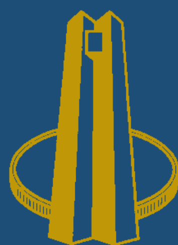
Financial Stability Review

September 2009



South African Reserve Bank

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This issue of the *Financial Stability Review* focuses mainly on the six-month period ending June 2009. However, selected developments up to 30 September were also reported on. Data may include own calculations made for purposes of this publication.

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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 addition to this, the Bank endeavours to contribute to a South African monetary, banking and financial system that as a whole is highly resilient. 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 regarding pertinent issues. The Bank recognises that it is not the sole custodian of financial system stability, and can only contribute towards 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, the government and financial institutions. Stability in the financial system would be evidenced by, firstly, an effective regulatory infrastructure, secondly, effective and well-developed financial markets and, thirdly, 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 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 a 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.

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Overview

Risks to the global financial system appear to have moderated as the co-ordinated policy actions by central banks and governments took effect. Liquidity conditions and banks' balance sheets improved, as did aggregate demand. The rate of contraction in global output has started to moderate as a result. This is notwithstanding some remaining risks to the global economic recovery, such as renewed loss of confidence, rising unemployment and further deleveraging by banks. At the most recent meetings of the Group of Twenty (G-20) finance ministers and central bank governors, further actions to strengthen the global financial system were agreed on. The need to develop transparent, credible and co-ordinated exit strategies from the unprecedented policy actions also came to the fore in the discussions.

In most advanced economies, gross domestic product (GDP) is still contracting and the International Monetary Fund (IMF) expects output to contract for 2009 as a whole. In emerging-market economies (EMEs), GDP is expected to return to positive growth by the end of 2009 or early 2010. Risk appetite for financial assets in EMEs returned in the first half of 2009 as stimulus measures resulted in rising confidence, increased capital inflows, and strong performances by equity and commodity markets. Generally, EMEs should benefit from a recovery in commodity markets, but their overall financial outlook remains cautious due to continuing financial market volatility and the possibility of a reversal of capital inflows.

Africa has not been totally shielded from the spillover effects of the global economic downturn. Nevertheless, the global economic crisis is still regarded as presenting both challenges and opportunities for the continent and its people, although such opportunities are dependent on a solid global recovery. Financial systems in sub-Saharan Africa have been relatively resilient to the effects of the financial crisis. However, in recent months adverse pressures from recessions abroad have weighed on the region, resulting in a deceleration in regional economic activity, and a rise in credit risk and non-performing assets.

In South Africa real production continued to decline in the period under review, albeit at a moderating tempo. Although the financial sector was largely shielded against the direct effects of the global financial crisis, banks and other financial firms did not escape the indirect impact of the global and domestic recession. The percentage of loans impaired has risen to levels approaching those seen at its peak during the credit cycle of the late 1990s, and the profitability of financial firms generally has been negatively affected. Fortunately, banks and other large financial firms remained well capitalised. Although credit lending standards remained high during most of the period under review, banks have since begun to loosen their lending criteria. The domestic bond and equity markets were generally volatile in the period under review, with promising recent signs of stabilising. The equity market has recently recorded considerable gains across all sub-indices due to support from factors such as commodity price increases and more robust foreign appetite for domestic equities.

Corporate credit granted and business confidence levels both declined throughout the period under review, and liquidations increased somewhat, confirming that the corporate sector remained under pressure generally. The financial position of households also remained relatively fragile as, among other factors, declining house prices and deteriorating labour market conditions impacted their balance sheets. The residential property market experienced continued house price deflation in the first eight months of

2009, but there have been tentative signs that it may have bottomed out. Consumer confidence improved slightly during the first two quarters of 2009 as households became more optimistic about the economy and their financial prospects, albeit in an atmosphere of caution about purchasing durable goods and incurring more debt.

A broad range of legislative and other initiatives have taken place in the period under review that give rise to considerable current and future enhancements to strengthen the domestic financial system. These include competition and consumer protection legislation, enhanced corporate governance standards, the regulatory framework for co-operative banks, and a re-evaluation of South Africa's compliance with international anti-money laundering standards. In addition, the international financial system reform agenda, under the auspices of the G-20 and Financial Stability Board (FSB), has resulted in a number of initiatives that will, to the extent that the new principles being espoused are relevant to the South African environment, cause some changes to the domestic financial system environment. South Africa, as a member of both the G-20 and FSB, participates directly in international forums where these regulatory reforms and other measures are being discussed, and is committed to implementing what is expected of a responsible jurisdiction in a stronger future global financial system.

The South African payment and settlement system coped well with the increased flows and volatility resulting from the global financial crisis. The approach and measures employed by the Bank to ensure operational continuity of these systems contributed to maintaining overall financial system stability.

Introduction

This issue of the *Financial Stability Review*, which focuses mainly on the six-month period ending June 2009, comprises two main sections, namely (1) financial stability developments and trends, and (2) 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 includes an update on legislative and other infrastructural developments in the South African financial system. It also contains a discussion of the future of financial regulation and areas that supervisory authorities internationally will most likely focus on in the aftermath of the global financial crisis. This section concludes with a discussion of the management and mitigation of operational risk in the real-time gross settlement (RTGS) system. Furthermore, it addresses the processes, controls and procedures that were put in place to ensure that the system is operationally resilient in order to minimise systemic risk and support financial system stability.

Financial stability developments and trends

International macrofinancial developments

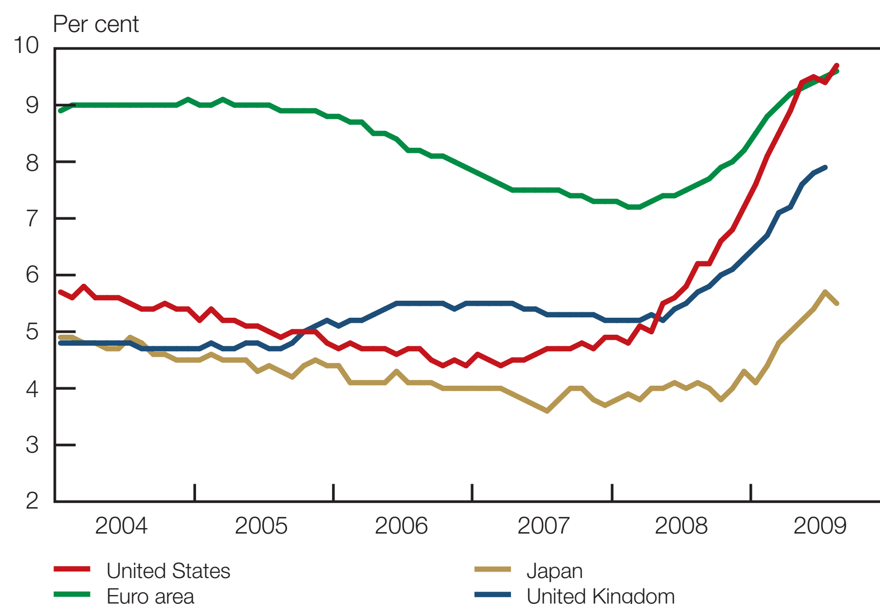
The risks to the global financial system appear to have moderated as unprecedented policy actions by many central banks and governments have assisted in stabilising liquidity positions in financial markets, improving the financial condition of distressed banks and supporting aggregate demand in affected economies. Although global economic growth is expected to be negative for 2009, recent data suggest that the rate of contraction is moderating in many countries.

Global financial and economic developments

1 IMF, *Global Financial Stability Report*, October 2009.

Although global financial risks appear to have diminished, the IMF expressed its concern about the risk of a reintensification of the adverse feedback loop between the real and financial sectors.[1] The potential impact of rising unemployment could feed through to financial systems, causing further uncertainty and instability. Constrained bank lending and impaired securitisation markets in many countries remain a concern, especially as deleveraging pressures persist. Further deleveraging, required to restore the soundness of problem banks, could also hinder global economic recovery. Other risks include further upward pressure on bond yields as the burden of public debt financing becomes heavier, social discontent that could prompt governments to introduce trade and financial restrictions, and the risk that recent improvements in the financial environment could lead to complacency in taking continued corrective action.

Figure 1 Unemployment rates in advanced economies



Source: Bloomberg

2 The Global Plan for Recovery and Reform was agreed on at the G-20 London Summit in April 2009.

3 Leaders' Statement: Pittsburgh Summit. Available online at: www.pittsburghsummit.gov.

At a meeting held in London in early September 2009, the G-20 finance ministers and central bank governors assessed the progress the group had made on the Global Plan for Recovery and Reform.[2] At its Pittsburgh summit held in late September, the G-20 also agreed on further actions to ensure sustainable growth and build a stronger international financial system, to reduce development imbalances, and to modernise the architecture for international economic co-operation.[3] It was agreed that members should, among

other things, promote employment through structural policies and improve training and education. Furthermore, excessive commodity price volatility needs to be addressed by enhancing the functioning and transparency of physical and financial markets. The group further highlighted the need to develop transparent, credible and co-ordinated exit strategies globally, to provide resources to low-income countries to support structural reforms and infrastructure development and to increase the representation of emerging and developing economies to reflect changes in the global economy.

Further steps identified as important to be taken in order to strengthen the global financial system included greater disclosure and transparency on the level and structure of remuneration for those individuals whose actions may have a significant impact on risk-taking, and corporate governance reforms and global standards on remuneration structures. Rapid progress in terms of stronger prudential regulation and oversight for systemically important firms, and an effective programme of peer review, capacity building and countermeasures were also identified as important steps needed to tackle non-cooperative jurisdictions that failed to meet regulatory standards. A need for convergence towards a single set of high-quality, global, independent accounting standards on financial instruments, loan-loss provisioning, off-balance-sheet exposures, and the impairment and valuation of financial assets was also emphasised.

International economic policy-makers agree that the overarching priority of regulators should be to restore financial sector health and maintain an appropriate pace of regulatory reform in addressing the vulnerabilities exposed by the crisis. Determined, suitably transparent and co-ordinated implementation of policies would assist in restoring confidence in financial systems. As confidence is restored and stability returns, carefully devised and co-ordinated exit strategies from the unprecedented policy actions by central banks and governments should be considered (see Box 1). The consensus is that exit strategies should be guided by the broad objectives of price stability and central bank independence, a sound financial system based on market principles, and fiscal sustainability.

Box 1 Exit strategies for central banks and governments

During the current financial crisis (2007–2009), the creation of large amounts of excess central bank liquidity resulted in larger amounts of bank reserves being held at the major central banks. Central banks have the mechanisms available to shrink their balance sheets and drain excess liquidity, which will again reduce these reserves. For example, the liquidity provided to the general market through repurchase transactions could be reversed by simply allowing existing transactions to mature and not rolling them over. If a faster effect is required, other liquidity-draining transactions could be initiated. Government bonds and other securities that central banks had purchased to increase central bank liquidity, influence yields or support market liquidity, could either be held to maturity or sold again in the market. Swap transactions entered into with the United States (US) Federal Reserve System to supply additional US dollar liquidity in a co-ordinated manner outside the US borders have mostly already matured.

However, from a financial stability perspective, these technically simple mechanisms that central banks can apply to reverse their crisis interventions are complicated by the need to determine the appropriate timing and pace of exit, as well as taking into account the potential market impact of alternative exit strategies. The challenge would lie in unwinding central bank interventions as markets recover. Exiting too soon and too quickly may disrupt a still-fragile economic recovery and cause renewed turmoil in financial markets. For example, extensive selling of debt securities could trigger a renewed fall in their value, causing another round of writedowns and losses. Selling government bonds could put upward pressure on yields, thereby increasing the general level of interest rates, jeopardising economic recovery and increasing the cost of government debt, which has grown substantially as a result of fiscal support packages. Terminating guarantees on securities could result in sharp price adjustments and some market disruption.

Exiting too late could contribute to excessive moral hazard and reintroduce an under-pricing of risk, among other things, because banks have access to almost unlimited funding from the major central banks at a very low cost. Likewise, continuing to provide guarantees on certain financial assets

for too long could distort their pricing relative to non-guaranteed securities that may inherently be of a better quality. Exit strategies will, nevertheless, have to be co-ordinated among countries in order to avoid cross-border market distortions.

Governments of the advanced economies also need exit strategies from fiscal packages that were designed to provide financial market support and economic stimulus. Exiting from these packages is inherently more complicated than the exit strategies of central banks. Although governments can rely on foreign funding to some extent and reduce the real value of their debt by allowing somewhat higher inflation, they will ultimately have to repay the increased debt with future savings. However, utilising savings for this purpose is in conflict with the aim of increasing aggregate demand on which economic recovery depends. Progressing out of a high government debt burden is likely to be a prolonged process, which is dependent on a relatively strong economic recovery, and which is not without long-term macroeconomic and financial implications for the global economy.

Financial and economic developments in advanced economies

Economic growth

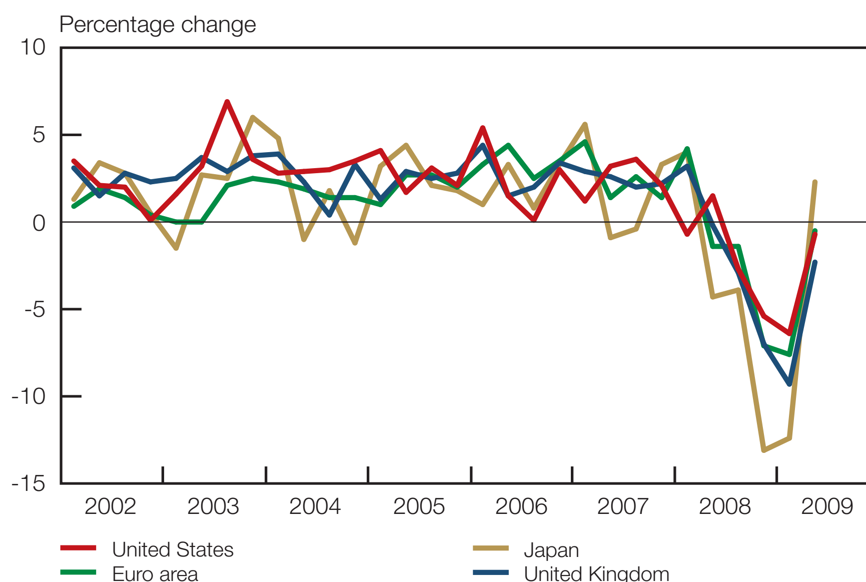
In most advanced economies GDP is still contracting and, according to the IMF, GDP in advanced economies as a group is expected to contract by 3,4 per cent in 2009. The IMF[4] revised its projections of global GDP in October 2009 and now expects it to contract by 1,1 per cent in 2009, before recovering to positive growth of 3,1 per cent in 2010.

4 IMF, *World Economic Outlook*, October 2009.

United States (US) GDP for the second quarter of 2009 contracted by 0,7 per cent, following a contraction of 6,4 per cent in the first quarter. This confirms an expected easing in the pace of decline and lends credence to predictions that the world's biggest economy is slowly emerging from the recession that began towards the end of 2007. The IMF also forecasts that growth will be positive in advanced economies for the next few quarters.[5] Caveats to these positive views are that economic growth might not be strong enough to reduce unemployment and is largely based on a combination of unsustainable fiscal stimuli and inventory rebuilding.

5 Blanchard, O. 2009. "Sustaining a Global Recovery", *IMF Finance and Development*, August.

Figure 2 Quarterly growth in real GDP



Source: Thomson Financial Ltd (DataStream)

The German and French economies both unexpectedly expanded by 1,2 per cent on an annualised basis in the second quarter of 2009, although economies of the euro area as

a whole contracted by 0,7 per cent in the same period. After four consecutive quarters of contraction, Japan's real GDP expanded at an annualised rate of 2,3 per cent in the second quarter of 2009. Uncertainty about the sustainability of these sharp and unexpected recoveries, however, still remains. Although the global recovery is generally expected to be protracted, risks of a severe recession have eased in most advanced economies and the risk of a systemic collapse has declined significantly.

Housing markets

The US housing market, which was the epicentre of the financial turmoil, is showing tentative signs of recovery. House prices have been declining consistently since 2007 and in January 2009 recorded their lowest point when single-family housing permits, new house sales and existing house sales reached their lowest levels. Since then, existing house sales in the US have started to recover and rose by 3,4 per cent in August 2009 compared with the previous year. Furthermore, the Case-Shiller Home Price Index[6] indicates that house prices seem to have bottomed out.

