annual percentage change, unless indicated otherwise

	2010			2011	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Bank credit granted <sup>1</sup> .....	-2,4	1,4	1,0	3,1	3,8
Gross fixed capital formation <sup>2</sup> .....	-4,2	0,8	2,3	4,3	4,4
Credit as a percentage of GDP .....	45,3	46,1	45,1	45,3	45,5
Credit as a percentage of annualised profits <sup>3</sup> .....	137,4	155,2	161,9	153,7	129,7
Net operating surplus <sup>4</sup> .....	21,5	15,1	20,2	13,3	9,9

1 Bank credit to the corporate sector in this case includes instalment sale and leasing finance, mortgage advances, overdrafts, credit card debtors, and other loans and advances

2 Gross fixed capital formation at current prices (seasonally adjusted rates) is used as a proxy for investment by private business enterprises

3 Bank credit to the corporate sector and net operating surpluses of corporations were used as proxies for corporate debt and for corporate profits respectively

4 Gross operating surplus minus depreciation (seasonally adjusted rates)

Source: South African Reserve Bank

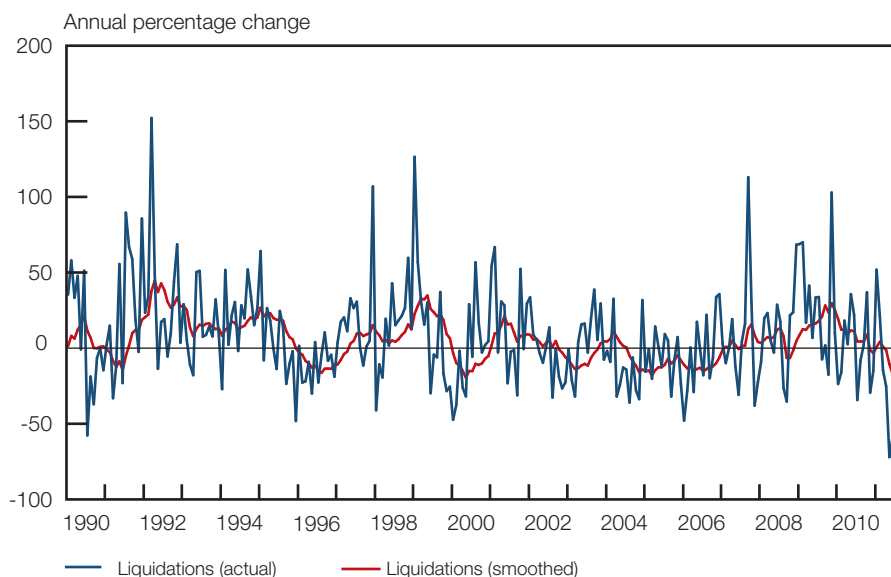
After decreasing between March and July 2011, the annual growth rate of the number of liquidations recorded increased in August 2011. On a month-on-month basis, liquidations rose by 20,3 per cent, mainly due to increases in liquidations in the finance, insurance, real-estate and business services industry (from 107 in July 2011 to 153 in August 2011). The number of compulsory (involuntary) liquidations decreased substantially from January to June 2011, before increasing again in July and August 2011. Voluntary liquidations remained at a much higher level than compulsory liquidations. However, as can be seen in Figure 20, statistics for liquidations are highly volatile and should be interpreted with caution.

Despite the positive developments mentioned above, there was a significant drop in the business confidence level during the second quarter of 2011 and a further decline from 48 to 39 index points was recorded in the third quarter of 2011 – the lowest level since the second quarter of 2010. The main drivers behind the decline included a drop in the confidence levels of new vehicle traders, retail traders and wholesale traders. The weakness in the trade sector can be attributed to weak household spending, while temporary factors such as industrial action, loss of production capacity and worse-than-expected domestic sales are believed to have contributed to the low level of business confidence.





Figure 20 Liquidations



Source: Statistics South Africa

28 Bureau for Market Research and Rand Merchant Bank, *Business Confidence Index* (Johannesburg: Bureau for Market Research and Rand Merchant Bank, September 2011).

29 The impairments data are for all loans. For 2007, the ratio of gross overdue to total loans and advances was used as a measure of asset quality. From 2008 onwards, the ratio of impaired advances to total loans and advances was used.

Some commentators believe that the drop in the overall business confidence level and the slowdown in GDP growth could only be a temporary problem in the business cycle upswing as confidence does not necessarily increase in a smoothed fashion.<sup>28</sup> It is expected that the economic upswing will remain fragile until factors that normally drive durable expansions, such as rising fixed investment, job growth and increased credit spending, return to more desirable levels. This view is supported by the probability of default or expected default frequency (EDF) of corporations, which is one of the commonly used leading indicators of emerging problems in the corporate sector. An increase in the EDF of corporations can be an indication that firms could have difficulties repaying their debt with financial institutions. This can lead to deterioration in the asset quality of banks. Figure 21 shows the relationship between corporate EDFs and the ratio of credit impairments to total gross loans.<sup>29</sup> Corporate EDFs are currently trending downwards, suggesting a brighter outlook for the corporate sector.

Table 8 Business confidence index<sup>1</sup>

Indices	2010			2011	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Business confidence index .....	36	47	44	55	48
New vehicle dealers confidence .....	49	79	51	84	76
Retail traders confidence .....	38	52	63	58	47
Wholesale traders confidence .....	47	50	47	65	47
Building contractors confidence .....	20	25	20	18	21
Manufacturers confidence .....	28	30	41	51	51

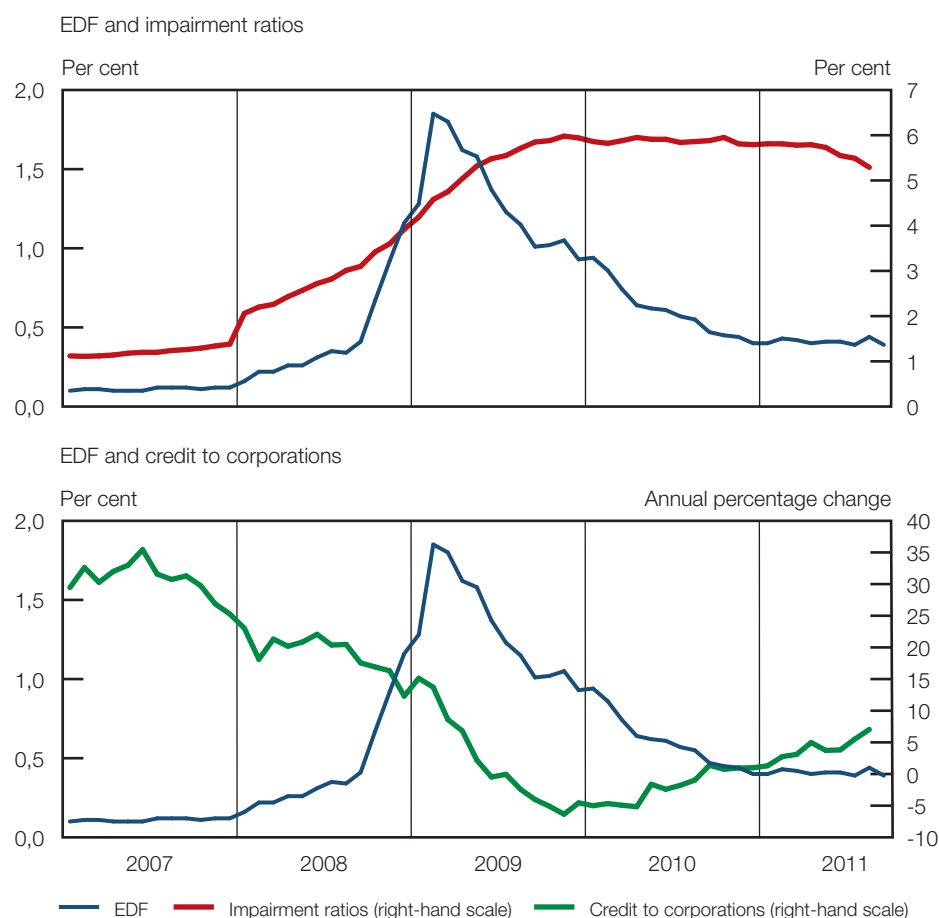
1 The business confidence level is measured on a scale of 0 to 100, where 0 indicates 'an extreme lack of confidence', 50 'neutral' and 100 'extreme confidence'

Source: Rand Merchant Bank/Bureau for Economic Research

The increase in corporate EDFs that started in mid-2007 coincided with the onset of deterioration in the asset quality of banks. Corporate EDFs reached a peak of 1,8 per cent in February 2009 and the asset quality of banks continued to deteriorate. Corporate EDFs have been improving

since the beginning of 2009, and the ratio of non-performing loans to total gross loans has remained almost unchanged at approximately 5,8 per cent since the end of 2009.

