Financial Stability Review

March 2009

South African Reserve Bank

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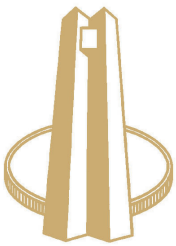

South African Reserve Bank

Data after 3 April 2009 were not considered for this publication. However, owing to the global financial crisis, selected global developments in April were also reported on. Data may include own calculations made for purposes of this publication.

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ISSN 1811-2226

Produced by the Publishing Section

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 this semi-annual *Financial Stability Review*. This 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 close links to the financial sector. It has the potential to cause significant macro-economic costs, as it interferes with production, consumption and investment, and therefore defeats national goals of broader economic growth and development.

Contents

Boxes

Figures

Tables

Introduction

This edition of the *Financial Stability Review*, which focuses mainly on the six-month period ending December 2008, 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 is followed by an analysis of the main developments in the domestic financial system and in some of the sectors that have a significant bearing on the overall 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 financial sector, as well as a discussion of some generic financial stability policy principles arising from the global financial crisis that are relevant to the South African environment. This section concludes with a discussion of the risk-reduction measures within the South African national payment system, and includes an overview of the values and volumes processed in the South African Multiple Option Settlement (SAMOS) system.

Finally, this edition of the *Financial Stability Review* also contains a note covering a South African perspective on the global financial-market turmoil and central bank intervention.

Overview

Since the release of the September 2008 *Financial Stability Review*, the global financial crisis has intensified. Many industrialised economies have fallen into recession and economic activity in emerging-market economies (EMEs) is also slowing markedly. Notwithstanding the adoption of bold and comprehensive policy measures by many countries to restore stability and market confidence, there is still some uncertainty over the severity of the impact of the global financial crisis on the real economy.

Key risks in the global recessionary environment that are feeding back into the financial system include declines in net lending to households and businesses, lower corporate profits, higher default rates, further losses in equity markets, as well as weaker property and commodity markets and volatility in currency markets. Monetary authorities in some industrialised countries have provided liquidity support and reduced their policy rates drastically to help restore confidence and increase credit extension, and several governments have announced fiscal stimulus packages to support domestic demand. But the most significant and promising development in this regard has been the Group of Twenty (G-20) leaders' Global Plan for Recovery and Reform agreed on at the London Summit in early April 2009. This agreement has brought about an expectation that, notwithstanding the many challenges that remain, this is likely to be the turning point in the road to recovery for the global economy.

The G-20 plan is likely also to benefit economic growth in EMEs, which have begun to appear much less immune to the effects of the deepening recession in industrialised economies. Global deleveraging, sharp declines in international trade and a so-called flight to quality by investors took their toll on growth and markedly reduced investors' demand for EME financial assets. The current financial crisis has been slow in reaching Africa's shores, and its direct effects are likely to be small. The longer-term and indirect impact on Africa, including the Southern African Development Community (SADC) region, could, however, be quite severe as there are a number of risks facing the continent. Fortunately, the G-20 plan has addressed some of the uncertainty regarding foreign-aid flows that existed as a result of fears of protectionism by developed countries.

South African banks maintained levels of capital well in excess of the already prudent regulatory requirement, and their degree of leverage as well as off-balance-sheet risk exposures were much lower than those of the failed banks in other countries. South African banks have primarily felt the impact of the global financial crisis indirectly through higher funding costs and increased impairments. The latter is, however, also attributable to the negative impact of the lower real economic activity on borrowers, following years of high credit growth. The banking sector was further shielded from developments in global financial markets by its limited exposure to foreign-currency-denominated assets, as well as its limited dependence on foreign-currency-denominated funding liabilities. Notwithstanding this, conditions in the South African financial sector have deteriorated in recent months. In the fourth quarter of 2008 confidence in the financial sector dropped to its lowest historical level. The decline in confidence could largely be ascribed to the impact of the global liquidity crisis as share prices on the JSE Limited (JSE) declined markedly, foreign portfolio investment flows reversed, impaired advances of banks increased and the profitability of financial institutions declined.

South African corporations are experiencing pressure as a result of the global financial turmoil and the slowdown in economic activity, and profits have generally been squeezed. The business confidence level also declined significantly, although this was ameliorated by factors such as reduced interest rates, a drop in the price of petrol

between November 2008 and February 2009, a relatively stable rand exchange rate and a confidence-boosting and stimulatory National Budget announced in February 2009.

The uncertainty in financial markets and the more pronounced slowdown in the economy have affected consumer confidence and undermined the outlook for consumption. Although there has been a moderation in the growth rate of household debt, households are still highly indebted. In general there are still many signals of financial distress in the household sector that can be exacerbated by further negative economic shocks or a sustained slowdown in the economy. Nominal house prices have started to decline amid high borrowing costs and more stringent lending criteria. There are, however, tentative signs of a recovery in the residential property market.

Developments in the financial infrastructure and regulatory environment that are likely to strengthen the resilience of the financial system include new legislative developments to improve competition, consumer protection and corporate governance. Implementation of relevant findings of the joint International Monetary Fund (IMF)/World Bank 2008 Financial Sector Assessment Program (FSAP) evaluation of the South African financial system should further contribute to the resilience of the financial system. Furthermore, because the smooth and efficient functioning of the national payment system (NPS) is a vital component of the broader financial system and is regarded as essential for supporting financial system stability, various risk-mitigation measures have been built into the South African NPS over time.

The future programme of developments to increase the robustness of the financial system will, to a large degree, be influenced by the international agenda of responses to the global financial crisis. Although the South African financial system was less affected, South Africa has been active in international forums examining the crisis, and will be expected to respond to any relevant regulatory changes deemed necessary to strengthen the global financial system. This may entail matters such as the legal mandate, role and responsibilities of authorities to support financial stability; the scope and design of the financial safety net; cross-border co-operation between regulators; countercyclical prudential requirements; and stronger macroprudential regulation and analysis.

Financial stability developments and trends

International macrofinancial developments

Many industrialised economies have recently fallen into recession and economic activity in EMEs is slowing markedly. Bold and comprehensive policy measures have been implemented by many countries to counter the effects of the global financial crisis, but there is still some uncertainty with regard to the severity of the impact on real economies and the degree of effectiveness of such policy measures.

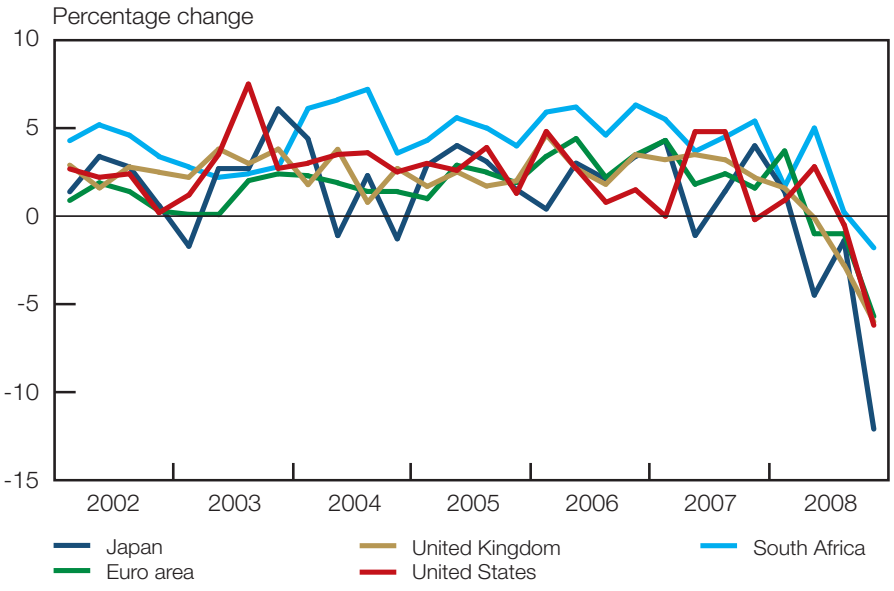
Financial and economic developments in industrialised countries

Industrialised economies such as the United States (US), the euro area, the United Kingdom (UK), other European economies, Canada, Japan, Australia and New Zealand have experienced contractions in output and, according to the IMF, these countries face a deteriorating economic outlook in 2009.

Global gross domestic product (GDP) is expected to contract by 1,3 per cent in 2009, from a positive growth rate of 3,2 per cent in 2008.[1] For advanced economies, real GDP is also expected to contract in 2009. Quarterly GDP growth in the UK, the euro area and Japan has been negative since the second quarter of 2008 and, in the US, for both the third and fourth quarters.

1 International Monetary Fund, *World Economic Outlook*, April 2009.

Figure 1 Quarterly growth in real GDP



Source: Thomson Financial Ltd (DataStream)

Key risks in a recessionary environment that could feed back into the financial system include sharper-than-expected declines in net lending to households and businesses, a fall in corporate profits, higher default rates, and further prolonged losses in equity markets, as well as declines in asset and commodity prices. At the World Economic Forum (WEF) annual meeting, a number of economic, financial and social risks stemming from the global financial crisis were discussed (see Box 1).

Box 1 Word Economic Forum Annual Meeting 2009

Discussants at the annual meeting of the World Economic Forum (WEF) in Davos, Switzerland, in January 2009 stressed the following economic, financial and social risks in the global environment stemming from the global financial crisis:

1. Business and governmental leaders face a destructive social backlash that could lead to political instability, revive protectionism and reverse the trend towards globalisation if effective solutions to the current economic crisis are not developed.
2. There were numerous signs of policy responses that were in danger of going wrong. These included efforts in the developed countries to direct fiscal stimulus funds to national producers through domestic content requirements and other protectionist measures, the withdrawal of state-supported lenders from emerging financial markets, and a reluctance to recapitalise the International Monetary Fund (IMF) and other multilateral lending institutions on the scale required by the crisis.
3. A rapidly deteriorating economic landscape in which the impact of rising unemployment, home foreclosures, bankruptcies and poverty were only beginning to be felt.
4. As governments struggle to contain the economic aftershocks of the financial meltdown in developed world credit markets, there was a real risk that steps taken to revive domestic economies could contribute, intentionally or unintentionally, to the alarming contraction in world trade volumes.
5. Failure to proceed with the long-stalled Doha Round of multilateral trade talks, which was seen to be the single most valuable step global leaders could take to keep the current economic crisis from triggering a destructive protectionist backlash.
6. Further unemployment and mass layoffs, which would further impact on consumer and business confidence.
7. Less scope for investment in alternative energy and other green technologies.

Source: Adapted from World Economic Forum, 2009. Available online at: www.weforum.org

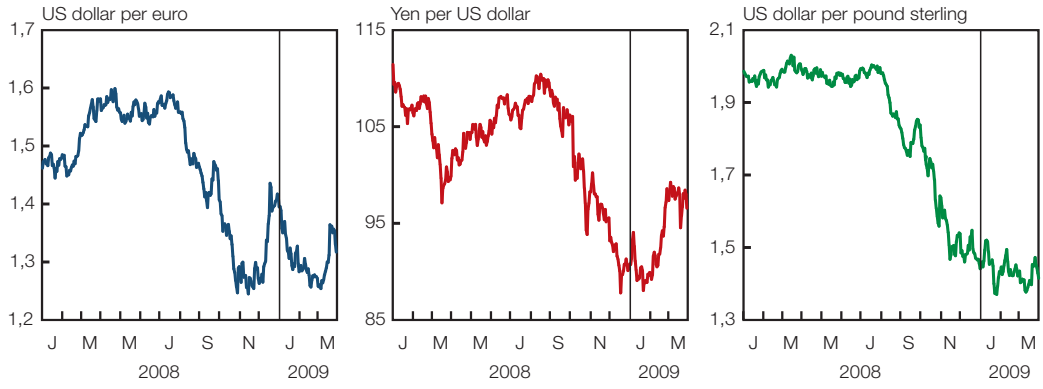
Uncertainty about the severity of the global credit crisis and economic downturn led to weak performances in global equity markets, as reflected in the Morgan Stanley Capital International (MSCI) World Index[2] (see Figure 12 on page 17) which fell by 44 per cent in 2008 and 7 per cent to date[3] in 2009.

Global bond yields declined to lower levels towards the end of 2008 as central banks reduced interest rates, investors worried about the effectiveness of the US financial rescue plans and a flight to the relative safety of government bonds accelerated. In early 2009, however, bond yields reversed slightly on concerns of a further increase in the supply of bonds as the markets had already absorbed large amounts of issuance. Looking ahead, the performance of bond yields is likely to be influenced by the pace at which the global economy recovers, credit demand rises and risk appetite improves.

2 The MSCI World Index is a free float-adjusted market capitalisation-weighted index that is designed to measure the equity market performance of 23 developed markets.

3 January–March 2009.

Figure 2 Exchange rates of the US dollar



Source: Bloomberg

Volatility in currency markets increased substantially as the global financial crisis worsened in 2008. The persistence of global uncertainty created by the financial crisis has supported the US dollar. The resilience of the US dollar is, according to analysts, not based on economic fundamentals, but on a general unwinding of positions, a flight to quality[4] and an increase in the demand for US dollars due to their safe-haven status. The Japanese yen strengthened against the US dollar in 2008, mainly as a result of the unwinding of carry trades.[5] This relative strength of the US dollar could be temporary and the possibility of rapid dollar depreciation in 2009 and beyond remains.[6]

The unwinding of global imbalances, in particular the possibility of a disorderly adjustment, has for some time been regarded as a key global financial stability risk. However, recently, global current-account imbalances have narrowed somewhat (see Figure 3) and could continue to narrow in 2009 due to declines in household consumption and business investment. The slowdown in GDP growth as a result of slowing import demand and policy plans to reduce imbalances[7] resulted in current-account surpluses diminishing in China and Japan. These adjustments are, however, accompanied by heightened risk aversion, significant declines in real-estate, financial asset and oil prices, and declines in capital flows to high-yielding EMEs, causing adjustments to be disorderly and presenting downside risks to global financial markets.

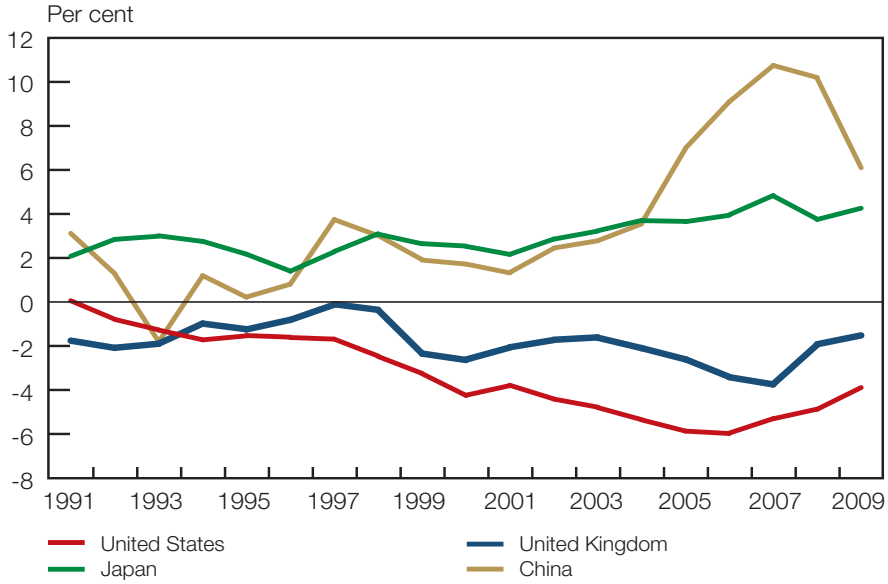
4 Flight to quality is when investors sell what they perceive to be higher-risk investments and purchase what they perceive to be safer investments, such as US Treasury bills.

5 Carry trade takes place when investors borrow funds at very low interest rates to buy high-yielding assets in another currency that yields higher interest rates. The process reverses ('unwinds') when the borrowed currency strengthens (or interest rates increase) and investors sell the risky assets.

6 World Bank, *Global Economic Prospects,* 2009.

7 Policy plans include revaluating currencies, adjusting interest rates, intervening in foreign-exchange markets, changing capital-account regulations, adjusting fiscal policy and tightening prudential regulations.

Figure 3 Current-account balances as a percentage of GDP

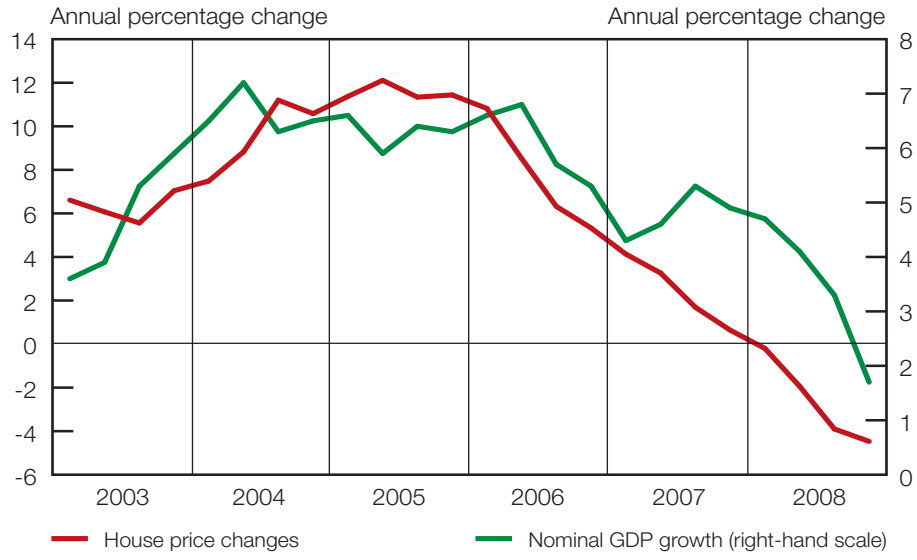


Source: Thomson Financial Ltd (DataStream)

The US housing market has been the epicentre of the financial crisis, and house prices are expected to decline further and only bottom out in 2010. The Case-Shillers futures price index, which measures developments in the largest US cities, indicates that house prices, which were down by about 19 per cent year on year in December 2008, are expected to drop to a level that is more than 30 per cent below the peak recorded in mid-2006, before they begin to stabilise.[8] Similarly, in the euro area and in the UK the outlook remains negative.