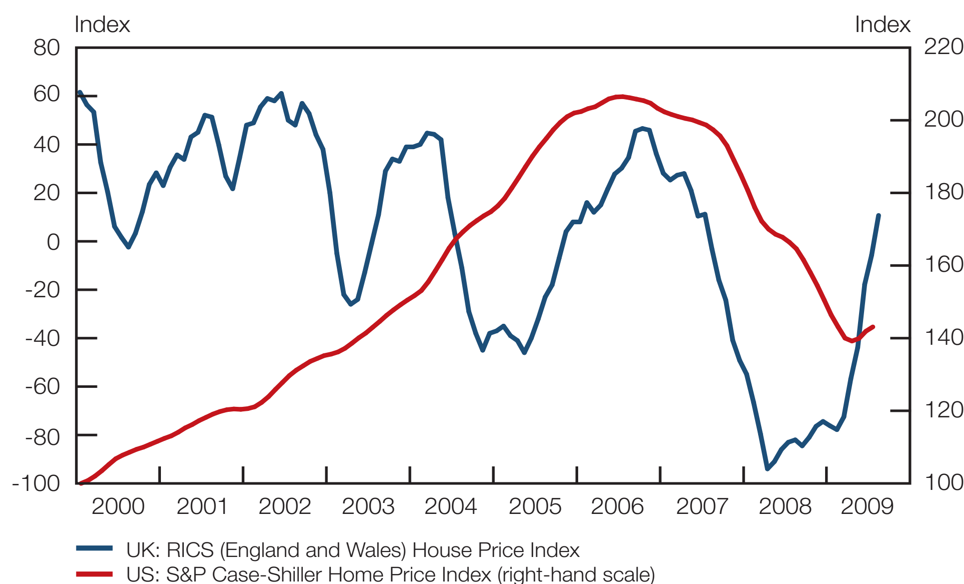
6 The Case-Shiller Home Price Index measures house price developments in the largest US cities.

Foreclosure activity[7] in the US is, however, still increasing (18 per cent higher in August 2009 from a year earlier) with one in every 357 households with a mortgage loan having received a foreclosure filing. In the United Kingdom (UK), house prices as measured by the Royal Institute of Chartered Surveyors (RICS) housing market survey[8] moved into positive territory in August 2009 – the first time since July 2007. In general, recent data releases suggest that housing markets in most advanced economies are slowly recovering.

7 The foreclosure process, as applied to residential mortgage loans, is when a bank or other secured creditor sells or repossesses an immovable property after the owner has failed to comply with the loan agreement between the lender and borrower.

8 The RICS housing market survey is an index of the proportion of surveyors reporting an increase in prices minus those reporting a decrease.

Figure 3 House price indices in the US and UK



Source: Bloomberg

Banking sectors

The outlook for the banking sectors in advanced economies remains uncertain. Bank balance sheets remain weak in many countries and writedowns could still rise because of deterioration in credit quality, thereby putting pressure on bank capital. Credit losses associated with the global financial crisis continued to increase, although at a much slower rate. Bloomberg estimates total bank losses at about US$1,614 trillion as at the end of the third quarter of 2009, with banks having to raise in total about US$1,372 trillion in new capital. There is still some uncertainty surrounding the eventual size of

probable losses for banks and, therefore, the outlook for banking sector profitability. Funding costs and the market price of insuring against credit risk in advanced economy banking sectors also remain high.

Although confidence in the US financial system is slowly returning, US banks continued to tighten lending criteria on all major types of loans to businesses and households in the second quarter of 2009.[9] Banks expect their lending standards to remain tighter than their average levels over the past decade, until at least the second half of 2010. Except for prime residential mortgages, demand for loans in the US also continued to weaken across all major categories.

9 Board of Governors of the Federal Reserve System, Senior Loan Officer Opinion Survey on Bank Lending Practices, July 2009.

The release of the results of stress tests conducted by US regulators on 19 of its largest lenders in May 2009 contributed to an improvement in market sentiment at the time. Ten US lenders were required to raise a total of US$74,6 billion in capital. Although not all analysts and critics were totally convinced by the results of the stress tests,[10] they did seem to put to rest speculation about the stability of the systemically significant banks in the US banking sector. However, concerns about the soundness of the smaller, non-systemic banks in the US remain high. According to a Bloomberg report,[11] 150 of these smaller banks hold non-performing loans that equal 5 per cent or more of their total loans. As non-performing loans reduce earnings and deplete capital, they may leave these banks with capital levels that are below those required by regulators. The number of banks in the US that have non-performing loans in excess of 5 per cent of their total loans more than doubled in the year to June 2009. In total, these banks held deposits of US$193 billion, almost 15 times the size of the Federal Deposit Insurance Corporation's funds, which makes this a concern of systemic proportions.

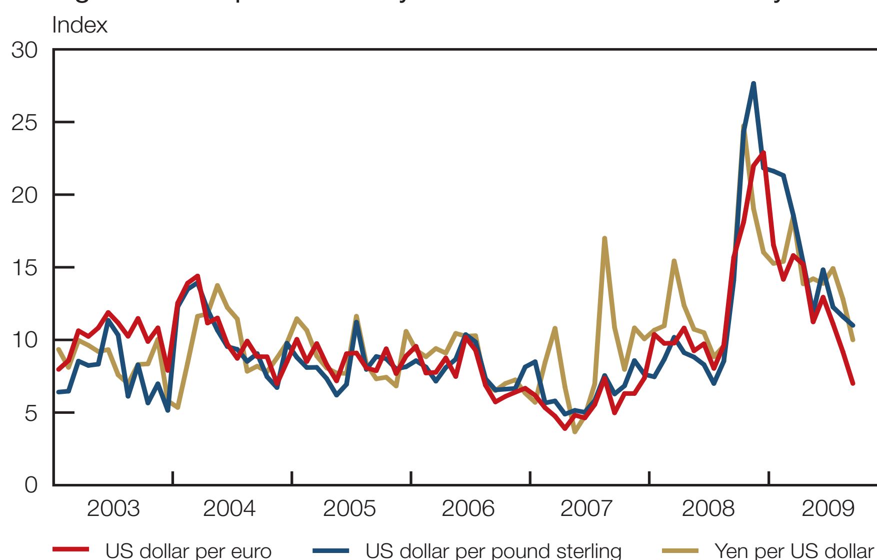
10 In September 2009 the Committee of European Banking Supervisors also released the results of the stress tests conducted on their banking sector.

11 "Toxic loans topping 5 per cent may push 150 banks to the point of no return". Available online at: www.bloomberg.com, August 2009.

Financial market volatility

Cuts in policy rates, continued provision of excess central bank liquidity, measures to support market liquidity, public guarantees, and recapitalisation of banks by governments and central banks in advanced economies seem to have lowered excessive levels of volatility in financial markets and reduced concerns about systemic

Figure 4 Implied volatility of the US dollar over 30 days[1]



1 Represents the consensus of option traders' forecasts for US-dollar volatility over the next 30 days

Source: Bloomberg

failure. Financial markets globally have also recovered somewhat from their weak performances following the financial crisis and economic downturn. In the foreign-exchange market US dollar volatility has not only added to financial market instability and uncertainty, but also contributed to extreme volatility in commodity prices. From July to November 2008, the US dollar appreciated by 28 per cent as the global financial crisis reached its peak and the demand for US dollars rose sharply due to its so-called safe-haven status. From early 2009, the US dollar reversed its course, as initial signs of financial market stabilisation began to appear. Exchange-rate volatility also appears to be easing and is approaching pre-crisis levels.

Financial and economic developments in emerging-market economies

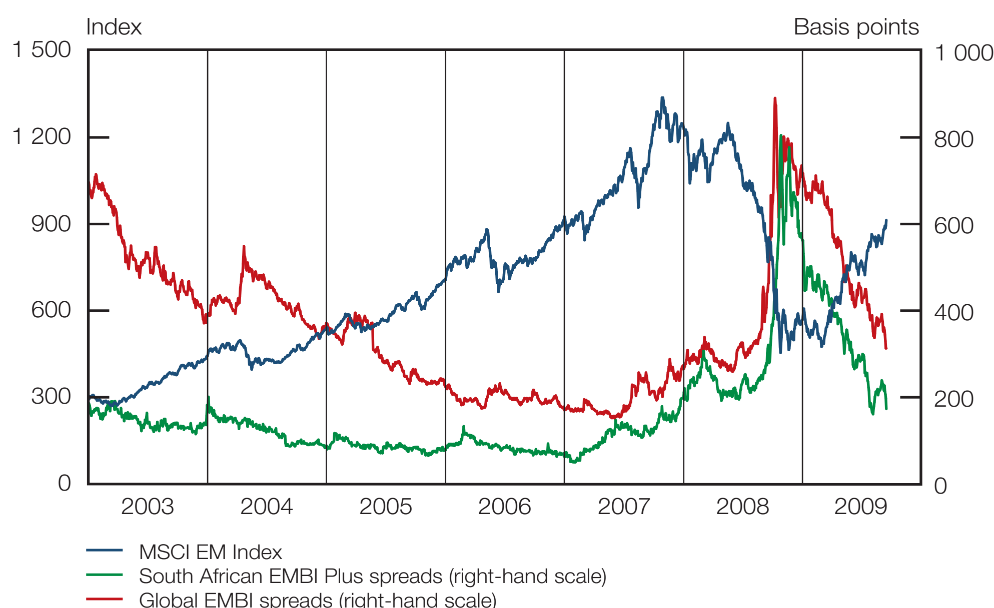
Economic growth

GDP in some EMEs contracted in early 2009 but is expected to return to positive growth by the end of 2009 or early 2010. EMEs such as China, India and other Asian economies recorded strong GDP growth in the second quarter of 2009. They are expected to continue this momentum in the remainder of 2009 due to stronger domestic demand, higher savings, lower public-sector debt and increased credit extension. The IMF, nevertheless, forecasts GDP growth in EMEs to slow to 1,7 per cent in 2009 (from 6 per cent in 2008) but to rise to 5,1 per cent in 2010. This expected slowdown in GDP growth in 2009 is mainly due to a decline in advanced economies' demand for EME exports and constrained cross-border funding (particularly for Emerging Europe and the Commonwealth of Independent States).

Bond and equity markets

Risk appetite for financial assets in EMEs returned in the first half of 2009 as government fiscal stimulus measures resulted in a rise in confidence, increased capital inflows, and strong performances by equity and commodity markets. Equity markets in EMEs have outperformed their developed market peers with gains of 61 per cent in the year to

Figure 5 MSCI EM Index, Global EMBI spreads and South African EMBI Plus spreads



Sources: Bloomberg and JPMorgan

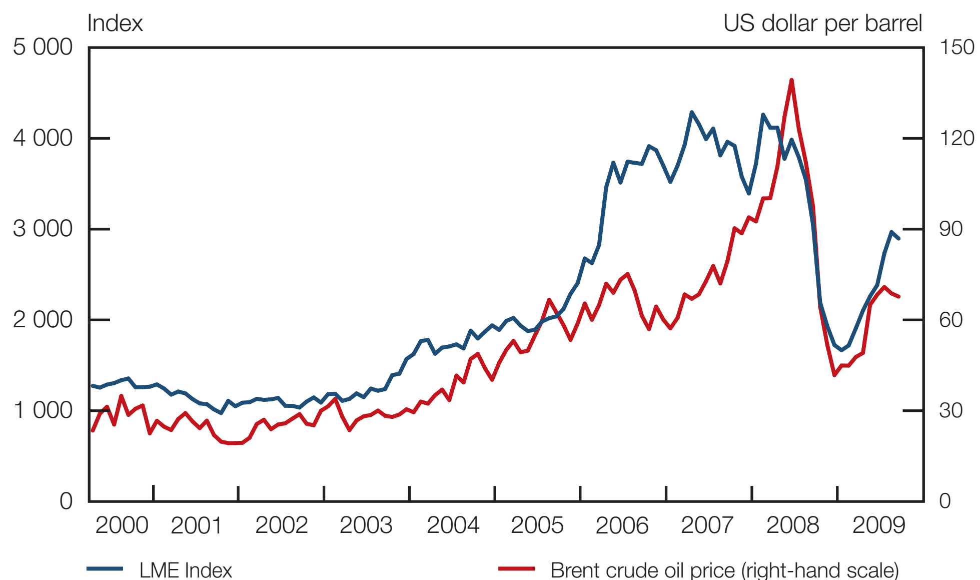
12 As at 30 September 2009.

date[12] compared with 24 per cent for developed markets. EMBI global sovereign spreads also narrowed significantly since their peak in October 2008, and South Africa's sovereign bond spreads followed a similar pattern. Despite these positive developments, the overall financial outlook for emerging markets remains cautious due to continuing financial market volatility and the possibility of a reversal of capital inflows.

Commodities

As major producers and exporters of commodities, EMEs should benefit from a recovery in commodity markets. After falling sharply in 2008, commodity prices recovered in the first half of 2009 amid volatile conditions. The Reuters/Jefferies Commodities Research Bureau index rose by 13 per cent in the year to date due to improved growth prospects, US dollar depreciation and other commodity-specific factors. The price of Brent crude oil rose by 62 per cent during the same period, and showed a strong correlation with developments in global equity markets and the weaker US dollar. The International Energy Agency raised its forecasts of global oil demand for 2009 and 2010, citing expectations of higher demand in Asia, especially China. Despite the upward revision in the demand forecast, global demand for oil is still expected to be lower in 2009.

Figure 6 LME Index and Brent crude oil price



Source: Bloomberg

13 The LME Index is calculated daily on the basis of closing prices of the six primary metals: copper, aluminium, tin, zinc, lead and nickel.

Base metal prices have also recovered due to a weaker US dollar, limited supply and an increase in demand. This was reflected in the London Metal Exchange[13] (LME) Index, which has risen by 68 per cent in the year to date. Food prices have remained high mainly due to strong demand and reduced harvests. The United Nations Food and Agriculture Organization World Food Price Index rose by 6 per cent in the year to date. The gold price rose steadily by 15 per cent (in US dollar terms) during the same period, supported by demand for gold as a hedge against economic uncertainty.

Financial and economic developments in Africa and the Southern African Development Community region

14 IMF, *World Economic Outlook*, October 2009.

Although Africa has moderately weak financial linkages with advanced economies, the continent has not been totally shielded from the spillover effects of the global economic downturn. The decline in global economic growth reduced demand for exports, increased portfolio outflows and decreased workers' remittances.[14] Fiscal and external

positions are expected to weaken further as commodity-based revenues decline. The overall fiscal position of the continent is projected to deteriorate to a deficit of 4,5 per cent of GDP in 2009.[15]

15 IMF, *Regional Economic Outlook*: *Sub-Saharan Africa*, April 2009.

Discussants at the World Economic Forum on Africa held in Cape Town, South Africa, in June 2009, stressed that while the global recession had less of an impact on sub-Saharan Africa than on other emerging regions, the global economic crisis still represented both an opportunity and a challenge for the continent and its people (see Box 2).

Box 2 World Economic Forum on Africa 2009

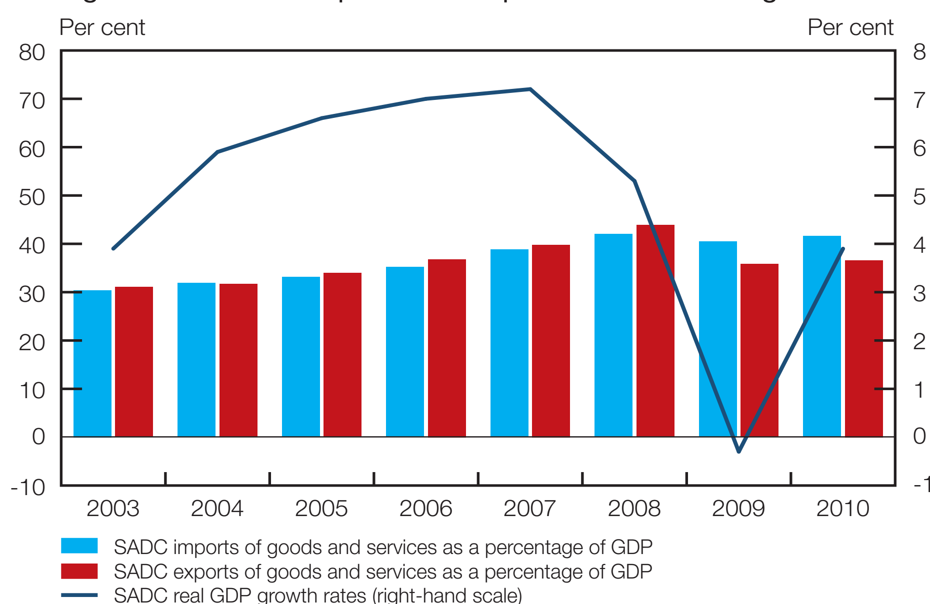
Participants agreed that policy-makers should take advantage of the opening for reform created by the global financial crisis. The main issues highlighted are as follows:

1. The continent's leaders need to assert themselves more strongly in multilateral decision-making bodies.
2. Strategies and policies that can successfully address problems such as poverty, disease, low productivity and inadequate access to capital already exist. African leaders in both the public and private sectors have, however, often been too slow to adopt them.
3. African officials and business leaders were urged to reach out more forcefully to investors in the oil-producing countries of the Arabian Peninsula, and to favour direct investment in their real economies.
4. African governments need to consider recommendations by private business to create a more favourable investment climate.