**Figure 21** EDFs, impairment ratios and credit to corporations



Sources: South African Reserve Bank and Moody's KMV

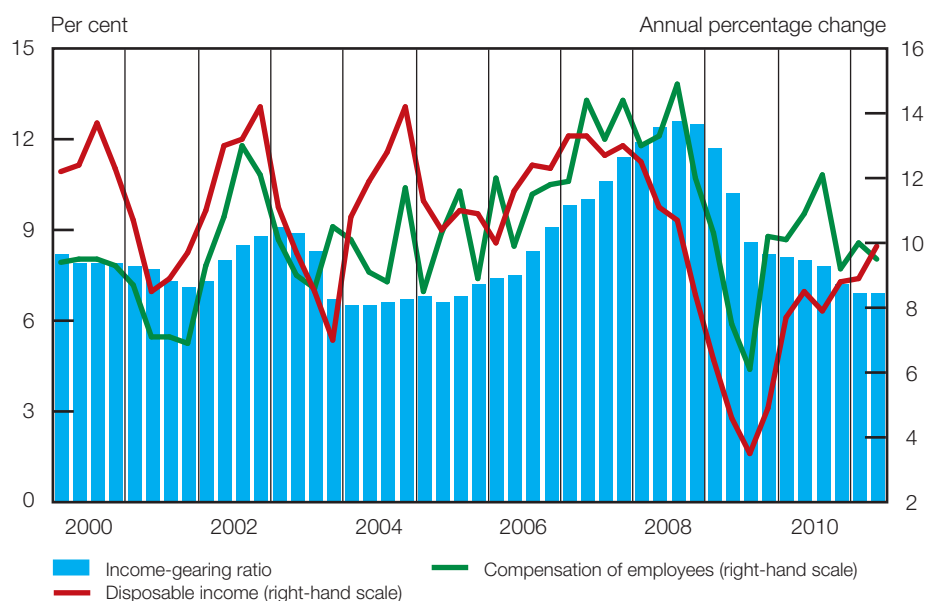
In theory, as corporate EDFs increase, credit providers are likely to tighten lending standards, and some firms will find it difficult to access credit. Corporate EDFs may, therefore, provide an early warning signal of the direction of the credit cycle. The increase in corporate EDFs since the end of 2007 was followed by a decrease in the annual growth rate of credit to the corporate sector, which had started in mid-2007 (Figure 21). The improvement in corporate EDFs since the beginning of 2009 was followed by the annual increase, albeit marginal, in credit extended to the corporate sector, suggesting that the credit cycle could be turning in an upward direction.

## Household sector

Households in South Africa continue to be impacted by the high rate of unemployment, and the savings rate of the sector remains low. Household indebtedness (as measured by the ratio of debt to disposable income) has been declining since the fourth quarter of 2010 as households consolidated their debt. Even though household indebtedness is still high, the debt-servicing burden has declined significantly. In the second quarter of 2011 compensation of employees and disposable income grew at annual rates of 9,5 per cent and 9,9 per cent respectively, and interest payments on debt were 6,9 per cent of disposable income. The improvement in the income of households and the declining debt-service cost or income gearing, should enable households to take advantage of the low interest rate environment and repay their debt sooner (Figure 22).



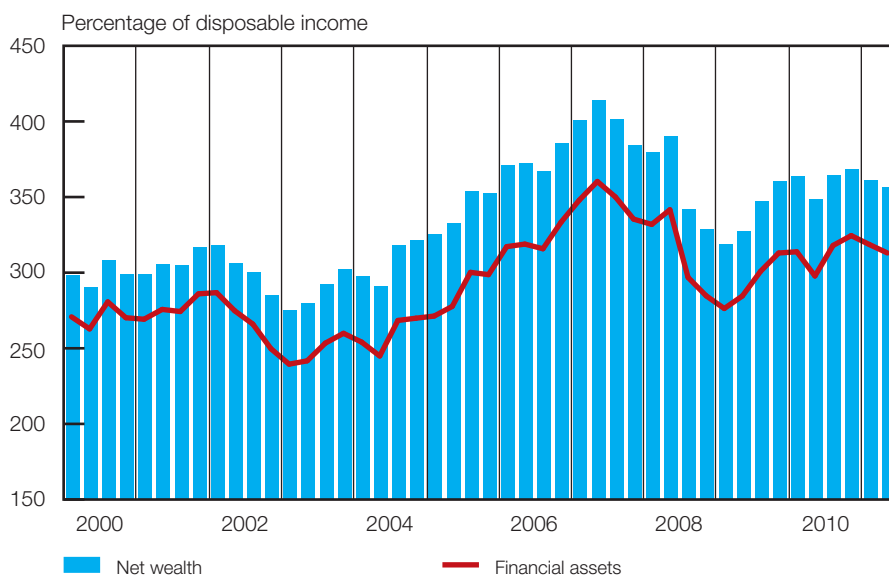
Figure 22 Household income growth and income-gearing ratio



Source: South African Reserve Bank

A continuation of the current period of steady growth in financial assets and disposable income would help build extra resilience in households' balance sheets. Adding to the strengthening of households' balance sheets and their ability to withstand unexpected shocks, household financial assets remained in the region of three times annual disposable income, while households' net wealth was more than 3,5 times their annual disposable income (Figure 23).

Figure 23 Household financial assets and net wealth



Source: South African Reserve Bank

After plummeting by 5 points to 9 index points in the first quarter of 2011, the level of consumer confidence increased to 11 index points in the second quarter of 2011. The increase occurred as more consumers became optimistic about the performance of the economy and their

personal finances. Consumers were, however, less optimistic about the current period as appropriate for purchasing durable goods. The second quarter gains in consumer confidence were completely eroded in the third quarter of 2011, with the consumer confidence index declining sharply to 4 index points. This was attributed to increased pessimism about the performance of the economy following the release of weaker-than-expected economic growth data for the second quarter of 2011. The percentage of consumers expecting an improvement in their financial position also declined in the third quarter of 2011.

**Table 9 Selected indicators for the household sector**

Annual percentage change, unless indicated otherwise

Indicator	2010			2011	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Nominal disposable income.....	8,5	7,9	8,8	8,9	9,9
Financial assets <sup>1</sup> .....	13,6	14,0	12,8	10,5	15,5
Net wealth <sup>2</sup> .....	15,6	13,4	11,1	7,9	12,5
Consumer confidence index <sup>3</sup> .....	14	15	14	9	11
Consumption expenditure to GDP.....	59,3	58,7	58,2	58,2	59,1
Real consumption expenditure .....	4,7	5,5	5,1	5,0	4,9
Credit extension .....	4,3	6,3	6,9	7,1	7,0
Savings as a percentage of disposable income...	-0,3	-0,3	-0,3	-0,2	-0,2
Debt .....	3,9	5,4	6,1	6,8	6,5
Debt to disposable income.....	78,4	78,7	77,6	76,8	75,9
Debt to GDP .....	46,3	46,0	45,1	44,6	44,8
Income-gearing ratio (per cent) <sup>4</sup> .....	8,0	7,8	7,2	6,9	6,9
Capital gearing (per cent) <sup>5</sup> .....	18,4	17,8	17,4	17,5	17,6
Insolvencies.....	-42,3	-28,4	-36,7	-32,6	-31,9

1 Financial assets include households' deposits with financial institutions, their share in pension funds and a proxy for their holdings of shares. Data on financial assets are preliminary and based on work in progress at the Bank

2 Household net wealth comprises household total assets, that is, total fixed assets plus financial assets less liabilities. Data on net wealth are preliminary and based on work in progress at the Bank

3 The consumer confidence index is expressed as a net balance between optimistic and pessimistic consumers. According to the Bureau for Economic Research at Stellenbosch University, the index can vary between -100 for 'extreme pessimism' and +100 for 'extreme optimism', with 0 being 'neutral'

4 'Income-gearing ratio' refers to financing costs of household debt as a percentage of disposable income. Data are preliminary

5 'Capital gearing' refers to household debt as a percentage of total assets of households. Data are preliminary

Sources: South African Reserve Bank, Statistics South Africa and Bureau for Economic Research, Stellenbosch University

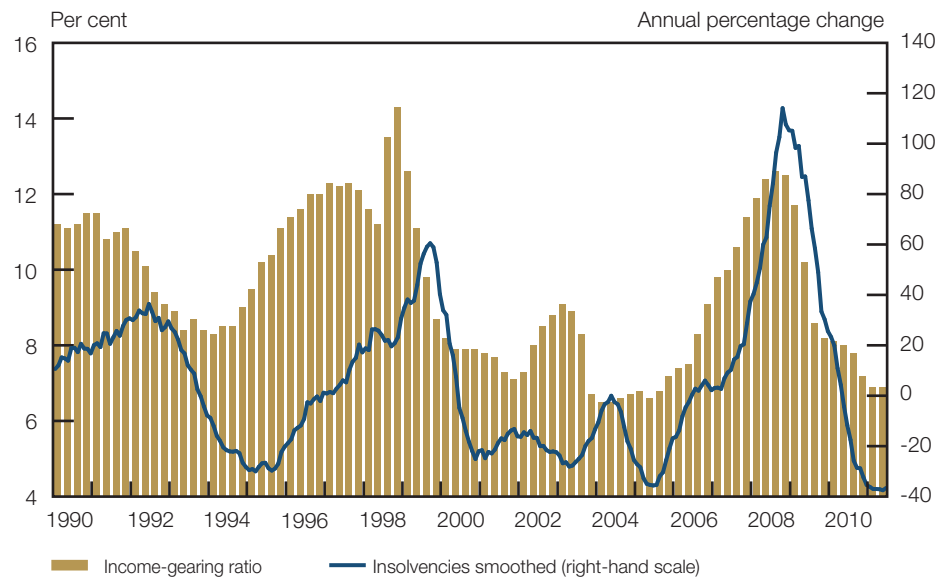
The experience of the recent recession and the requirements of the National Credit Act have caused households to be more cautious about their finances. Signs of greater financial caution among households were evident as early as the first quarter of 2011. Data from the National Credit Regulator indicate that the number of applications for credit facilities decreased by 3,9 per cent year on year in the first quarter of 2011 (a decrease of 13,7 per cent compared to the fourth quarter of 2010). Over the same period, the percentage of applications rejected increased to 43,3 per cent.

The declining trend in the annual growth rate of the number of insolvencies continued during the period under review and into July 2011. The decline in insolvencies of individuals and partnerships occurred on the back of relatively low debt-service cost and rising disposable income of households, both of which afford households the opportunity to repay their debt quicker.