8 European Central Bank, *Financial Stability Review*, December 2008.

Figure 4 Annual house price changes and nominal GDP growth in the US



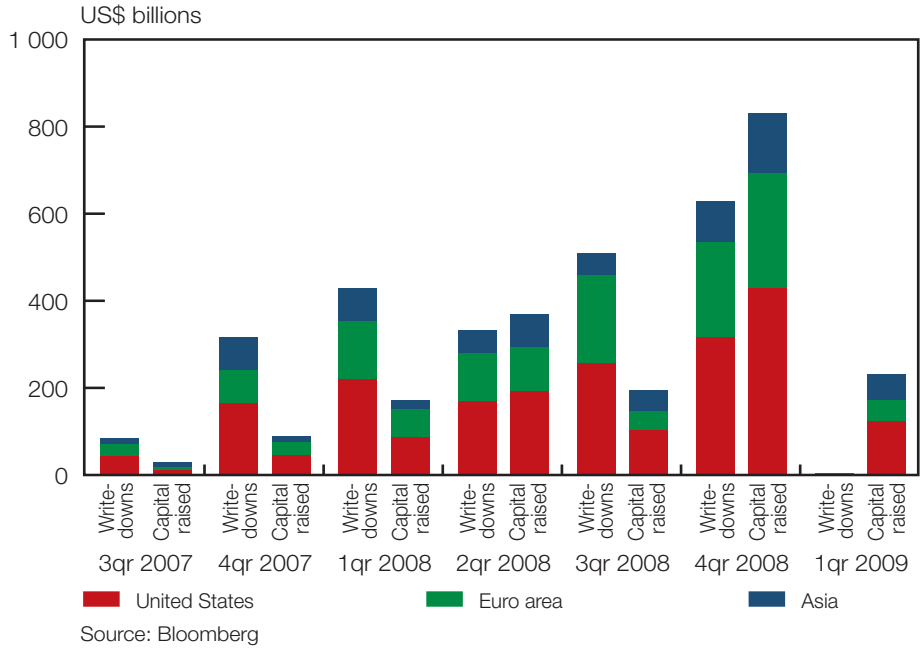
Source: Thomson Financial Ltd (DataStream)

Credit losses associated with the sub-prime mortgage crisis, according to Bloomberg, continue to mount and estimates of total bank losses are currently about US$1,291 trillion, with banks having to raise in total about US$1,114 trillion in capital (see Figure 5). Further deterioration in housing markets could prolong the recession in industrial countries, and cause further weakening of financial institutions involved in housing finance and other asset-backed lending and related products. Despite various rescue packages from governments to some of the world's biggest banks, there still appears to be concern about further possible bank failures.[9] Policy efforts through liquidity support, deposit insurance and recapitalisation schemes might have addressed some immediate threats to financial stability, but these efforts have not resolved the uncertainty about the long-term solvency of financial institutions. Furthermore, the process of loss recognition and restructuring of bad loans is still incomplete.[10]

9 Bloomberg, *Global Confidence Drops as Economies Crumble, Bailouts Needed*. 11 March 2009.

10 IMF, *World Economic Outlook Update*, January 2009.

Figure 5 Credit writedowns and capital raised by the world's biggest banks and securities firms



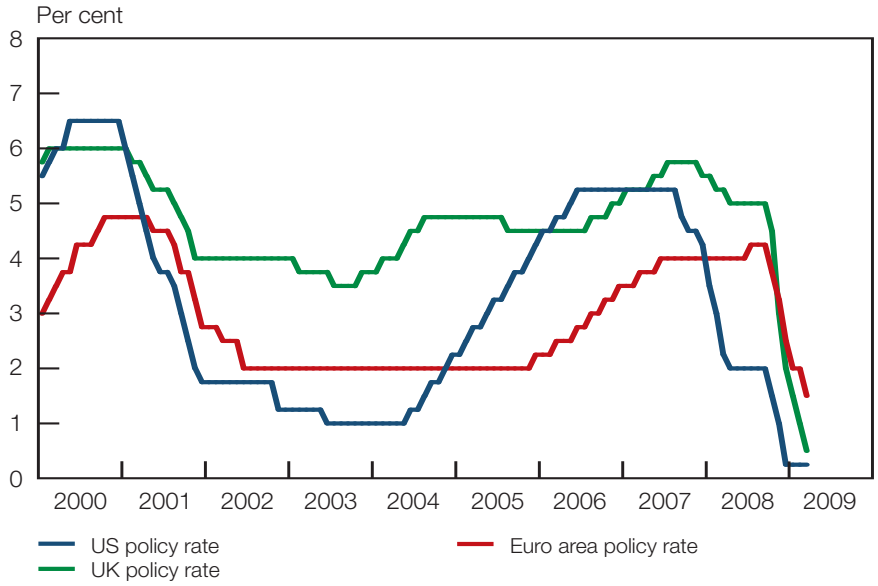
Source: Bloomberg

In reaction to the deteriorating global outlook, central banks in advanced economies have taken strong actions to cut policy rates (see Figure 6) and raise credit extension.[11] While the US and Japan are already close to a zero interest rate policy, other industrialised economies could also move in that direction in 2009. In addition, attention has turned to the use of fiscal stimulus packages to support domestic demand, and several countries, including the US, China and various European countries, have announced such plans. The IMF recommended that fiscal measures be diversified (including tax and spending measures) and that they should total about 2 per cent of global GDP.[12]

11 For a more comprehensive discussion of actions by central banks, see the note on a South African perspective on the global financial market turmoil and central bank intervention in this edition of the *Financial Stability Review*.

12 IMF, *IMF Spells Out Need for Global Fiscal Stimulus*, December, 2008.

Figure 6 Central banks' policy rate responses to the global crisis



Source: Statistical information as published by various central banks

A significant recent development in this regard was the London Summit of the G-20 leaders from developed, emerging and developing economies, as well as key international institutions in April 2009. The agreement reached at the summit constitutes the most comprehensive package of co-ordinated initiatives and positive commitment thereto since the onset of the crisis. This has brought about an expectation that, notwithstanding the many challenges that remain, this is likely to be the turning point in the process of recovery (see Box 2).

Box 2 Group of Twenty (G-20) London Summit – April 2009

G-20 leaders faced an unprecedented range of challenges, which included averting a global economic recession and restoring economic growth in the short term, while reshaping the financial system, preserving the world trading system and laying the foundation for a sustainable recovery. The objective of the summit was to take collective action and come up with a global plan for economic recovery and reform. The main initiatives agreed upon were:

1. Leaders reaffirmed their commitment to working together to restore growth and jobs, while preserving long-term fiscal sustainability. They agreed on actions to accelerate the return-to-trend growth and called on the International Monetary Fund (IMF) to regularly assess the actions taken and the global actions required. The G-20 undertook to make available an additional US$1,1 trillion of support to help the global economy through the crisis and to restore credit, growth and jobs. Most of this will be provided through the international financial institutions, that is, the IMF, World Bank and other multilateral development banks (MDBs).

2. Leaders agreed to strengthen the financial system by putting in place a better and more credible system of surveillance and regulation to take account of macroprudential risks and prevent excess leveraging, including (for the first time) regulation and oversight of large hedge funds and credit rating agencies. They also agreed on actions to tackle non-co-operative jurisdictions and common principles for executive remuneration.
3. Leaders agreed to fund and reform the international financial institutions to overcome crises and prevent future ones. They made available an additional US$850 billion in resources through the international financial institutions, including a US$500 billion expansion of the IMF's resources, a special drawing rights allocation of US$250 billion, and at least US$100 billion in additional lending from MDBs.
4. The G-20 agreed not to resort to protectionism and proposed adopting a transparent monitoring mechanism to take measures that promoted trade. They made available US$250 billion to halt the slowdown in trade finance, which facilitates up to 90 per cent of world trade.
5. Leaders reaffirmed their commitment to meeting the Millennium Development Goals and delivering on development aid pledges. They made available US$50 billion to low-income countries, including through the proceeds of agreed IMF gold sales, and further support to low-income countries by the IMF. They also called on the United Nations to establish an effective mechanism to monitor the impact of the crisis on the poorest and most vulnerable countries.

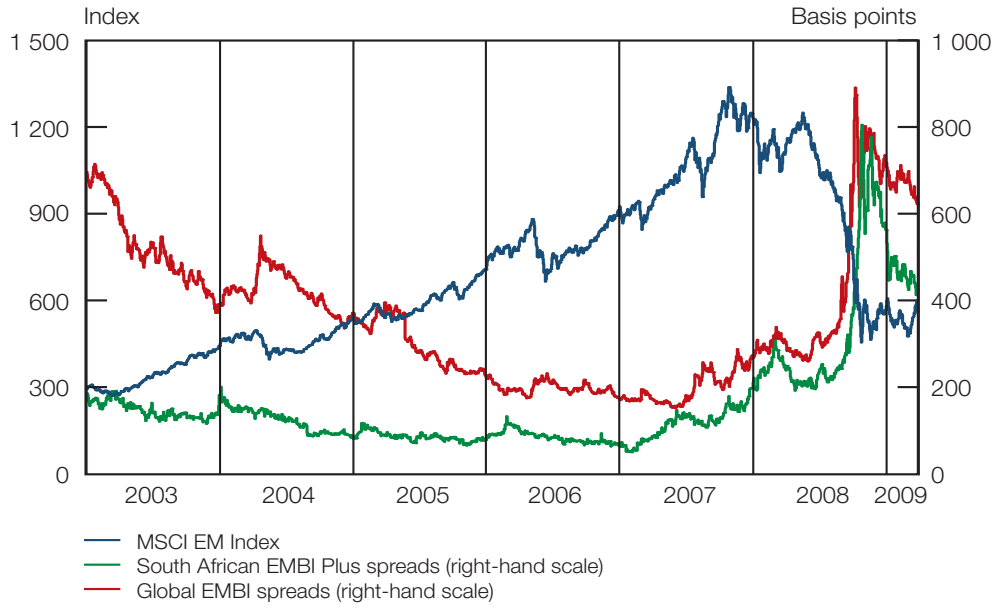
Source: Adapted from G-20 Communiqué, 2009. Available online at: www.londonsummit.gov.uk

Financial and economic developments in emerging-market economies

Despite strong performances over the past number of years, EMEs have begun to appear much less immune to the effects of the deepening recession in industrialised economies. Global deleveraging,[13] deterioration in trade and a so-called flight to quality by investors took their toll on growth, and markedly reduced investors' exposure to EME financial assets. A decline and/or sharp reversal in capital flows to EMEs also added to ongoing volatility in financial markets. EME equity markets, as measured by the MSCI EM Index, lost 54 per cent of their market capitalisation (see Figure 7) in 2008. Global Emerging Markets Bond Index (EMBI) spreads widened markedly in 2008 and South Africa's sovereign bond spreads followed a similar pattern. In the year to date, however, these spreads narrowed somewhat on improved risk appetite and slightly higher US Treasury bill yields.

13 'Deleveraging' refers to the process whereby financial institutions attempt to improve their balance-sheet structures rapidly by reducing external borrowings relative to assets. To do this in the short term often involves selling assets at depressed prices, making the financial system vulnerable to a self-reinforcing negative credit cycle.

Figure 7 MSCI EM Index, EMBI global spreads and South African EMBI Plus spreads



Sources: Bloomberg and JPMorgan

Looking ahead, the IMF expects economic growth in EMEs to slow to 1,6 per cent in 2009 (from 6,1 per cent in 2008). A sharp economic downturn in EMEs could exacerbate the global downturn and lead to balance-of-payments problems and sovereign defaults. The so-called decoupling theory[14] no longer seems convincing, even for large EMEs such as China where hopes were pinned on it being able to sustain global growth. Given the importance of China and its net creditor position with respect to the US, a sharp slowdown in GDP growth in China could have a significant impact on the already-weak global economy. A recent Merrill Lynch Survey of Fund Managers,[15] however, showed that fears of a prolonged slowdown in China appear to be fading. The G-20 plan for recovery and reform reported on earlier is clearly designed also to benefit EMEs and developing countries, and to restore them as potential engines of growth.

14 The 'decoupling theory' suggests that EMEs will decouple from the US economy and remain buoyant even during a US recession as a result of strong GDP growth in EMEs such as China and India.

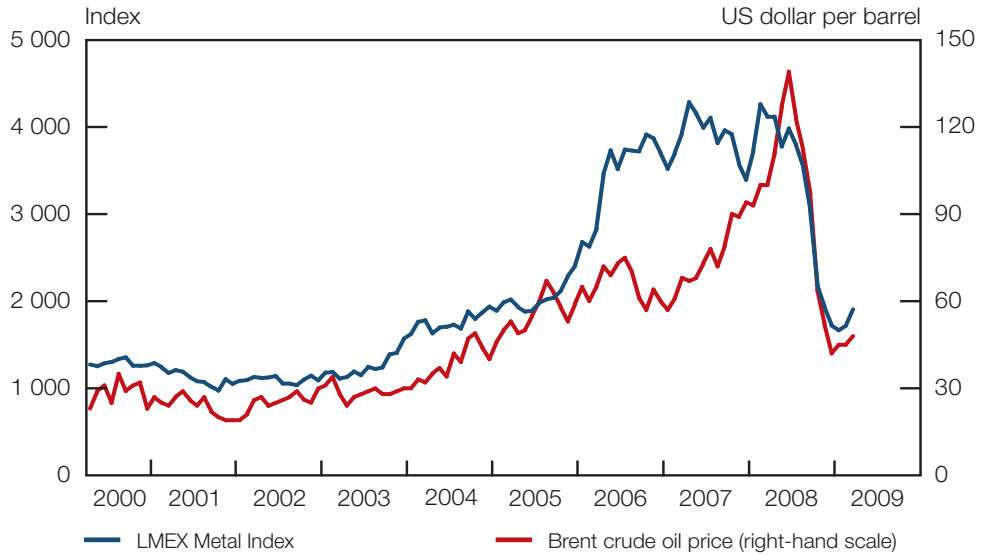
15 *Merrill Lynch Fund Manager Survey Finds Chinese Economic Optimism Fuelling Improved Growth Outlook*. Available online at: http://ml.com, 18 February 2009.

Commodity prices have been extremely volatile during 2008 and early 2009, creating a very uncertain operating environment for commodity importers and exporters. For instance, sharp declines in commodity prices could cause supply-side constraints, increased lay-offs and more credit defaults, thereby impacting negatively on financial system stability.

Since the middle of 2008, commodity prices have recorded sharp declines as the global growth outlook deteriorated and the US dollar appreciated. For the year as a whole, the Reuters/Jefferies Commodity Research Bureau (CRB) Index[16] fell by 36 per cent. The price of Brent crude oil plunged by 56 per cent in 2008, mainly due to weaker global demand prospects and rising stock levels (see Figure 8). More recently, heightened concerns about geopolitical issues (especially in Africa, the Middle East and Russia), decisions by the Organization of the Petroleum Exporting Countries (OPEC) to reduce production and early indications that central bank actions to alleviate the effects of the financial crisis may succeed provided some support to oil prices. The price of Brent crude oil rose by 14 per cent in the year to date and is currently trading around US$50 per barrel.

16 The CRB Index serves as a measure of 19 global commodity futures prices, which include soft commodities, energy, grains and oil seeds, precious metals, livestock, industrial metals, and base metals.

Figure 8 LMEX Index and Brent crude oil price



Source: Bloomberg

Base metal prices continued to fall due to weaker global manufacturing and industrial activity. This was reflected in the London Metal Exchange[17] (LMEX) Index which fell by 49 per cent in 2008. Food prices also followed the downward trend and the United Nations (UN) Food and Agriculture Organization (FAO) World Food Price Index[18] fell by 22 per cent in 2008 after rising by 36 per cent in 2007. Conversely, the gold price showed some resilience due to its safe-haven status as a hedge against economic uncertainty. In 2008, the gold price in US dollar terms rose by 6 per cent and in the year to date it increased by a further 4 per cent.

17 The LMEX Index is calculated once a day on the basis of closing prices of the six primary metals: copper, aluminium, lead, tin, zinc and nickel.

18 The UN FAO World Food Price Index is a constant trade-weighted average of over 60 agricultural commodity prices quoted internationally.

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

Although the current financial crisis has been slow in reaching Africa's shores, its indirect impact could be quite severe.[19] The direct effects of the crisis are most likely to be of a smaller magnitude as Africa remains less integrated in global financial markets. However, countries with well-developed stock exchanges are already feeling the negative effects due to increased global risk aversion.

19 IMF, *IMF Pledges to Help Africa get Through Global Crisis*, 10 March 2009.

There are a number of risks facing the continent as a result of the financial crisis, namely the risk of private capital flow reversal, a fiscal risk due to declining revenue, a decline in GDP growth as a result of a slowing demand for exports, and liquidity risk due to the weakening of global financial markets.[20] African countries, many of which are already experiencing high energy and food prices, are faced with the severe threat of growth deceleration, which could undermine the progress made in alleviating poverty, improving the living standards of the population and attaining the continent's Millennium Development Goals. Fortunately, the recent G-20 plan for recovery and reform has addressed some of the uncertainty regarding foreign-aid flows that existed as a result of fears of protectionism by developed countries.

20 African Development Bank Group, *Impact of the Financial Crisis on African Economies: An Interim Assessment*, January 2009.

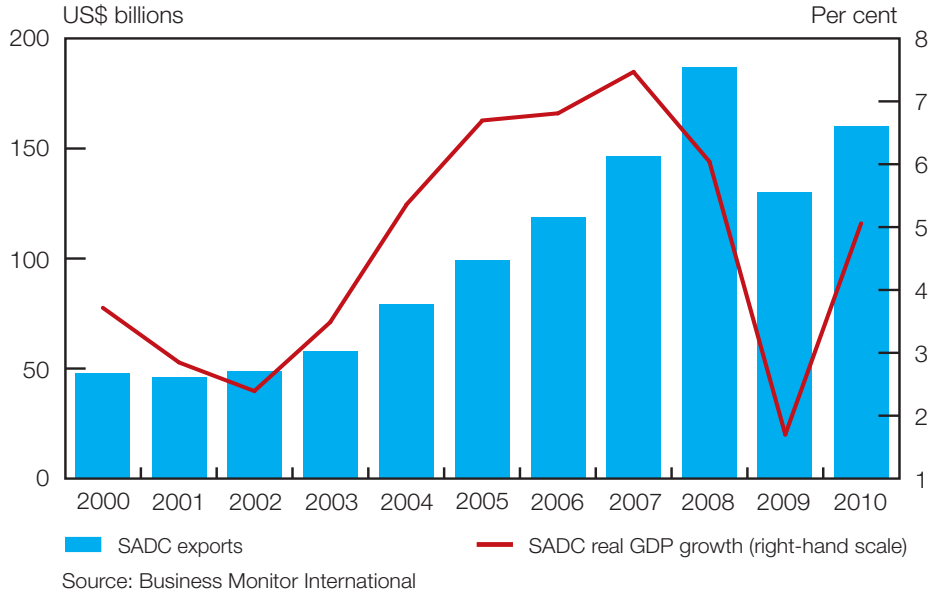
In recent years countries in sub-Saharan Africa have experienced rapid economic expansion. However, the global financial crisis has impacted negatively on the region's outlook. According to the International Centre for Trade and Sustainable Development (ICTSD), the medium-term impact is likely to be severe, and the impact will differ across countries in the region depending on their production and export structure, exposure to the international financial system, and capacity to cushion the negative repercussions of the crisis.[21]

21 *Sub-Saharan Africa and the Global Financial Crisis*. Available online at: http://ictsd.net, December 2008.

As with Africa, the direct effects on SADC countries are likely to be limited despite the global economy facing a possible recession. SADC countries will also be indirectly impacted by the global economic slowdown through weaker external demand and lower commodity prices, which will result in declines in exports. Lower export revenues will affect government and corporate finances negatively. GDP growth in the SADC region is expected to slow from 7,5 per cent in 2007 to 6,0 per cent in 2008 and to 1,7 per cent in 2009.[22]

22 Business Monitor International, *Business Monitor International Report*: *Africa in 2009*, February 2009.

Figure 9 SADC real GDP growth and exports



Source: Business Monitor International

Business Monitor International (BMI) has evaluated the economic and political risk situation for certain countries in the SADC region. According to this assessment, there are a number of countries in the region that are viewed as having considerable economic risk and being vulnerable to new shocks, either domestic or external. Economic imbalances due to weak economic structures and policies are expected to remain in some SADC countries. In Zimbabwe, for example, economic activity is still deteriorating and the country continues to face shortages of food, fuel and other basic commodities.

Domestic macroprudential analysis

This section provides an analysis of the main developments in the South African financial system and its counterparts, the corporate and household sectors. Developments in these sectors have a significant bearing on the stability of the domestic financial system. The section also analyses trends in selected financial soundness indicators relating to the external sector and the real-estate market. An overview of the level of real economic activity is given at the outset.