Source: Adapted from *Africa's Roadmap*: *From Crisis to Opportunity*, World Economic Forum on Africa, 2009. Available online at: www.weforum.org

According to the IMF, GDP growth in sub-Saharan Africa is expected to decline sharply from 5,5 per cent in 2008 to 1,3 per cent in 2009, but to improve to 4,1 per cent in 2010. Such an improvement, however, depends on a solid global recovery. The Southern African Development Community (SADC) region is expected to experience a contraction in GDP of 0,3 per cent in 2009, but to recover to positive growth of 3,9 per cent in 2010. As a result of deteriorating global demand, exports as a percentage of GDP are projected to fall to 35,8 per cent in 2009 from 43,9 per cent in 2008.

Figure 7 SADC imports and exports and real GDP growth[1]

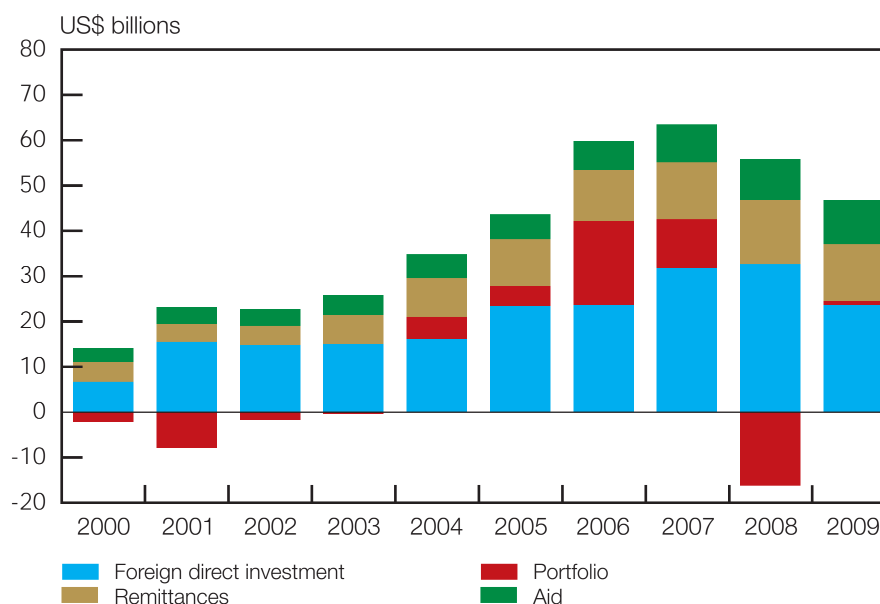


1 Data excludes Zimbabwe. Data for 2009 and 2010 are estimates

Source: IMF *Regional Economic Outlook: Sub-Saharan Africa*, April 2009

Capital flows into sub-Saharan Africa declined significantly in 2008 and further declines are projected for 2009. The flow of remittances from abroad is also expected to fall in 2009. The global financial crisis has, among other effects, caused portfolio inflows to reverse and inward foreign direct investment to decline, making trade finance more costly. Although foreign-aid flows were stable, fears remain that the global financial crisis and heavier fiscal burdens could eventually cause advanced economies to reduce their foreign aid to the continent.

Figure 8 Selected inflows in sub-Saharan Africa[1]



1 Data for 2009 are estimates

Source: IMF *Regional Economic Outlook: Sub-Saharan Africa*, April 2009

16 Group of Eight Italy Summit, Chairman's Summary, July 2009. Available online at: www.g8italia.2009.it.

Leaders at the Group of Eight (G-8) summit in Italy[16] nevertheless reaffirmed their official development assistance commitments to Africa by publishing a preliminary accountability report and developing a fully-fledged accountability mechanism to monitor progress and strengthen the effectiveness of their actions. Acknowledging that the crisis was jeopardising the progress of the continent towards the Millennium Development Goals, leaders requested an international assessment in 2010 of the requirements to achieve these goals.

Financial systems in sub-Saharan Africa had initially been relatively resilient to the effects of the financial crisis, given their limited integration with global financial markets. However, in recent months, adverse pressures from recessions abroad have weighed on the region, resulting in a deceleration in regional economic activity, and a rise in credit risk and non-performing assets. While the financial system in the region as a whole may absorb and withstand the effects of the crisis, this may not be true for all countries in the region.

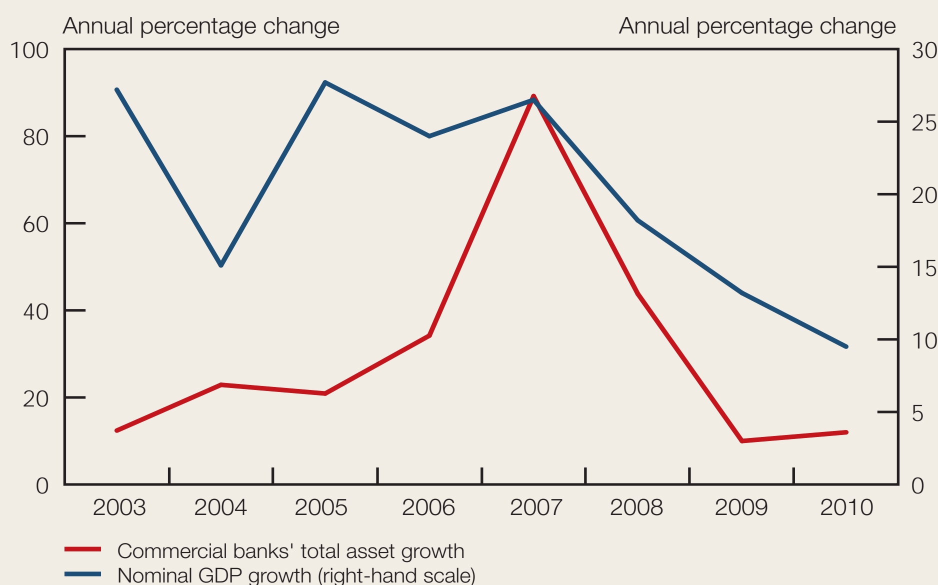
In August 2009, the Central Bank of Nigeria injected approximately US$2,6 billion into five banks after the central bank had identified that these banks were undercapitalised (see Box 3).

Box 3 Recent developments in the Nigerian banking system

In October 2008 the Central Bank of Nigeria provided financial support in the form of an expanded discount window[17] (EDW) to a number of banks that showed severe liquidity strains. Despite this facility, five Nigerian banks continued to display signs of potential failure in August 2009, due to a general weakness in risk management practices and corporate governance. High concentration in these banks' exposures to certain sectors added to their vulnerability.[18] While the five banks were by no means the only ones to have benefited from the EDW, the persistence and frequency of their demands for assistance suggested a deeper problem and, as such, the central bank identified them as possible sources of financial instability.

The central bank and the Nigeria Deposit Insurance Corporation conducted an investigation into the five banks, and their findings showed an excessively high ratio of non-performing loans to total loans (ranging from 19 per cent to 48 per cent). This was a result of excessive rates of growth in total assets in 2006 and 2007 (see Figure), poor corporate governance practices, negligent credit administration processes and non-adherence to the central bank's credit risk management requirements. As a group, these banks are regarded as systemically important, accounting for 39,9 per cent of loans, 30 per cent of deposits and 31,5 per cent of total assets in the Nigerian banking system. The investigation also revealed that these banks have very high levels of risk concentration.

Nominal GDP and commercial banks' total asset growth in Nigeria[1]



1 Data for 2008, 2009 and 2010 are estimates

Source: Business Monitor International

The five banks were declared undercapitalised and the Nigerian Stock Exchange placed a two-week suspension on trading in the shares of these banks. The Central Bank of Nigeria announced the replacement of the management of these banks and assisted with injections of US$2,6 billion in the form of Tier 2 capital. This injection is purely a temporary measure as the central bank plans to hold the shares only until new investors are found to recapitalise these banks.

17 The expanded discount window is a tool used by the Central Bank of Nigeria to extend facilities to banks with serious liquidity shortages.

18 Address by the Governor of the Central Bank of Nigeria on developments in the banking system in Nigeria. Available online at: http://www.cenbank.org, August 2009.

In the light of the severe economic and humanitarian crisis experienced during the past few years in Zimbabwe, a Short-Term Emergency Recovery Programme (STERP) for 2009 was initiated by the Government of National Unity. This programme highlights the need for sound governance and macroeconomic policy management, political stability, social security, low inflation and economic growth. In addition, the government introduced a multi-currency system in an attempt to anchor expectations.

19 IMF, *World Economic Outlook*, October 2009.

20 IMF, Article IV Consultation with Zimbabwe, May 2009.

The short-term macroeconomic outlook for Zimbabwe has improved somewhat amid sound recommendations by the government's STERP. After periods of extremely high inflation, the IMF now forecasts inflation of 6,9 per cent for 2009. GDP growth is projected to be 3,7 per cent for 2009, compared with a contraction of 14,1 per cent for 2008.[19] However, severe downside risks remain. A recovery of the Zimbabwean economy depends largely on foreign assistance and private capital inflows, which have come under strain following the global financial crisis. Furthermore, the worsening fiscal position, potential implementation capacity constraints and possible political tensions may counteract stabilisation efforts in the country.[20]

Conclusion

During the period under review, the deterioration in global macroeconomic conditions has impacted on financial systems through increased stress on banking systems related to losses on lending across a broad range of exposures. Despite signs of a turnaround in economic activity, financial systems are still vulnerable to event risk and a renewed loss of confidence. The adverse feedback effects from the real economy, therefore, remain a concern and present new challenges for safeguarding the stability of the global financial system.

Domestic macroprudential analysis

This section provides a synopsis of financial soundness indicators of the South African financial system. It presents an analysis of the main developments in the domestic financial sector and its counterparts, the corporate and household sectors. Developments in these sectors have a significant bearing on the stability of the financial system. This section also analyses trends in the external sector and the real-estate market, and starts with an overview of the level of real economic activity.

Indicators of real economic activity

21 Statistics South Africa, *Quarterly Labour Force Survey*, quarters 1 and 2, 2009.

Domestic economic performance deteriorated at a more moderate pace in the second quarter of 2009, compared with the first quarter. Real GDP contracted at an annualised rate of 3 per cent in the second quarter, compared with a contraction of 6,4 per pent in the first quarter, making it the third successive quarterly contraction. Nearly all indicators of real economic activity (Table 1) recorded annual declines in the first two quarters of 2009. As the economy continued to contract, employment was also affected negatively. In the first half of 2009, about 475 000 jobs were lost.[21] Employment declined in all the industries except community and social services. The combination of an ongoing economic recession and weak labour market conditions continued to put a damper on economic activity as households continued to economise in the face of the very difficult economic environment. Weak global demand also contributed to the contraction of economic activity in South Africa, especially in the mining, manufacturing and motor industries.

Table 1 Selected indicators of real economic activity[1]

Annual percentage change, unless indicated otherwise

Activity indicators	2008			2009	
	Jun	Sep	Dec	Mar	Jun
Building plans passed	-25,1	-21,7	-34,4	-35,6	-30,5
Buildings completed	-5,4	9,4	8,4	-4,1	-7,0
Retail sales	1,0	-2,2	0,1	-5,0	-6,8
Wholesale trade sales	6,5	2,9	4,7	-10,2	-12,4
New vehicle sales	-19,8	-22,2	-30,0	-37,8	-24,3
New passenger car sales	-24,2	-22,9	-26,7	-24,9	-17,6
Electric current generated	-2,9	-1,6	-11,6	-7,7	-4,2
Utilisation of production capacity (percentage)	84,7	84,8	80,6	78,2	77,9

1 At constant 2000 prices and seasonally adjusted except for retail sales data, which are at constant 2008 prices

Sources: South African Reserve Bank, National Association of Automobile Manufacturers of South Africa and Statistics South Africa

Confidence in the financial sector

In the second quarter of 2009 confidence in the financial services sector appears to have returned as the Ernst & Young Financial Services Index[22] reversed some of the losses recorded in the previous quarters (see Table 2). Among the sub-indices, the retail banking confidence index was the only one that did not improve but, instead, recorded a further drop to 28 index points. This decline was attributed to the continued deterioration in the profits of retail banking and the persistently high levels of impaired advances. By contrast, the confidence level of investment banking and specialised finance rose in the second quarter of 2009, reflecting a rebound in the outlook for resource companies as commodity prices started to rise. The rebound, in turn, led to some merger-and-acquisition activity and reconsideration of projects that had been put on hold due to the uncertainties created by the global financial crisis. The recovery in equity markets, improved net inflows of foreign capital and a better outlook for profitability also helped to revive confidence of investment managers.

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

Table 2 Financial Services Index and its components

	2008		2009	
	3rd qr	4th qr	1st qr	2nd qr
Financial Services Index	58	47	40	49
Retail banking confidence index	43	53	32	28
Investment banking and specialised finance confidence index	81	46	31	50
Investment management confidence index	57	42	45	66
Life insurance confidence index	51	48	50	51

Sources: Bureau for Economic Research and Ernst & Young

Banking sector

As was discussed in the March 2009 issue of the *Financial Stability Review*, South African banks have been largely shielded against the direct effects of the global financial crisis. Reasons given were, among other things, the fact that domestic banks had not invested heavily in high-risk securities or complex instruments, and had very limited foreign credit exposure on their loan books (see Table 3). Of the total credit exposure, about 90 per cent was, on average, concentrated in South Africa by the end of the quarter ended June 2009.

Table 3 Geographical distribution of credit

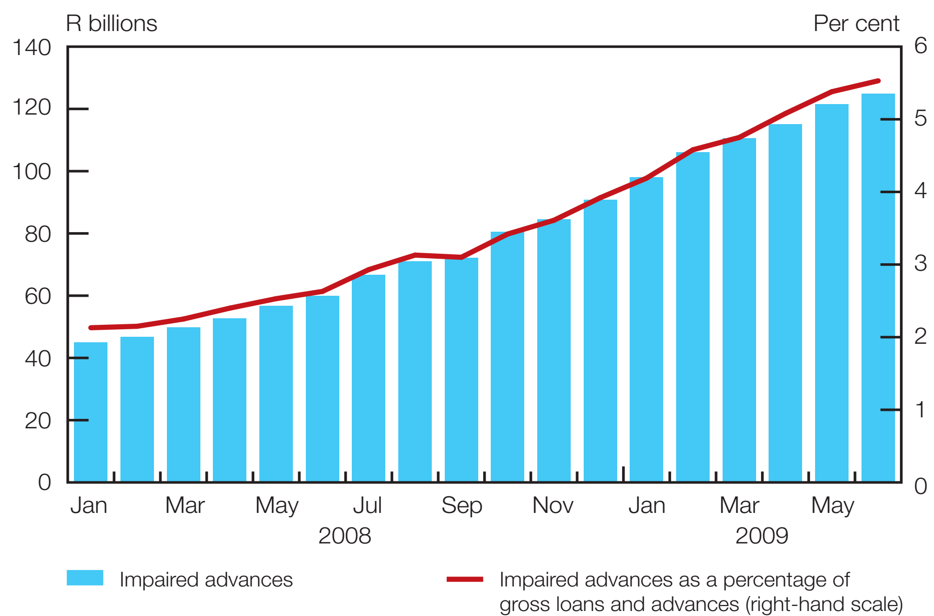
Per cent

	2008		2009	
	Sep	Dec	Mar	Jun
South Africa	91,75	89,06	89,48	91,11
Other African countries	0,47	0,51	0,51	0,49
Europe	5,98	8,35	8,32	6,68
Asia	0,14	0,16	0,13	0,23
North America	1,40	1,61	1,38	1,33
South America	0,00	0,11	0,02	0,09
Other	0,25	0,21	0,15	0,09
Total[1]	100,00	100,00	100,00	100,00

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

Source: South African Reserve Bank

Figure 9 Impaired advances



Source: South African Reserve Bank

However, deteriorating domestic economic conditions and the indirect impact of the global financial crisis have been felt by banks mainly through continuously rising credit impairments. Since December 2008, impaired advances rose by 37,5 per cent to a level of R124,9 billion in June 2009 (Figure 9). The slowdown in economic activity and prevailing stricter lending conditions by banks resulted in a further moderation in growth of total loans and advances during the first half of 2009. Combined with the continuous increase in impaired advances, the quality of banks' loan books was bound to be affected negatively.