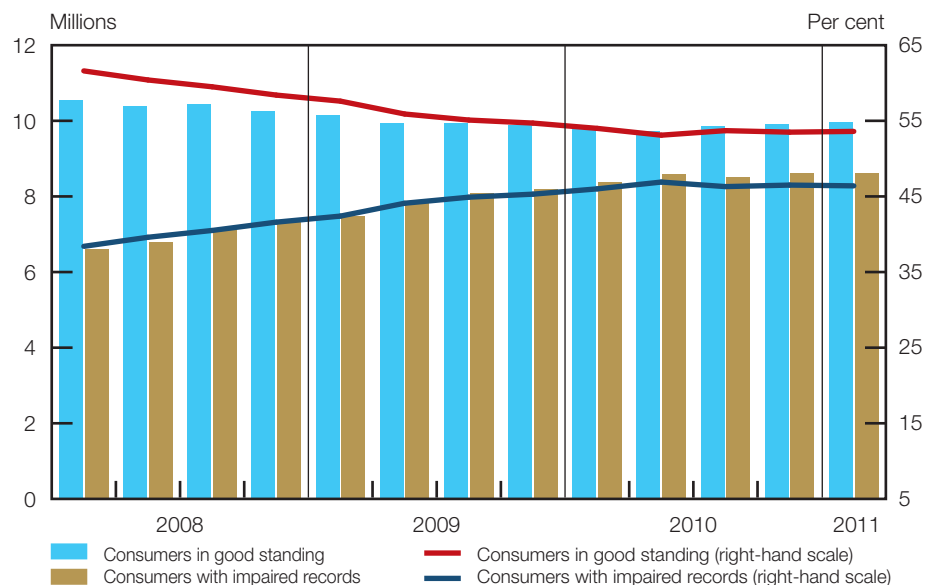
Figure 24 Income-gearing ratio and insolvencies



Sources: South African Reserve Bank and Statistics South Africa

The improvement in the credit quality of consumers, which started in the third quarter of 2010, continued into the first quarter of 2011. There was an annual increase of 2,1 per cent in the number of credit-active consumers (from 18,21 million in March 2010 to 18,60 million in March 2011). Consumers in good standing accounted for 53,6 per cent of total credit-active consumers (an increase of 1,3 per cent compared to March 2010), while those with impaired records accounted for 46,4 per cent. The improvement in the credit quality of consumers is expected to continue should interest rates remain at relatively low levels.

Figure 25 Credit standing of consumers



Source: National Credit Regulator

## Residential real-estate sector

During the first half of 2011, indicators of activity in the residential real-estate sector revealed mixed signals. Encouragingly, the percentage of first-time buyers to total buyers increased from 22 per cent in the first quarter to 25 per cent in the second quarter of 2011. Over the same period, the average time properties remained in the market decreased from 134 days to 106 days, and the percentage of properties that remained in the market for three months or more decreased from 81 per cent to 75 per cent. However, the level of residential demand activity (previously known as the 'residential property confidence indicator') decreased from 6,1 index points in the first quarter to 5,6 index points in the second quarter of 2011. The percentage of properties sold below the asking price also increased. The buy-to-let segment remained constant.

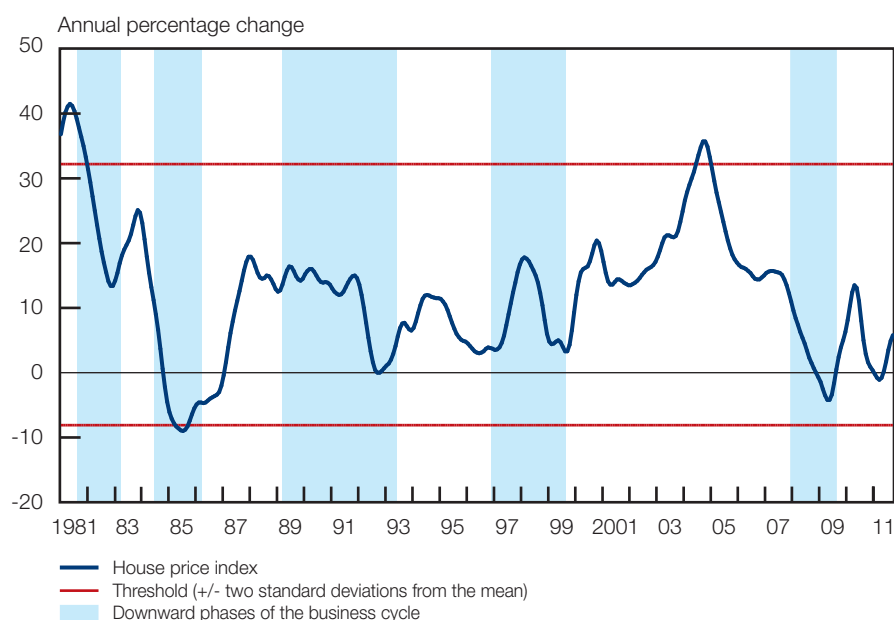
**Table 10** Indicators of residential real-estate activity

Per cent, unless indicated otherwise

Indicator	2010		2011	
	3rd qr	4th qr	1st qr	2nd qr
Level of residential demand activity .....	5,7	5,8	6,1	5,6
First-time buyers as a percentage of total buyers .....	15	17	22	25
Buy to let as a percentage of total buyers .....	7	7	8	8
Average time properties remain in the market (days) .....	109	111	134	106
Percentage of properties sold at less than asking price.....	81	80	85	87
Percentage of properties in the market for three months or more .....	78	74	81	75

Source: First National Bank

**Figure 26** House price index<sup>1</sup>



<sup>1</sup> The Absa House Price Index is based on the total purchase price of houses in the 80 m<sup>2</sup>–400 m<sup>2</sup> size category valued at R3,5 million or less in 2008 (including improvements) in respect of which loan applications were approved by Absa. Prices are smoothed in an attempt to exclude the distorting effects of seasonal factors and outliers in the data

Source: Absa Bank Limited





Year-on-year house price growth regained momentum and continued to accelerate following the decline that had started in May 2010. With the revival in residential demand activity, the Absa House Price Index grew at an annual rate of 5,8 per cent in September 2011. Although the pace of house price growth was still slow, it could be a reflection of the delayed positive impact of interest rate cuts during the second half of 2010.

The resurgence in residential real-estate activity and house price growth could only be sustained following improvements in the financial position of households. Other factors that enable the sustainability of the recovery include the increase in the volume of building work and the improved confidence among residential building contractors, up from a level of 20 index points in the first quarter to 24 index points in the second quarter of 2011.

## Infrastructure and regulation

This section of the *Financial Stability Review* considers developments in the domestic and international financial infrastructure and the regulatory environment. First, an update is provided on significant financial legislation and infrastructural developments that impact on the domestic financial sector. This is followed by an overview of issues occupying emerging macroprudential policy oversight structures from a number of jurisdictions, including an update on the proposed twin peaks financial regulatory model for South Africa. Finally, the potential financial stability implications for South Africa arising from recent trends in ETFs are discussed.

### Update on policy, and legislative and infrastructural developments affecting the South African financial system

#### Macroprudential regulatory developments from selected jurisdictions and an update on South Africa's adoption of a twin peaks financial regulatory regime

According to the IMF,<sup>30</sup> considerable efforts are under way to implement lessons learnt from the recent financial crisis. One such lesson is the need for an overarching policy framework to address the stability of the financial system as a whole, the so-called macroprudential policy framework. To be effective, a macroprudential policy framework needs to make provisions that would ensure a policy-maker's ability and willingness to act. Such provisions include clear mandates; control over macroprudential instruments that are commensurate with the said mandates; arrangements that safeguard operational independence; and provisions to ensure accountability, all of which must be supported by transparency and clear communication of both decisions and decision-making processes.

Over the past year, various structures have emerged in a number of jurisdictions to address macroprudential issues arising from the financial crisis. The impetus for reform came from the Group of Twenty (G-20) leaders' commitment to prevent financial systems from experiencing a similar crisis in future by putting in place sound regulatory structures and closing regulatory loopholes that were exposed during the financial crisis. In the US and the UK, progress has been made with ensuring that both the Financial Stability Oversight Council (FSOC) and the Financial Policy Committee (FPC) become operational.

Both bodies have had to grapple with critical regulatory and financial stability issues. In the UK these issues ranged from the need for improved disclosure of sovereign and banking-sector exposures by banks; review of forbearance and associated provisioning practices across the UK's retail and corporate sectors; and the monitoring of risks associated with opaque funding structures, such as collateral swaps or similar transactions employed by ETFs. In the US the FSOC has had to deal with issues pertaining to the systemic risk monitoring process; criteria for designating non-bank financial firms for supervision by the US Federal Reserve System; and the current sovereign credit risks in the European Union (EU).

Only in a select few cases, predominantly in the US, are mandates clearly established through legislation. However, processes to entrench these mandates in legislation are under way in other jurisdictions, such as the UK. Membership of these macroprudential oversight committees also varies, ranging from being purely comprised of respective central bank officials to having government representatives, other regulators concerned and independent external representation.