Indicators of real economic activity

The overall level of activity in the real economy dropped in the fourth quarter of 2008. Annual declines were recorded in building plans passed, new vehicle and passenger car sales, and electricity generated. Utilisation of production capacity also dropped from 85 per cent in September 2008 to 83 per cent in December. Relatively higher lending rates, coupled with an uncertain outlook following developments in the global financial markets, may have contributed to the decline in real economic activity.

Table 1 Selected indicators of real economic activity[1]
Annual percentage change, unless indicated otherwise

Activity indicators	2007	2008			
	Dec	Mar	Jun	Sep	Dec
Building plans passed	-15,0	-7,3	-24,9	-20,2	-32,6
Buildings completed	-14,5	9,2	-6,1	5,3	2,1
Retail sales	-0,5	-1,3	-0,4	-4,7	0,5
Wholesale trade sales	2,3	10,5	6,4	2,6	4,1
New vehicle sales	-20,0	-11,0	-21,7	-24,6	-30,8
New passenger car sales[2]	-19,0	-22,9	-25,2	-21,5	-24,7
Electric current generated	3,7	-2,1	-3,2	-0,5	-10,4
Utilisation of production capacity (percentage)[3]	87,2	84,8	84,8	85,0	83,0

1 At constant 2000 prices and seasonally adjusted, unless indicated otherwise
2 Measured in volume terms
3 Utilisation of production capacity by large enterprises in the manufacturing industry. Quarters run from February to November. The data in the table are from November 2007 to November 2008

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

The impact of the global economic slowdown on real economic activity in South Africa is also evident in the retrenchments and business closures particularly in mining and manufacturing. In the motor industry, for example, the drop in domestic and especially export demand and the resulting production cuts are a reflection of a sales slump in the rest of the world.

Financial-sector developments

In the third quarter of 2008 the ratio of equity market capitalisation to GDP dropped substantially even though it was still high. A further drop was recorded in the fourth quarter, which was in line with developments in the global equity markets. No major changes were recorded with regard to the degree of monetisation in the system (the ratio of broad money supply to GDP) and bank intermediation (the ratio of private-sector credit to GDP) in the third and fourth quarters, partly reflecting relatively tight credit conditions coupled with still relatively high lending rates.

Table 2 Selected indicators of financial-sector development
Per cent

	2007	2008			
	Dec	Mar	Jun	Sep	Dec
Equity market size					
Market capitalisation to GDP	269,22	263,95	262,87	195,73	193,46
Turnover ratio (liquidity)	35,80	48,30	46,40	67,70	41,30
Equity traded to GDP	9,65	12,74	12,13	13,73	7,52
Monetisation					
M3 to GDP	79,46	78,96	80,63	79,45	81,28
Bank assets to GDP	120,36	128,81	130,40	125,97	134,91
Central bank assets to GDP	11,68	13,70	12,85	13,28	14,53
Deposits to GDP	87,69	87,83	88,60	87,86	89,01
Bank intermediation					
Private-sector credit to GDP	81,41	83,88	85,03	83,28	83,97
Private-sector credit to total credit	100,65	99,56	99,98	98,49	97,30
Private-sector credit to deposits	92,83	95,50	95,97	94,78	94,34

Sources: South African Reserve Bank and JSE Limited

Level of confidence in the financial sector

In the fourth quarter of 2008 confidence in the financial sector, as measured by the Ernst & Young Financial Services Index,[23] dropped to its lowest level since the index's inception. The drop, which largely stemmed from a worsening level of confidence in the areas of investment banking and specialised finance, was largely ascribed to the impact of the global liquidity crisis. The confidence level of investment managers also declined. Volatile global capital markets and a weak investment banking environment pushed business volumes lower, which affected fee income negatively. Investment income also dropped due to the poor performance of the equity markets.

23 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 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 3 Financial Services Index and its components

	2007	2008			
	4th qr	1st qr	2nd qr	3rd qr	4th qr
Financial Services Index	98	84	70	58	50
Retail banking confidence index	95	78	57	43	53
Investment banking and specialised finance confidence index	100	79	79	81	46
Investment management confidence index	97	77	81	57	49
Life insurance confidence index	100	100	63	51	53

Sources: Bureau for Economic Research and Ernst & Young

Following a large drop in the third quarter of 2008, the retail banking confidence level rose in the fourth quarter of the same year. However, it is still low compared to historical levels. The increase was recorded despite declining interest income resulting from declining growth in credit extension on the back of tight lending standards. Falling income and rising expenditure led to a contraction in net profit of retail banks.

The confidence level of life insurers was supported by rising premium income, although this is expected to slow due to adjustments made following a new commission payment method with effect from January 2009.[24]

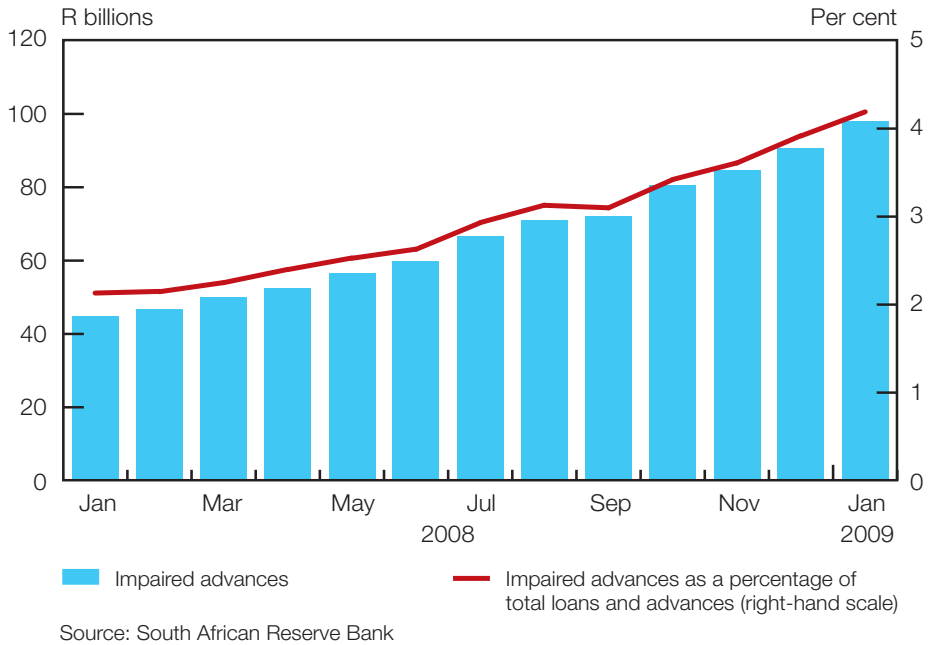
24 The new method is such that a sizeable portion of broker remuneration is paid over the life of the policy instead of it being paid upfront as had been the case in the past.

Banking sector

South African banks have been largely protected against the direct effects of the global financial crisis. Domestic banks have not invested as heavily in high-risk securities or complex instruments; have maintained a mostly traditional and relatively conservative banking model; have maintained relatively high lending standards; have enjoyed high profitability for a number of years and have maintained high capital levels; have low levels of foreign funding; and have limited activity outside the African continent.

Banks have primarily felt the impact of the global financial crisis indirectly through higher funding costs and increased impairments due to retrenchments and the negative impact of lower real economic activity on corporate borrowers. The magnitude of the indirect impact is reflected in part in the sharp decline in the share prices of banks (see Table 4). Increased signs of pressure build-up in the banking sector were evident in the second half of 2008. In January 2009 impaired advances had increased by 118 per cent compared with a year earlier, and have increased by 47 per cent since July 2008 (see Figure 10).

Figure 10 Impaired advances



Source: South African Reserve Bank

Nevertheless, the increase in impaired advances is not seen as a major systemic threat, since it was to be expected after such a prolonged period of extensive credit growth in recent years. Banks remain well capitalised and profitable, and the ratio of impaired advances to total advances is still well below the worst of the previous credit cycle. Possibly of more concern is the impact of the acute procyclical behaviour of banks, which have evidently tightened their lending standards significantly. For example,

according to anecdotal information, mortgage lenders are requiring borrower equity of up to 30 per cent of the purchase price of property in some cases.

Table 4 Selected indicators of the South African banking sector[1]
Per cent, unless indicated otherwise

	2008					
	Jul	Aug	Sep	Oct	Nov	Dec
Market share (top four banks)	83,48	83,89	83,79	82,90	83,72	84,42
Gini concentration index	83,33	83,51	83,55	83,43	83,68	84,04
Herfindahl index of concentration (H-index)	0,182	0,184	0,185	0,182	0,185	0,189
Banks' share prices (year-on-year percentage change)	-30,09	-20,37	-18,74	-34,80	-33,98	-21,35
Capital adequacy						
Capital-adequacy ratio	12,75	12,79	12,75	12,63	12,69	13,02
Regulatory Tier 1 capital to risk-weighted assets	9,72	9,74	9,74	9,74	9,93	10,23
Credit risk						
Total advances (R billion)	2 271	2 264	2 323	2 355	2 338	2 316
Impaired advances (R billion)	66,65	70,96	72,09	80,52	84,47	90,81
Impaired advances to total advances	2,93	3,13	3,10	3,42	3,61	3,92
Specific credit impairments (R billion)	23,53	25,04	26,26	27,73	27,63	28,50
Specific credit impairments to impaired advances	35,31	35,29	36,42	34,44	32,71	31,38
Specific credit impairments to gross loans and advances	1,04	1,11	1,13	1,18	1,18	1,23
Profitability						
Return on assets (risk-weighted assets)	1,76	1,70	2,00	1,87	2,16	3,16
Return on assets (interest-earning assets)	1,20	1,16	1,33	1,24	1,41	2,14
Return on equity	17,03	16,46	19,27	17,90	19,65	28,71
Interest margin to gross income	55,50	53,24	53,16	51,61	50,52	44,64
Operating expenses to gross income	52,48	49,73	47,62	50,90	49,82	42,21
Liquidity						
Liquid assets to total assets (liquid-asset ratio)	4,68	4,87	4,78	4,52	4,99	4,95
Liquid assets to short-term liabilities	8,59	9,11	9,06	8,93	10,29	9,79
Effective net open position in foreign exchange to capital and reserve funds	-0,18	2,01	2,63	1,22	0,61	0,46

1 Data updated on 10 March 2009. Data collection forms were changed with the implementation of Basel II in January 2008 and the term 'non-performing loans' was replaced with the term 'impaired advances', which has a more stringent definition and results in a technical increase from non-performing loans to impaired advances. Impaired advances are advances in respect of which the bank has raised a specific credit impairment

Source: South African Reserve Bank

At the end of the fourth quarter of 2008 most of the credit extended to the private sector was granted to the private household sector, followed by the financial intermediation and insurance sector. The extent of banks' exposure to some of the most cyclical sectors (i.e., mining and quarrying, manufacturing, construction and real estate) remains fairly low and amounts to an aggregated 13,2 per cent of credit to the private sector.

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

	2008		
	Jun	Sep	Dec
Agriculture, hunting, forestry and fishing	1,39	1,37	1,20
Mining and quarrying	2,90	2,98	2,70
Manufacturing	4,30	4,40	4,43
Electricity, gas and water supply	0,53	0,78	0,71
Construction	1,27	1,31	1,28
Wholesale and retail trade, hotels and restaurants	4,24	4,61	3,60
Transport, storage and communication	2,42	2,43	2,36
Financial intermediation and insurance	25,49	24,79	25,39
Real estate	2,97	3,14	4,83
Business services	4,74	4,60	5,65
Community, social and personal services	3,24	3,27	4,14
Private households	36,65	36,63	36,47
Other	9,86	9,69	7,24

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

Source: South African Reserve Bank

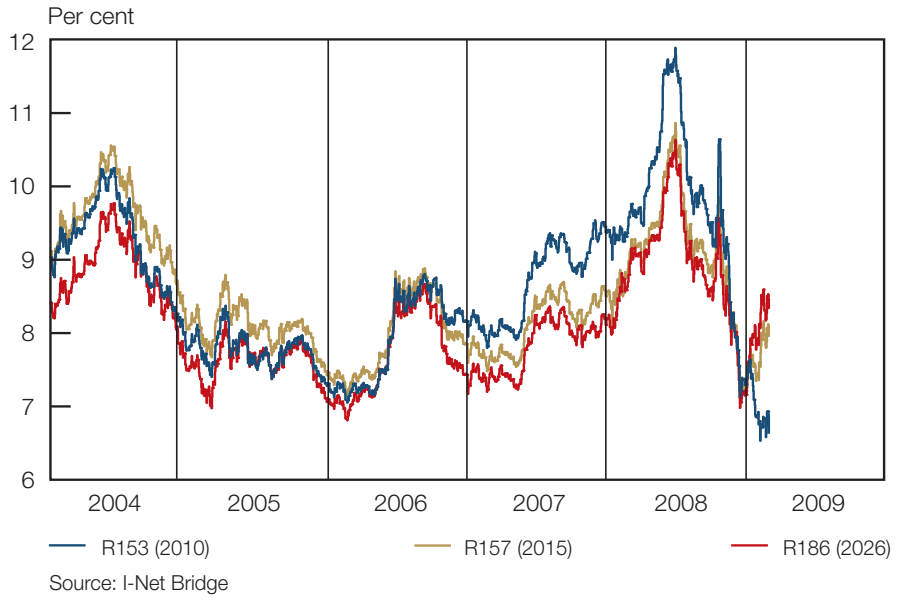
Bond, equity and currency markets

In the second half of 2008 domestic government bond yields declined (see Figure 11), reflecting signs of a deepening global recession, an easing in inflationary pressure, interest rate cuts and continued weakening of the equity markets. Since January 2009, the yield on the short-dated R153 bond has declined further as a result of the appreciation of the rand, moderation in domestic inflation and expectations of further interest rate cuts following a cumulative 250 basis point cut since December 2008. The upward trend in longer-term bond yields since December 2008 can be attributed to the depreciation of the rand, which resulted in speculation about a possible rating downgrade and less demand for assets that were perceived as being riskier, as the global economic slowdown deepened.

As the global financial crisis intensified and started to dampen economic growth in the second half of 2008, the domestic equity market continued its downward trend (see Figure 12). Accelerated deleveraging, failures and near-failures of large financial institutions in the industrial countries, coupled with the weakening of global economic fundamentals, have resulted in falling asset prices and difficult financial conditions. As concerns over the risk of a global recession gathered momentum and economic growth in EMEs slowed, more pronounced declines in financial asset values and increases in volatility ensued.

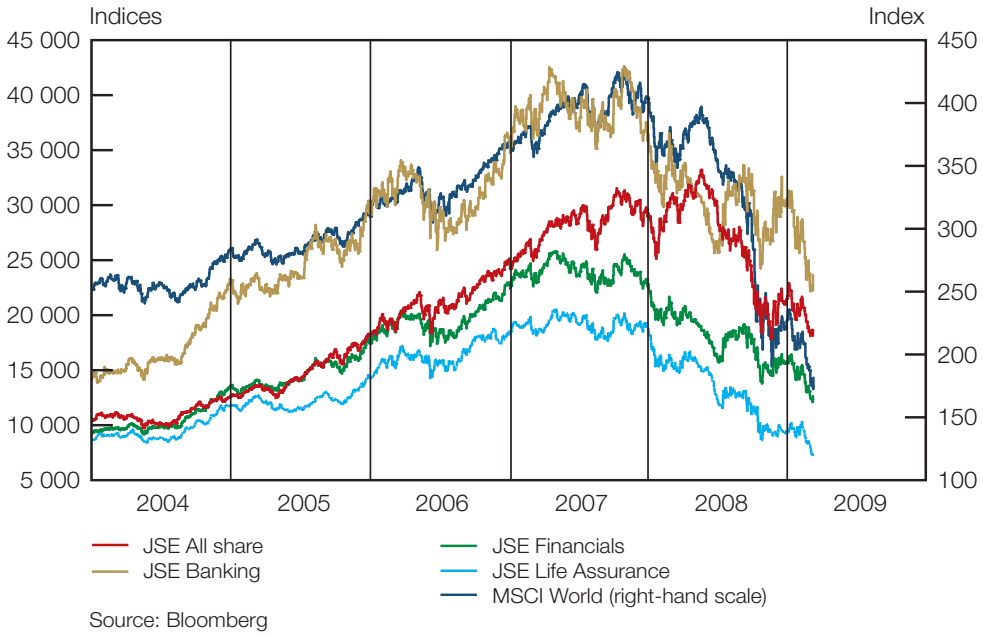
By mid-March 2009, the local equity market was down by about 44 per cent from its May 2008 peak of over 33 000 index points. The financials and the life assurance sub-indices have suffered even steeper declines. In the light of the domestic and global economic outlook, and the mutually reinforcing negative feedback loop, financial market conditions are generally expected to remain fragile.

Figure 11 Selected domestic bond yields



Source: I-Net Bridge

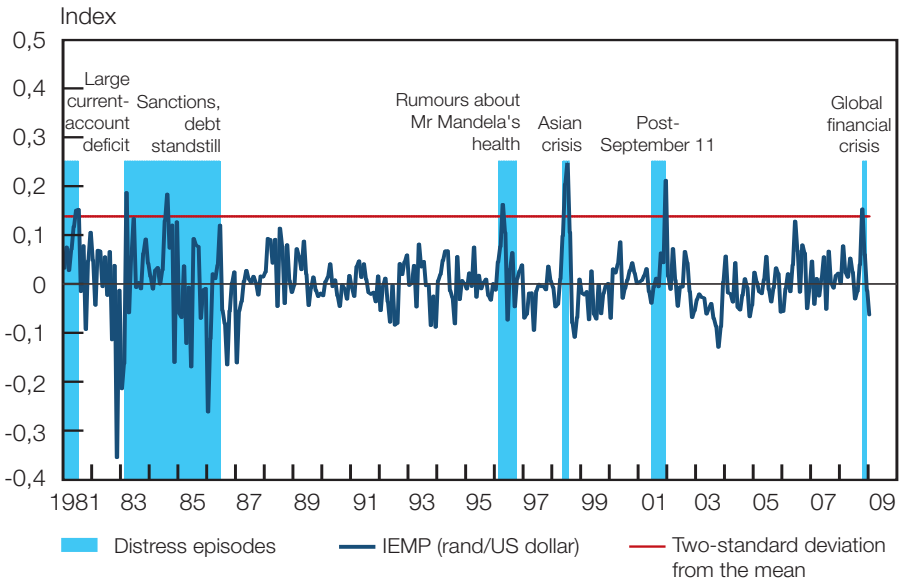
Figure 12 Share price indices



Source: Bloomberg

The index of exchange market pressure (IEMP) shows that in October 2008 the rand was under considerable pressure in the local foreign-exchange market, as the IEMP momentarily breached the stress threshold (see Figure 13). The pressure can be ascribed to the contagion effect from the global financial crisis, which has subsequently subsided somewhat as the IEMP has again been below the threshold since November 2008.

Figure 13 Index of exchange market pressure[1]



[1] The IEMP pressure is usually defined as 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 in the local currency and vice versa

Source: South African Reserve Bank

External sector

25 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.

The Guidotti ratio (GR), which is the ratio of foreign-exchange reserves to short-term external debt, improved in the fourth quarter of 2008 after having been deteriorating since the first quarter of 2008. The improvement in the GR was due to short-term debt falling by a greater proportion than the decline in foreign-exchange reserves. Available foreign-exchange reserves were above the country's short-term foreign debt by about 16 percentage points. The augmented Guidotti ratio (AGR)[25] also improved during the same period and was at 0,77, suggesting that existing foreign-exchange reserves were about 23 percentage points below the country's total external financing requirements.