Table 4 Selected indicators of the South African banking sector[1]

Per cent, unless indicated otherwise

	2009					
	Jan	Feb	Mar	Apr	May	Jun
Market share (top four banks)	84,11	84,39	84,09	84,66	84,36	84,79
Gini concentration index	83,96	83,99	83,95	84,07	83,95	84,14
Herfindahl index of concentration (H-index)	0,188	0,190	0,188	0,190	0,189	0,190
Banks' share prices (year-on-year percentage change)	-14,85	-22,35	-23,95	-13,98	-5,40	7,79
Capital adequacy						
Capital-adequacy ratio	13,01	12,98	13,29	13,54	13,51	13,69
Regulatory Tier 1 capital to risk-weighted assets	10,23	10,20	10,37	10,49	10,50	10,67
Credit risk						
Gross loans and advances (R billions)	2 338	2 316	2 329	2 268	2 257	2 258
Impaired advances (R billions)	97,97	106,14	110,59	115,13	121,46	124,89
Impaired advances to gross loans and advances	4,19	4,58	4,75	5,08	5,38	5,53
Specific credit impairments (R billions)	29,64	31,30	32,37	34,06	35,49	36,69
Specific credit impairments to impaired advances	30,25	29,49	29,27	29,58	29,22	29,38
Specific credit impairments to gross loans and advances	1,27	1,35	1,39	1,50	1,57	1,63
Profitability						
Return on assets (smoothed)	1,15	1,09	1,01	0,99	0,96	0,99
Return on equity (smoothed)	20,70	19,59	18,10	17,87	17,19	17,54
Interest margin to gross income (smoothed)	50,81	50,10	50,83	50,57	50,43	51,15
Operating expenses to gross income (smoothed)	49,00	49,10	49,46	49,78	50,02	49,35
Liquidity						
Liquid assets to total assets (liquid-asset ratio)	4,94	4,93	5,04	5,27	5,27	5,27
Liquid assets to short-term liabilities	10,17	10,16	10,01	10,52	10,25	10,16
Effective net open foreign-currency position to qualifying capital and reserve funds	0,13	1,02	0,66	0,44	0,58	0,70

1 Data were updated on 14 September 2009

Source: South African Reserve Bank

Nevertheless, the weakening asset quality of banks is not seen as posing a major systemic threat, as banks have maintained high levels of capital and continued to be profitable, albeit less so than before. Conditions are likely to improve gradually in an environment of relatively less tight monetary policy combined with a bottoming out of the economic downturn. The overall capital-adequacy ratio and the Tier 1 capital ratio remained well above the minimum regulatory requirements of 9,5 per cent and 7 per cent respectively, but profitability, as measured by the return on assets (ROA) and return on equity (ROE), declined slightly over the review period but remained positive. Smoothed over a period of 12 months, the ROA dropped from 1,15 per cent in January 2009 to 0,99 per cent in June, while ROE dropped from 20,7 per cent to 17,5 per cent over this period. Despite the decline in profitability, banks remained efficient as reflected by a fairly low cost-to-income ratio. Share prices gradually recovered during the first half of 2009, but increased markedly in June. The structure, composition and concentration in the banking sector remained almost unchanged during the first half of 2009, with the big four banks still accounting for almost 85 per cent of the total assets of the sector.

The interim results of the big banks confirmed that the tougher operating environment had resulted in declines in headline earnings. Factors that impacted on banks' interim results included the slowdown in economic activity, rising credit impairments, falling interest rate margins and the reduction in the value of investment portfolios.

In the current environment of deteriorating asset quality, falling house prices, contracting economic growth and rising unemployment, banks were reluctant to relax lending standards, thus reinforcing acute procyclical behaviour. Based on the results of a survey[23] conducted by Ernst & Young and the Bureau for Economic Research on the lending standards of banks, it would appear that most retail banks[24] still favoured very strict lending criteria for credit during both the first and second quarters of 2009 (Figure 10). In the case of investment banking-type activities,[25] fewer banks maintained their strict lending criteria in the second quarter (probably in anticipation of increased demand for credit from corporations) compared to the first quarter when all respondents to the survey were still biased towards a tightening of credit granting standards. However, since the survey was conducted, banks seem to have begun to ease their lending criteria, especially on mortgages, as several banks announced lower home loan deposit requirements, and mortgage bonds of 100 per cent of the value of the property have become available to very specific applicants and in special circumstances.

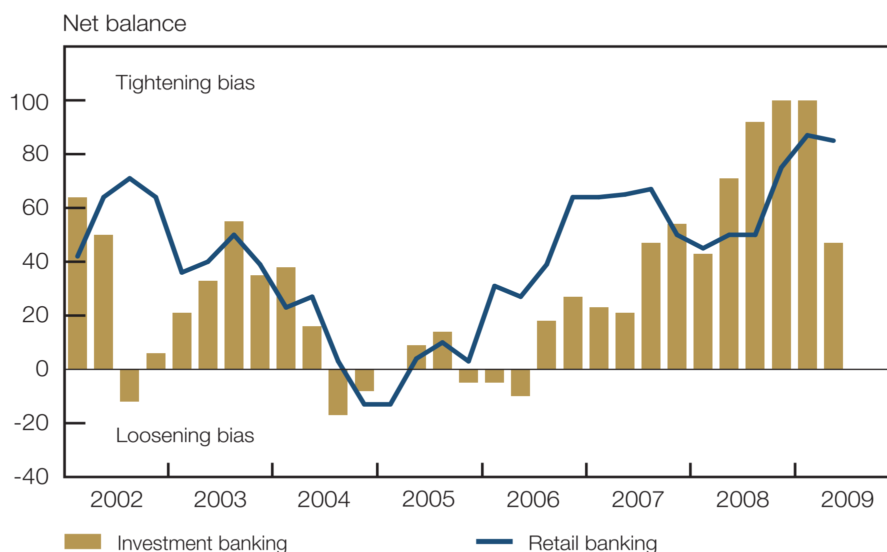
At the end of the second quarter of 2009 banks' largest concentration of exposure was still in the private household sector (see Table 5). Overall, the distribution of private-sector credit across industries remained fairly stable over time.

23 Ernst & Young, *Bank Index*, 2009. Available online at: http://www.ey.com.

24 'Retail banking' is defined for purposes of this survey to include business units of private banking, micro lending, retail banking, corporate banking and business banking for small- and medium-sized private enterprises.

25 'Investment banking' includes business units for corporate finance, private equity and direct investments, project finance, treasury and specialised finance and stock broking.

Figure 10 Lending standards applied by banks for loan applications[1]



1 The 'net balance' statistic is used to interpret the survey results and is the difference between the percentage of bank survey respondents who tightened lending standards and those who eased them during a specific quarter

Sources: Bureau for Economic Research and Ernst & Young

Table 5 Sectoral distribution[1] of credit to the private sector

Per cent

	2008	2009	
	Dec	Mar	Jun
Agriculture, hunting, forestry and fishing	1,20	1,45	1,52
Mining and quarrying	2,70	3,00	3,07
Manufacturing	4,43	3,83	3,99
Electricity, gas and water supply	0,71	0,76	0,85
Construction	1,28	1,25	1,24
Wholesale and retail trade, hotels and restaurants	3,60	3,81	3,80
Transport, storage and communication	2,36	2,38	2,73
Financial intermediation and insurance	25,37	25,05	22,49
Real estate	4,83	4,89	5,11
Business services	5,67	5,81	5,85
Community, social and personal services	4,14	4,12	4,84
Private households	36,47	37,22	37,97
Other	7,23	6,42	6,55
Total[2]	100,00	100,00	100,00

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 financial strength of long-term insurers in South Africa was assessed as generally sound, based on the capital-adequacy levels in the sector as measured by the ratio of free assets to required capital (see Table 6).

Table 6 Free assets-to-capital-adequacy requirement[1]

Free assets-to-capital-adequacy requirement (typical long-term insurers)[2]	Number of insurers				
	2008			2009	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Covered 0–1 time	0	0	1	1	1
Covered 1–2 times	8	10	8	9	10
Covered 2–5 times	14	12	17	15	14
Covered 5–10 times	3	4	2	2	2
Covered 10+ times	1	1	1	1	1
Total	26	27	29	28	28

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 Typical insurers are those insurers that offer most of the six classes of business as defined in the Long-term Insurance Act, No. 52 of 1998, in the primary market. The figures were not audited

Source: Financial Services Board

However, financial soundness indicators for typical long-term insurers (see Table 7) suggest that this sector experienced some strain in line with a general weakening of domestic economic conditions. Nevertheless, some positive developments have since been recorded in the second quarter of 2009, which included a significant drop in claims (as a percentage of net premiums) and an improvement in underwriting profitability, although it still remained negative. Furthermore, the rate of decline in share prices of typical long-term insurers slowed down.

Table 7 Selected indicators for typical long-term insurers

	2008			2009	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Number of policies[1]	6	4	6	6	4
Share prices[1]	-27,9	-29,7	-43,4	-38,2	-16,5
Individual lapses[2]	55	63	59	66	67
Individual surrenders[2]	11	12	13	8	11
Claims[3]	102	102	99	101	88
Management expenses[3]	11	11	11	11	13
Commission[3]	6	6	6	6	6
Underwriting profitability[4]	-19	-19	-16	-18	-7
Conventional profitability[5]	20,2	15,0	23,3	15,5	...

... Denotes unavailability of data
1 Year-on-year percentage change
2 Expressed as a percentage of the number of new policies issued during the period using statistics that were not audited
3 Expressed as a percentage of net premiums
4 Net premium income less net premium expenditure all divided by net premium income. Profit used when calculating profitability refers to underwriting profit, which is money earned by insurers in their underwriting operations excluding money earned in the investment of assets and other sources
5 Profit over total revenue. Profit used when calculating conventional profitability is the excess of revenue over expenditure

Sources: South African Reserve Bank and Financial Services Board

Financial conditions in the short-term insurance sector also improved somewhat during the second quarter of 2009, despite a fall in the number of cars registered, and a correspondingly lower demand for motor insurance. Underwriting and investment income increased markedly compared with the first quarter of 2009, and claims as a percentage of net premiums remained stable (see Table 8).

Table 8 Selected indicators for typical short-term insurers

	2008			2009	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Net premiums increase[1]	9	10	9	6	6
Underwriting profit/loss[1]	-26,9	-13,5	20,5	-25,1	3,6
Underwriting and investment income[1]	3,1	-5,2	13,4	-1,5	21,5
Claims[2]	68	68	66	69	68
Management expenses and commission[3]	28	27	27	28	28
Underwriting profit/loss[3]	5	6	6	3	5
Underwriting and investment income[3]	13	13	13	13	14
Surplus asset ratio[4] (median)	39	38	40	39	46

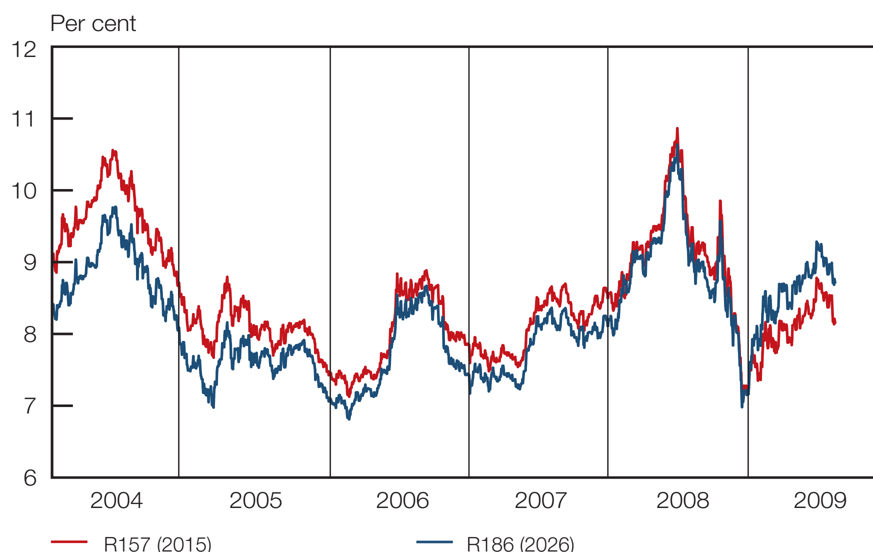
1 Year-on-year percentage change
2 As a percentage of premiums earned
3 As a percentage of net written premiums
4 Surplus as a proportion of liabilities

Source: Financial Services Board

Bond and equity markets

The downward trend in government bond yields in the second half of 2008 reversed in the first half of 2009 due to increased government borrowing. The reversal was related to brisk government expenditure alongside revenue which significantly undershot expectations, following a sharper-than-expected domestic economic contraction. The upward trend in bond yields could also be attributed to a depreciation in the rand early in the year, when it depreciated from R9,30 against the US dollar in January to R10,60 in March. Increased risk aversion at the time contributed to less demand for riskier assets as the global recession deepened. In early August 2009, however, the trend reversed as inflation figures surprised on the downside, reinforcing expectations that inflation would remain low in the near future. Furthermore, bond yields declined as the rand appreciated to below R7,50 against the US dollar, following speculation pertaining to the MTN–Bharti Airtel deal, better-than-expected second quarter GDP data and a narrowing in the current-account deficit. However, the downward trend is expected to be capped by the

Figure 11 Selected domestic bond yields

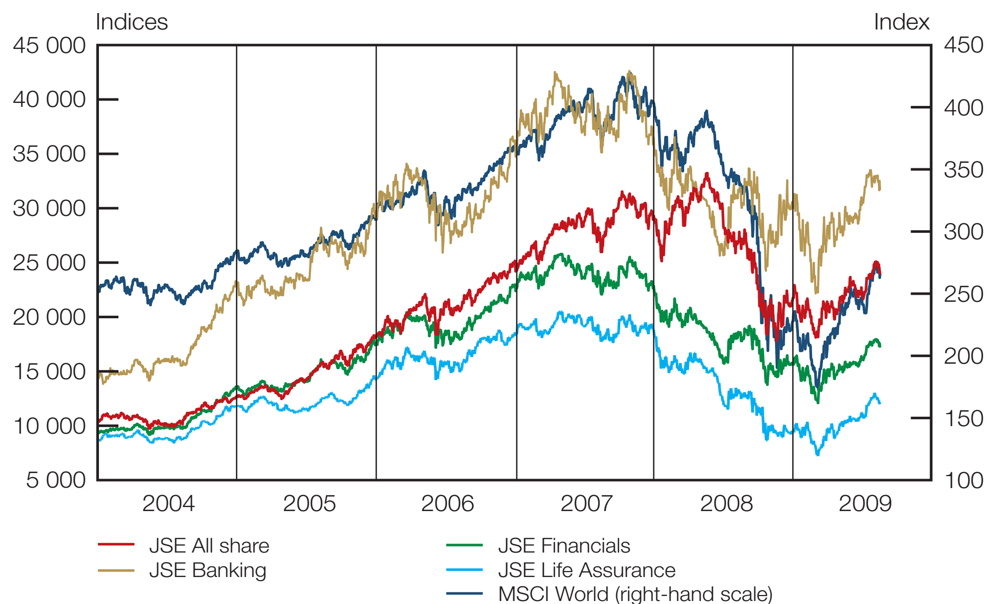


Source: Bloomberg

increased issuance of government bonds against the backdrop of a projected R60 billion shortfall in government revenue in the 2009/10 fiscal year. For the most part, the yield curve remained inverted, with the medium to longer end of the curve moving lower, due to an improved inflation outlook. More recently, the yield curve has normalised, with a positive slope, indicative of expectations that future economic growth and inflation would pick up alongside lower short-term rates as monetary policy was eased.

The domestic equity market recovered in the first half of 2009 (see Figure 12) in line with international equity markets. The equity market received support from lower domestic interest rates and, more recently, a rise in commodity prices. However, the positive impact of the increase in commodity prices on the resources index was overshadowed by the stronger rand. Financial and banking shares, which bore the brunt of negative developments in global banking stocks, have gained support from the monetary policy easing since December 2008 and an improvement in the financial sector globally during the past few months. While the platinum sector was depressed by weakness in the international motor vehicle market and strike action domestically, the platinum index has been up almost 60 per cent since the lows reached in March 2009. Appetite for domestic equities remained robust as non-residents were net buyers to the extent of R62,7 billion for the year to date. From the low levels reached in March 2009, the All-Share Index (Alsi) has gained almost 40 per cent, with gains recorded across all sub-indices.