Progress is being made in South Africa with the implementation of the twin peaks financial regulatory model as announced by the Minister of Finance in February 2011 and highlighted in the March 2011 issue of the *Financial Stability Review*. Public consultations have closed and high-level issues arising from public submissions are currently being considered. The inaugural meeting of the Financial Regulatory Reform Steering Committee (FRRSC) – a committee created to promote the implementation of the regulatory reforms – was held in June 2011 and five working

30 International Monetary Fund, *Macroprudential Policy: An Organizing Framework* (Washington DC: IMF, March 2011).





groups have been established between National Treasury (NT), the Bank and the Financial Services Board (FSB). They will consider the following matters related to implementation:

- Consideration and formulation of the most appropriate prudential regulatory framework to ensure at a minimum, all relevant systemic components of institutions, markets and systems fall under the prudential regulation and supervision remit of the Bank, including resolution policies to address risks to and imbalances in the broader financial system.
- Consideration and formulation of the appropriate regulatory and supervisory policy for the business conduct of financial institutions and markets.
- Research of the micro- and macroeconomic impact of the adoption of a twin peaks regulatory framework and an explicit financial stability mandate on the financial system and the macroeconomy.
- Development of a comprehensive and sound legislative framework to support the mandate and objectives of the financial regulatory reform process.
- Definition of the different institutional processes and infrastructural issues emanating from the integration of prudential regulation under the Bank and the establishment of a market conduct regulator under the remit of the FSB.

All five working groups have met and have deliberated on their terms of reference, draft work programmes and timelines going forward. It is anticipated that a roadmap document for implementing the reforms will be published in 2012.

## The impact of Basel III on the South African banking sector

A recent survey<sup>31</sup> of Chief Executive Officers of selected South African banks identified regulatory changes as one of the key concerns of, and the driving force behind, changes to banking business models, with the most important regulatory change being identified as the Basel III Accord (Basel III).<sup>32</sup> The detail of the enhancements made by the Basel Committee's Basel III framework was documented in the March 2010 *Financial Stability Review*.

Basel III identified three core aspects to promote more resilient banking sectors, namely (i) capital, (ii) leverage and (iii) liquidity, together with a phased timeline for their implementation. The Basel Committee is monitoring the impact of Basel III on participating banks on a semi-annual basis by way of a Quantitative Impact Study with end-December and end-June reporting dates. As a member of the Basel Committee, South Africa is participating in the exercise and the Bank is co-ordinating the submission of data for the South African banking sector. The sector's reliance on short-term wholesale funding for long-term assets is likely to present a significant challenge to banks in meeting the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR). The NT has set up a task team to consider, among other matters, the implications of the LCR and the NSFR on the structure of the South African economy. The task team consists of representatives of the NT, the Bank, the FSB, the Banking Association of South Africa, the Association for Savings and Investment SA, and selected domestic banks and asset management firms. The work of the task team is ongoing.

## Release of the microinsurance policy document

On 28 July 2011 the NT released a policy document entitled *The South African Microinsurance Regulatory Framework*. The proposed microinsurance framework discussed in the document aims to address challenges related to improving access to insurance products and consumer protection for lower-income families in South Africa. One of the intended aims of the policy framework is to enhance consumer protection within this market segment through appropriate prudential and business conduct regulation; improved enforcement of regulations; and consumer education interventions targeted at understanding insurance and its associated risks and benefits.

The release of the above-mentioned policy document follows the 2008 discussion paper entitled the "Future of Microinsurance Regulation in South Africa", which highlighted the deficiencies and access imbalances prevalent in insurance products marketed to the low-income sector of the population, and was reviewed in the September 2008 *Financial Stability Review*. The NT

31 Refer to the 2011 survey entitled "Unlocking Opportunities: Strategic and Emerging Issues in South African Banking" conducted by PricewaterhouseCoopers.

32 Basel III refers to the Basel Committee's publication entitled *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems*, dated December 2010.



and the FSB have committed themselves to developing the microinsurance legislation, which is due to be issued for public comment by 2012 and subsequently tabled in Parliament by 2013.

## Consumer Protection Act: Final enforcement guidelines and exemptions

The September 2009 *Financial Stability Review* reported on the enactment of the Consumer Protection Act, 2008 (Act No. 68 of 2008). On 20 July 2011 the National Consumer Commission (NCC) published final enforcement guidelines that will be used to give effect to the CPA. The guidelines contain several sections that address, among other things, the functions of the NCC, complaints handling and investigations, evidence and procedural fairness, and the investigation case file review and audit process. According to the guidelines, the NCC will enforce the CPA in the following ways:

- Promote informal resolution of disputes between consumers and suppliers
- Receive and deal with complaints of prohibited conduct or offences
- Monitor consumer markets to ensure that prohibited conduct is prevented, detected and prosecuted
- Monitor the effectiveness of accredited consumer groups, industry codes and alternative dispute-resolution schemes or any other regulatory authority exercising jurisdiction over consumer matters
- Investigate and evaluate prohibited offences
- Issue and enforce compliance notices
- Negotiate and conclude undertakings
- Refer any competitive behaviour concerns to the Competition Commission
- Refer matters to the tribunal and offences to the National Prosecuting Authority.

On 27 June 2011 the Department of Trade and Industry published two notices exempting selected industries in the financial services sector from certain provisions of the CPA. The first exemption notice that was published exempts banks from the provisions of section 14 of the CPA.<sup>33</sup> This applies to all banks registered in terms of the Banks Act, 1990 (Act No. 94 of 1990), mutual banks registered in terms of the Mutual Banks Act, 1993 (Act No. 124 of 1993), and co-operative banks registered in terms of the Co-operatives Banks Act, 2007 (Act No. 40 of 2007). All exemptions are applicable with effect from 1 April 2011. Small- to medium-sized municipalities were also granted an exemption from all provisions of the CPA, while pension funds and collective investment schemes were exempted from most sections of the CPA for a period of 18 months from 1 April 2011 until 31 October 2012. The securities services industry will be exempt from certain sections of the CPA for an indefinite period.

In addition to ensuring adequate consumer protection, the CPA also places a heavier burden on businesses that do not comply with best practice. It is envisaged that the guidelines and exemptions of the CPA will enhance the robustness of the enforcement of the CPA and will allow for the correct adjudication of cases that fall within the ambit of the CPA. The promulgation of the CPA has resulted in South African consumers being among the best-protected consumers in the world as they are protected from unprincipled business practices. Generally, the harmonisation of consumer protection legislation enhances market conduct regulation and, by extension, financial system stability.

## Credit Rating Services Bill

On 26 July 2011 Cabinet approved the release of the CRS Bill 2011,<sup>34</sup> for public comment in view of the fact that credit rating agencies (CRAs) were deemed to have been a contributing factor to the global financial crisis. At the G-20 summit on financial markets and the world economy that took place on 15 November 2008,<sup>35</sup> G-20 members committed themselves to introducing a regulatory framework for CRAs. In the light of these international developments and South Africa's commitment to adhering to international standards, where applicable, the CRS Bill was drafted. The CRS Bill aims to protect the independence, integrity, transparency and reliability of the credit rating process. In addition, the CRS Bill is meant to enable South African authorities to engage with their international counterparts in ensuring responsible and

33 Section 14 refers to the expiry and renewal of fixed-term agreements. The exemption has been granted because it has implications for the liquidity and capital requirements of banks.

34 The CRS Bill is available at [www.treasury.gov.za/public\\_comments/CreditRating](http://www.treasury.gov.za/public_comments/CreditRating).

35 Available at [http://www.g20.org/Documents/g20\\_summit\\_declaration.pdf](http://www.g20.org/Documents/g20_summit_declaration.pdf).





accountable CRAs at a global level, and to improve investor protection. Lastly, the CRS Bill will improve efficiency and transparency of financial markets, and potentially reduce systemic risk.

The CRS Bill is applicable to any CRA and credit ratings published in South Africa, and to any person who performs credit rating services and/or issues credit ratings that are published in South Africa. It also provides guidance on, among other things, the registration and de-registration of CRAs, duties of CRAs, methodologies, models and key rating assumptions, codes of conduct, and annual reporting.

One of the key provisions contained in the CRS Bill is that of the liability and independence of CRAs. Following the imminent enactment of the CRS Bill, CRAs will be liable for inaccurate credit ratings issued if it can be proven that they had acted negligently or did not comply with the obligations as prescribed in the CRS Bill. The CRS Bill, when enacted, will be overseen by the Registrar of CRAs at the FSB. In view of the fact that financial institutions and investors rely on credit ratings to make decisions, the CRS Bill will increase confidence in CRAs' ratings. It is expected that once this legislation is promulgated, it will enhance the quality and transparency of credit ratings issued, and will consequently result in CRAs using more robust methodologies for assigning credit ratings. The CRS Bill and accompanying subordinate legislation were published for comment on 6 August 2011. There is currently a review process of the CRS Bill to align it with comments received, where after a final version of the CRS Bill will be resubmitted to Cabinet.

## Financial Markets Bill

In the March 2010 *Financial Stability Review* it was reported that amendments were being made to the Securities Services Act, 2004 (Act No. 36 of 2004) (the Securities Services Act). The FM Bill is the outcome of a thorough review of the Securities Services Act and will replace it going forward. Factors that had a significant bearing on the review of the Securities Services Act include a need to improve or update certain outdated provisions contained in the Securities Services Act; a need to cater for certain recommendations emanating from the 2010 IMF–World Bank Financial Sector Assessment Programme; compliance with the new principles of the International Organisations of Securities Commissions; the global financial crisis; and South Africa's commitment to global regulatory reform proposals. In addition, recent legislative developments that relate to the Companies Act, 2008 (Act No. 71 of 2008) and the Consumer Protection Act 68 of 2008, also constituted important developments that needed to be incorporated into financial markets legislation. Amendments to the Securities Services Act took into consideration three core objectives of securities regulation, namely the protection of investors; ensuring that markets are fair, efficient and transparent; and the reduction of systemic risk.