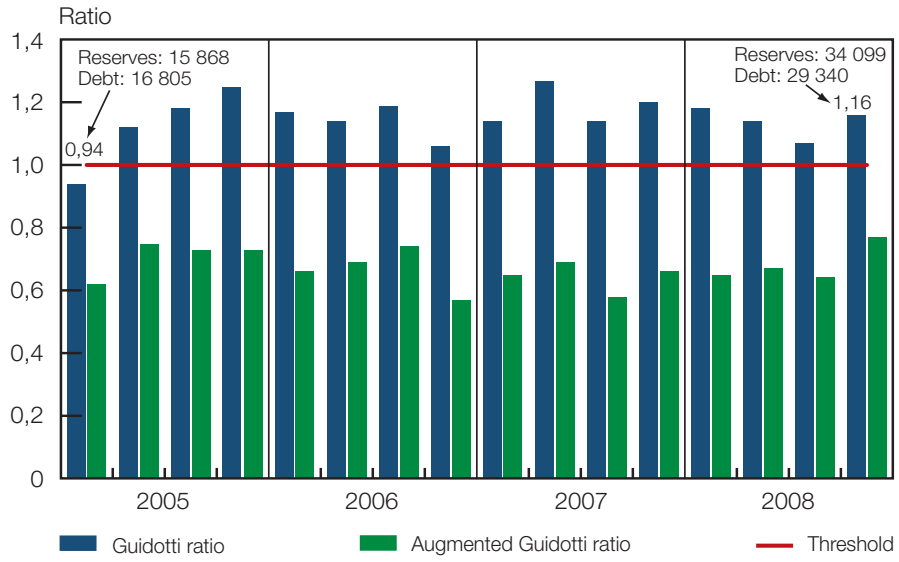
Table 6 Reserve-adequacy ratios

	US$ millions			Guidotti ratio	Augmented Guidotti ratio
	Gross foreign-exchange reserves[1]	Short-term foreign debt[2]	Current-account deficit		
2006: 2nd qr	23 950	21 031	-13 918,41	1,14	0,69
3rd qr	24 650	20 738	-12 756,08	1,19	0,74
4th qr	25 613	24 171	-21 127,55	1,06	0,57
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

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

Insurance sector

The South African insurance industry has, so far, weathered the global financial market turmoil without major pressures. The industry has good profitability, capitalisation levels and reserves. The financial strength of long-term insurers, as measured by the ratio of free assets-to-capital-adequacy requirement, remained sound in the last six months of 2008.

Table 7 Free assets-to-capital-adequacy requirement[1]

Free assets-to-capital-adequacy requirement (typical long-term insurers)[2]	Number of insurers				
	2007	2008			
	4th qr	1st qr	2nd qr	3rd qr	4th qr
Covered 0–1 time	0	0	0	0	1
Covered 1–2 times	7	7	8	10	8
Covered 2–5 times	14	13	14	12	17
Covered 5–10 times	4	5	3	4	2
Covered 10+ times	1	1	1	1	1
Total	**26**	**26**	**26**	**27**	**29**

1 'Free assets' refer 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

Other financial soundness indicators for typical long-term insurers showed some improvement in the fourth quarter of 2008. The annual growth rate of the number of new policies increased slightly, while claims as a percentage of net premiums and individual lapses relative to the number of policies issued came down marginally. Although underwriting profitability remained negative, it showed a marginal improvement as a result of a moderation in the growth rate of claims. However, the accelerated annual rate

of decline in insurance share prices may be an indication that the level of confidence in the industry remains low, as deleveraging in major economies is felt worldwide.

Table 8 Selected indicators for typical long-term insurers

	2007	2008			
	4th qr	1st qr	2nd qr	3rd qr	4th qr
Number of policies[1]	7	6	6	4	6
Share prices[1]	7,7	-16,6	-27,9	-29,7	-43,4
Individual lapses[2]	44	59	55	63	59
Individual surrenders[2]	16	15	11	12	13
Claims[3]	101	114	102	102	99
Management expenses[3]	11	11	11	11	11
Commission[3]	6	6	6	6	6
Underwriting profitability[4]	-18	-31	-19	-19	-16
Conventional profitability[5]	25,8	23,4	17,8	15,9	...

… 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

Table 9 Selected indicators for typical short-term insurers

	2007		2008		
	3rd qr	4th qr	1st qr	2nd qr	3rd qr
Net premiums increase[1]	15	4	7	9	10
Underwriting profit/loss[1]	18,7	-22,2	5,9	-26,9	-13,5
Underwriting and investment income[1]	14,8	-2,6	38,7	3,1	-5,2
Claims[2]	65	66	69	68	68
Management expenses and commission[3]	26	27	26	28	27
Underwriting profit/loss[3]	7	6	5	5	6
Underwriting and investment income[3]	15	14	14	13	13
Surplus asset ratio (median)	46	43	39	39	38

1 Year-on-year percentage change
2 As a percentage of earned premiums
3 As a percentage of net written premiums

Source: Financial Services Board

Corporate sector

As a result of the global financial turmoil and the slowdown in economic activity, South African businesses are evidently experiencing pressure. Corporations have been affected directly through higher financing costs, as well as indirectly through the impact of the turmoil on their customers and, hence, their order books. Exports are under

pressure due to the decline in world trade, and the risk of more job losses in some industries, wage pressures and the costs of production remain high. Pressure build-up in the corporate sector was reflected by an annual increase of 68,4 per cent in liquidations in December 2008 and 68,8 per cent and 70 per cent in January and February 2009, respectively.

Table 10 Total number of liquidations by industry[1]

Industry	2007	2008	
	Dec	Nov	Dec
Agriculture, hunting, forestry and fishing	2	1	1
Mining and quarrying	4	0	1
Manufacturing	13	14	13
Electricity, gas and water	1	1	2
Construction	7	13	12
Wholesale and retail trade, catering and accommodation	74	85	65
Transport, storage and communication	4	9	4
Finance, insurance, real-estate and business services	85	96	222
Community, social and personal services	16	21	27
Total number of liquidations	**206**	**240**	**347**

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

Largely because of developments in the global financial markets, profits have been squeezed and the annual growth rate of credit extended to the corporate sector decelerated in the fourth quarter of 2008 (see Table 11). Although there was a deceleration in the annual growth rate of credit, the corporate debt burden (credit to corporations as a percentage of annualised profits) increased, suggesting that corporate debt was still increasing at a faster rate than corporate profits.

Table 11 Selected indicators for the corporate sector

Annual percentage change, unless indicated otherwise

	2007	2008			
	4th qr	1st qr	2nd qr	3rd qr	4th qr
Bank credit granted[1]	25,3	21,3	22,1	17,6	12,3
Gross fixed capital formation[2]	20,9	19,4	20,2	21,6	19,8
Credit as a percentage of GDP	36,6	36,4	37,6	37,4	37,0
Credit as a percentage of annualised profits[3]	178,7	172,8	156,0	157,0	167,6
Business confidence index[4]	67	48	45	34	33
Net operating surplus[5]	23,3	17,6	24,4	20,2	19,8

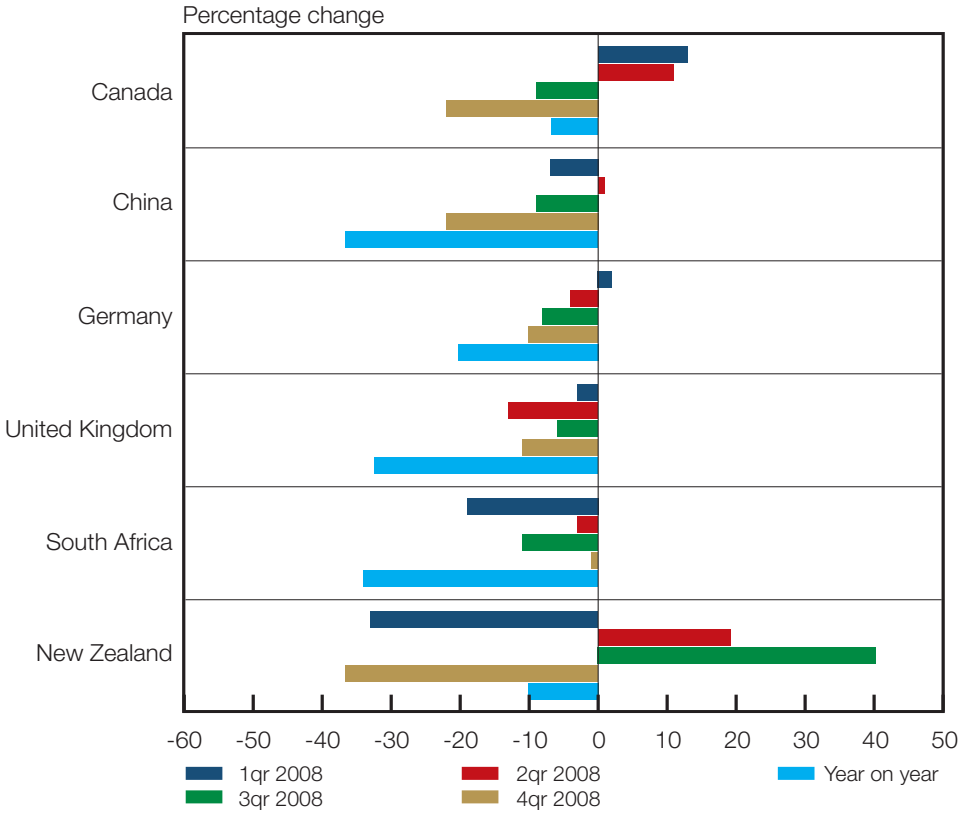
1 Bank credit to the corporate sector in this case includes instalment sales, leasing finance, mortgage advances, overdrafts, credit card debtors, and other loans and advances
2 Gross fixed capital formation at current prices (seasonally adjusted rates) is used as a proxy for investment by private business enterprises
3 Bank credit to the corporate sector and net operating surpluses of corporations are 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

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

The business confidence level, as measured by the Rand Merchant Bank/Bureau for Economic Research (RMB/BER) Business Confidence Index, declined to 33 index points in the fourth quarter of 2008 before declining further to 27 index points during the first quarter of 2009. The drop was considered milder than expected, given developments in the global financial markets, and has been ameliorated by factors such as a fall in interest rates in December 2008; a drop in the price of petrol between November 2008 and February 2009; a relatively stable rand exchange rate; and a confidence-boosting and stimulatory National Budget announcement in February 2009. The main contributors to the decline in the business confidence level for South Africa in the first quarter of 2009 were the sub-indices for new vehicle dealers and manufacturers.

Figure 15 compares the change in the business confidence level of South African businesses with the changes of selected countries. On a quarterly basis, the level of business confidence for South Africa was the least affected (of the countries shown) in the fourth quarter of 2008. However, it is among the most highly affected countries when compared to the previous year.

Figure 15 Changes in the business confidence indices of selected countries



Sources: Global Economics Research (Canada), National Bureau of Statistics (China), Ifo Institute for Economic Research (Germany), ICAEW UK Business Confidence Monitor (United Kingdom), RMB/BER (South Africa) and National Bank of New Zealand (New Zealand)

Household sector

The growth rates of household financial assets and net wealth have been falling gradually, and started contracting in the third and fourth quarters of 2008. This could

suggest that households may be liquidating part of their financial assets to reduce their debt during this period of financial strain. Declining equity prices may also have generated large revaluation losses in household financial assets, which can have a negative impact on funded pension schemes.

Table 12 Selected indicators for the household sector
Annual percentage change, unless indicated otherwise

	2007	2008			
	4th qr	1st qr	2nd qr	3rd qr	4th qr
Nominal disposable income	12,0	13,6	14,2	13,6	10,6
Financial assets[1]	13,1	6,0	4,2	-5,8	-10,4
Net wealth[2]	12,3	5,1	3,3	-5,1	-9,3
Consumer confidence index[3]	22	12	-6	-1	-4
Consumption expenditure to GDP	60,6	60,9	60,9	60,7	60,2
Real consumption expenditure	4,9	4,2	3,3	1,8	0,1
Credit extension	19,5	24,7	21,3	17,7	15,5
Savings as a percentage of disposable income	-0,3	-0,3	-0,3	-0,3	-0,1
Debt	19,8	18,0	14,2	10,5	8,5
Debt to disposable income	77,9	78,2	76,5	75,6	76,4
Debt to GDP	46,9	47,3	46,4	45,6	45,9
Income-gearing ratio[4]	10,9	8,7	9,3	9,3	9,8
Capital-gearing ratio[5]	19,4	20,1	19,7	21,0	22,4

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 South African Reserve Bank
2 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 South African Reserve Bank
3 The consumer confidence index is expressed as a net balance between optimistic and pessimistic consumers. According to the BER, the index can vary between -100 for extreme pessimism and +100 for extreme optimism, with 0 as neutral
4 'Income gearing' refers to financing costs of household debt as 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

The uncertainty in financial markets and the more pronounced slowdown in the economy have affected consumer confidence and have undermined the outlook for consumption. The gains in consumer confidence that accrued in the third quarter of 2008 were reversed in the fourth quarter when the confidence level deteriorated to -4 index points. As a result, consumption expenditure continued to be subdued.

Although borrowing costs were reduced in December 2008 and January 2009,[26] credit extended to households has become less readily available due to the tightening of lending standards by banks and other authorised credit providers. It also appears that households are reluctant to accumulate more debt. The year-on-year growth rate in household credit has been falling since the second quarter of 2008 and stood at 8,4 per cent in January 2009.

Data from the credit bureau showed that the number of credit-active consumers increased in the second half of 2008 and that the number of consumers with impaired credit records[27] increased to 7,3 million (41,6 per cent of credit-active consumers).

26 Borrowing costs were reduced again in March and April 2009.

27 An impaired credit record is a record in which any of the accounts are either classified as three or more payments in arrears, or has an adverse listing, or that reflects a judgement or administration order.

Table 13 Credit standing of consumers

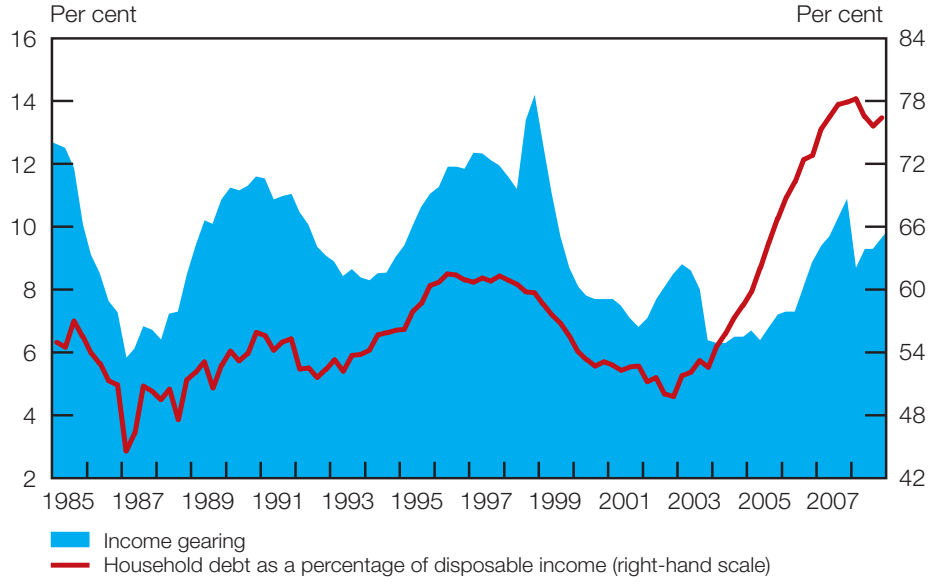
In millions, unless indicated otherwise

	2007		2008			
	Sep	Dec	Mar	Jun	Sep	Dec
Credit-active consumers	16,9	17,1	17,1	17,2	17,5	17,6
Consumers in good standing	10,5	10,7	10,6	10,4	10,4	10,3
Consumers with impaired records	6,4	6,5	6,6	6,8	7,1	7,3
Percentage of consumers in good standing	62,3	62,4	61,6	60,4	59,5	58,4
Percentage of consumers with impaired records	37,7	37,6	38,4	39,6	40,5	41,6

Source: National Credit Regulator

The indebtedness of the household sector represents a potential channel of contagion through which an external shock can affect the financial system. Such a shock can take the form of a sharper or more prolonged slowdown in the economy. The year-on-year growth rate in household debt moderated in the fourth quarter of 2008. As a percentage of disposable income and of GDP, household debt increased slightly during the same period. Furthermore, there were slight increases in the financing costs of household debt (income gearing) and capital gearing over the same period, reflecting relatively high borrowing costs.

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 period. If an indicator breaches the threshold, it is regarded as a signal of possible financial distress. Five indicators that issued signals of distress in the fourth quarter of 2008 were financial assets, net wealth, the ratios of debt to disposable income and to GDP, and capital gearing. The signal of distress issued by the capital gearing ratio may be due to the contraction in the growth of financial assets, as households liquidate assets to cope with the high financial stress levels. The signals of distress in the household sector may be an indication of vulnerability to negative economic shocks.

Table 14 Financial soundness indicators for the household sector[1]
Annual percentage change, unless indicated otherwise

	Mean	Standard deviation	Threshold[2]	4th qr 2008	Signal
Nominal disposable income	11,4	2,0	9,3	10,6	No
Financial assets[3]	13,8	8,7	5,1	-10,4	Yes
Net wealth[3]	13,4	7,7	5,7	-9,3	Yes
Debt	14,2	6,8	21,0	8,5	No
Debt to GDP	37,8	4,6	42,4	45,9	Yes
Debt to disposable income	60,0	8,2	68,2	76,4	Yes
Real consumption expenditure	4,3	2,2	6,4	0,1	No
Consumption expenditure to GDP	62,4	0,9	63,3	60,2	No
Credit extension	14,5	7,0	21,5	15,5	No
Income-gearing ratio	9,1	2,0	11,1	9,8	No
Capital-gearing ratio	19,2	1,2	20,4	22,4	Yes
Insolvencies	5,4	36,5	41,9	15,2	No
Summonses	1,5	12,8	14,3	7,5	No

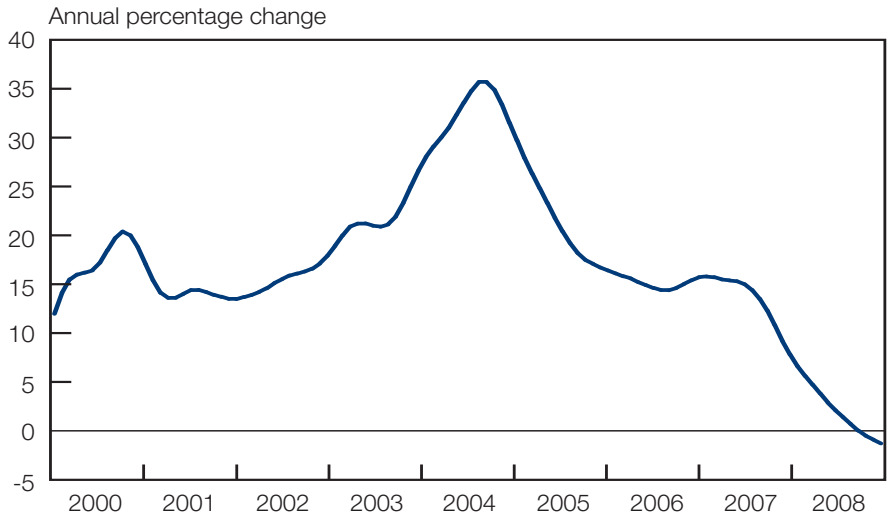
1 Data start from the first quarter of 1993 to the fourth quarter of 2008. For credit extension, insolvencies and summonses, data start from January 1995 to December 2008. The assessment of the vulnerability of the household sector to shocks involves the comparison of the threshold value to the actual 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

The Absa House Price Index registered a negative annual growth rate of -0,9 per cent in January 2009 followed by -1,3 per cent in February. The average annual growth rate for 2008 was 3,8 per cent, which is lower than the average annual growth rate of about 5 per cent recorded in 1999 after the prime lending rate was increased to well above 20 per cent in 1998. The contraction can be attributed to relatively high borrowing costs coupled with stringent credit-granting requirements following the implementation of the National Credit Act, No. 34 of 2005 (NCA), in 2007 as well as to the global financial crisis.