Figure 12 Share price indices



Source: Bloomberg

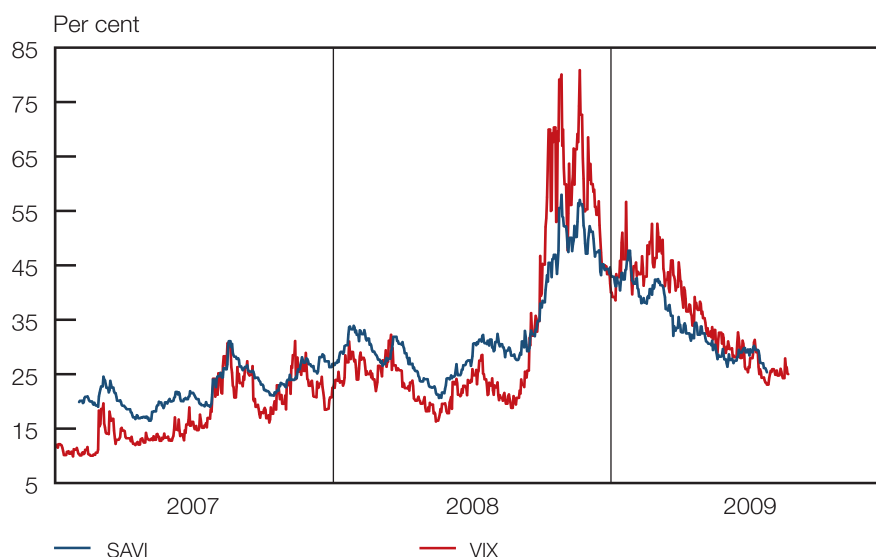
26 The SAVI is calculated using implied volatilities from Top 40 option prices and measures the expected level of volatility in the local equity market over an upcoming 90-day period.

27 The most referenced equity market volatility gauge in the world is the VIX, which is calculated using current Standard and Poor's (S&P) option-price data. It represents the consensus of option traders' forecasts for the S&P volatility over the next 30 days.

Volatility in equity markets

In financial markets, a typical reference to risk relates to the measurement of the dispersion of returns (volatility) for a given portfolio or underlying asset. Volatility estimates the extent to which prices move or how far away from the trend they are expected to move in a given time frame. The South African Volatility Index (SAVI)[26] had been following the same trend as the Chicago Board Options Exchange (CBOE) Volatility Index (VIX).[27] Towards the end of September, the two indices were at almost the same level and trending downwards, intuitively implying less expected risk both in the global and domestic financial markets.

Figure 13 Volatility in equity markets



Source: JSE Limited and the Chicago Board Options Exchange

External sector

The Guidotti ratio (GR), which is the ratio of foreign-exchange reserves to short-term external debt, further improved in the second quarter of 2009. The improvement was due to an increase in foreign-exchange reserves and a decline in the level of short-term debt. Available foreign-exchange reserves were above the country's short-term foreign debt by about 30 percentage points. The augmented Guidotti ratio (AGR)[28] improved to 0,97, as the current-account deficit narrowed, suggesting that existing foreign-exchange reserves were only about 3 percentage points below the country's total external financing requirements.

28 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.

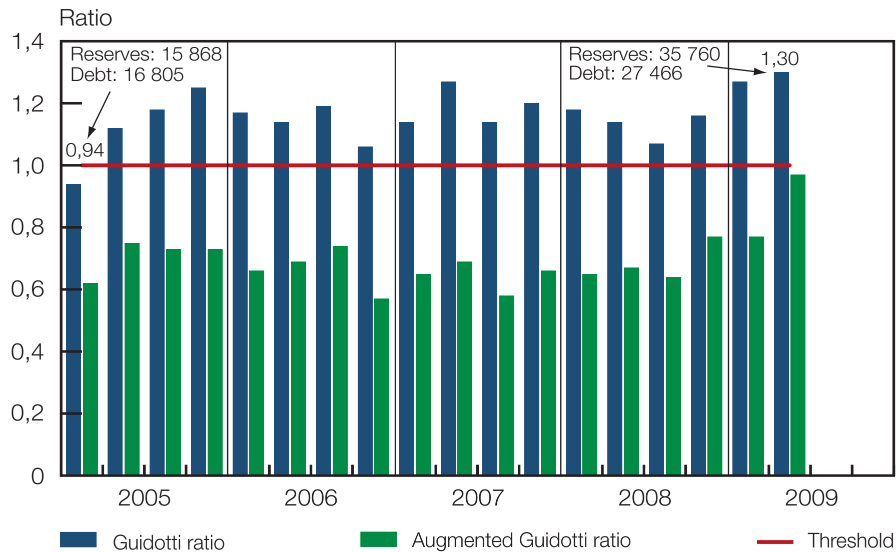
Table 9 Reserve-adequacy ratios

	US$ millions			Guidotti ratio	Augmented Guidotti ratio
	Gross foreign-exchange reserves[1]	Short-term foreign debt[2]	Current-account deficit		
2007: 1st qr	26 518	23 315	-17 335,26	1,14	0,65
2nd qr	28 279	22 319	-18 463,13	1,27	0,69
3rd qr	30 523	26 773	-25 492,29	1,14	0,58
4th qr	32 979	27 399	-22 410,57	1,20	0,66
2008: 1st qr	34 394	29 119	-23 753,95	1,18	0,65
2nd qr	34 854	30 507	-21 273,06	1,14	0,67
3rd qr	34 424	32 271	-21 841,72	1,07	0,64
4th qr	34 099	29 340	-14 756,90	1,16	0,77
2009: 1st qr	34 108	26 949	-17 243,50	1,27	0,77
2nd qr	35 760	27 466	-9 512,69	1,30	0,97

1 Official foreign-exchange reserves are measured by the 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

Figure 14 Reserve-adequacy ratios[1]

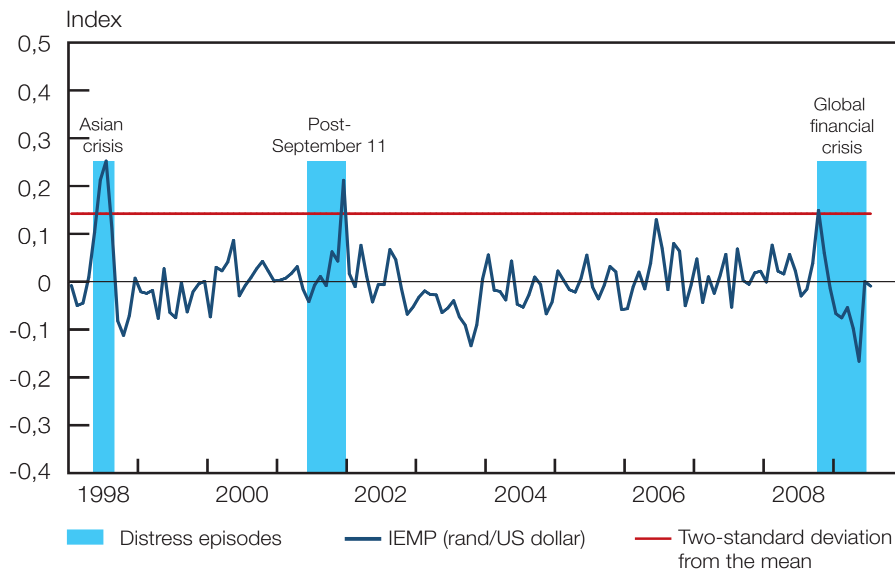


1 Figures for reserves and debt in US$ millions

Source: South African Reserve Bank

The index of exchange market pressure (IEMP) shows that the pressure that was experienced in the local foreign-exchange market during the final quarter of 2008, as a result of the global financial crisis, has since subsided. In the first seven months of 2009 the IEMP remained comfortably below the distress threshold.

Figure 15 Index of exchange market pressure[1]



1 The IEMP is a weighted average of the depreciation of the local currency, the percentage change in international reserves and the change in the domestic interest rates. A rise in the value of the index indicates increasing pressure on the local currency and vice versa

Source: South African Reserve Bank

Corporate sector

Developments in the global economy, coupled with the cyclical downturn in the domestic economy, resulted in a squeeze in corporate profits and a contraction in credit extended to the corporate sector (Table 10). Year-on-year growth in credit to the corporate sector, which moderated to 8,6 per cent in the first quarter of 2009, registered

a contraction of 0,4 per cent in the second quarter. As economic growth was negative for the third consecutive quarter, the level of investment by private business enterprises moderated significantly in the second quarter.

Business confidence levels declined throughout the first half of 2009. The decline in the first quarter was attributed mainly to lower confidence levels of dealers in new vehicles and manufacturers. The smaller-than-usual decrease recorded in the second quarter of 2009 was attributed to both the retail and wholesale sectors, where confidence was well above that of other sectors. Retailers in non-durable goods and semi-durable goods in particular reported comparatively better business conditions. Conversely, the other sub-indices[29] reported sharp downward adjustments. However, a further drop to 23 index points (mainly as a result of poor wholesale trading conditions) has since been reported for the third quarter – the index's lowest level in 10 years.

29 Other sub-indices represent the manufacturing sector and building contractors.

Table 10 Selected indicators for the corporate sector

Annual percentage change, unless indicated otherwise

	2008			2009	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Bank credit granted[1]	22,1	17,6	12,3	8,6	-0,4
Gross fixed capital formation[2]	20,2	21,6	19,8	11,5	1,6
Credit as a percentage of GDP	37,6	37,4	37,0	37,1	36,6
Credit as a percentage of annualised profits[3]	156,0	157,0	167,6	183,5	161,2
Business confidence index[4]	45	34	33	27	26
Net operating surplus[5]	24,4	20,2	19,8	2,3	-3,7

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 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'
5 Gross operating surplus minus depreciation (seasonally adjusted rates)

Sources: South African Reserve Bank and Rand Merchant Bank/Bureau for Economic Research

Pressure experienced in the corporate sector is also evident in the total number of liquidations, which increased by 33,8 per cent in July 2009 compared with the year before. Factors likely to have contributed to the strain in the corporate sector include declining world trade, which has affected exports severely, increased wage demands, low domestic demand for goods, and relatively high production costs.

Table 11 Total number of liquidations by industry[1]

Industry	2008	2009	
	Jul	Jun	Jul
Agriculture, hunting, forestry and fishing	5	2	2
Mining and quarrying	0	0	1
Manufacturing	19	22	24
Electricity, gas and water	1	1	1
Construction	12	20	18
Wholesale and retail trade, catering and accommodation	96	79	126
Transport, storage and communication	15	10	25
Finance, insurance, real-estate and business services	147	148	198
Community, social and personal services	25	29	33
Total number of liquidations	320	311	428

1 Information on liquidations is obtained from the Registrar of Companies and Close Corporations, and the Department of Trade and Industry

Source: Statistics South Africa

Household sector

The financial position of households remained relatively fragile. Both financial assets and net wealth of households continued the contraction that started in the third quarter of 2008. The combined impact of the secondary effects of the global financial crisis and the recession in the domestic economy on the balance sheets of households materialised in the form of valuation losses on capital market investments, which caused the value of financial assets and net wealth to shrink. Falling house prices and deteriorating labour market conditions exacerbated the weakness of households' balance sheets.

Nevertheless, consumer confidence improved slightly during the first two quarters of 2009 as households became more optimistic about the future of the economy and their financial prospects. In the second quarter confidence was boosted by further interest rate reductions, increases in social grants and some recovery in equity markets. However, consumers were still highly cautious about purchasing durable goods and incurring more debt.

Table 12 Selected indicators for the household sector

Annual percentage change, unless indicated otherwise

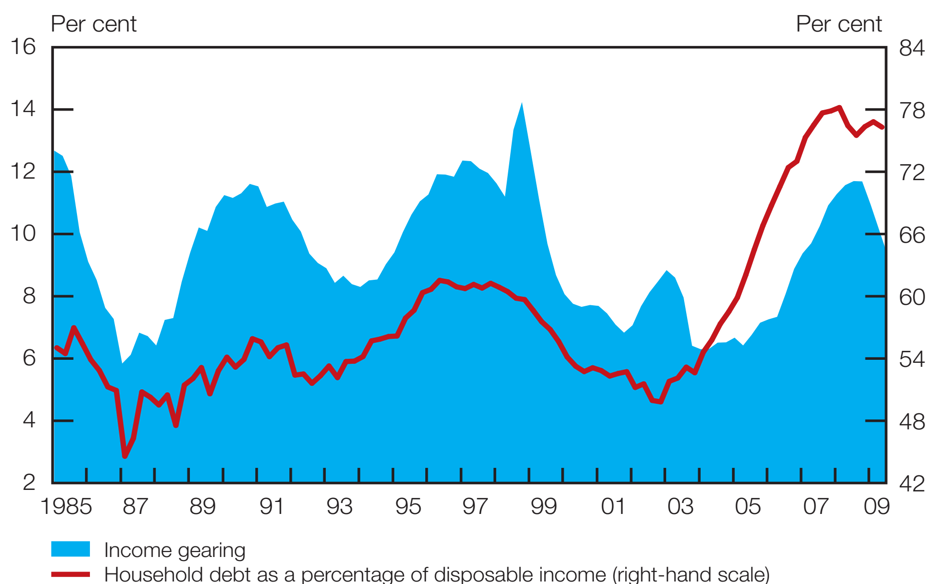
	2008			2009	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Nominal disposable income	14,2	13,6	10,6	7,0	4,3
Financial assets[1]	4,2	-6,1	-3,7	-9,2	-10,1
Net wealth[2]	3,4	-5,3	-3,7	-8,0	-8,7
Consumer confidence index[3]	-6	-1	-4	1	4
Consumption expenditure to GDP	60,9	60,7	60,2	60,9	61,8
Real consumption expenditure	3,3	1,8	0,1	-1,8	-3,6
Credit extension	21,3	17,7	15,5	6,2	4,6
Savings as a percentage of disposable income	-0,5	-0,4	-0,2	-0,1	-0,1
Debt	14,1	10,4	8,4	5,1	4,1
Debt to disposable income	76,4	75,5	76,3	76,8	76,3
Debt to GDP	46,3	45,6	45,9	46,7	47,1
Income gearing (per cent)[4]	11,6	11,7	11,7	10,9	9,5
Capital gearing (per cent)[5]	19,6	21,0	21,3	22,3	21,8

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 are 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 are 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, the index can vary between -100 for extreme pessimism and +100 for extreme optimism, with 0 being neutral
4 'Income gearing' refers to financing costs of household debt as a percentage of disposable income
5 'Capital gearing' refers to household debt as a percentage of total assets of households

Sources: South African Reserve Bank and Bureau for Economic Research

As the economy entered its third consecutive quarter of contracting real output in the second quarter of 2009, the level of household-sector indebtedness remained high. The loan repayment ability of households has been supported by the lower debt-service burden arising from the lowering of bank lending rates, which should have a positive effect on the ability of households to service debt.

Figure 16 Ratio of household debt to disposable income and income gearing



Source: South African Reserve Bank

The vulnerability of the household sector to shocks is assessed by comparing the actual values of the financial soundness indicators for the household sector to a set threshold, based on its mean and standard deviation over a specified period. If an indicator breaches the threshold, it issues a signal of possible financial distress.[30] The increase in the number of indicators issuing a signal can be seen as evidence of the financial strain on households.

30 The standard deviation has been subtracted from the mean value for real consumption expenditure, consumption expenditure to GDP and credit extension in order to take the phase of the economic cycle into account. The convention is to add standard deviation to the mean for these variables.

Table 13 Financial soundness indicators for the household sector[1]

Annual percentage change, unless indicated otherwise

	Mean	Standard deviation	Threshold[2]	2nd qr 2009	Signal issued
Nominal disposable income	11,2	2,2	9,0	4,3	Yes
Financial assets	13,2	9,3	3,9	-10,1	Yes
Net wealth[3]	12,8	8,2	4,6	-8,7	Yes
Debt	13,9	6,9	20,9	4,1	No
Debt to GDP (per cent)	38,1	4,8	42,9	47,1	Yes
Debt to disposable income (per cent)	60,5	8,5	69,0	76,3	Yes
Real consumption expenditure	4,0	2,4	1,6	-3,6	Yes
Consumption expenditure to GDP (per cent)	62,3	0,9	61,5	61,8	No
Credit extension	14,2	7,0	7,2	4,6	Yes
Income gearing (per cent)	9,3	2,1	11,4	9,5	No
Capital gearing (per cent)	19,3	1,3	20,6	21,8	Yes
Insolvencies	4,2	38,8	43,0	-49,5	No
Summonses	1,6	12,5	14,1	11,3	No

1 Data start from the first quarter of 1993 and run to the second quarter of 2009. For credit extension, insolvencies and summonses, data start from January 1995 and run to June 2009. The assessment of the vulnerability of the household sector to shocks involves the comparison of the threshold value to the actual value of each indicator
2 Threshold values have been set at one standard deviation from the mean
3 Data are preliminary and are based on work in progress at the South African Reserve Bank

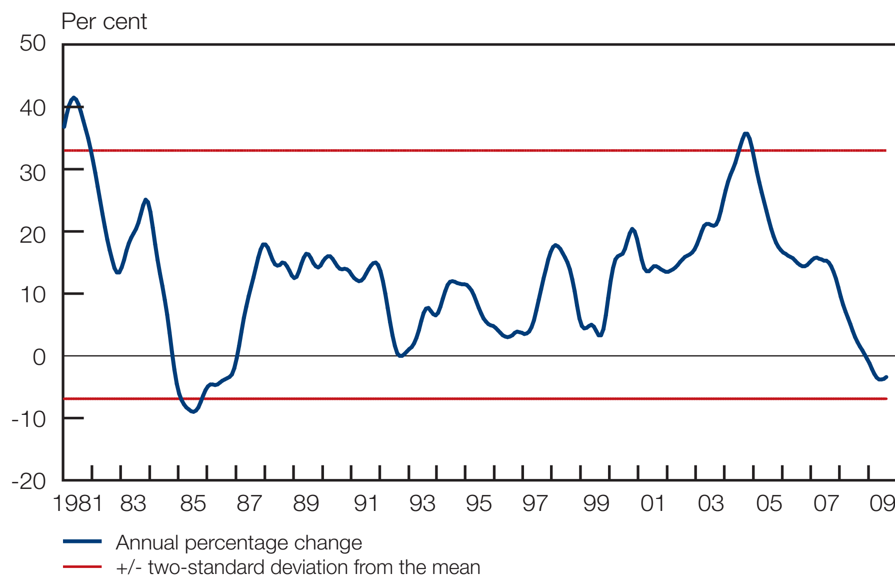
Sources: South African Reserve Bank and Statistics South Africa

Residential real-estate sector

Although the residential property market experienced continued house price deflation in the first eight months of 2009, there are tentative signs that it may have bottomed out.