The FM Bill comprises several chapters that cover definitions, licensing of exchanges, self-regulatory organisations (SROs), provisions related to unlisted securities, and provisions for offences and penalties. It strengthens the SRO regulatory model by allowing SROs to publish the results of inspections and on-site visits, and reduces the regulatory burden for entities that are subject to regulatory oversight by other Acts. It increases the scope of regulation for instruments such as over-the-counter derivatives through trade repositories in order to enhance transparency. A provision for foreign entities to become members of the South African financial markets infrastructure will enhance the oversight of cross-border operations. It is anticipated that the FM Bill will increase oversight to include the shadow financial system, create more transparency in financial markets, and improve monitoring and communication of potential systemic risks.

## Developments in the payment systems arena: Vision 2015 and access to the settlement and clearing network

The National Payment System Department (NPSD) of the Bank has released its Vision 2015<sup>36</sup> strategy document, which aims to maintain a world-class payment system that meets domestic,

36 The National Payment System Framework and Strategy: Vision 2015 can be accessed on the Bank's website at <http://www.reservebank.co.za>.



regional and international requirements. At the core of the strategy are the following eight main objectives:

- 1 Access to the payment system
- 2 Oversight of the payment system
- 3 Communication in the payment system
- 4 Participation in international workgroups and forums
- 5 Human resources capacity enhancement in the payment system
- 6 Infrastructural development of the payment system
- 7 Regional infrastructure integration of the payment system
- 8 The interchange determination process.

In a recent position paper on access to the National Payment System (NPS) released by the Bank in June 2011,<sup>37</sup> which was written in response to some of the recommendations made by the Banking Enquiry Report of 2008,<sup>38</sup> the conclusion was reached that recent events in the global financial markets had underscored the important role that financial institutions played in the wellbeing of a country's financial affairs. Regulation therefore plays a vital role in ensuring a safe and efficient financial system. The Bank will continue actively to pursue ways to formalise and broaden the access for non-banks in the payments arena. This, however, will only be done after all the potential risks and benefits have been carefully analysed and understood, and safety and efficiency considerations have been taken into account. The Bank will continue to engage with the financial participants and other regulatory authorities to find the most appropriate financial regulatory model for South Africa.

## Treating Customers Fairly programme update

The September 2010 *Financial Stability Review* reported on the introduction of a new initiative by the FSB, namely to address market conduct issues in a systematic way by adopting a TCF programme. After initial public consultations, the FSB released a TCF roadmap document on 31 March 2011. The purpose of this document is to inform financial services stakeholders of the approach the FSB intends to adopt in implementing the TCF programme for the market conduct regulation of retail financial services in South Africa. The document also responds to the feedback that stakeholders provided to the TCF discussion document issued for comment by the FSB in April 2010. The roadmap further confirms the FSB's desire to enshrine fair treatment of customers throughout the product life cycle: from design and development, to the point of sale, to ongoing support and advice, right through to the end of the intended useful life of the product.

As stated in the NT's policy document entitled "A Safer Financial Sector to Serve South Africa Better",<sup>39</sup> published in February 2011, the twin peaks financial regulatory model will result in substantially stronger market conduct regulation to be undertaken by the FSB. The policy document highlights the TCF initiative as an important step in strengthening market conduct objectives in the financial sector.

## Exchange-traded funds and their implications for systemic risk

The Financial Stability Board has been tasked with monitoring market developments in order to identify potential vulnerabilities and suggest actions that can be taken to correct them. In April 2011 the Financial Stability Board issued a note entitled "Potential Financial Stability Issues Arising from Recent Trends in Exchange-traded Funds".<sup>40</sup> Recent trends in the international ETF markets have raised some concerns about the risks that these financial instruments may pose to financial stability. This section aims to highlight and elucidate these risks.

Exchange-traded products (ETPs) are derivatively priced securities that are traded on stock exchanges. They are typically benchmarked to indices, stocks and commodities. Although the Financial Stability Board's note mentioned above focuses specifically on ETFs, it is important to note that there are several types of ETPs in the market, including ETFs, exchange-traded notes (ETNs), exchange-traded commodities (ETCs) and exchange-traded vehicles (ETVs).

37 The Position Paper NPS 02/2011 can be accessed on the Bank's website at <http://www.reservebank.co.za>.

38 The Technical Report on the 2008 Banking Enquiry can be accessed at <http://www.compcom.co.za/technical-report/>.

39 The policy document can be accessed at [www.treasury.gov.za](http://www.treasury.gov.za).

40 The note can be accessed at <http://www.financialstabilityboard.org/>.



41 "Plain vanilla" is a description given to the most basic form of a financial instrument.

42 BlackRock, *BlackRock ETF Landscape Industry Highlights Report* (Toronto: BlackRock, July 2011).

43 Channels of risk are detailed in the April 2011 BIS Working Paper No. 343, entitled "Market Structures and Systemic Risks of Exchange-traded Funds" by Srichander Ramaswamy.

44 Different types of ETFs that are available in South Africa include Beta ETFs (which track Top 40 index shares), Style ETFs (which invest in indices that cover an investment theme), Fixed Interest Bond ETFs (which track the JSE bond indices) and Commodity ETFs (which track the rand price of gold bullion).

ETFs are investments that comprise a portfolio of listed shares that track an exchange index, such as the Satrix 40 index or S&P's 500 index. ETFs are attractive investments due to their lower cost, tax efficiency and highly liquid profile compared to more traditional investments. ETFs combine the diversified portfolio of a unit trust investment with the tradability features of a listed security, and can be bought or sold at the end of each trading day at the market-ruling price. ETFs have existed in Europe and the US since the early 1990s. They were initially a plain vanilla-type,<sup>41</sup> flexible and transparent investment. However, in recent times more innovative product structuring for these instruments has emerged. As a result, ETFs have become more complex, opaque and diverse. Global ETF assets under management rose from US \$412 billion in 2005 to US \$1,4 trillion in July 2011.<sup>42</sup> The growth rate of the ETF market far exceeds that of mutual funds and equity markets.

Potential financial stability risks that were identified in the Financial Stability Board's note include the increase in complexity and opacity of synthetic ETFs, the impact of this innovation on market liquidity, and the impact that ETFs will have on financial institutions during periods of market stress.

There are a number of other channels through which risks to financial stability could materialise.<sup>43</sup> These include

- compromised risk management due to the lack of transparency regarding the replication of index returns by swap counterparties as there is no known mechanism for managing liquidity risk in synthetic replication schemes;
- collateral risk triggering a run on ETFs when market liquidity conditions have deteriorated;
- materialisation of funding liquidity risk can occur when there are sudden and large investor withdrawals, which are invariably triggered by market events (the entire financial system can be adversely affected by the collapse of financial intermediaries); and
- increased product complexity and options on ETFs undermining risk-monitoring capacity. Risk monitoring of ETFs becomes even more difficult as investors cannot monitor the index replication processes.

ETFs were first traded in South Africa in late 2000, when the Satrix 40 ETF listed on the JSE. Since then there has been a steady growth in the industry and as at 31 July 2011, there were 30 ETFs with close to R34,2 billion under management across all asset classes.<sup>44</sup> ETFs are registered by the FSB under the Collective Investment Schemes Control Act, 2002 (Act No. 45 of 2002) (CISCA). They therefore adhere to the rules and requirements of CISCA, the Financial Advisory and Intermediary Services Act, 2002 (Act No. 37 of 2002) and the Financial Intelligence Centre Act, 2001 (Act No. 38 of 2001). ETFs that are not regulated under CISCA are still required to comply with JSE listing rules. The JSE has imposed provisions under the listings requirements to ensure that an ETF provides sufficient investor protection and operates as an ETF according to the JSE's definition. The JSE initiates a thorough process of due diligence to ensure that the structure is indeed satisfactory to the JSE. The JSE considers issues such as the acceptability of the index that is being tracked by the ETF to ensure that the assets are held by a vehicle that is insolvency-remote from the issuer and verifies that the ETF is fully covered.

Although the South African ETF market has not been widely exposed to synthetic ETFs, other types of ETPs, such as ETNs, are becoming more popular and as the ETF market continues to grow, South African regulatory authorities need to take cognisance of the risks that these instruments may pose to the financial system.

# Note on the countercyclical capital buffer and its possible application in South Africa<sup>45</sup>

## Introduction

In the aftermath of the global financial crisis the Basel Committee initiated a broad range of regulatory reforms that cover both microprudential and macroprudential elements. One of the key macroprudential proposals for strengthening the resilience of the broader financial system and for reducing the cyclicity of some banking behaviour is the CCB for banks.<sup>46</sup> This note provides an overview of the CCB and examines the performance of the common reference guide for taking CCB decisions in domestic conditions. The note then explores some further indicators to consider when implementing a CCB framework in the South African context.

## An overview of the countercyclical capital buffer

The CCB is designed to ensure that there is a buffer of capital requirements that takes into account the macro-financial environment in which banks operate, specifically the build-up of system-wide risk associated with excessive credit growth.<sup>47</sup> The CCB is a macroprudential tool aimed at ensuring that the banking sector in aggregate has adequate capital on hand to maintain the flow of credit in the economy without its solvency being questioned. "This should help to reduce the risk of credit being constrained during periods of stress that could undermine the performance of the real economy and result in additional credit losses in the banking system".<sup>48</sup>

The CCB could be implemented during periods of excessive credit growth in the financial system and released when credit is constrained. This mechanism enables the banking sector to run down the built-up buffer in order to absorb losses and maintain the flow of credit during periods of economic stress in order to attenuate the worst side-effects of downturns on the banking system and the real economy. According to the Basel Committee, the CCB can range between 0 and 2,5 per cent of total risk-weighted assets and there is a proposed phased introduction thereof over three years between 1 January 2016 and 31 December 2018. Capital buffer decisions will be implemented according to national circumstances and as determined by the financial authorities in their respective jurisdictions. According to the Basel Committee, countries that experience excessive credit growth may consider accelerating implementation of the CCB and may, in exceptional circumstances, implement a buffer in excess of 2,5 per cent.<sup>49</sup> Since the focus is on excess aggregate credit growth, the Basel Committee expects that jurisdictions are likely to employ the buffer on an infrequent basis, perhaps once every 10 to 20 years.<sup>50</sup>

The CCB is part of the process to strengthen the global capital framework and will be additional to the other time-invariant Basel III capital requirements, such as common equity Tier 1 ratio, Tier 1 capital ratio, the total capital ratio and the capital conservation buffer. While the other minimum capital ratios are cumulatively focused on improving individual bank solvency, the CCB's main objective is aimed at reducing systemic risks. However, similar restrictions on the distribution of profits for not meeting the requirements of the capital conservation buffer will apply when not meeting the CCB requirements. The overall capital requirements are depicted in Table A in a building-block approach by adding the capital requirements at each level, including the capital conservation and countercyclical capital buffers.