Figure 17 House price index[1]

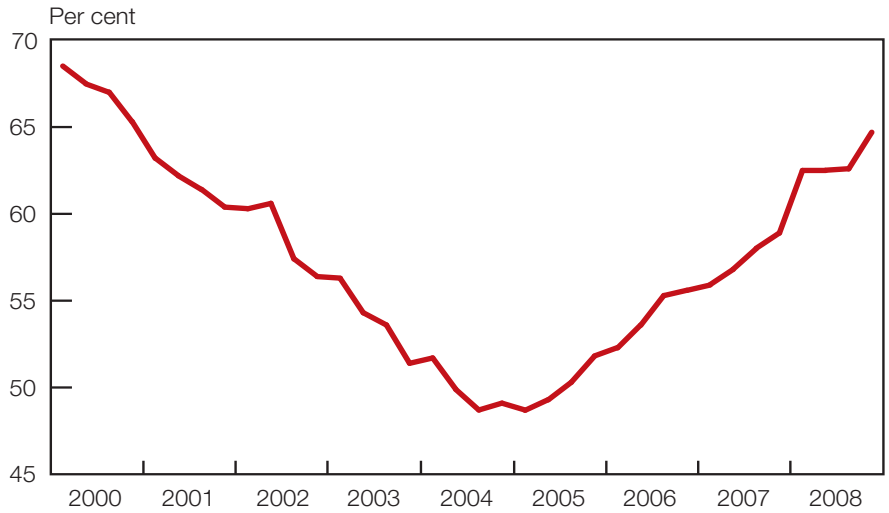


1 The house price index is based on the total purchase price of houses in the 80–400m^2 size category valued at R3,1 million or less in 2008 (including improvements), in respect of which loan applications were approved by Absa. Prices are smoothed in an attempt to exclude the distorting seasonal factors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

Source: Absa Bank Limited

The combination of a fall in house prices and high levels of mortgage debt following a period of favourable macroeconomic conditions and low interest rates led to a sharp increase in the ratio of mortgage debt as a percentage of the market value of housing (see Figure 18). At 64,7 per cent in the fourth quarter of 2008, it reached the highest level since the fourth quarter of 2000, indicating that banks remained highly exposed to the household sector.

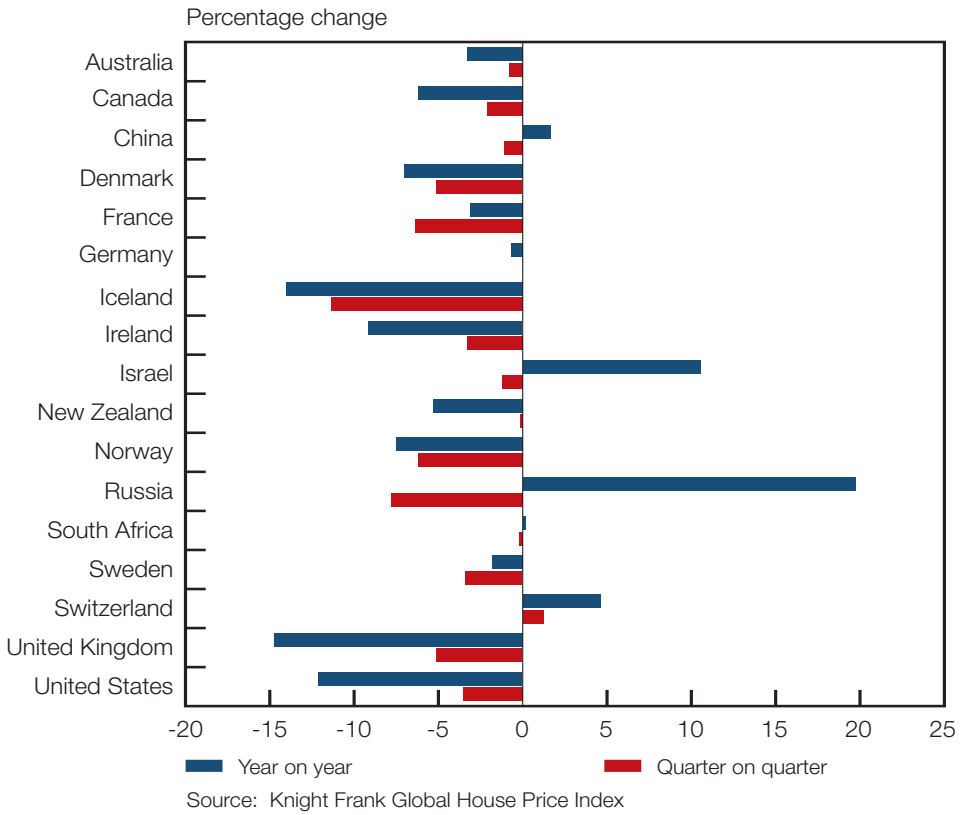
Figure 18 Mortgage debt as a percentage of market value of housing



Source: South African Reserve Bank

Figure 19 provides a comparison of the growth rates of house prices in selected countries. Most of the countries shown recorded negative growth rates of house prices in the fourth quarter of 2008.

Figure 19 House price trends in selected countries: December 2008



Source: Knight Frank Global House Price Index

While recent developments point to a poorly performing South African residential property market, the Residential Property Confidence Indicator[28] (RPCI) showed signs that demand for residential property may have picked up slightly in the fourth quarter of 2008. However, the improvement was marginal and it is too early to interpret it as a change in the trend, since the increase may have been influenced by seasonal factors. Other possible indications of improvement in the residential property market include declines in the average time that properties remain on the market and the percentage of properties sold at less than asking price, as well as the rise in the ratio of first-time buyers to total buyers (see Table 15). More first-time buyers may be expected to enter the market following the recent cuts in lending rates. The business confidence index of residential contractors remained unchanged, while that of non-residential contractors dropped considerably, dragging down the composite building confidence index.

28 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 home-buyers visiting show houses.

Table 15 Activity level in the residential property market and the business confidence level of contractors

	2007	2008			
	4th qr	1st qr	2nd qr	3rd qr	4th qr
Residential Property Confidence Indicator	5,1	5,0	4,4	4,1	4,6
Average time property remains in the market (days)	79	88	104	141	108
Percentage of sellers willing to drop prices	82	83	85	88	81
First-time buyers as a percentage of total buyers	17	14	17	12	17
Buy-to-let as a percentage of total buying	11	13	14	13	12
Business confidence indices					
Residential contractors index	76	60	32	34	34
Non-residential contractors index	92	78	70	66	59
Composite building confidence index[1]	86	66	50	52	40

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

Sources: First National Bank and Bureau for Economic Research

Infrastructure and regulation

This section of the *Financial Stability Review* considers developments in the financial infrastructure and regulatory environment. The first part begins with an update on significant financial legislative and regulatory developments that affect the financial sector. In addition, the current financial crisis has generated a range of proposals and recommendations for strengthening the resilience of the global financial system by national and international organisations, and consideration is given to some of the challenges and lessons that are relevant to financial stability policy-makers.

The second part focuses on the South African NPS and provides an overview of risk mitigation measures that have been introduced, as well as trends in values and volumes processed. The NPS is viewed as a core component of the broader financial system, and its smooth and efficient functioning is regarded as essential for financial system stability.

Update on legislative and other infrastructural developments in the financial sector

The regular review and update of legislative and regulatory measures aimed at promoting a stable financial environment are key features of a sound and robust financial system. This section provides an update of recent legislative developments relevant to the financial sector for the period under review, as well as feedback on the joint IMF/World Bank 2008 FSAP (see Box 3 on the findings of the joint IMF/World Bank FSAP mission).

Competition Amendment Bill

The Competition Amendment Bill, No. 31D of 2008 (Competition Bill) seeks to amend the Competition Act, No. 89 of 1998 (Competition Act), through the introduction of provisions dealing with concurrent jurisdiction of industry regulators, complex monopolies and market inquiries. The Competition Bill also addresses personal liability of directors and officers of firms, and protection for whistleblowers on cartel activities.

In terms of regulator jurisdiction, the Competition Bill vests the Competition Commission with concurrent jurisdiction in instances where specific legislation assigns responsibility for competition matters to an industry regulator. The Competition Act will prevail in the event of a conflict between the specific legislation and the Competition Act, unless such conflict is resolved by a memorandum of understanding.

Provisions relating to complex monopolies prohibit participation in a complex monopoly if it has the effect of preventing or lessening competition substantially. The provisions relating to market inquiries allow the commissioner to make recommendations and take remedial actions. The Competition Bill is still under consideration by Parliament due to concerns about the constitutionality of provisions relating to the introduction of personal liability against directors of firms who cause companies to engage in cartel conduct.

Consumer Protection Bill

The Consumer Protection Bill, No. B19D of 2008 (Consumer Bill), provides for a consumer protection regime that has been designed to promote and advance the social and economic welfare of consumers. While the Consumer Bill has wide and far-reaching implications, it includes provisions that limit its scope in order to avoid inconsistencies

with existing financial-sector legislation. In this regard, the Consumer Bill proposes numerous consequential amendments to various sections of the NCA.

Of particular relevance is the definition of services in the Consumer Bill. While the Bill defines 'service' to include "any banking services, or related or similar financial services", it expressly excludes such service to the extent that it is regulated by the Financial Advisory and Intermediary Services Act, No. 37 of 2002; the Long-term Insurance Act, No. 52 of 1998 (Long-term Insurance Act); or the Short-term Insurance Act, No. 53 of 1998 (Short-term Insurance Act).[29] It further provides that the Consumer Bill will not apply to any transaction that constitutes a credit agreement under the NCA. Therefore, by implication, services that fall outside these exclusions will be subject to the provisions of the Consumer Bill, unless there is inconsistency between the provisions of the Consumer Bill and any other Act.[30] The Consumer Bill is currently awaiting the President's assent. The eventual consequences for the financial sector in future remain to be seen, as they constitute a mindset change in the current balance between prudential and consumer protection regulation.

King III

In February 2009, in anticipation of the new Companies Act[31] and in view of international developments, the King Committee on Corporate Governance released an updated *Report on Governance in South Africa (King III)* and the *Draft Code of Governance Principles*. *King III* expands on key principles and recommendations in areas covered in *King II* and it is anticipated that *King III* will come into effect on 1 March 2010 and will apply to all entities, regardless of the form and manner of incorporation or establishment.[32]

King III introduces emerging corporate governance trends, with specific emphasis on the importance of integrated sustainability reporting and standards in this regard.[33] Other principles introduced include alternative dispute resolution mechanisms, the concept of risk-based internal audits, information technology governance, shareholders and remuneration, and the evaluation of boards and individual directors. Governance issues regarding business rescue, and fundamental and affected transactions as contained in the then proposed Companies Act, No. 71 of 2008 are also addressed. The adoption of these corporate governance best practices should lead to a more robust and transparent financial business environment.

Changes in the securities exchange market

In February 2009 the majority of shareholders of the Bond Exchange of South Africa Limited (BESA) accepted an improved offer by the JSE to acquire BESA. The JSE is one of the oldest securities exchanges in sub-Saharan Africa and is ranked among the top 20 exchanges in the world. The JSE/BESA group explained in its joint announcement that the acquisition would realise, among other things, benefits of greater liquidity, reduction of costs through economies of scale and better risk management for users of a single exchange.

The proposed merger represents a horizontal integration of the two most significant exchanges in South Africa and the region.[34] It is expected that the merger will enhance the effectiveness of South Africa's capital markets through international competition, deepen the market and increase liquidity. This proposed deal awaits the necessary legal and regulatory approval from the authorities.

29 The exclusion of the Long-term Insurance Act and Short-term Insurance Act is subject to these insurance-sector laws being aligned with the consumer protection measures provided for in the Consumer Bill within a period of 18 months from commencement of the Act, failing which the provisions of the new Consumer Act will apply.

30 In the case of inconsistency between the Consumer Bill and any other Act (excluding the Public Finance Management Act, No. 1 of 1999, and the Public Service Act, No. 103 of 1994) where the provisions cannot be applied concurrently without the one contravening the other, then the provision offering the greater protection to the consumer will prevail.

31 The Companies Act, No. 71 of 2008 was signed by the President on 8 April 2009. For a detailed discussion of the then proposed new Companies Act, refer to the *Financial Stability Review* of September 2008 and September 2006.

32 *King III* may be challenging for smaller companies, but the 'apply or explain' approach to implementation may resolve this dilemma, where the board must explain the practice it applies other than the recommended one and the reasons for applying a different practice.

33 The integrated report should consider the company's impact on the economic life of the community and the expectation of the company to be seen as a 'decent citizen' in so far as the company applies innovation, fairness, collaboration and social transformation.

34 It is anticipated that the merger will only be a legal integration at the initial stage as the JSE/BESA group will in future consider the technology solutions available in the integrated group to determine the optimal technology infrastructure.

Box 3 Overview of the findings of the joint International Monetary Fund/World Bank Financial Sector Assessment Program mission to South Africa

A joint IMF/World Bank Financial Sector Assessment Program (FSAP)[35] mission visited South Africa during 2008 to assess the stability of the financial system and released its findings in October 2008. The mission is of the opinion that:

Members of the mission were of the opinion that South Africa's sophisticated financial system is fundamentally sound with a regulatory framework that is modern and generally effective. Banks and insurance companies had, at the time of the finalisation of the assessment, weathered the impact of the global market turmoil and reported good profitability, capitalisation levels and reserves. The adoption of Basel II by banks in January 2008 proceeded well, while capacity and resource building had been enhanced in the insurance regulatory regime. Model validation and stress-testing capacities for the financial sector had been upgraded, while stress tests conducted by the mission team suggested that capital and reserve cushions at banks and insurance companies are sufficient to absorb large, but plausible shocks.

Similar to the rest of the world, the South African financial system faces heightened macrofinancial risks and is bracing for a less-benign economic environment with falling commodity prices. Banks are exposed to increased credit risk in especially their household loan portfolio due to record-high levels of household indebtedness, a mounting debt-service burden and deteriorating asset quality. There are extensive interlinkages in the financial sector, with banks being heavily reliant on domestic wholesale deposits as their main source of funding. In the light of this, the mission team recommended improving the scope of the information base used for financial stability analysis of banking system risks, including household credit and bank liquidity and funding risks; monitoring emerging risks closely; and conducting early warning analyses. The mission team also encouraged the regulators to ensure proactively that banks and insurance companies had adequate capital buffers to manage the risks associated with, among other things, lending to very highly leveraged borrowers and pending new international solvency standards. They underscored the need for regulators to co-operate to ensure that supervision was both strong at the sectoral level and addressed risks that spanned more than one sector or market.

The mission team pointed out that the framework for contingency planning and emergency liquidity assistance had been strengthened with the establishment of the Financial Sector Contingency Forum (FSCF)[36] and the enhancement of the liquidity assistance mechanisms of the South African Reserve Bank. The mission team recommended that a crisis simulation exercise should be undertaken to evaluate response capabilities to systemic stress in the financial sector. They were of the opinion that procedures for addressing banking problems could be further strengthened by the implementation of a well-designed deposit insurance system.

Other findings by the mission team included a need to enhance the framework for securities regulation and to strengthen surveillance of over-the-counter (OTC) markets, which is also a focus area for the rest of the world following the global financial crisis. Money, foreign-exchange and capital markets are relatively well developed, but may be subject to contagion risks through changing investor sentiments, given their close linkages with offshore markets. The mission supported steps to foster liquidity and depth in the local markets and other ongoing efforts to increase disclosure and transparency, and improve market conduct, regulation and supervision in the markets. They recommended that the authorities should continue their cautious approach to foreign-exchange regime liberalisation with due regard to macroeconomic circumstances. While access to financial services has improved markedly in recent years, the remaining challenges include bringing non-salaried individuals into the system, broadening access to non-bank services, the financing of small- and medium-sized enterprises, and the provision of affordable housing.[37]

35 FSAP assessments are designed to assess the stability of the financial system as a whole and not that of individual institutions. They have been developed to help countries identify and remedy weaknesses in their financial-sector structure, thereby enhancing their resilience to macroeconomic shocks and cross-border contagion.

36 The FSCF facilitates preparedness for addressing crises and inter-agency co-ordination in the South African financial system.

37 The full FSAP report can be accessed online at: www.imf.org.

Generic financial stability policy principles arising from the global financial crisis that are relevant to the South African environment

South Africa has been active in international forums examining the global financial crisis and will be expected to respond to any relevant regulatory changes deemed necessary to strengthen the global financial system. Various international standard setters and forums are pursuing a number of regulatory reforms and financial stability policy challenges to improve the overall functioning of the world's financial system, and to address the root causes and the structural problems of the countries most affected by this crisis.[38] What follows is a short discussion of some of the emerging financial stability principles that require further consideration by the South African authorities.

38 A significant recent development in this regard was the London Summit of the G-20 leaders from developed, emerging and developing economies, as well as key international institutions, in April 2009. See Box 2 for more detail.

An explicit legal mandate for financial stability

The actions taken recently by international monetary and regulatory authorities to stabilise the financial system have in many cases been carried out in the interest of broader financial stability, without the necessary legal backing for those specific actions.[39] It is generally believed that a more specific legal framework will set the scene for greater international co-operation on the global surveillance of financial stability risks. The legal framework should provide a basis for future direct actions to be taken in the field of broader financial stability. This would entail a review of the role of the respective authorities, their existing powers and legislative frameworks, and an evaluation of the tools available to stabilise the financial system effectively in times of severe financial crises.

39 Many monetary authorities, as the ultimate providers of liquidity to a country's financial system, have implicit powers to promote and encourage the safety and efficiency of the financial system in order to withstand shocks.

Changed thinking on what constitutes "systemically important financial institutions/markets"

Before the onset of the global financial crisis, it was generally believed that only deposit-taking commercial banks could pose threats to financial system stability because of their maturity transformation function involving the use of short-term funding for long-term assets.[40] However, events over the past year have clearly demonstrated that a broad array of other types of financial institutions contributed to the build-up of financial system imbalances, and had a crucial impact on financial stability due to their complex and opaque interrelationships with one another.[41] Following recent financial bail-outs, it seems that the understanding of the definition of what is a 'systemically important' financial institution or market has changed. The Financial Stability Board (previously the Financial Stability Forum (FSF)) has urged monetary authorities that act as providers of emergency liquidity assistance to develop a more systemic perspective[42] of the financial system, and to assess the impact of the potential failures of these systemically important institutions and/or markets.

40 There has been one or two exceptions in the past, such as the case of the hedge fund, Long Term Capital Management, where a non-bank financial institution proved to be of systemic significance.

41 Typically, these financial institutions, such as investment banks, monoline insurers and the banks' various kinds of special-purpose vehicles, were subject to 'light' regulation and supervision as they did not accept deposits from the general public.

42 A systemic perspective would entail having a clear understanding of how different institutions and markets relate to one another, how different types of financial and operating risks are interconnected, and how potential risks and fragilities between different counterparties, markets and sovereigns are created.