In August 2009 the Absa House Price Index registered a negative annual growth rate of -3,4 per cent compared with -3,7 per cent in July. The continuous decline in house prices occurred on the back of weak economic performance, concerns of future job losses and the resultant disruptions to income streams. It is, however, expected that the cumulative 500-basis-point cut in interest rates since December 2008 should provide some relief for households and, eventually, improve the affordability of housing. Furthermore, the recent relaxation of credit-granting criteria to some categories of clients by some banks should also contribute towards recovery in the real-estate sector.

Figure 17 House price index[1]



1 The Absa House Price Index is based on the total purchase price of houses in the 80 m^2–400 m^2 size category valued at R3,1 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

The ratio of mortgage debt to the market value of housing remained high in the second quarter of 2009. The high ratio can be ascribed to a combination of declines in house prices, coupled with still-high levels of mortgage debt following an extended period of favourable macroeconomic conditions and low interest rates. However, at its peak in the current downward cycle (66,1 per cent in the first quarter of 2009), it is still below the peak of 84,8 per cent recorded during the previous cyclical downturn.[31]

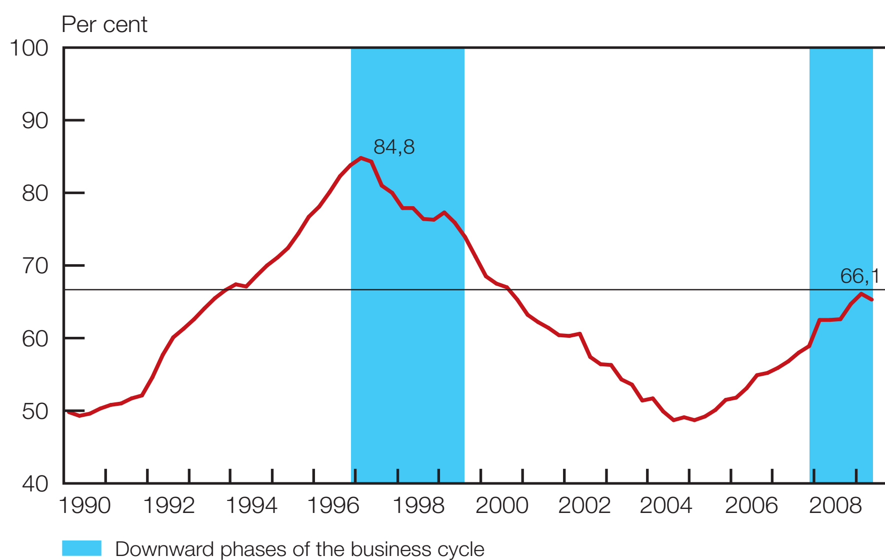
While activity in the South African residential property market remained weak, the Residential Property Confidence Indicator[32] (RPCI) showed some signs of improvement in demand in the first two quarters of 2009 (see Table 14). However, the still relatively tight lending criteria of banks and onerous deposit requirements were dampening activity. Over this period, two of the more cyclical components of demand for housing, namely the percentage of first-time buyers and the ratio of buy-to-let to total buyers,

31 The current downward phase of the business cycle, which started in November 2007, is compared to the one that started in December 1996 and ended in August 1999. (Source: South African Reserve Bank *Quarterly Bulletin*, September 2009).

32 The RPCI measures activity on a scale of 1 to 10, where 1 to 3 indicates 'not very active', 4 to 6 indicates 'stable', 7 to 8 is 'active' and 9 to 10 indicates a 'very active' market. 'Activity' is defined as "feet through doors", which translates into the number of potential house buyers visiting show houses.

remained depressed. Following the easing of monetary policy, more first-time buyers may be expected to enter the market. Other signs of continued weakness included the high percentage of sellers not realising their asking price and an increase in the average time property remains in the market. The residential and non-residential contractors' business confidence levels dropped again in the second quarter of 2009. The low levels of confidence were attributed to low demand for building work which also affected profit margins.

Figure 18 Mortgage debt as a percentage of market value of housing



Source: South African Reserve Bank

Table 14 Activity level in the residential property market and the business confidence level of contractors

	2008			2009	
	2nd qr	3rd qr	4th qr	1st qr	2nd qr
Residential property confidence indicator	4,4	4,1	4,6	4,8	4,8
Average time property remains in the market (days)	104	141	108	123	148
Percentage of sellers willing to drop prices	85	88	81	86	86
First-time buyers as a percentage of total buyers	17	12	17	15	14
Buy-to-let as a percentage of total buying	14	13	12	11	11
Business confidence indices					
Residential contractors index	32	34	34	26	17
Non-residential contractors index	70	66	59	51	36
Composite building confidence index[1]	50	52	40	28	29

1 The First National Bank Building Confidence Index measures the business confidence of all the major role players and suppliers involved in the building industry, such as architects, quantity surveyors, contractors, sub-contractors, wholesale and retail merchants, and manufacturers of building materials

Source: First National Bank and Bureau for Economic Research

Conclusion

Real economic activity declined in most sectors as the ongoing economic recession and increases in unemployment put a damper on household expenditure. Credit impairments of banks rose and, combined with a slowdown in loan growth, profitability was affected negatively. Credit approval standards also appeared to have been eased somewhat towards the end of the second quarter and during the third quarter of 2009. Business confidence levels declined throughout the period under review and liquidations increased. The financial position of households remained fragile as deteriorating labour market conditions and declining house prices impacted on their balance sheets. Bond and equity markets were generally volatile in the period under review.

Infrastructure and regulation

This section of the *Financial Stability Review* considers developments in the domestic financial infrastructure and regulatory environment. The first part begins with an update on recent regulatory and infrastructural developments. In addition, consideration is given to a number of global regulatory reform proposals and financial stability challenges, and how they could affect financial regulation in South Africa in the future.

The second part focuses on operational risk management in the RTGS system of the South African national payment system. Operational disruptions, whether from the central system or participants' systems, might impact negatively on the normal operations of payment and settlement systems which, in turn, might affect financial stability. These systems must, therefore, be robust and operationally resilient to minimise disruptions.

Update on legislative and other infrastructural developments in the South African financial system

The regular review and update of legislative and regulatory measures are important for a well functioning financial system. This section provides an update of significant recent developments that have a bearing on the South African financial system.

Progress on legislative developments previously reported

The March 2009 issue of the *Financial Stability Review* reported on several legislative developments that occurred during the period then under review. Since then, a number of legislative processes have been concluded. These include the

- Competition Amendment Bill, No. 31D of 2008, which was enacted as the Competition Amendment Act, No. 1 of 2009, at the end of August 2009;
- Consumer Protection Bill, No. B19D of 2008, which was enacted as the Consumer Protection Act, No. 68 of 2008. Implementation of the legislation will commence by October 2010 (18 months after April 2009) in order to give businesses an opportunity to align their practices with the said Act;
- revised *Code and Report on Governance Principles for South Africa* (King III), which was released at the end of August 2009 for implementation on 1 March 2010; and
- acquisition of the Bond Exchange of South Africa by the JSE Limited, which was approved by the relevant regulatory authorities on 22 June 2009.

Co-operative banking regulation and supervision

Member-based financial services co-operatives were acknowledged as a different tier of the official banking sector with implementation of the Co-operative Banks Act, No. 40 of 2007 (Co-operative Banks Act), on 1 August 2008.[33] Subsequently, a Co-operative Banks Development Agency (the Agency)[34] was established under the auspices of the National Treasury and a Co-operative Banking Supervision Unit (CBSU) was established in the Bank. The CBSU is responsible for the supervision of larger co-operative banks.

The Agency and the Bank are co-operating to finalise the legal framework for co-operative banks. Co-operative institutions meeting the minimum criteria (which is a minimum of 200 members and at least R1 million in deposits) and that have, until now, operated under exemption notices, have to apply for registration as a co-operative bank in terms of the Co-operative Banks Act. These institutions could provisionally apply for registration by using the prescribed application form contained in the Draft Co-operative Banks Act Combined Rules that was issued for public comment on 1 July 2009.[35] The

33 See the September 2007 and September 2008 issues of the *Financial Stability Review* for a broad overview of co-operative banking in South Africa.

34 The Agency is also responsible for the accreditation of support organisations and representative bodies. These organisations will provide co-operative banks with ongoing training, assistance in managing and maintaining prudential requirements, the establishment of risk management systems, improvement of governance arrangements, and audits.

35 It is expected that the final Co-operative Banks Act Combined Rules will be published later this year or early in 2010. Once published, they will pave the way for the registration of the first co-operative bank.

regulations in terms of section 86 of the Co-operative Banks Act setting out the prudential requirements were published on 1 July 2009.

Co-operative banks, once registered and compliant with the Act, its Regulations and Rules, will eventually be covered by an explicit deposit insurance scheme as envisaged in the Co-operative Banks Act, which is expected to increase consumer confidence in this sector of banking. Once the entire regulatory framework is firmly in place, it should not only increase the value of the financial services provided by co-operative banks, but also expand basic financial services to reach people in unbanked communities.

Financial Action Task Force mutual evaluation

In 2008 the Financial Action Task Force (FATF) and the Eastern and Southern Africa Anti-Money Laundering Group (ESAAMLG) jointly re-evaluated South Africa's compliance with FATF standards according to the 'Forty plus Nine Recommendations' for anti-money laundering and combating the financing of terrorism. The evaluation was finalised early in 2009 and the Executive Summary report was released in March.[36]

36 *The Mutual Evaluation Report–Executive Summary: Anti-Money Laundering and Combating the Financing of Terrorism, South Africa* is available online at: http://www.fatf-gafi.org.

The report found South Africa to be compliant and/or largely compliant with 12 out of the 16 FATF core and key recommendations. The South African financial authorities were commended for their strong commitment to an anti-money laundering and combating the financing of terrorism (AML/CFT) regime and the close co-operation between a variety of government departments and agencies. Good progress has been made in developing a system for combating money laundering and the financing of terrorism since the previous FATF evaluation in 2003. The latest assessment concluded that the Financial Intelligence Centre was functioning effectively. It was mentioned that measures to criminalise money laundering and the financing of terrorism, and provisions for the forfeiture of proceeds of crime were comprehensive and generally in line with international standards, while the Suspicious Transaction Reporting regime was being implemented effectively. The generally positive assessment contributes towards meeting the requirement of the Leaders of the G-20 for its jurisdictions to adhere to international AML/CFT standards.

It was, however, noted that South Africa's AML/CFT regime could be strengthened. Measures that can be improved relate to customer due diligence procedures performed by financial and other institutions, and customer particulars that must accompany electronic funds transfers. The disclosure of cross-border transfers of cash, and the monitoring of compliance by financial and other institutions with obligations flowing from anti-money laundering legislation could also be enhanced. The report also recommended measures to improve the transparency of ownership and control structures of legal persons and trusts. Measures to provide for the protection of non-profit organisations from money laundering and the financing of terrorism were also recommended.

Enhancing fiscal transparency in South Africa's economic administration

One of the 12 Key Standards for Sound Financial Systems as stipulated by the FSB is the Fiscal Policy Transparency standard, which outlines the requirements for transparency in matters relating to the structures and finances of government. The government has recently established the National Planning Commission (NPC) in order to enhance economic transparency and sustainability, and to create coherence within government structures. The NPC will play a key role in mapping out government's long-term plan for economic growth and development. This body is expected to work closely with the Minister of Finance, the Minister of Economic Development as well as the Minister of Trade and Industry.

The Presidency recently released a Green Paper[37] outlining the tasks of the NPC and has presented the contents thereof to Parliament. It is expected that the structures of the NPC will be established after further discussions have taken place. In the interim, the ministries retain their respective mandates and work towards the shared vision of a stable economic environment for South Africa. With the attention of the international markets focused on fiscal sustainability issues following the global financial crisis, this development is likely to be followed with interest.

37 The Green Paper is available online at: http://www.thepresidency.gov.za.

The future of financial regulation – a post-crisis outlook

The March 2009 issue of the *Financial Stability Review* detailed a number of emerging financial stability principles and policy issues that require consideration by national and international organisations in order to strengthen the global financial system. Since then, significant progress has been made internationally on a number of issues that could have some far-reaching implications for the regulatory landscape going forward. Notably, the reconstitution of the Financial Stability Forum (FSF) as the FSB has given formal momentum to addressing the many recommendations made in April 2009 by the Leaders of the G-20 and other policy-makers (for further details on the reconstituted FSB see Box 4). In a similar vein, international committees such as the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO) have also released a number of guidelines and standards to enhance the quality of financial sector supervision worldwide.

Box 4 Reconstitution of the Financial Stability Forum

Following the London Summit of the Group of Twenty (G-20) on 2 April 2009, a *Declaration on Strengthening the Financial System* was issued which called for the reconstitution of the Financial Stability Forum as the Financial Stability Board (FSB). As a result, the mandate and the membership of the FSB were expanded,[38] and new structures were put in place to promote financial stability. The FSB membership consists of financial authorities, standard-setting bodies and financial institutions. The FSB aims to address vulnerabilities affecting the financial system, and develop and implement strong regulatory, supervisory and other policies in the interest of global financial stability.

The G-20 requested the FSB to monitor member countries' progress in implementing the G-20 recommendations and to report back on the findings. Obligations deriving from FSB membership include the pursuit and maintenance of financial stability; the maintenance of openness and transparency in the financial sector; the implementation of international standards; and the agreement to undergo periodic peer reviews.

New structures, procedures and working methods have been implemented by the FSB to ensure continued and effective functioning of the larger membership. To this effect, a plenary, steering and three standing committees were established. In brief, the mandates of the three standing committees are as follows:

- The Standing Committee for Vulnerabilities Assessment will assess and monitor imbalances or financial system weaknesses and propose to the FSB Plenary actions needed to address them. Its findings will be the basis for the FSB's vulnerabilities deliberations, and will provide input for the early warning exercises of the International Monetary Fund (IMF).[39]
- The Standing Committee for Supervisory and Regulatory Co-operation will address co-ordination issues that arise among supervisors and regulators, and, where appropriate, provide policy guidance. It will set guidelines for, and oversee the establishment and effective functioning of, supervisory colleges, and will advise in greater detail on crisis management issues.
- The Standing Committee for Standards Implementation will prepare the FSB's planned peer reviews of its members, which are an obligation of membership, and will report on members' commitment and progress in implementing international financial standards and other initiatives.

38 The following G-20 countries are new members: Argentina, Brazil, China, India, Indonesia, Korea, Mexico, Russia, Saudi Arabia, South Africa and Turkey. In addition, Spain and the European Commission were also invited as members.

39 The IMF and the FSB have responded to the financial crisis through the joint development of an Early Warning Exercise to enhance surveillance of sources of potential systemic risk.

In the following sub-sections the areas that supervisory authorities will most likely focus on in future, will be discussed briefly.

Increased focus on the macroprudential approach to financial regulation and supervision

The global financial crisis reinforced the principle that individual institutional soundness does not necessarily equate to overall financial system soundness. Therefore, as a supplement to the microprudential supervision of individual institutions, the importance of incorporating macroprudential supervision into the regulatory framework in order to identify the build-up of systemic risks and vulnerabilities in the financial system is actively encouraged by the international community.