45 This note is based on preliminary work done by a team of staff members of the Bank in preparation for the possible implementation of the CCB. The team was co-ordinated by Mr R Edries, and input to this note was provided by members of the Research Department and Bank Supervision Department. The views expressed do not necessarily reflect the views of the Bank.

46 The details of the CCB are explained in the Basel Committee paper entitled "Guidance for National Authorities Operating the Countercyclical Capital Buffer", issued in December 2010.

47 Basel Committee, *Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems* (Basel: Basel Committee, revised version, June 2011), 57.

48 Basel Committee "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (Basel: Basel Committee, December 2010), 1.

49 However, the "international reciprocity provisions set out in this regime would not apply to the amount in excess of 2,5 per cent of risk-weighted assets", Basel Committee, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (Basel: Basel Committee, December 2010), 2.

50 Internationally active banks are expected to employ a CCB more frequently since credit-cycle periods differ across jurisdictions in which they have exposures.





**Table A Capital requirements and buffers**

Per cent

	Common equity Tier 1	Tier 1 capital	Total
Minimum .....	4,5	6,0	8,0
Conservation buffer .....	2,5		
Minimum plus conservation buffer .....	7,0	8,5	10,5
Countercyclical buffer range .....	0,0–2,5		

Source: Basel Committee on Banking Supervision

## Preliminary steps in developing a countercyclical capital buffer framework

The Basel Committee's guidance document on the CCB addresses a range of other issues pertinent to the implementation of a CCB policy, including the principles that should inform CCB decisions; jurisdictional reciprocity; frequency and communication of buffer decisions; treatment of surplus when the buffer is removed; and the interaction of the CCB with Pillar 1 and Pillar 2 of the Basel III framework. The principles informing the operation of the capital buffer are crucial to the CCB and they should permeate the overall CCB decision-making process. The five principles can be summarised as follows:

- 1 Buffer decisions should be guided by the buffer objectives
- 2 The credit-to-GDP gap guide should be the common reference point
- 3 Assessments should be mindful of the risk of misleading signals
- 4 There should be a prompt release of the buffer at the appropriate time
- 5 There should be additional macroprudential tools.<sup>51</sup>

Other important issues are beyond the scope of this note, which focuses on understanding and applying the methodology, namely the credit-to-GDP gap reference guide for arriving at buffer decisions, but they will be referred to when relevant for the ensuing discussion of a CCB policy for South Africa.

## The common reference guide for the countercyclical capital buffer

Financial authorities are expected to prepare for the implementation of a CCB policy at national level. To assist national authorities, a methodology has been proposed to calculate an internationally consistent buffer guide that can serve as a common reference point for taking buffer decisions. The common reference guide is the private sector credit-to-GDP gap.<sup>52</sup> A step-by-step description of how to transform the aggregate private sector credit/GDP guide into a gap is as follows:<sup>53</sup>

- Step 1:* Calculate the aggregate private sector credit-to-GDP ratio.  
*Step 2:* Calculate the credit-to-GDP gap (the gap between the ratio and its trend).  
*Step 3:* Transform the credit-to-GDP gap into the buffer guide add-on.

In the proposed methodology, the implementation of the buffer add-on focuses on the credit-to-GDP gap and would depend on deviations of the actual credit-to-GDP ratio from the long-term credit-to-GDP trend. In principle and subject to the principles highlighted above, a buffer add-on is not required when the credit-to-GDP ratio is below its long-term trend. However, a buffer add-on would need to be implemented when the credit-to-GDP ratio exceeds its long-term trend, as this could be indicative of excessive credit growth and an increasing level of systemic risk.<sup>54</sup>

51 For further details on these important principles, refer to the Basel Committee, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (Basel: Basel Committee, December 2010), 2–4.

52 While a range of other conditioning variables could have been considered, the Basel Committee argued that it found the credit-to-GDP gap "the best performing" variable and provides reasons clarifying why it was selected over other indicator variables, the Basel Committee, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (Basel: Basel Committee, December 2010), 8–9.

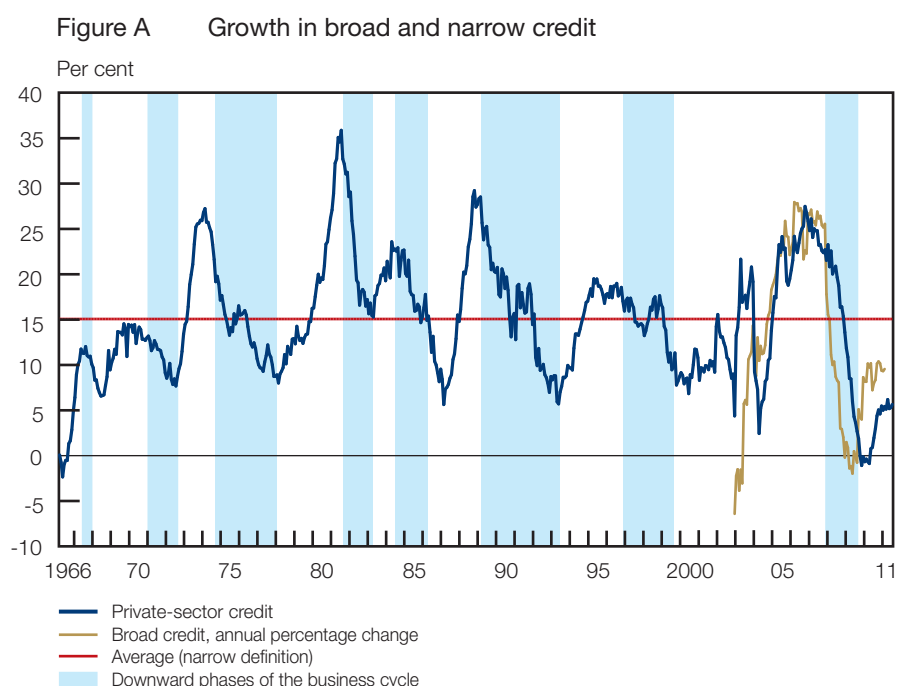
53 The step-by-step guide in the guidance document does not list the intervening step required to calculate the private-sector credit-to-GDP trend. The private-sector credit-to-GDP trend would be based on a Hodrick–Prescott (HP) filter using a recommended smoothing parameter of 400 000. See the Basel Committee, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (Basel: Basel Committee, December 2010), 13.

54 National Bank of Belgium, *Financial Stability Review* (Brussels: National Bank of Belgium, 2011), 123.



## Calculating the credit-to-GDP gap for South Africa

Initial calculations in investigating the CCB and the credit-to-GDP gap in South Africa considered a range of technical issues, such as which measures of “credit” should be used and what value of the smoothing parameter for the Hodrick–Prescott (HP) filter would be most suitable to apply to the relevant data sets for South Africa. These investigations used both narrow and broad definitions of credit.<sup>55</sup> Figure A depicts the growth of both nominal measures of credit, that is, the narrow private-sector measure of credit and the broader measure of credit. While the differences between the two measures are evident, it is also clear that there are similarities in the trends of both, with the narrow measure lagging developments in the broader measure. However, the domestic CCB policy should, as far as it is possible, be closely aligned with the details of the Basel Committee proposal. It would be advisable to use the narrow definition of credit and a recommended smoothing parameter of 400 000 in the HP filter.



Source: South African Reserve Bank

In order to assess the efficacy of the credit-to-GDP guide for a CCB policy in local conditions, one would have to assess the performance of the credit-to-GDP gap over a range of past crises. Figure B provides the results of calculating the private-sector credit-to-GDP gap for South Africa over the last four-and-half decades (since 1965), using the narrow definition of nominal credit and the recommended smoothing parameter of 400 000.<sup>56</sup> From this analysis, it is noticeable that over the last three decades the gap exceeded zero (the long-term trend) for the periods 1982–1986, 1998–2000, the early 1990s and 2006–2010. The credit-to-GDP guide issued a strong warning signal for a buffer add-on for the 2006–2010 period, which could be interpreted as an indication of excessive credit growth on a system-wide basis in the domestic economy in the period leading up to the global financial crisis. The credit-to-GDP gap also issued warning signals in 1982–1986 and 1998–2000, which coincide with the two other periods of banking crisis in South Africa.<sup>57</sup>

Despite the fact that the preliminary analysis of the private sector credit-to-GDP reference guide shows that it has promise of being a useful tool in developing a CCB policy in the domestic economy, there is ample reason to use this guide with caution and not to apply it either

55 The narrow definition is similar to that used by the Basel Committee in its guidance document and can be defined as the total credit extended by all monetary institutions to the domestic sector for South Africa, while the broader definition included credit extended by all other institutions.