Expansion of the role of the financial safety net, including exceptional interventions undertaken by central banks

Central banks around the world, both in an individual capacity and in a co-ordinated manner, acted in novel ways to stabilise the financial markets. The traditional role and boundaries of the financial safety net have been challenged as governments at times designed schemes to support entire financial systems as opposed to only individual institutions.[43] Central banks and regulatory authorities are considering the lessons learnt from the crisis, including issues such as the relevance of deposit insurance[44] and wider access to emergency lending facilities at the central bank, which could imply that the scope and extent of official regulation and supervision would have to be wider.

43 The 'safety net' function was not only limited to the provision of emergency liquidity assistance (ELA), but also extended to include measures aimed at promoting interbank lending, credit extension and, in extreme cases, nationalisation of banks. A wide array of assets was accepted as collateral for central bank funding. ELA was not restricted to banks, but also extended to systemically significant non-bank financial institutions.

Crisis management preparedness, including cross-border arrangements

Many countries were taken by surprise by this particular "all-new" global crisis type and responded, in some cases, by means of ad hoc, improvised and costly solutions. Despite the emphasis in recent years on the importance of crisis management arrangements, global co-ordination of actions also took a while before being implemented. This highlights the importance of cross-border co-operation between regulators on a national and international level, as well as practising and testing crisis management skills and readiness on an ongoing basis. It is generally believed that information sharing and co-operation on systemically important cross-border firms through more effective supervisory colleges should become the norm.

44 As illustrated by the current crisis, deposit insurance systems and general deposit guarantees issued by governments provided some assurance to retail depositors, but did little to appease uncertainty in the markets, and to address the liquidity and confidence crisis.

Procyclicality problems and countercyclical measures

Research has shown that financial systems and prudential regulation standards are by nature subject to cyclical forces and this finding is reinforced by the events of the current crisis. The Basel Committee on Banking Supervision (BCBS) has already started to assess whether, and the extent to which, regulations and prudential standards reinforce these cyclical dynamics and impact on the entire financial system. In particular, it is analysing the potential procyclicality of the Basel II capital framework and the international accounting standards, and is in the process of proposing countercyclical requirements to meet the prudential objective of protecting banks against downturns in the business cycle. Authorities are considering setting up supervisory systems that are more responsive to economic developments from a holistic point of view (see Box 4 on countercyclicality considerations).

Box 4 Countercyclicality considerations in the South African context

Generally, banking systems are largely and inherently procyclical. It is natural for a lender to share the enthusiasm of a borrower in boom times, but to be very wary of extending credit to even sound business cases when defaults start accumulating in bad times. Current prudential and regulatory tools, and fair-value accounting methodologies tend to encourage such procyclical behaviour, which increases the upswings in the economic cycle and exacerbates the downswings, thereby often accentuating the severity of a financial crisis. The current global credit crisis clearly illustrates the procyclical effect prudential tools have on financial activity and it is therefore not surprising that there are growing calls for the introduction of countercyclical measures.[45]

45 See, for example, the G-20 Declaration of 15 November 2008 and Goodhart C et al., The Fundamental Principles of Financial Regulation, *Geneva Reports on the World Economy* 11, 2009.

The objective of countercyclical measures is to reduce macroeconomic costs in times of financial instability, including protecting the banks from effects of the cycle.[46] In theory, countercyclical measures can dampen the impact of expansions and contractions on financial institutions over the business cycle. In fact, they can dampen the credit cycle in terms of tighter lending policies and thereby affect the real economy. Many countercyclical prudential tools focus on the accumulation of sufficient capital buffers during the expansionary phase of the business cycle when the exposures of financial institutions typically increase. These buffers can then be drawn upon during the contraction phase of the business cycle. The notion of buffers is intricately linked to the idea of countercyclical prudential measures acting as shock absorbers in the banking system to lessen the impact of downswings on the business cycle.

46 For a recent discussion on this and related matters, see "Seven Lessons from the Past Three Years", a speech delivered by Sir John Gieve, Deputy Governor of the Bank of England, at the London School of Economics, 19 February 2009.

While there is a range of countercyclical prudential tools that could be utilised, the most common measures proposed by the standard setters include adjusting bank capital ratios, loan loss provisioning, loan-to-value (LTV) ratios (including collateral values), capping leverage ratios, and targeting compensation or incentives provisions and funding liquidity ratios. The general aim of these prudential tools is to induce prudent risk management or behaviour in the banking system (when times are good) and thereby reduce systemic risk. Simply put, the idea is to tighten or intensify capital, liquidity and provisioning requirements (or reduce LTVs and limit incentives) during the upswing or credit booms in anticipation of the losses that will result from loans, written during the upswing part of the cycle, when the cycle turns. The build-up of these buffers, it is argued, would strengthen the resilience of the banking system.

Some impediments to countercyclical measures revolve around the design details; practical implementation of these measures and their calibration to the various stages of the cycle; and the tensions between different regulatory requirements and standards. In practice, a countercyclical prudential policy is difficult to apply because of limited ability to predict with accuracy the turning points in the cycle. Time lags in the computation of the business cycle contribute to this dilemma. An example of tension between regulatory standards is the difference between accounting standards and regulatory requirements, especially with regard to loan loss provisioning.[47] In the meantime, a number of guiding principles have emerged that should help in the design of policy measures.

47 For further details, see the box article in the March 2008 edition of the *Financial Stability Review* on Basel II and IFRS: loan loss provisioning aspects.

In terms of these principles, policy measures should be effective, fair, simple, transparent, have low implementation costs, limit evasion and be rules-based. This seems to imply pragmatic measures such as capital-adequacy requirements that are based on a bank's loan-book growth rate in the preceding reporting period. This will obviate the need for having to determine the turning points of the cycle theoretically.

48 Petersen, M A and Hattingh, J A, "Cyclicality of Asset Prices, Credit, Capital and Prudential Behaviour and its Implications for Financial Stability", South African Reserve Bank Discussion Paper, unpublished, October 2008.

South Africa implemented the Basel II capital framework in 2008 and complies with International Financial Reporting Standards. A recent study conducted by the South African Reserve Bank in conjunction with an independent research fellow[48] found that prudential behaviour by South African

depository institutions was strongly procyclical overall, especially with regard to credit extension. Furthermore, for the period covered in this study, most South African financial variables displayed procyclical behaviour. Procyclicality, in this context, is likely to be exacerbated by the use of fair-value accounting, which relies on current market values to recognise losses.

In practice, South Africa has some experience of countercyclical measures that have been adopted in the past. These include bank capital ratios higher than the required minimum and LTV ratios requiring minimum deposits for certain kinds of loans. The minimum capital-adequacy ratio requirements in South Africa in 2001 were increased from 8 per cent to 10 per cent to take into account financial stability considerations. With the implementation of Basel II, the base minimum capital-adequacy ratio is 9,5 per cent, but the banking sector has kept its actual capital-adequacy ratios at about 12 per cent, reflecting the still conservative banking and regulatory practices prevalent in the domestic market. In addition, LTV ratios for mortgage loans were limited at the onset of the 1998 financial crisis. Should there be agreement internationally to implement new countercyclical measures, South Africa would want to comply with them where relevant and applicable.

Liquidity risk management

The market turmoil that began in mid-2007 emphasised the importance of liquidity for the functioning of financial markets and the banking sector. The reversal in market conditions illustrated how quickly liquidity could evaporate and that illiquidity could last for an extended period, which necessitates central bank action to provide liquidity to support the functioning of money markets. The difficulties that were faced indicated that many banks and other financial institutions had failed to take account of a number of basic principles of liquidity risk management. Regulators and the financial industry will be more aware of liquidity risk than they were before the crisis and a number of the latest best practices on liquidity management are being incorporated in the future requirements of the BCBS.

Increased focus on macroprudential analysis (as opposed to institution-centred microprudential analysis)

Prudential regulation and analysis still focuses, to a great extent, on the strength of individual institutions, but the financial crisis has, once again, illustrated how individual institutions may appear sound despite structural vulnerabilities at the system level. Efforts by the BCBS are under way to strengthen macroprudential regulation and analysis to capture system-wide risks, and counteract the procyclicality of the financial system. Proposed initiatives include prescribing system-wide measures for reviewing the way in which loan loss provisioning is made; setting limits on leverage; encouraging the build-up of adequate capital buffers in good times that can be drawn upon in bad times; developing mechanisms to provide liquidity to core financial markets so that they remain open; and ensuring that the financial infrastructure is risk-proofed properly, for example, by providing clearing houses for credit default swaps.

Tougher regulation of financial innovation

The ongoing search for yield and short-term profits by investors and perverse incentive schemes were some of the factors that contributed to the development of excessive financial innovation.[49] As a result of the collapse of the US mortgage-backed market, much negativity has developed around financial innovation, with some commentators expressing views that there are more downside risks than benefits and that the pace of financial regulation has fallen behind financial innovation over the past few years.[50] Tougher regulation has been called for by the G-20 countries on practices that lead to excessive risk-taking and ultimately increase systemic risks, and that all systematically important financial institutions, markets and instruments should be subject to an appropriate degree of regulation and oversight. The G-20 countries recommended that hedge funds or their managers should be registered and should disclose appropriate information to assess the risks they posed.

49 The rapid creation of complex and opaque financial instruments and derivatives, such as credit default swaps and collateralised debt obligations created new risks that were not well understood and incorrectly priced by investors, rating agencies, regulators and boards of directors.

50 This may bring about a 'back-to-basics' approach in the banking sector and a re-emphasis on the importance of the traditional banking model.

The impact of risk reduction measures within the national payment system

51 The SAMOS system was implemented on 9 March 1998.

The NPS is a vital component of the broader financial system supporting financial stability in South Africa. The interbank settlement system, which is one of the features of the NPS, is called the SAMOS system.[51] This system provides for the settlement of both large-value and low-value payment instructions. All transactions settled across the books of the Bank are final and irrevocable.

As the Bank has the duty to oversee the safety and soundness of the NPS, including the effectiveness and efficiency of the SAMOS system, risk mitigation measures were implemented to reduce systemic risk within the South African financial system. The NPS is continuously evolving to accommodate the new developments in the domestic and international payment and settlement industry. During the past ten years the NPS, including the SAMOS system, has proven to be efficient and effective. The purpose of this section is to review: (1) the risk reduction measures introduced during the years 1999 to 2008 and (2) the statistical trends in the SAMOS system from 2000 to 2008.

Risk reduction measures

Liquidity provision in the South African Multiple Option Settlement (SAMOS) system

52 A settlement bank is a settlement system participant as defined in section 1 of the National Payment System Act, No. 78 of 1998 (NPS Act).

53 Collateral is in the form of the liquid assets, prescribed in the Banks Act, No. 94 of 1990, which must be owned by the banks and must be unencumbered.

Liquidity is the backbone of every payment system. The SAMOS system allows for the monitoring of each settlement bank's liquidity and provides an early warning signal should any settlement bank[52] tend to hoard liquidity or display signs of possible liquidity problems. Without sufficient liquidity to fund the payment instructions, the system would cease to function. The SAMOS system provides a dynamic collateral facility to enable the automatic granting of loans. Should a bank not have sufficient funds available in its settlement account to settle a payment instruction, a loan will be granted automatically against acceptable collateral[53] reserved in the system.

The continuous processing line (CPL) facility was implemented in July 1998 and the continuous batch processing line (CBPL) in October 2001 to optimise the utilisation of funding (liquidity) in the SAMOS system. Funding for CPL and CBPL facilities is either obtained as a result of the settlement bank transferring funds from its own settlement account held with the Bank to the CPL/CBPL, or through the receipt of funds from another settlement bank in the same CPL/CBPL agreement.

The management of liquidity within the system provides stability in the NPS and the financial system as a whole. In times of crisis the ability to monitor the liquidity available to the banks and the payment flows has proven to be a valuable tool to reduce the risk of systemic failure. This monitoring facility was used extensively in 2002 when the small banks experienced liquidity problems. During the current international financial crisis, there have been no signs of illiquidity in the NPS environment and this has demonstrated the important role the SAMOS system plays in stabilising the financial system through its capacity to monitor liquidity within the system.

54 Refer to NPS Position Paper No. 1/2000 on "Risk Reduction Measures". Available online at: www.reservebank.co.za

The limitation of item values

55 A payment stream is an environment created to clear and settle a specific payment instrument.

The settlement banks implemented maximum item value limits[54] on specific payment instruments with effect from January 2002 (see Table 16) to limit the excessive exposures for the settlement banks in the various payment streams.[55] The item limits

removed high-value transactions from the low-value payment streams and moved them to the real-time line (RTL)[56] payment stream, thus reducing the size of the interbank obligations in the clearing system. This resulted in more than 90 per cent of total value being settled with immediate finality, enhancing liquidity and reducing credit and settlement risks within the SAMOS system.

56 The RTL is the high-value, low-volume interbank settlement facility that is provided to the settlement banks in the SAMOS system to effect immediate settlement.

Table 16 Risk measures – item limits

Payment stream	CLC[1]	EFT[2] credit	EFT[2] debit	ZAPS[3]
Item limit (maximum)	R5 million	R5 million	R500 000	R5 million

1 Cheques are processed in the code line clearing (CLC) payment stream
2 Refers to electronic funds transfer
3 The South African Payment Stream (ZAPS) is the payment stream originally used for the processing of the rand leg of foreign-exchange transactions

Source: South African Reserve Bank

Payment clearing house agreements

The various payment streams are governed by payment clearing house[57] (PCH) agreements, which contractually formalise the relationship between settlement banks, and establish the operating rules and standards in the various payment streams. The PCH agreements strengthened the legal framework of the NPS, thereby reducing legal risk in the system. Table 17 presents a list of the payment streams. With the exception of the RTL, all the PCH agreements relate to interbank obligations that arise from the clearing environment.

57 A 'payment clearing house' is defined in the NPS Act as an arrangement between two or more South African Reserve Bank settlement system participants.

Table 17 List of the payment streams

Authenticated early debit order	MasterCard
Code line clearing (cheque)	MZANSI money transfer
Credit card	Non-authenticated early debit order
Debit card	Real-time clearing
Electronic funds transfer credit	SASWITCH (automated teller machine)
Electronic funds transfer debit	Visa card
Immediate settlement (real-time line)	ZAPS (electronic credit payment)
Bond Exchange of South Africa	Share transactions totally electronic (STRATE)[1]

1 STRATE is the PCH system operator that facilitates the determination and submission of the interbank obligations arising in the Securities Settlement System, which includes the JSE and the bond market

Source: South African Reserve Bank

The settlement schedule

At its inception, the SAMOS system settlement cycle extended over two days. This resulted in overnight exposures which, in turn, exposed the banks and the NPS to credit, liquidity and settlement risks since the obligations were not settled on the day of value. In order to mitigate the aforementioned risks, a same-day square-off approach for the SAMOS system was successfully implemented on 7 August 2004 to enable payments and settlements to be concluded on the intended day of value as stipulated in Principle IV of the Bank for International Settlements (BIS) Core Principles for Systemically Important Payment Systems (SIPS).[58] The settlement schedule and the duration of the settlement windows were consequently revised. Table 18 depicts the settlement schedule and type of settlement activities taking place in a particular window.

58 The principle states that "the system should provide prompt and final settlement on the day of value, preferably during the day and at a minimum at the end of the day".

Table 18 Settlement schedule and type of settlement activities

	Time	Activities
Window 1	00:00–07:00	Normal settlement Batch settlement
Window 2	07:00–12:00	Normal settlement Batch settlement CLS[1]
Window 3	12:00–16:15	
Finalise window	16:15–16:20	Close-off of transactions
Position window	16:20–17:00	End-of-day settlement instructions only
Night window[2]	17:00–24:00	Low-value batch settlement only

1 CLS refers to continuous linked settlement to effect payment elsewhere in the world
2 The night window is now only used to settle the low-value batches that were not settled during the day, and these batches are settled before midnight

Source: South African Reserve Bank

The earlier settlement of obligations lessened the bottleneck of transactions requiring processing at the end of the day. The intraday finality instilled confidence in the NPS, since the credit and liquidity risks in the SAMOS system were reduced.

Financial market settlement risk

The CPL and CBPL facilities (discussed earlier) enabled the Securities Settlement System, through share transactions totally electronic (STRATE), to link to, and settle in, the SAMOS system. The ability to settle the interbank obligations from the equity and bond markets enables the principle of delivery-versus-payment (DvP) to be implemented. This automated the transfer of ownership to take place simultaneously with the transfer of funds (settlement), and reduced the market and principal risks in the financial market settlement environment.

Foreign-exchange settlement risk

The South African rand (rand) was accepted as a continuous linked settlement (CLS) currency in 2004 and led to the reduction of the foreign-exchange settlement risk on transactions between the rand and foreign currencies[59] settled in the CLS system. In the CLS system both legs of a foreign-exchange transaction are settled simultaneously (payment-versus-payment).[60] The participation in CLS yields liquidity and efficiency benefits for the SAMOS system and financial system as a whole. To this end, CLS settlement in the SAMOS system has been able to accommodate the record volumes transacted during the recent international financial turmoil.

The value of rand-related transactions has increased steadily since 2004. The average growth rate per annum was 17 per cent, but the year-on-year increase from 2007 to 2008 was lower, at 7 per cent. This can be attributed to the slowdown in the economy due to the international financial crisis. The highest daily value settled exceeded R35 billion[61] and the highest monthly value recorded was in August 2007, being R331 billion.[62] The monthly values settled remained volatile during 2008, averaging R296 billion. September 2008 saw R322 billion being settled and R328 billion was settled in October, which correlated with the total values settled within CLS during the stressful months of the international financial crisis.

59 As at December 2008, there were 17 currencies participating in the CLS system (for a detailed discussion of the CLS system, see the September 2008 edition of the *Financial Stability Review*).

60 The transactions are settled in a single time zone (Central European Time) in the CLS Bank and they settle mainly in Window 2 in the SAMOS system.

61 These figures were recorded on 15 June 2006 and 28 February 2008.

62 This highest value involved 1 863 transactions, while the highest monthly volume was 2 153 transactions, with a value of R280 billion in January 2008.

Overview of the values and volumes processed in the SAMOS system

The SAMOS system infrastructure operated well throughout the international financial crisis. Its efficiency has been demonstrated by the settlement of record transaction values without any operational disruptions. The salient activities performed during 2000 to 2008 illustrate that the SAMOS system is a risk-mitigating system[63] in itself.

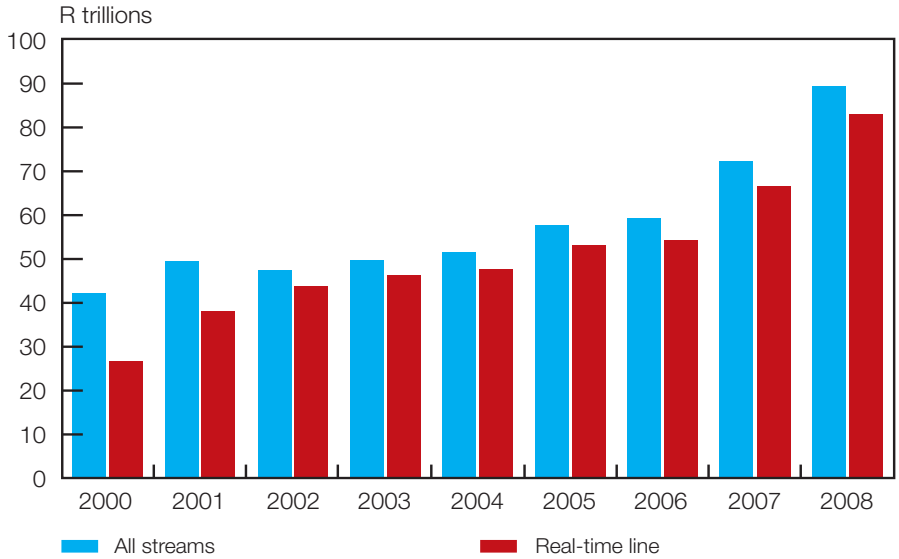
63 In the SAMOS system the settlement banks see their positions on a real-time basis and thus they are able to monitor their exposures.