International consensus is still to be reached on policy issues such as which authority will be best suited to take responsibility for macroprudential supervision and how 'systemically significant' financial institutions, markets and instruments should be defined. However, researchers and policy-makers have started to identify some specific areas for macroprudential supervision. These include[40] the monitoring of large or rapidly increasing exposures and risks; the analysis of possible spillovers between financial firms or between firms and markets through mutual exposures and interconnectedness; and oversight of each systemically important firm commensurate with the risks that its failure would pose to the financial system. Other areas include the introduction of stress testing for the system as a whole (including top-down and bottom-up stress testing); monitoring of aggregate leverage, liquidity and solvency; and analysing procyclicality and developing countercyclical measures.

40 These specific areas identified were based on, among other things, a speech by Chairman Ben S Bernanke on "Lessons of the Financial Crisis for Banking Supervision", 7 May 2009; Lord John Eatwell's "The Future of International Regulation", Friedrich-Ebert-Stiftung, April 2009; and various research papers by Claudio Borio.

In South Africa, prudential analysis of the systemic components of the financial system is conducted by the Bank and the Financial Services Board, but additional work needs to be done to ensure a more holistic approach to the inclusion of macroprudential analysis in the broader regulatory framework. In particular, and similar to many other countries, studying and determining the interconnectedness between financial institutions, markets and instruments should be considered more closely. More emphasis is being placed on systemic stress testing including cross-sectoral testing. In addition, the Bank is considering the role it should play in accomplishing system-wide macroprudential supervision and analysis.

Countering the impact of procyclicality

The existence of procyclicality in the financial system has reinforced the negative way the financial system and the real economy interact with each other, thereby undermining stability in both the financial sector and the real economy. Prudential and accounting regulations have contributed to the procyclical phenomenon. To reduce the effects of procyclicality, alternative prudential measures such as through-the-cycle approaches[41] could come to the fore more strongly in future. In addition to prudential regulatory amendments, fiscal and monetary authorities could also be called upon to implement measures that will have some countercyclical impact.

41 A through-the-cycle approach tries to capture the creditworthiness of a borrower over a longer time horizon, including the impact of normal cycles of the economy. A shorter-term measure of credit risk is known as "point-in-time".

The *Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System* includes recommendations and principles for mitigating procyclicality, covering, among other things, a bank's capital framework, loan-loss provisioning practices, and ways of dampening the adverse interaction between leverage and valuation. According to the FSF/FSB, regulators should, in general, focus more closely on ensuring the accumulation of sufficient capital and other buffers that would strengthen the resilience of the banking system in a downturn. The BCBS has developed objectives for what a countercyclical capital buffer should achieve and made some proposals on how the countercyclical buffer should operate (see Box 5 for measures proposed by the BCBS).

Box 5 Enhancements by the Basel Committee on Banking Supervision to strengthen prudential oversight

Capital buffers and better quality of capital

One of the key focus areas for the Basel Committee on Banking Supervision (BCBS) and regulators will be to ensure that banks have a solid capital base to strengthen their resilience. This would involve strengthening the capital base in the banking system by raising the overall levels of capital as well as improving the quality of capital, especially Tier 1 capital. In July 2009, the BCBS approved a package of measures to strengthen the 1996 rules governing trading book capital to capture the credit and market risk of complex trading activities and to enhance the three pillars of the Basel II framework. These measures included a stressed value-at-risk requirement, which the BCBS believes will help dampen the procyclicality of the minimum regulatory capital framework, as well as strengthening of the treatment of certain securitisation transactions in Pillar 1 by introducing minimum capital requirements.

Liquidity risk management

The current crisis revealed the weak liquidity positions and inadequate management of liquidity risk in a number of systemically significant financial institutions. It is expected that liquidity management at both institutional and systemic levels will receive renewed attention from regulatory authorities.

In September 2008 the BCBS published the *Principles for Sound Liquidity Risk Management and Supervision* (the Principles). These Principles provide, among other things, new global soundness standards for liquidity risk management, the maintenance of high-quality liquidity cushions, the identification and measurement of the full range of liquidity risks, including contingent risks, and the conduct of regular stress tests for various scenarios. The BCBS Working Group on Liquidity intends to monitor implementation of the Principles, and to develop proposals for benchmarks and tools in the second half of 2009.

The BCBS and the Committee on the Global Financial System are developing a framework for assessing system-wide liquidity risk in order to identify potential early warning indicators of the build-up of pressures on systemic liquidity. The framework could serve as a basis for developing policy options to contain system-wide funding liquidity risk. Harmonisation of international liquidity risk supervision would raise banks' resilience to liquidity stresses globally and strengthen cross-border supervision of funding liquidity.

Introduction of supplementary leverage ratios[42]

The period before the current financial crisis was characterised by historically high leverage ratios, historically low risk premiums and high volumes of assets, many of which turned out to be toxic assets. The recognition of the negative effects of excessive leverage[43] has led to proposals calling for a reduction in leverage on a system-wide and individual-firm basis in an orderly manner that will not exacerbate the crisis. Reducing leverage can be achieved by raising capital, decreasing debt and/or by selling assets to pay off debt. The BCBS has announced that it will introduce a leverage ratio to supplement the risk-based measure and help to contain the build-up of leverage in the banking system. The main elements of how a leverage ratio would work in practice have been formulated, and development work is taking place on important practical details. Calibration of a leverage ratio will be part of an impact assessment to be conducted in 2010.

Some specific capital buffer requirements have been implemented in South Africa such as prescribing a capital-adequacy ratio above the international minimum benchmark of 8 per cent[44] and prescriptions on loan-to-value ratios. South Africa's approach to procyclicality and countercyclical measures for bank capital was discussed in greater detail in the March 2009 issue of the *Financial Stability Review*. The Bank supports initiatives to improve the Basel II capital framework, including initiatives relating to the area of procyclicality.

Widening the scope of regulation

Many observers believe that gaps in financial regulation allowed financial institutions to arbitrage these shortcomings, thereby contributing to the global financial crisis. Policy-makers have reached broad consensus that the perimeters of regulation should be expanded to also cover institutions such as hedge funds and credit rating agencies

42 Leverage, at a simple level, is the ratio of total assets on balance sheet to equity. This gross balance-sheet leverage is widely used as it requires only readily available data. It can be refined further by using core regulatory capital of the bank (Tier 1 capital), divided by risk-weighted assets, or by taking into account off-balance-sheet exposures.

43 In the April 2009 issue of the *Global Financial Stability Report*, the IMF found that higher leverage ratios of debt to common equity appear to have greater potential than capital-adequacy requirements and prudential liquidity ratios to predict an impending financial crisis.

44 The minimum required capital-adequacy ratio for the banking sector has been set at 9,5 per cent before the addition of a bank specific capital add-on as part of the Pillar 2 supervisory review process.

(CRAs), as well as financial products such as over-the-counter derivatives. Although these institutions and financial products did not contribute directly to the collapse of the global financial system, they continue to play an important role in financial markets and the potential systemic risks they pose must be taken into account.

In an effort to improve the conduct of CRAs, IOSCO updated the *Code of Conduct Fundamentals for Credit Rating Agencies* (the Code of Conduct) in 2008. Regulators have put in place a formal monitoring process regarding the adoption and application of the Code of Conduct by CRAs. In order to address principles for the oversight of hedge funds, IOSCO published the *Hedge Funds Oversight Final Report* in June 2009. These principles include the compulsory registration of hedge funds, regulatory oversight of hedge fund managers and some form of oversight over the funding sources of hedge funds. Information sharing among regulators is also proposed in order to create a cohesive hedge fund regulatory regime.

The trend in other jurisdictions such as the US and European Union leans towards a more regulated environment for CRAs. Curbing any over-reliance on rating agencies in the prudential approach may in future also be followed in South Africa. The Financial Services Board is in the process of proposing how CRAs should be regulated in the South African markets. Approvals of CRAs whose ratings are used as part of the Basel II capital framework are subject to the processes prescribed by the Bank Supervision Department (BSD) of the Bank.[45]

45 Banks Act Circular 07/2007. Recognition of eligible external credit assessment institutions in terms of the amended Banks Act, 1990.

As reported in the September 2007 issue of the *Financial Stability Review*, the Financial Services Board introduced regulations governing the managers of hedge funds who are required to register and report certain information to them. The Financial Services Board intends to review the reporting and disclosure requirements for hedge fund managers in line with recommendations by IOSCO. The Financial Services Board, in conjunction with the Alternative Investment Management Association of South Africa and the Association for Savings and Investments South Africa, is investigating the possibility of extending the regulatory framework of hedge funds to include the regulation of hedge-fund products. This initiative is currently at an advanced stage and it is envisaged that it will enhance transparency in the hedge-fund sector.

Importance of contingency planning for co-ordinated crisis management

In the past, crisis management was viewed as a national issue, but with the globalisation of economies and financial markets it has now taken on an international character and financial authorities are trying to eliminate the barriers that hinder cross-border co-operation in times of crisis. The FSF/FSB issued recommendations for cross-border co-operation and crisis management in April 2009, namely *FSF Principles for Cross-border Cooperation on Crisis Management*. These recommendations aim to encourage frequent interaction and information sharing among authorities regarding institutions that could pose systemic risks regionally, as well as the structural and contingency arrangements of these institutions. Firm-specific cross-border contingency planning arrangements are encouraged. The FSB Cross-border Crisis Management Working Group is preparing a list of the main elements to be included in contingency planning discussions.

During the current financial crisis there has been an increased focus on assessing the suitability of existing deposit insurance schemes to deal with a financial crisis of this nature. This culminated in the release of the *Core Principles for Effective Deposit Insurance Systems* in June 2009. This publication by the BCBS and the International Association of Deposit Insurers is intended to serve as an important benchmark for countries to use in establishing, or reforming, deposit insurance schemes.

As detailed in the March 2009 issue of the *Financial Stability Review*, one of the recommendations of the recent IMF/World Bank Financial Sector Assessment Program (FSAP) is that South Africa should undertake a crisis simulation exercise in order to evaluate how the financial system would respond to stress. In March 2009, South Africa made some progress in laying the groundwork for crisis management preparedness in the southern African region. The Bank co-hosted the Toronto Centre for Leadership in Financial Supervision (Toronto Centre) at a conference for regional regulators and central banks. The Toronto Centre's programme was designed to create an awareness of crisis preparedness, and the importance of contingency plans and cross-border co-operation in times of crisis.

Although South African banks and the domestic financial system were not impacted by the global financial crisis to the same extent as their international counterparts, there is some indication that domestic and foreign banks[46] favour the establishment of an explicit deposit insurance scheme. These developments have contributed to the motivation for South Africa to move from the current perception of an implicit deposit insurance regime to establishing an explicit deposit insurance scheme. Consequently, work has been initiated in developing a South African deposit insurance scheme, with the role-players currently collaborating in this regard.

46 Based on the PricewaterhouseCoopers survey published in *Strategic and Emerging Issues in South African Banking*, 2009 edition.

Surveillance of cross-border firms through supervisory colleges

Supervisory colleges have been identified by the FSF/FSB as a possible mechanism for raising the level of international co-operation among supervisors. The members of the FSF/FSB (which include South Africa) have agreed that they should ensure that supervisory colleges lead to improvements in information exchange, co-operation, risk assessment and the management of home-host country issues[47] with regard to the co-ordinated supervision of internationally active banks. Best practices are still being developed, although both the Committee of European Banking Supervisors and the FSF/FSB have, in the interim, published guidance and principles for the establishment of supervisory colleges.

47 The home-host country issue refers to the division of the responsibility for supervision of cross-border entities or firms.

In South Africa some training and information sharing structures have been established that could be utilised as 'supervisory colleges'. Nevertheless, there are recommendations made by the FSF/FSB that must be considered in order to enhance the effectiveness, coverage and scope of these 'supervisory colleges', particularly in the SADC region. These recommendations would include reviewing the membership of such a supervisory college to ensure its effectiveness, its role as a conduit for sharing information on crisis management and its information-sharing protocol. The establishment of regional stability colleges, which go beyond information sharing to forums that can bolster regional financial stability, could also be considered.

Supervision of large and complex financial groups

The current financial crisis has dispelled the notion that only deposit-taking institutions can cause systemic instability. Financial authorities worldwide are in agreement that plans need to be put in place to create a consolidated and more robust framework for the supervision of large and complex financial groups, such as banks, insurance and related companies. The FSB's Joint Forum Working Group on the Differentiated Nature and Scope of Regulation has undertaken to give guidance and make recommendations on this issue. There are still challenges that could arise in the implementation of consolidated supervision, which include, for example, legislation that restricts the type of information that a supervisor can share with subsidiaries of banks and other related entities or financial authorities. Supervisors will have to co-operate in order to implement these recommendations.

48 BSD, *Annual Report 2008*. Financial sector supervision and regulation, page 12.

One of the key findings by the IMF/World Bank FSAP of 2008 was that South Africa needed to strengthen the supervision of financial conglomerates, focusing on risks that span more than one sector. The BSD has reaffirmed that it would review working relations with regulators of other sectors in pursuit of a better understanding of cross-sectoral risks with the aim of working towards the stability of all sectors of the financial system.[48]

Regulation of compensation practices

Compensation and incentive practices are regarded as a contributing factor to excessive risk-taking by financial institutions. To deal with the problem of incentives in the financial services sector, the FSF/FSB issued the *Principles for Sound Compensation Practices* (PSCP) in April 2009. The PSCP is expected to better align firms' compensation practices with long-term interests and firm-wide risks. For banks, the PSCP has been incorporated in Pillar 2 of the Capital Accord Framework (Basel II), while insurance supervisors are considering appropriate ways in which to implement these principles in their supervisory regime. Several regulators, such as the Financial Services Authority in the UK and the French Banking Commission, have issued their own set of rules/codes on compensation practices in their respective jurisdictions.

In 2008 the BSD discussed compensation policies and practices with the boards of directors of local banks. The BSD considered whether the banks had adequate measures in place to ensure that there was proper alignment of organisational objectives, both over the short and long term, and that there were controls in place to manage risk appetite within board-approved tolerance limits. Continued dialogue will take place to encourage banks to adopt best practice principles regarding incentive structures. From a broader perspective, the recently revised *Report on corporate governance principles for South Africa* (King III) specifically requires more active involvement of the board of directors in the remuneration policies of companies.

International convergence towards high-quality accounting standards

Both financial market participants and prudential regulators rely on financial reporting as an important basis for decision-making. The global financial crisis has highlighted the importance of credible financial reporting. High on the agenda of the International Accounting Standards Board (IASB) is to simplify and improve accounting for financial instruments and to consider the feasibility of an approach to move to an expected-loss-model for loan-loss provisioning.

It is envisaged that there will be a reduction in the classification and measurement categories of financial assets and liabilities to only two categories, namely (1) fair value and (2) amortised cost, and to use only one credit loss-focused impairment approach for assets that are held at amortised cost (several approaches are being used, including that of 'fair value'). An expected-loss-model approach for loan losses would have the benefit of being more forward looking and it incorporates a broader range of available credit information. Other important issues being considered by the IASB that have a bearing on financial institutions are hedge accounting for financial instruments and improved transparency of off-balance-sheet accounting. South Africa is awaiting the outcome of the IASB deliberations on new accounting practices.

Changes to the regulatory architecture

Attempts to strengthen the resilience of the financial system in the wake of the crisis have, in some countries, entailed the review of the regulatory architecture, especially with regard to the responsibility of ensuring systemic stability. Fragilities in the regulatory architecture and the need for co-ordination of efforts among financial authorities have

led to calls for a 'systemic' or 'super' regulator in some jurisdictions. For example, in the US there has been a proposal for the establishment of a Financial Services Oversight Council[49] (the Council). The Council would be tasked with several responsibilities, including the identification of emerging sources of systemic risk and sources of spillovers in financial institutions, and assisting with co-ordination of actions to address problems in supervisory and regulatory practices. Similar efforts to strengthen the regulatory infrastructure are also taking place in the UK where there are proposals for the establishment of a regulatory body that could perform the function of a 'systemic overseer'.[50] As part of the reform proposals in these jurisdictions, it would appear that the role of central banks and treasury departments in these countries may be strengthened in the supervisory process. However, there have been arguments that the perceived problems in the regulation of the financial service sectors are not the regulatory structures per se, but the regulatory gaps, the lack of effective supervision and the inability to regulate large and complex financial institutions adequately.

49 Testimony on Regulatory Restructuring by Ben S Bernanke, 24 July 2009.

50 Remarks by Andrew G Haldane at the Federal Reserve Bank of Chicago 45th Annual Conference on Reforming Financial Regulation, 8 May 2009.

Concluding remarks

Leaders of the G-20 have established a broad and comprehensive action plan, covering fiscal, monetary, organisational and regulatory reform measures to address the fragilities of the international financial system. The reform process is already under way as some of the proposed changes, such as the FSF's transition to the FSB, have been completed and a number of documents providing principles and proposals for dealing with such issues have been issued. Some of the proposed reforms will require careful analysis and consideration as the underlying issues are complex in nature.