56 One weakness of the HP filter is its end-point bias. In order to mitigate this problem forecasted data are used.

57 The banking crisis in 1985–7 was linked to the debt-standstill and flight of capital crisis, while the one in 1997–9 was linked to the impact of the South-east Asian crisis.

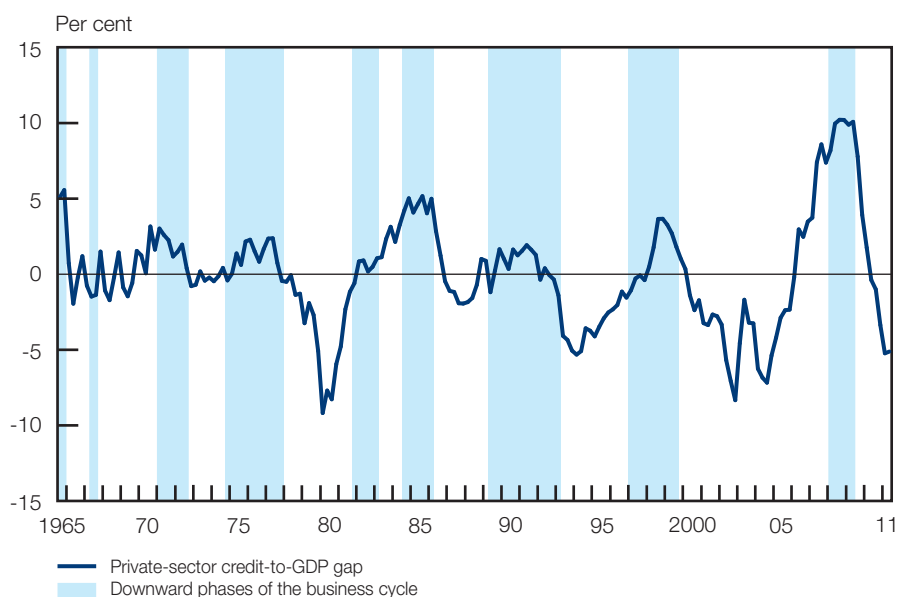


58 South African Reserve Bank, "A Diagnostic of Credit in South Africa" (South African Reserve Bank Discussion Paper, Pretoria: South African Reserve Bank, October 2010), 3; also the Basel Committee, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (Basel: Basel Committee, December 2010), 4.

59 Signals can be regarded as weak if they breach the long-term trend only marginally and for a short duration. They are unlikely to provide sufficient advance warning of excessive credit growth to facilitate the Basel Committee's recommendation of pre-announcing buffer decisions by up to 12 months.

mechanically or uniformly. For instance, the credit-to-GDP ratio exceeded its long-term trend in the early 1990s, yet no local banking crisis took place during this time, and thus this particular signal is possibly an anomaly as it issued what could, for CCB purposes, be called a 'misleading' signal. Being a ratio, the credit-to-GDP gap will not only be affected by credit developments, but also by GDP denominator behaviour. Therefore, interpretation of the gaps "should be cognisant that the ratio and therefore the gap could be influenced by a cyclical slowdown or outright decline in gross domestic product".<sup>58</sup> In avoiding incorrect conclusions, national authorities also need to distinguish between "weak" and "strong" signals from the credit-to-GDP guide when making CCB decisions.<sup>59</sup>

**Figure B** Private-sector credit-to-GDP gap and phases of the business cycle



Source: South African Reserve Bank

## Extending the range of macroeconomic indicator variables

The preliminary local study of the CCB supports the international use of a common reference point such as the proposed methodology, but it is advisable to use the credit-to-GDP gap only as a guideline and not rely on it exclusively for making absolute CCB decisions. The preliminary local investigation thus advocates that the credit-to-GDP analysis should include other indicator variables, which is congruent with the Basel Committee's suggestion that "authorities should look for evidence as to whether inferences from the credit-to-GDP gap guide are consistent with those of other variables".<sup>60</sup> The team has thus proposed a dashboard approach to arrive at well-informed CCB decisions, in which a number of variables have to be examined. The one group of indicators considered could be classified as macroeconomic or financial indicators and the other as macroprudential banking-sector indicators.

One such macroeconomic indicator proposed is the business cycle. The level of credit in relation to the phases of the business cycle could also assist in determining whether there is a build-up of credit in the economy. Increasing levels of credit are associated with the upward phases of the business cycle and not with the downward phases, although developments in the credit-to-GDP ratio may initially lag behind developments in the business cycle. The logic is that excessive credit build-up would more likely be associated with upward phases of the business cycle. To assist in the analysis, the downward phases of the domestic business cycle are superimposed in Figures A and B.

60 Basel Committee, "Guidance for National Authorities Operating the Countercyclical Capital Buffer" (Basel: Basel Committee, December 2010), 4.



It is evident in Figure A that the growth phases of credit coincided mostly with the upward phases of the business cycle. It is also discernible from Figure B that the upward trends of the credit-to-GDP ratio started during the upward phases of the business cycle, but did not necessarily peak in these phases. It is noteworthy that the three occasions when the domestic credit-to-GDP ratio started its upward trend before breaching its long-term trend coincided with the upward phases of the business cycle in April 1983 to June 1984, April 1993 to November 1996 and September 1999 to November 2007 respectively.<sup>61</sup> The start of an upward trend in the growth of credit or in the credit-to-GDP ratio during the downward phase of a business cycle would be highly unusual and would require further detailed analysis in the domestic context. Therefore, CCB policy-makers would have to be cognisant of the stages of the business cycle when interpreting the credit-to-GDP ratio and gap.

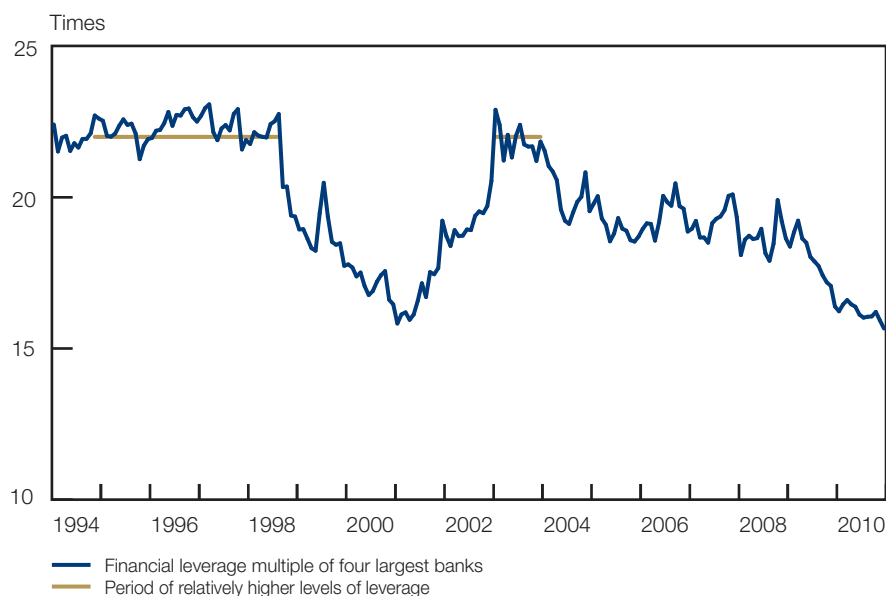
61 South African Reserve Bank, *Quarterly Bulletin* (Pretoria: South African Reserve Bank, June 2011), S-153.

Interest rates are another proposed macroeconomic indicator, especially the prime rate and the interest rate environment in which bank lending is conducted. In South Africa the cost of bank credit follows the central bank's policy rate. It would be more likely for the amount of credit to grow in the context of an accommodative monetary policy and for credit growth to slow down in a high interest rate environment. While interest rates are not the only determinant for the supply of, and demand for, credit, it would be unusual, but not impossible, for credit growth to become excessive during a period of tight monetary policy in South Africa.

## Macroprudential banking-sector indicators and variables

Another broad area of interest that could be considered for a CCB policy in South Africa is developments within the banking sector itself. It has been proposed that developments in the banking sector, such as leverage and asset growth, could also indicate the build-up of systemic risk and vulnerabilities. As the credit-to-GDP gap is based on a ratio in which GDP behaviour affects the denominator, the analyses of leverage and asset growth allow for the assessment of credit relative to other important banking-sector indicators such as capital levels and loan (asset) growth.

Figure C Financial leverage multiple for the four largest banks in South Africa



Source: South African Reserve Bank

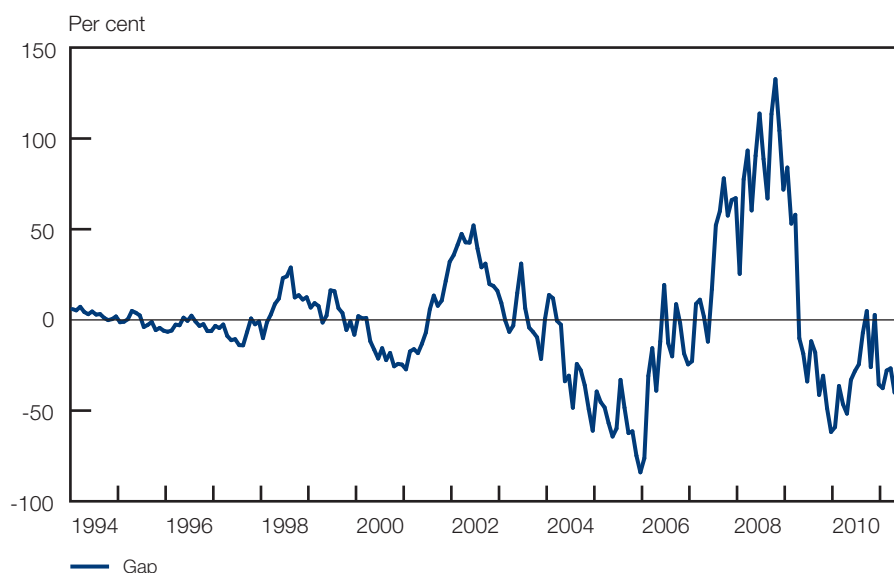




During lending booms, leverage multiples tend to increase. Figure C shows that the crises of 1997–1999 and, to a lesser extent, the one of 2008–2010 were preceded by periods of relatively higher leverage multiples for the four largest banks in South Africa. Not only would the peaks be important for indicating the possible build-up of risk, but an underlying upward trend in leverage ratios could also possibly be a precursor to impending strains developing in the banking sector, or signal that banking-sector capital is possibly being leveraged at above-average levels.