The large-value settlement environment

In the SAMOS system the large-value transactions are settled in real-time on a gross basis. These large-value low-volume transactions represent interbank, financial market and the CLS bank (discussed above) settlements. On average, the large-value transactions, settled in the RTL stream, currently comprise 92 per cent of the total value settled, while the balance of 8 per cent represents the low-value batch settlement. Figure 20 shows the total value settled and value of the RTL transactions. The composition changed from 77,2 per cent in 2001 to 92,4 per cent in 2002 as a result of the implementation of the item limits.

From 2000 to 2008, total annual value settled in the SAMOS system increased by 112 per cent to R89 trillion, while the transaction volume settled increased by 335 per cent to 2,7 million. In 2008, the average value settled daily was R295 billion, with an average of 9 000 transactions per day. The highest monthly value settled was R8,5 trillion in October 2008, with a total transaction volume of 265 367. The SAMOS system has successfully handled these unusual values and volumes of transactions, thus proving the operational efficiency of the system.

Figure 20 Total value settled versus real-time line settlements



Source: South African Reserve Bank

The settlement of financial market obligations

In 2008 the annual value of equities settled was R748 billion, representing 0,9 per cent of the value settled in RTL. It must be noted that the principle of netting[64] is applied in the securities settlement system. The average daily value was R2,9 billion. During 2008, the annual value of bonds settled was R16 trillion. This represented 19 per cent of the total value settled in RTL. The average daily value of the bond settlement was

64 Netting is the process where obligations are netted or offset against each other.

R62 billion. Over the years the interaction of the financial market system and the SAMOS system has demonstrated the robustness and efficiency of the processes and procedures put in place which, in turn, contributed to the stability of the NPS.

The low-value settlement environment

The settlement of batches

65 BankServ was founded in 1972 as the Automated Clearing Bureau (Pty) Limited. More information is available online at: www.bankserv.co.za.

The transactions that make up the batches are low-value high-volume in nature and are cleared by BankServ,[65] and settled in PCH batches at specific times of the day and night. For the purposes of this discussion, only the major PCHs have been addressed.

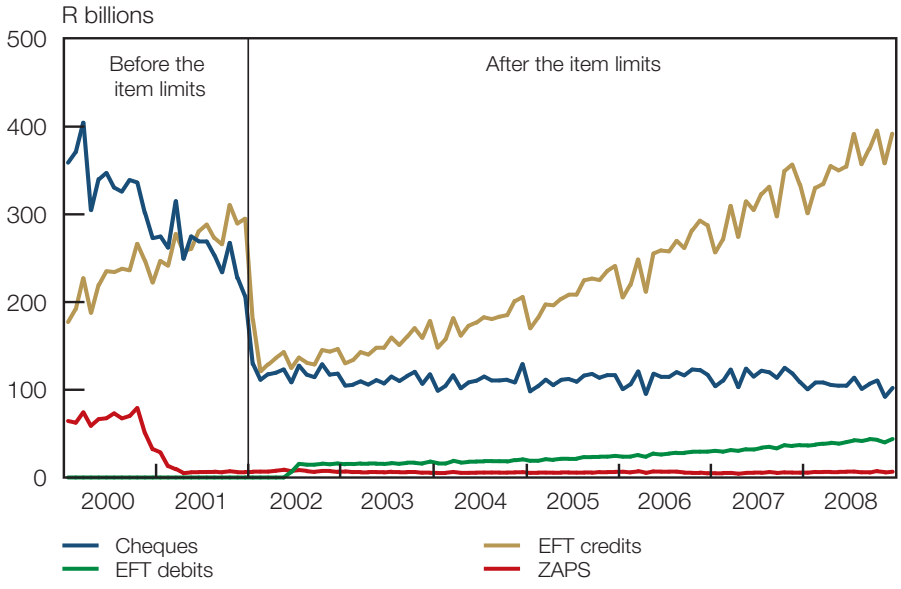
The electronic fund transfers and cheques

66 This PCH is widely used by employers to make salary payments and by customers using the Internet or the call centre services of their bank to effect payments.

The electronic fund transfer (EFT) credit[66] PCH is the second-largest payment stream used after the RTL. The usage of EFT credits became prominent after the implementation of item limits in January 2002 and in 2008 represented 5 per cent of the total value settled. The average monthly value settled was R358 billion. The risk in the EFT credit PCH is very low, since the transactions are credit-push in nature, that is, the payer initiates the payment. Figure 21 not only identifies the impact of the item limits, but also the subsequent patterns in the EFT and cheque PCHs.

The EFT Debit PCH provides the payer with a cheap and very convenient means of making recurring payments. This PCH is used to process debit orders, and as a payment instrument to collect monthly premiums, such as insurance policies, mortgage and hire-purchase payments. The usage of the EFT Debit has gradually increased to a monthly average value of R40,4 billion.

Figure 21 Electronic fund transfer and cheques



Source: South African Reserve Bank

Cheques are the third-largest PCH and represent 1,4 per cent of the total value settled. Cheques are mainly used by corporates as a legal document for proof of payment. In

value terms, cheques have remained constant since the implementation of item limits, while demonstrating a decreasing trend in volumes. In 2008 the average monthly value of cheques settled was R105 billion.

Early debit order PCHs

Early debit order (EDO) PCHs are an offshoot of the EFT debit PCH. These PCHs were introduced during August 2006 to normalise the collection process for electronic debits from customer accounts, once their wages or salaries had been deposited, and to do away with the preferential treatment of certain transactions.[67] Thus the EDO PCHs were implemented to level the playing field for the debit order collectors, and to enhance the effectiveness and efficiency of the NPS. There are two EDO PCHs, namely (1) the authenticated early debit order (AEDO)[68] and (2) the non-authenticated early debit order (NAEDO).[69] The average monthly value settled in the AEDO PCH during 2008 was R285 million. The average monthly value settled in the NAEDO PCH in 2008 was R1,7 billion.

SASWITCH (automated teller machine) and the cards[70]

The SASWITCH stream relates to the settlement of interbank obligations arising from the use of automated teller machines (ATMs) by cardholders who use the ATMs of other banks. SASWITCH and all card-related transactions have been increasing steadily (see Figure 22). As from October 2004 credit card PCHs have been settled individually, while previously they were part of the EFT Credit PCH.

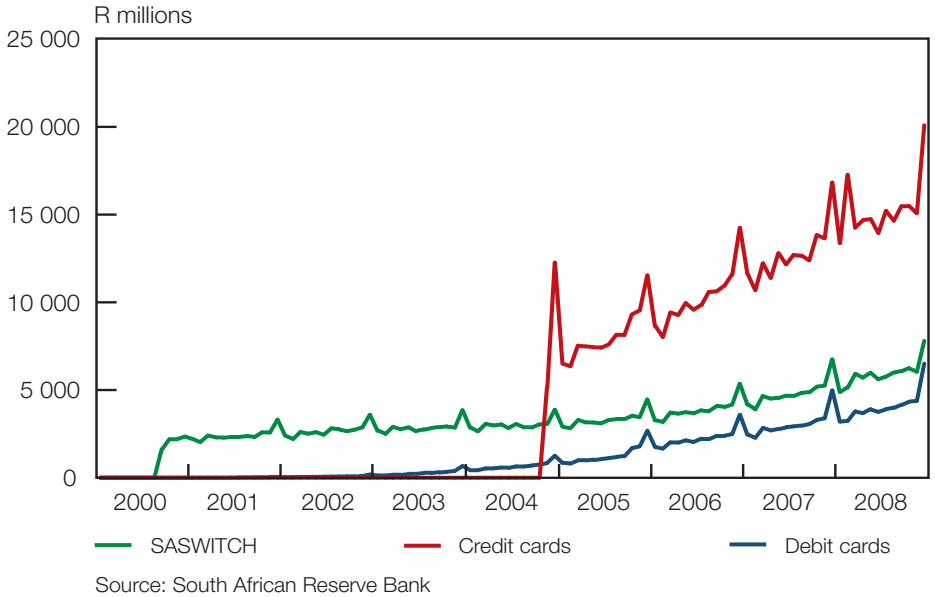
67 For more information see "NPS Directive No. 2 of 2006 Directive for Conduct within the NPS: In Respect of Banks Involved in the Collection of Payment Instructions in the Early Debit Order (EDO) Payment Clearing Houses (PCHs)".

68 In AEDO customers are allowed to mandate payment collectors to withdraw a single payment or fixed instalments for a prescribed period from their account.

69 In NAEDO customers are allowed to mandate payment collectors by means of either a signed document mandate or a voice-recorded mandate to collect instalments from their accounts.

70 Cards include credit cards, debit cards and cheque cards.

Figure 22 SASWITCH (ATMs) and cards



Source: South African Reserve Bank

The card streams have been increasing with the higher-value transactions being attributed to credit cards. The transactions relate to purchases made at, among other things, point-of-sale terminals at merchants and over the Internet. Table 19 is a snapshot of the monthly average for the transactions settled in 2008. It is, however, noteworthy to point out the annual impact of the December/January festive season as depicted in Figure 22.

Table 19 Monthly average for transactions settled

Payment stream	SASWITCH	Credit card[1]	Debit card
Monthly average	R5,9 billion	R15,3 billion	R4,1 billion

1 Includes MasterCard and Visa

Source: South African Reserve Bank

Real-time clearing

In March 2007 the real-time clearing (RTC) payment stream was implemented. The RTC payment instruction is processed immediately and the payee credited within 60 seconds. The interbank settlement takes place within one hour from the time the payment instruction was initiated (within business hours), which significantly reduces any risk associated with the payment. With this functionality, the SAMOS system assists in expediting payments. As at December 2008, three banks were actively participating in this stream. The average monthly value settled increased by 168 per cent from R406 million in 2007 to R1,1 billion in 2008.

To conclude this section on the impact of risk reduction measures within the national payment system, a number of credit, liquidity and settlement-risk reduction measures have been introduced over the past number of years. This has led to the NPS being one of the pillars supporting financial stability in South Africa. Values and volumes processed in the NPS are growing steadily and the risks pertaining to the large-value and low-value payment environments are constantly being addressed and resolved. The system is continuously evolving to accommodate new developments in the domestic and international payment and settlement industry. Its operational efficiency has been demonstrated in normal and stressed times.

Note on the global financial market turmoil and central bank intervention – a South African perspective

by N Brink[1]

Introduction

Since the release of the September 2008 *Financial Stability Review*, the global financial crisis has intensified, with no country completely escaping its damaging effects. Central banks and governments in the major industrialised countries, followed by a number of emerging-market countries, intervened in unconventional ways to counter these effects. Interventions so far have had a range of objectives, such as providing liquidity to financial institutions, restoring banks' capital ratios, unlocking frozen credit markets, supporting industries in distress, restoring confidence in banks, bringing some stability to financial markets, and attempting to alleviate the length and impact of the global economic slowdown.

1 The views expressed are those of the author and do not necessarily reflect the views of the South African Reserve Bank.

In these extreme and highly contagious conditions, in which there seems to be a continuous lack of confidence, all countries are confronted with financial instability risks. Nevertheless, the South African financial markets have so far been spared the worst of the financial effects of the crisis, and the Bank has not experienced any need, to date, to change its operations in the financial markets. In order to understand some of the factors that differentiated South Africa in this regard, a number of dimensions of central bank intervention, the banking sector and financial markets in South Africa are briefly discussed and compared to those of countries where the financial turmoil has been more intense.

Monetary operations

The term 'monetary operations' refers to the transactions that a central bank would, under normal circumstances, enter into in order to implement its monetary policy stance. By influencing the amount of liquidity that is available in the money market, central banks can exert some influence over money-market interest rates, provided that the money market functions efficiently. Typically, an injection of liquidity by the central bank, for example, through outright purchases of securities or over-allotment in its refinancing operations, would result in easier monetary conditions and lower market interest rates. By contrast, a draining of liquidity through transactions in the opposite direction would cause a contraction of market liquidity and exert upward pressure on market interest rates.

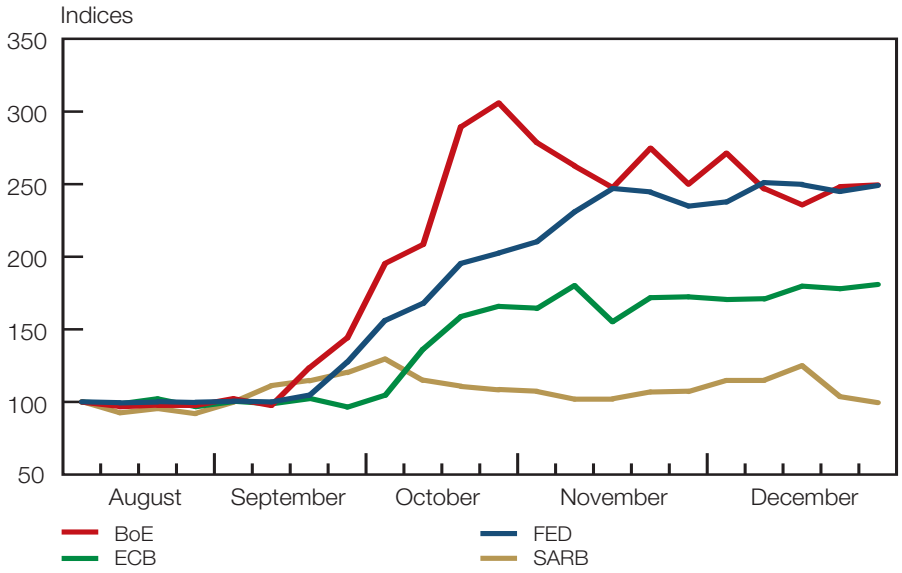
During the financial crisis, and in particular since its intensification in October 2008 after the demise of Lehman Brothers, central banks in the industrialised world have injected significant amounts of liquidity into their money markets. In some instances, the "visible" liquidity injections that are reported on the balance sheets of the central banks have been complemented by less-transparent off-balance-sheet transactions, such as foreign-exchange swaps. Central banks have also, in various instances, offered asset swaps in order to alleviate the pressure that banks experienced from the deteriorating values of some of the securities that they held as assets. In most cases the duration of central banks' refinancing operations was extended and collateral requirements were relaxed.

Figure A illustrates the extent to which the Federal Reserve System (the Fed), the Bank of England (BoE) and the European Central Bank (ECB) have increased liquidity injected

through their on-balance-sheet operations since September 2007, expressed as indices. The ECB started providing unlimited amounts of liquidity in its refinancing operations and longer-term reverse repurchase transactions, basing the amounts allotted on demand by banks. As a result, the amounts provided in the main and longer-term refinancing operations of the ECB almost doubled from €466 billion early in August 2008 to €843 billion by the year-end. In the US, the Fed's credit to financial institutions increased from around US$890 billion in August 2008 to well over US$2 trillion by December 2008. Similarly, the BoE's liquidity-providing assets increased from around £92 billion in August 2008 to £843 by the 2008 year-end.

These increases in liquidity were, in some instances, partially neutralised by liquidity-draining transactions. For example, in the case of the ECB, commercial banks' deposits with the ECB increased significantly over the same period, so that the net effect on liquidity was reduced.

Figure A Liquidity provided by central banks: August to December 2008[1]



[1] Because of different monetary policy implementation frameworks, instruments and reporting formats, the levels of the indices are not directly comparable, but intended to illustrate relative trends
FED: Credit to financial institutions
BoE: Increase in liquidity-providing operations
ECB: Amounts provided in both main- and longer-term refinancing operations
SARB: Amounts provided in refinancing operations
Source: Statistical information as published by the various central banks

In contrast to central banks in the industrialised world, the Bank has not experienced any pressure to alter its monetary operations since the onset of the financial crisis. The fluctuations in the amounts of liquidity provided in its refinancing auctions, even though subdued, are exaggerated by the relatively small money-market shortage. In actual values, it fluctuated between R9 billion and R14 billion. The Bank did not have to respond to any shortage of liquidity by increasing amounts offered in its monetary operations.

Policy reactions

In addition to their policies of quantitative easing (i.e., providing additional liquidity), as described in the previous section, central banks in industrialised countries started to

react, initially to the crisis in financial markets and, subsequently, to the significant slowdown in economic activity by significantly lowering their policy rates. Since the beginning of 2008, G-7 countries (excluding Japan) have reduced their rates by between 2,0 and 4,5 percentage points, resulting in rates of between 0 and 2,0 per cent, while other developed countries such as Sweden, Switzerland, Denmark, Norway and Australia followed suit.

The reaction in emerging-market countries was mixed: some followed the industrialised countries' lower interest rate path, while some kept rates unchanged. Others initially increased rates for a variety of reasons, including attempts to counter currency depreciation, outflows of foreign investment, downgrades in sovereign ratings or other side-effects of the financial crisis. Many of these have since started to reduce rates again.

The Bank, in accordance with its inflation-targeting framework, implemented a tightening monetary policy stance from June 2006, in reaction to a deteriorating inflation outlook at the time. The repurchase rate was increased from 7,0 per cent to a peak of 12,0 per cent. In December 2008, for the first time, the Monetary Policy Committee of the Bank reduced its policy rate by 50 basis points, followed by further reductions of 100 basis points both in February and in March 2009. However, as explained in the monetary policy statements, these reductions were facilitated by an improved inflation outlook against a backdrop of slowing economic growth and declining commodity prices. Consistent with the Bank's exchange rate policy of non-intervention, the rate changes were not intended to influence the level of the exchange rate, which is left to be determined by market forces. It was also not to assist the banking sector or to react to the global financial crisis. South Africa's banking sector and financial markets continued to operate effectively during the crisis to date, as illustrated in subsequent sections.

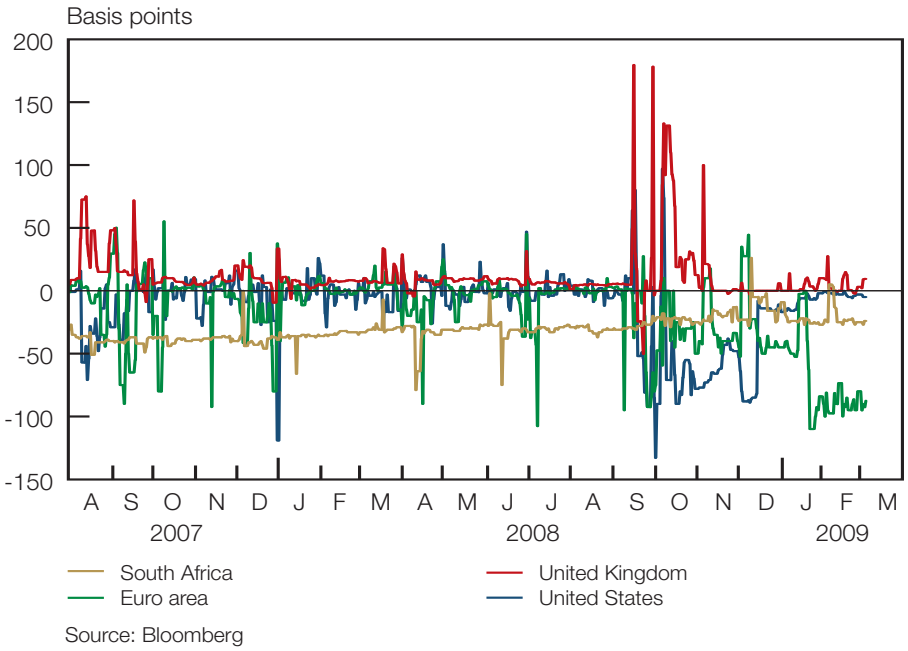
Interbank markets

In normal market conditions overnight rates in the money market are maintained at levels close to the central banks' policy rate. This is a key requirement to ensure that central banks are able to implement monetary policy. If the policy rate is changed, overnight market rates should follow suit, and the effects should filter through to longer-term rates and asset prices through the interest rate transmission mechanism.