It is, however, important to strengthen the resilience of the international financial system to ensure that similar crises do not recur in the future. In this regard, national and regional financial authorities are making positive contributions to the global regulatory reform agenda. South Africa's membership of both the G-20 and FSB has afforded its financial policy authorities the opportunity to participate and engage directly in forums where these regulatory changes/reforms and other measures are being discussed.

Management and mitigation of operational risk in the real-time gross settlement system

Introduction

Payment and settlement systems generally performed well during the recent international financial crisis and were able to cope with increased flows and volatile activity resulting from international financial markets. The stability and transparency of these systems enabled participants to transact with confidence and certainty. Payment and settlement systems have over time become more integrated, interconnected and interdependent, increasing pressure on the design and operation of these systems.

RTGS systems have in many ways succeeded in assisting with the management of financial risks in the payment and settlement environment and, therefore, reducing settlement risks and costs. New challenges in the form of operational risks have emerged as failure or unavailability of the RTGS system may threaten the stability of the financial system.

South Africa established its RTGS system in March 1998, based on the standards promoted by the Committee on Payment and Settlement Systems (CPSS) of the Bank for International Settlements (BIS). The domestic system is known as the South African

Multiple Option Settlement (SAMOS) system. This section considers the processes, controls and procedures put in place by the Bank in ensuring that the SAMOS–RTGS system is operationally resilient in order to minimise systemic risks and support financial system stability.

The South African SAMOS–RTGS system

The SAMOS–RTGS system is owned and operated by the Bank, which is also responsible for the system's daily management and administration. The SAMOS–RTGS system is regarded as the primary payment system in South Africa and was developed to comply with the BIS's *Core Principles for Systemically Important Payment Systems* (Core Principles).[51] In respect of the management of operational risks, the Bank is guided by Core Principle VII, which states that "a system should ensure a high degree of security and operational reliability and should have contingency arrangements for timely completion of daily processing".

There are various external participant systems linked to the SAMOS–RTGS system. These include the 23 settlement banks, several clearing systems for retail payments, the operator for clearing and settlement of securities and the Continuous Linked Settlement (CLS) system[52] for settlement of the rand leg of foreign-exchange market transactions for CLS-eligible currencies. Participants can access the SAMOS–RTGS system through either the Bank's proprietary message network service and/or the Society for Worldwide Interbank Financial Telecommunication (SWIFT).[53] Disruptions may originate from the central system and/or from linked external participant systems, which can trigger liquidity and credit risks that may potentially disrupt the overall stability of the financial system.

Since 2005, more than 90 per cent in terms of value of all settlement has taken place during the day with immediate finality on a gross real-time basis. This emphasises the time-criticality of settlement to ensure continuous flow in the SAMOS–RTGS system and the significance to the Bank of ensuring that the SAMOS–RTGS system and the externally linked systems are available throughout the day for settlement to be effected on time.

Managing operational risks in the SAMOS–RTGS system

The most commonly used definition of operational risk is that of the Core Principles, which states that operational risk "is the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events". Operational risks in the SAMOS–RTGS system and related infrastructure can result from hardware and software failures, human errors or fraud, telecommunications infrastructure failures or even external events such as power outages, pandemics, sabotage or natural disasters. The main objective of operational risk management is thus to ensure that the SAMOS–RTGS system is available, reliable and resilient enough to allow settlement to take place safely and timeously, and for contingency arrangements to be in place for serious disruptions. In this regard, the Bank recently introduced a contingency arrangement whereby a separate payments system team is deployed on a permanent basis at the Bank's alternate operational site. Should the primary facility be disrupted, inaccessible or completely unavailable, this team can continue with the daily SAMOS–RTGS operations.

All parties participating in the SAMOS–RTGS system, including contracted technical service providers, are bound by service level agreements that outline the roles and

51 The Core Principles are intended for use as universal guidelines to encourage the design and operation of safer and more efficient systemically important payment systems worldwide. All systemically important payment systems must comply with the Core Principles.

52 More information on the CLS system can be obtained from the March 2009 and September 2008 issues of the *Financial Stability Review*.

53 The proprietary message network service is based on the SWIFT standards, and its security features are based on international security standards and best practices.

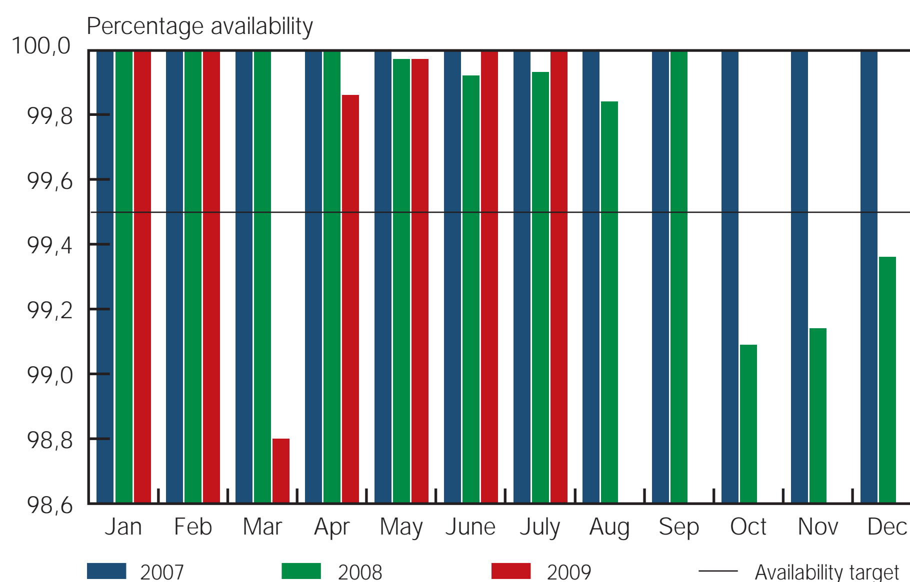
responsibilities of each party in the management and administration of the system. The operational activities of the system are monitored continuously and all disruptions are logged, recorded and followed up by technical and operational staff of the Bank. Procedures for dealing with problems, changes, communication and crisis management are documented. Continuous monitoring and management of the daily settlement processes, liquidity usage and participants' settlement flows take place.

Availability and reliability of the SAMOS–RTGS system

Failure or unavailability of the SAMOS–RTGS system is one of the key operational risks identified by the Bank. Operational disruptions that last for long periods may impact negatively on the daily settlement operations and the ability of participants to settle payment obligations, and this may trigger liquidity and other financial risks.

To date, the SAMOS–RTGS system has maintained high levels of availability and reliability. Overall, the availability target of 99,5 per cent of the SAMOS–RTGS system was met almost continuously, except for four months during the period January 2007 to July 2009. The lowest level of availability recorded over this period was during March 2009 (98,8 per cent), implying a downtime of 1,2 per cent (see Figure 19). These disruptions were mainly related to the infrastructural components of the SAMOS–RTGS system and not the core application system in itself. Downtime incidents experienced in 2008 and 2009 did not adversely affect settlement completion on either the settlement day or the cut-off times of interdependent systems such as the CLS system, the securities clearing and settlement and retail payment settlement systems.

Figure 19 Availability of the SAMOS–RGTS system and components (January 2007–July 2009)



As shown in Figures 20 and 21, the SAMOS–RTGS system experienced an abnormal increase in values and volumes processed in October 2008 as a result of the international financial crisis. Owing to continuous strategic capacity planning undertaken by the Bank, the SAMOS–RTGS system was able to perform optimally and was resilient during this period.

Figure 20 Monthly wholesale (large value) settlement volumes (January 2007–July 2009)

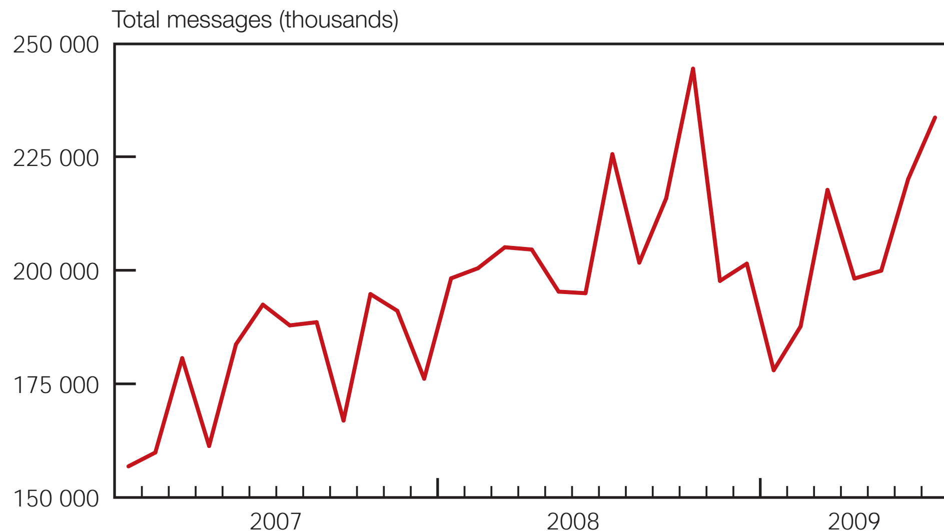
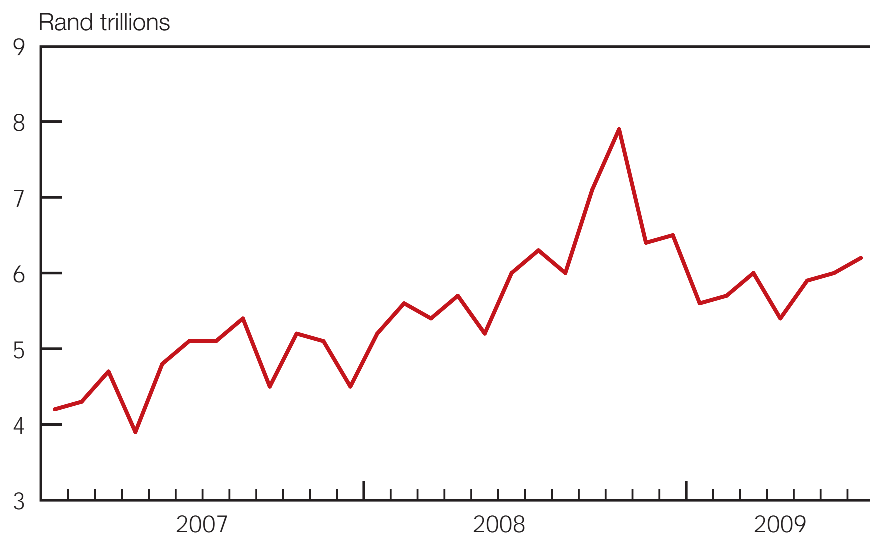


Figure 21 Monthly wholesale (large value) settlement values (January 2007–July 2009)



Availability of external participants' systems

Although the availability of the core SAMOS–RTGS system is a key element in settlement service provision, it is not sufficient for ensuring completion of immediate final settlement. Participant systems that link with the core SAMOS–RTGS system are also required to be robust in order to facilitate timeous completion of daily settlement operations, since their disruptions impact on the smooth functioning of the SAMOS–RTGS system. It is, therefore, important that adequate controls and procedures are in place for the Bank to manage operational risks stemming from these systems. Affected participant systems that link to the SAMOS–RTGS include those operated by settlement banks, payment clearing house (PCH) operators[54] and the CLS Bank.

54 A PCH operator is a system operator that clears on behalf of other SAMOS–RTGS system participants. Refer to the September 2008 issue of the *Financial Stability Review* for an in-depth discussion of the various payment system networks.

Settlement bank systems

Affected settlement bank systems include relevant back-office systems, their SAMOS–RTGS system interfaces and any other systems that participants use to initiate

or manage their payment settlements. Operational disruptions in these systems would have an impact on the ability of a settlement bank to settle on time, which may then affect liquidity flow in the overall system and culminate in other risks. Liquidity flows will be constrained when the settlement bank experiencing system problems receives funds from other participants, but is unable to effect any payment settlement for its obligations. During this period, liquidity is also constrained in the account of the settlement bank experiencing problems.

One of the principles agreed on by the Bank and the participants is that settlement banks are responsible for the risks that they introduce into the SAMOS–RTGS system. Therefore, the Bank sets technical and operational requirements that settlement banks must comply with as criteria for participation in the SAMOS–RTGS system. Each settlement bank signs an agreement with the Bank outlining the contractual obligations of both parties on the settlement service provided by the Bank. This includes the timeous communication of planned changes and contingency arrangements for facilitating settlement in the event of difficulties.

Securities settlement and retail payments clearing systems

There is an interface between the securities settlement system[55] and the SAMOS–RTGS system to facilitate delivery-versus-payment for financial market transactions. Also linked to the SAMOS–RTGS system are two automated clearing house systems responsible for the clearing and settlement of retail payments in South Africa. Settlement of the cleared transactions for various payment streams, for example, cheque, electronic funds transfer and cards, is effected by means of batches of positions for those transactions that are of low-value and high-volume.

55 STRATE, the authorised central securities depository, is responsible for the clearing and settlement of traded securities transactions in South Africa.

Agreements on service levels to manage operational risks have been concluded with the operators of these systems. These agreements cover mainly the operational responsibilities of each party and contingency arrangements in place. Regular interactions also take place with the operators to discuss operational issues, including planned system changes, and to share general information that may be relevant to operational risk management.

Continuous Linked Settlement system

The SAMOS–RTGS system is also linked to the CLS system for the settlement of the rand leg of foreign-exchange market transactions for CLS-eligible currencies. This has contributed significantly to reducing settlement risk in the South African foreign-exchange market. The availability of the SAMOS–RTGS system and the systems of participants settling directly or indirectly through the CLS system is crucial for the timely completion of daily CLS settlement. Operational disruptions from these systems may result in liquidity risks in other currencies settling in the CLS system or other SAMOS–RTGS systems having to extend their operating hours and this scenario may pose reputational risk for South Africa.[56] The Bank will continue to work with the relevant stakeholders in promoting the use of the CLS system for the settlement of foreign-exchange transactions and, more importantly, to address operational risks arising from the interdependencies of local and global payment and settlement infrastructures.

56 The Bank is party to a Coordination Manual with CLS Bank, which outlines operational responsibilities of both parties and the controls in place to manage operational disruptions.

Lessons from the global crisis – increased focus on operational risk

In South Africa the advent of a SAMOS–RTGS system has undoubtedly enabled the implementation of a securities settlement system to achieve delivery-versus-payment for financial market transactions and the system serves as a link to the CLS system for the settlement of foreign-exchange transactions to achieve payment-versus-payment. To

date, this has contributed significantly to the reduction of risks and to the stability of the financial system in South Africa as operational disruptions have been minimal and insignificant, even during the difficult periods of the global financial crisis.

The interdependence of the SAMOS–RTGS and the external domestic and global participant systems that are linked to it has highlighted the importance of operational risk management. The Bank, both as an overseer and operator of the payment and settlement system, has a responsibility to manage and mitigate the operational risks that may arise. Following recommendations in a BIS report on the interdependencies of payment and settlement systems,[57] the Bank will continue to engage the relevant stakeholders in advancing broad risk management approaches and practices and to strengthen co-ordination of risk management and crisis management efforts.

57 See www.bis.org. CPSS, "*The interdependencies of payment and settlement systems*", June 2008.

Abbreviations

AGR	augmented Guidotti ratio
Alsi	All-Share Index
AML	anti-money laundering
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BSD	Bank Supervision Department (of the Bank)
CBOE	Chicago Board Options Exchange
CBSU	Co-operative Banking Supervision Unit
CFT	combating the financing of terrorism
CLS	Continuous Linked Settlement
CPSS	Committee on Payment and Settlement Systems
CRA	credit rating agency
EDW	expanded discount window
EM	emerging market
EMBI	Emerging Markets Bond Index
EME	emerging-market economy
ESAAMLG	Eastern and Southern Africa Anti-Money Laundering Group
FATF	Financial Action Task Force
FSAP	Financial Sector Assessment Program
FSB	Financial Stability Board
FSF	Financial Stability Forum
G-8	Group of Eight
G-20	Group of Twenty
GDP	gross domestic product
GR	Guidotti ratio
IASB	International Accounting Standards Board
IEMP	index of exchange market pressure
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
LME	London Metal Exchange
MSCI	Morgan Stanley Capital International
NPC	National Planning Commission
PCH	payment clearing house
PSCP	Principles for Sound Compensation Practices
RICS	Royal Institute of Chartered Surveyors
ROA	return on assets
ROE	return on equity
RPCI	Residential Property Confidence Indicator
RTGS	real-time gross settlement
SADC	Southern African Development Community
SAMOS	South African Multiple Option Settlement
SAVI	South African Volatility Index
STERP	Short-Term Emergency Recovery Programme
SWIFT	Society for Worldwide Interbank Financial Telecommunication
the Bank	South African Reserve Bank
UK	United Kingdom
US	United States
VIX	Volatility Index (CBOE)