An examination of banking-sector leverage ratios may be augmented by an analysis of loan (asset) growth. The growth of loans in a bank's books is in itself not a negative development. It is excessive loan growth that should concern supervisors and financial authorities. Figure D depicts the growth of loans and advances in the South African banking sector relative to its own long-term trend. It is evident that the overall growth in loans exceeded its long-term trend in a significant manner from June 2007 to March 2009 (before and during the current global financial crisis) and to a lesser extent from March 1998 to September 1999, and again from July 2001 to June 2003. Significant deviations above the trend should alert financial authorities of potential negative developments in the banking sector. Excessive loan growth could thus become another variable to consider and include when making CCB decisions.

Figure D South African banking loans and advances: Deviation from the long-term trend<sup>1</sup>



<sup>1</sup> Monthly data for the period under review were used and a smoothing parameter of 14 400 was applied to the data, which is the norm usually applied to such data

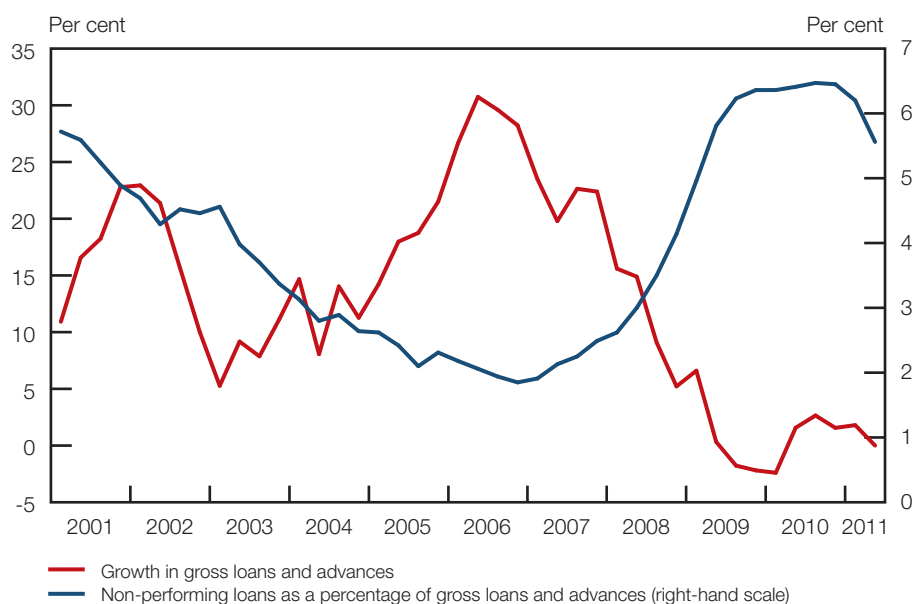
Source: South African Reserve Bank and own calculations

It is more likely for risky credit practices to underlie excessive asset growth in the books of the banking sector. According to Shin (2010), rapid loan growth is often achieved “only at the cost of lowering lending standards”.<sup>62</sup> Accordingly, it is to be expected that the underlying vulnerability of the loan book would be exposed by a downturn. These developments are, to a certain extent, displayed in Figure E. The South African banking sector's gross loans and advances increased significantly between 2003 and 2006.<sup>63</sup> Throughout this lending boom, non-performing loans were decreasing. However, as the effects of the global financial crisis set in after 2007, loan growth started decreasing rapidly. In addition, recessionary conditions exposed weaknesses in some loan books, resulting in non-performing loans increasing rapidly to approximately 6,5 per cent of gross loans and advances. The phenomenon of declining loan growth and increasing non-performing loans could thus become another development to monitor when assessing the build-up of systemic risks in the banking system for CCB policy purposes. In this regard, authorities may also want to monitor developments in the levels of provisions to confirm deterioration of the loan books in the banking sector.

62 International Centre for Financial Regulation, *Macroprudential Policies Beyond Basel III* (London: International Centre for Financial Regulation, 2010). Some of the ideas discussed in this paragraph are based on this article. However, whereas Shin (2010) plotted loan growth versus provisions, the team used non-performing loans as a proxy for provisions. Refer to the note to Figure E for a definition of the non-performing loans used.

63 One reason provided for the growth of loans in this period and the decline in 2007 is that lenders provided as much credit as possible before the more stringent conditions of the National Credit Act, 2005 (Act No. 34 of 2005), which came into effect in 2007, became effective.

Figure E Loan growth and non-performing loans for the South African banking sector<sup>1</sup>



<sup>1</sup> For the purposes of this note, 'non-performing loans' is defined as exposures overdue for 90 days. For the period prior to January 2008, the 90 days overdue data included the sub-standard, doubtful and loss categories (based on the regulations aligned to Basel I). From January 2008 onwards (i) for banks that utilised the standardised approach for credit risk, the data for the sub-standard, doubtful and loss categories were included; and (ii) for banks that utilised the internal ratings-based approach for credit risk, the exposures classified as defaults were included

Source: South African Reserve Bank

## Concluding remarks

This note has attempted to highlight some of the issues that national authorities will have to deal with when considering a CCB policy for domestic conditions. In South Africa, the credit-to-GDP gap appears to be a useful instrument for assisting authorities in making CCB decisions, but it also has limitations. Therefore, authorities should be careful in using the credit-to-GDP gap exclusively and in a mechanical or uniform way. It is evident that national authorities would have to use their own discretion and consider other indicators as encouraged by the Basel Committee's guidance document.

Moreover, this note has focused on the common reference guide and additional variables that could be used for a CCB policy. It has, however, not addressed other important components of a CCB policy, such as the calculation of the size of the buffer based on the gap (i.e., thresholds); the variables that could be utilised for the release of the buffer; or the details of the CCB communication strategy. What has become clear at this early stage is the specific nature of the authority that will be required to implement and monitor this capital buffer. In this regard, there is a broad consensus that, given the fact that the CCB is a macroprudential tool, it should be the macroprudential authority that is authorised to make countercyclical capital buffer decisions.

Finally, this note has provided a preliminary list of other variables that are being researched domestically in preparation for the possible implementation of a South African CCB policy. This is by no means an exhaustive or a complete list of indicators and the way in which they would be used has not yet been finalised. They may need to be refined further. In the list of alternative indicators, it may in future be helpful to distinguish between *leading* and *lagging* indicators. As more countries prepare for the implementation of the CCB and share their deliberations, it is likely that the dashboard of indicators would be enhanced.



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## Abbreviations

AGR	augmented Guidotti ratio
Alsi	All-Share Index
BIS	Bank for International Settlements
CAR	capital-adequacy ratio
CBOE	Chicago Board of Options Exchange
CCB	countercyclical capital buffer
CDS	credit default swap
CISCA	Collective Investment Schemes Control Act
CPA	Consumer Protection Act
CRA	credit rating agency
CRB	Commodity Research Bureau
CRS	Credit Rating Services
EBA	European Banking Authority
ECB	European Central Bank
EDF	expected default frequency
EFSD	European Financial Stability Facility
EME	emerging-market economy
ETC	exchange-traded commodity
ETF	exchange-traded fund
ETN	exchange-traded note
ETP	exchange-traded product
ETV	exchange-traded vehicle
EU	European Union
Euribor	euro interbank offered rate
FAO	Food and Agriculture Organization
FDI	foreign direct investment
FM	financial market
FPC	Financial Policy Committee
FRRSC	Financial Regulatory Reform Steering Committee
FSB	Financial Services Board
FSI	financial soundness indicator
FSOC	Financial Stability Oversight Council
G-20	Group of Twenty
GDP	gross domestic product
GR	Guidotti ratio
H-index	Herfindahl–Hirschman index
HP	Hodrick–Prescott
IEMP	index of exchange market pressure
IIF	Institute of International Finance
IMF	International Monetary Fund
JSE	JSE Limited
LCR	liquidity coverage ratio
MENA	Middle East and North Africa
MSCI	Morgan Stanley Capital International
NCC	National Consumer Commission
NPS	National Payment System
NPSD	National Payment System Department (of the South African Reserve Bank)
NSFR	net stable funding ratio
NSII	network systemic importance index
NT	National Treasury
OIS	overnight indexed swap rate
PC	principal component
PC1	first principal component
PC2	second principal component



PCA	principal component analysis
PMI	Purchasing Managers' Index
RICS	Royal Institute of Chartered Surveyors
S&P	Standard & Poor's
SAM	Solvency Assessment and Management
SRO	self-regulatory organisation
SSA	sub-Saharan Africa
TCF	Treating Customers Fairly
UK	United Kingdom
US	United States
VIX	Chicago Board of Options Exchange Volatility Index

## Glossary

the Bank	South African Reserve Bank
the Basel Committee	the Basel Committee on Banking Supervision
the Securities Services Act	Securities Services Act, 2004 (Act No. 36 of 2004)