Globally, uncertainty about the extent of exposure among banks to toxic assets resulted in a lack of trust among banks about one another's ability to withstand these shocks. In Europe and North America, in particular, this uncertainty was reinforced by the significant losses and writedowns that had been reported[2] and special assistance that had to be granted to ailing banks and other financial institutions. As a result, banks were reluctant to transact with one another, in particular in uncollateralised ways. This reluctance was reflected in increased pricing. Figure B shows how the spread between the overnight London Interbank Offered Rate (Libor) and the BoE's policy rate increased from a 'normal' level of around 10 basis points to almost 180 basis points on some days during September 2008. This spread also became excessively volatile, recording a range of about 230 basis points during that month. A similar trend was observed in the US, where the spread between the actual and targeted Federal Funds rates varied between -133 and +97 basis points. In the euro area, the Euro Interbank Offered Rate also displayed extreme volatility. These increases and volatility persisted despite the injection of additional liquidity by the central banks, and also impacted on the effectiveness of monetary policy implementation.

2 Significant losses and writedowns were reported as a result of fair value or mark-to-market accounting requirements.

Figure B Spreads between policy rates and market overnight rates

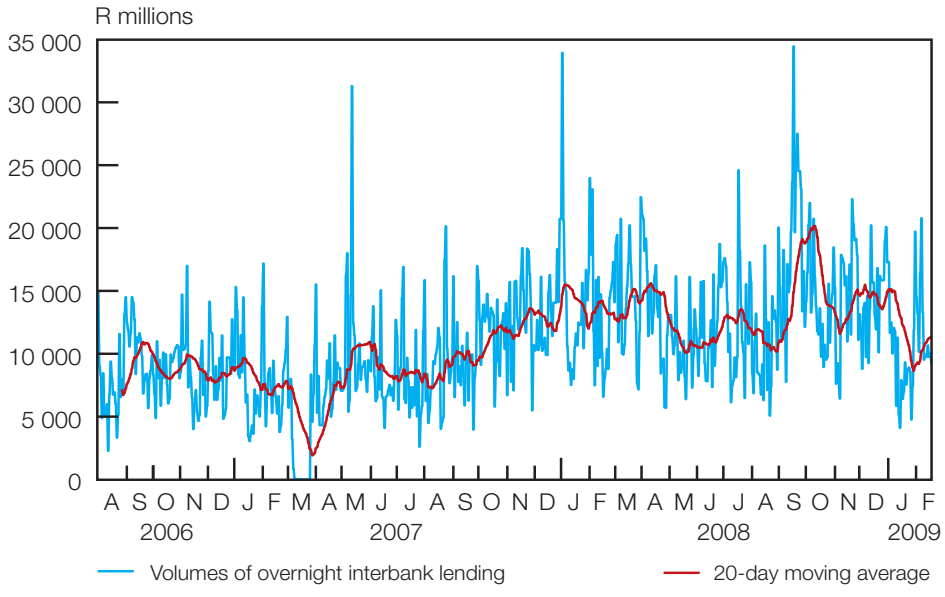


Source: Bloomberg

In South Africa the spread between the market rate (as measured by the South African Benchmark Overnight Rate on deposits (Sabor)) and the Bank's repurchase rate continued to fluctuate in its usual range. The spread also remained negative, that is, market rates remained below the policy rate, indicating an absence of extraordinary upward pressure on overnight rates.

Figure C shows that the volumes of overnight interbank lending activity in South Africa also continued as usual. If anything, volumes increased somewhat towards the end of 2008, but not to the extent that the volumes indicated any underlying trend or problem in the interbank market.

Figure C Volumes of overnight interbank lending in South Africa



Source: South African Reserve Bank

In summary, South Africa's interbank market continued to function normally in terms of both volumes and prices, and did not reflect similar disruptions as experienced in the industrialised world.

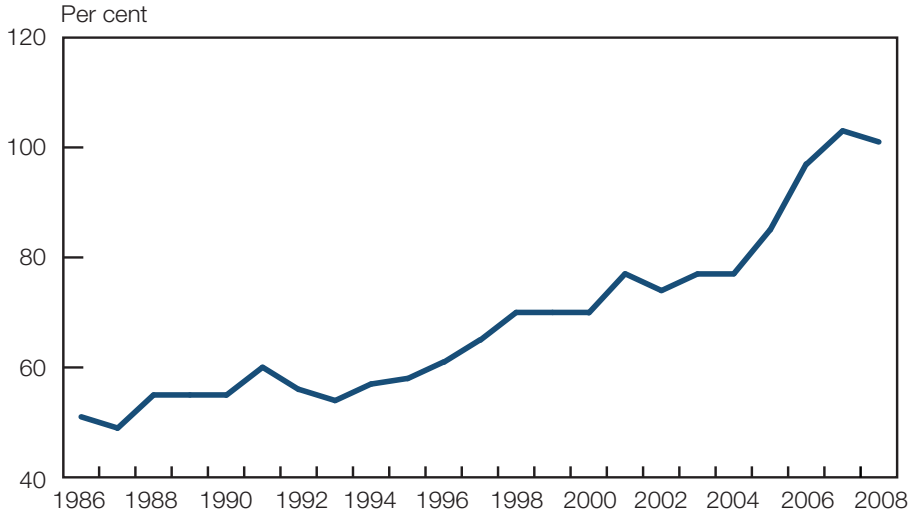
Financial leverage and banks' financial position

One of the characteristics of the global financial system during recent years was the increase in debt. Growth in the monetary aggregates and credit extension in industrialised and most emerging-market countries outpaced growth in their real economies.

One way of illustrating this increased use of debt, which is also sometimes referred to as the 'financialisation of economies', is the ratio of bank loans and advances to nominal GDP. As can be observed in Figure D, this ratio for South Africa more than doubled, from 51 per cent in 1986 to 103 per cent in 2007, declining slightly to 101,3 per cent in 2008. The increase in the ratio reflects the growth in banks' balance sheets that consistently outpaced growth in GDP. Nevertheless, the increase in this ratio has not been as sharp as in many industrialised countries, and the South African ratio is moderate if compared to more extreme cases, such as Switzerland's ratio of around 746 per cent by the end of 2008.[3] Furthermore, the decline in the ratio in 2008 reflects a moderation in the rate of increase in credit extension by banks as a result of various factors such as tighter monetary policy, stricter lending requirements and the effects of the National Credit Act, No. 34 of 2005 (NCA).

3 Calculated from Reuters data.

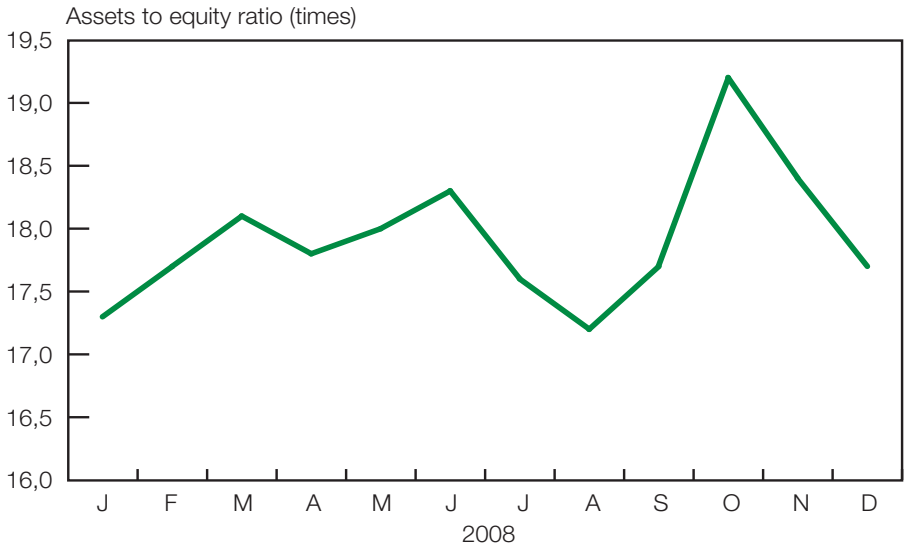
Figure D Credit as a percentage of nominal GDP of South Africa



Source: South African Reserve Bank

A factor that is acknowledged as one of the contributing factors to the financial crisis is the degree of leverage that banks undertook. Figure E illustrates the leverage ratio of South African banks during 2008, expressed as the ratio of total assets to equity. This ratio can be interpreted as the number of times that equity has been committed to finance assets. Therefore, a lower ratio reflects a more prudent balance-sheet structure.

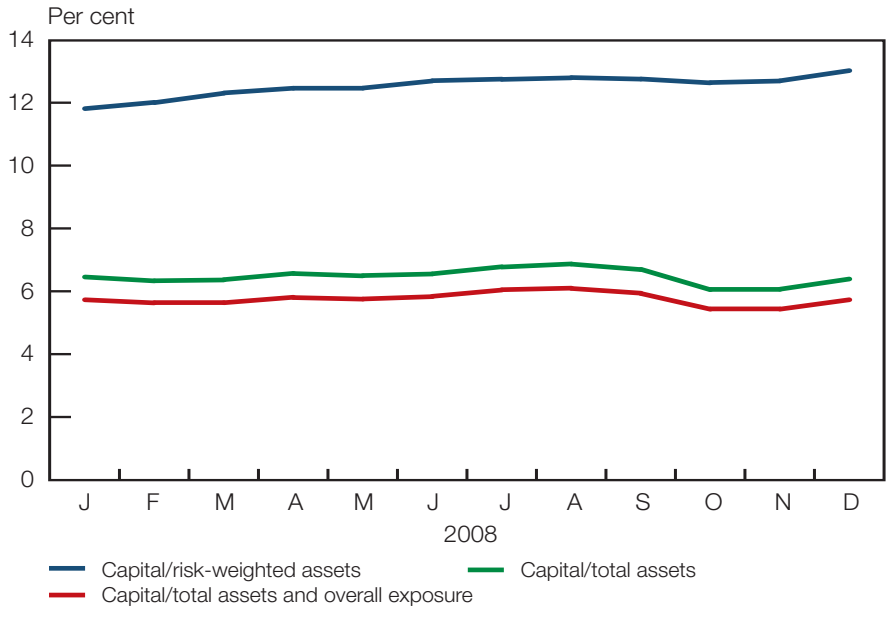
Figure E Financial leverage ratio of South African banks



Source: South African Reserve Bank

Figure F expresses leverage in another way, namely as a percentage of assets that are funded with own capital. In this instance, a higher ratio indicates a more prudent balance-sheet structure. The figure illustrates the degree of leverage of South African banks by expressing their total capital and reserves (equity) as a percentage of their risk-

Figure F Aggregate qualifying capital of the banking sector as a percentage of risk-weighted assets, total assets and overall exposure



Source: South African Reserve Bank

weighted assets, their total (unweighted) assets and total assets combined with total off-balance-sheet exposure respectively. The graph shows that banks maintained their regulatory capital relative to risk-weighted assets at a level in excess of 12,0 per cent, compared to a minimum requirement of 9,5 per cent. Their degree of leverage was much higher if measured against total unweighted assets and even more so if their off-balance-sheet commitments are included. However, all ratios remained fairly constant, and the ratio of capital to total unweighted assets remained at around 6,5 per cent throughout 2008. This indicates that, in aggregate, banks did not make significant adjustments to the composition of their balance sheets in order to meet their regulatory capital requirements. Moreover, the small decline in the ratio when off-balance-sheet commitments are added indicates limited off-balance-sheet risk exposures. This is different to the situation in countries where the financial crisis hit hardest and where banks had to take significant amounts of off-balance-sheet exposures back onto their balance sheets, resulting in undercapitalisation.

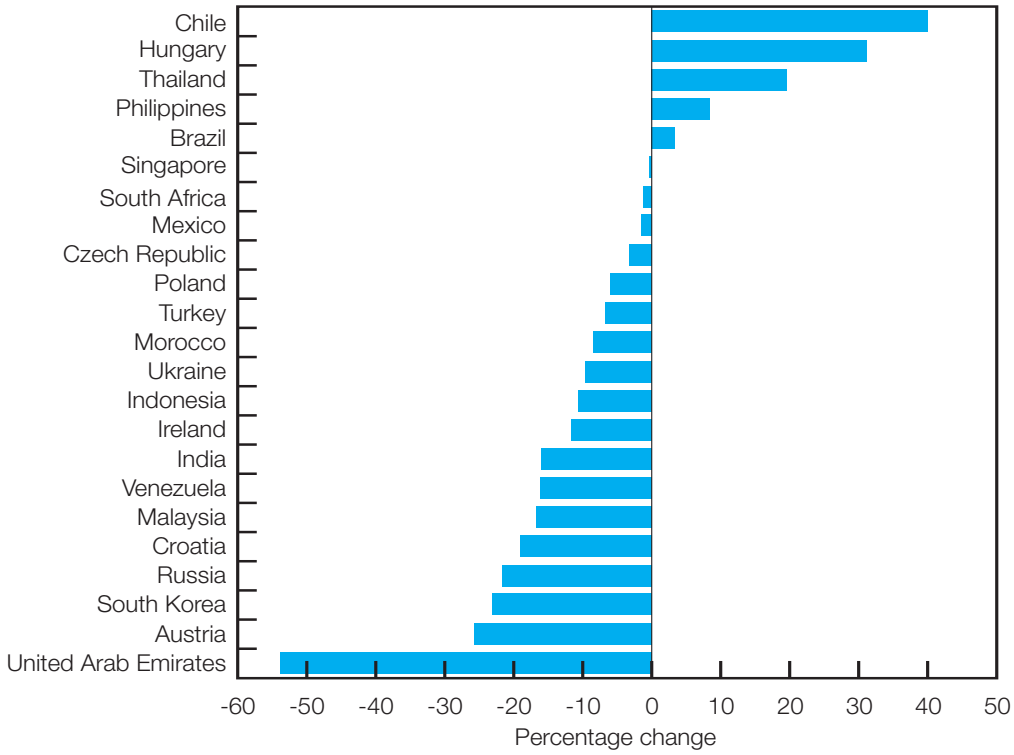
Another characteristic of the South African banking sector that has, to some extent, shielded it from developments in global financial markets is its limited exposure to foreign-currency-denominated assets, as well as its limited dependence on foreign-currency-denominated funding liabilities. As at the end of December 2008, banks' foreign-currency-denominated loans and advances comprised only 7,8 per cent of their total loans and advances, while their foreign-currency-denominated funding liabilities comprised only 3,6 per cent of total liabilities to the public. Banks generally manage their currency risk exposures prudently; their effective net open positions are generally maintained at levels much lower than the prudential limit of 10 per cent of qualifying capital. In addition, remaining exchange controls had restricted domestic banks' ability to invest in off-shore financial instruments that had suffered severe declines in value.

Exchange rate policy and foreign reserves

Between 2003 and 2007, emerging-market economies (EMEs) as a group experienced record inflows of foreign capital into their economies as investors in low-yielding industrialised countries searched for higher returns in riskier investment destinations. These inflows were augmented by current-account surpluses that resulted from high commodity prices and enabled many EMEs to increase their foreign-exchange reserves. However, as the tide turned, the deleveraging in global financial markets caused a sharp reduction in appetite for riskier investments and emerging markets experienced significant outflows of capital. Export earnings also declined as commodity prices fell and global demand faltered. Some emerging-market countries used part of their reserves as countercyclical stabilising measures in various ways, such as supporting exchange rates and industries, repaying foreign liabilities or facilitating a more expansionary fiscal stance. Figure G shows the changes in a number of countries' reserves levels in the 12 months to February 2009, illustrating that many countries experienced a decline in reserves.

However, it was not only some of the emerging-market countries that intervened in support of their currencies. In March 2009 the Swiss National Bank surprised financial markets by announcing that it planned to intervene in the opposite direction than emerging markets, by selling Swiss franc. This was part of a package of measures, including interest rate cuts, intended to weaken the currency to counter deflation.

Figure G Changes in gross reserves: February 2008 to February 2009



Source: Bloomberg

In the case of South Africa, the level of the Bank's gross reserves declined by about US$500 million to US$33,8 billion as at the end of February 2009. However, this decline can essentially be attributed to valuation changes as the price of gold declined and the US dollar appreciated.[4] The Bank reduced its borrowed reserves from US$3,5 billion in 2006 to about US$640 million at the end of February 2009. This reduction in borrowed reserves was a strategic decision taken as South Africa's foreign reserves position became healthier and the reduction had not been initiated by the financial crisis. In line with its exchange rate policy of non-intervention, the Bank did not use its reserves to influence the exchange rate of the rand and has not been required in any way to use its reserves to support the stability of the financial system.

4 The Bank holds a portion of its reserves in currencies other than US dollar, therefore depreciation in these currencies against the US dollar would result in a valuation loss.

Concluding remarks

The conditions in the South African financial markets and banking sector have deteriorated in recent months. Share prices on the JSE declined, portfolio investment flows reversed, impaired advances of banks increased and the profitability of financial institutions declined somewhat. These developments resulted from the spill-over effects of the international financial crisis, rather than from direct exposure to toxic assets, liquidity squeezes in the domestic banking system, malfunctioning markets, funding constraints on banks, excessive leverage in the financial sector or the effect of currency depreciation on foreign debt. As such, the international financial crisis has, to date, not resulted in severe instability of the domestic financial system.

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Abbreviations

AEDO	authenticated early debit order
AGR	augmented Guidotti ratio
ATM	automated teller machine
BCBS	Basel Committee on Banking Supervision
BER	Bureau for Economic Research
BESA	Bond Exchange of South Africa
BIS	Bank for International Settlements
BMI	Business Monitor International
BoE	Bank of England
CBPL	continuous batch processing line
CLC	code line clearing
CPL	continuous processing line
CRB	Commodity Research Bureau
DvP	delivery versus payment
ECB	European Central Bank
EDO	early debit order
EFT	electronic funds transfer
ELA	emergency liquidity assistance
EM	emerging market
EMBI	Emerging Markets Bond Index
EME	emerging-market economy
FAO	Food and Agriculture Organization
FSAP	Financial Sector Assessment Program
FSCF	Financial Sector Contingency Forum
FSF	Financial Stability Forum
G-20	Group of 20
GDP	gross domestic product
GR	Guidotti ratio
ICAEW	Institute of Chartered Accountants in England and Wales
ICTSD	International Centre for Trade and Sustainable Development
IEMP	index of exchange market pressure
IMF	International Monetary Fund
JSE	JSE Limited
LIBOR	London Interbank Offered Rate
LMX	London Metal Exchange
LTV	loan to value
MDB	multilateral development bank
MSCI	Morgan Stanley Capital International
NAEDO	non-authenticated early debit order
NCA	National Credit Act
NPS	National Payment System
OPEC	Organization of the Petroleum Exporting Countries
OTC	over the counter
PCH	payment clearing house
RMB	Rand Merchant Bank
RPCI	Residential Property Confidence Indicator
RTL	real-time line
Sabor	South African Benchmark Overnight Rate
SADC	Southern African Development Community
SAMOS	South African Multiple Option Settlement
SARB	South African Reserve Bank
SIPS	Systemically Important Payment Systems
STRATE	shares transactions totally electronic
US	United States
UK	United Kingdom
UN	United Nations
WEF	World Economic Forum
ZAPS	South African Payment Stream