OECD Economics Department Working Papers No. 847

Strengthening the Macroeconomic Policy Framework in South Africa

Tatiana Lysenko,

Geoff Barnard

https://dx.doi.org/10.1787/5kghsx2v5345-en

OECD

Unclassified **ECO/WKP(2011)16**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development **18-Feb-2011**

English - Or. English

ECONOMICS DEPARTMENT

ECO/WKP(2011)16
Unclassified

STRENGTHENING THE MACROECONOMIC POLICY FRAMEWORK IN SOUTH AFRICA

ECONOMICS DEPARTMENT WORKING PAPERS No. 847

by Tatiana Lysenko and Geoff Barnard

JT03296648

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English - Or. English

TABLE OF CONTENTS

ABSTRACT/RÉSUMÉ

Strengthening the macroeconomic policy framework in South Africa

South Africa's macroeconomic framework has served the economy well, but should be strengthened to make the economy more resilient to external shocks. Enhancing the credibility of the inflation target would provide the monetary authorities with more space for flexibility in the face of exogenous shocks. To ease the pressure on the exchange rate emanating from high commodity prices and sentiment-driven surges in capital inflows, the accumulation of foreign exchange reserves by the central bank should be more rapid, and the removal of remaining controls on capital outflows should be accelerated. Fiscal policy has been generally sound, but should be tighter and more counter-cyclical during the economic upswings to prevent a structural deterioration of the fiscal balance and to create more room for manoeuvre during downturns. A fiscal rule that institutionally constrains discretionary policy may facilitate this task. It would also help ensure that the strong public commitment to address major social challenges, improve access to public services and promote long-term growth by investing in physical infrastructure and human capital can be sustained. In conjunction with a greater effort to identify and tax economic rents from natural resource extraction, consideration should be given to establishing a mechanism to manage commodity price windfalls. This paper relates to the *2010 Economic Survey of South Africa* (*www.oecd.org/eco/surveys/southafrica*).

JEL Classification: E30, E31, E50, E52, E58, E61, E62, F32.

Keywords: South Africa; economy; monetary policy; exchange rate policy; inflation; inflation targeting; capital flows; exchange rates; interest rates; fiscal policy; fiscal rules.

* * * * *

Renforcer le dispositif de la politique macroéconomique en Afrique du Sud

Le dispositif de politique macroéconomique de l'Afrique du Sud a produit de bons résultats, mais il convient de le renforcer pour assurer une plus grande résistance aux chocs externes. Améliorer la crédibilité de l'objectif d'inflation donnerait aux autorités monétaires plus de latitude pour réagir aux chocs exogènes. Afin de réduire la pression à la hausse du taux de change, résultant du prix élevé des matières premières et d'entrées de capitaux spéculatifs, il faudrait que la banque centrale laisse augmenter plus rapidement ses réserves de change et que la suppression des contrôles des mouvements de capitaux encore en vigueur s'accélère. La politique budgétaire a généralement été saine, mais devrait être resserrée et devenir plus anticyclique pendant les phases de reprise, pour éviter une dégradation structurelle du solde budgétaire et élargir la marge de manœuvre disponible pendant les récessions. Une règle budgétaire faciliterait la tâche en soumettant les mesures discrétionnaires à une contrainte institutionnelle. Elle aiderait à garantir aussi le respect durable du ferme engagement de l'État de relever les grands défis sociaux, d'améliorer l'accès aux services publics et de promouvoir la croissance à long terme en investissant dans les infrastructures physiques et le capital humain. Tout en s'efforçant davantage de recenser et de taxer les rentes économiques liées à l'exploitation des ressources naturelles, on pourrait envisager d'instituer un mécanisme de gestion des recettes exceptionnelles tirées des matières premières. Ce document se rapporte à l'*Étude économique de l'OCDE de l'Afrique du Sud 2010* (*www.oecd.org/eco/etudes/afriquedusud*).

Classification JEL : E30, E31, E50, E52, E58, E61, E62, F32.

Mots clés : Afrique du Sud ; économie ; politique monétaire ; politique de taux de change ; inflation ; ciblage de l'inflation ; flux de capitaux ; taux de change ; taux d'intérêt ; politique budgétaire ; règles budgétaires.

STRENGTHENING THE MACROECONOMIC POLICY FRAMEWORK IN SOUTH AFRICA[1]

by Tatiana Lysenko and Geoff Barnard[2]

South Africa has earned a good reputation for macroeconomic management since the mid-1990s. Monetary policy has become more transparent and predictable since the introduction of inflation targeting in February 2000, and the monetary policy framework has been supported by sound fiscal policy, beginning with the introduction of the Growth Employment and Redistribution (GEAR) programme in 1996. The government implemented a number of important fiscal initiatives, including comprehensive tax reform, a multi-year expenditure planning horizon and reprioritisation of government expenditure towards social spending. Fiscal prudence has been a cornerstone of the policy approach, resulting in the remarkable turnaround in the fiscal position from the high deficits of the early 1990s to the surpluses in the 2005/06 to 2007/08 fiscal years and a rapid decline in the public debt ratio and interest rate burden. Reflecting policy reforms to encourage greater integration with the world economy *via* trade and investment flows, and the credibility of macroeconomic policies, private capital inflows increased substantially, in particular from 2003.

The macroeconomic framework, while broadly successful, has faced several challenges over the last three years. Rising global food and energy prices up to mid-2008 and increases in regulated electricity prices triggered a prolonged overshooting of the inflation target at the time when the economy started to slow down. While the regime has proven to be flexible, taking into account output and employment in the short-run while attempting to ensure that the inflation target is achieved over time, its credibility suffered and inflation expectations ratcheted up. The role of the exchange rate within the framework is another policy area where consensus has not been reached. High volatility of the exchange rate in nominal and real terms has been previously identified as a constraint on growth in AsgiSA, the government development strategy launched in 2006.[3] Increased volatility of the terms and trade and capital flows over the last two years triggered even greater volatility of nominal and real exchange rates. A persistent real appreciation trend and its negative impact on the tradables sector has become another area of concern. The

1. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

2. Tatiana Lysenko and Geoff Barnard are, respectively, Economist and Senior Economist on the South Africa Desk in the Economics Department of the OECD (tatiana.lysenko@oecd.org; geoff.barnard@oecd.org). This Working Paper draws on Chapter 2 of the OECD's *2010 Economic Survey of South Africa* (*www.oecd.org/eco/surveys/southafrica*). The authors are grateful for valuable comments received on earlier drafts of this text from Andrew Dean, Bob Ford and Andreas Wörgötter, as well as for discussions with officials from the National Treasury of South Africa and the South African Reserve Bank. Special thanks go to Stan du Plessis for comments and factual input, to Corinne Chanteloup for research assistance and to Josiane Gutierrez for editorial support. The views expressed in this paper do not necessarily reflect those of the OECD and its member countries.

3. This issue was reviewed in the *Economic Assessment of South Africa* (OECD, 2008).

lengthy appreciation episode before the crisis was driven in part by the improving terms of trade, but also by increasingly large capital inflows. It appears that the surge in capital inflows since 2003 has partly reflected investors' confidence in credible economic policies and supported domestic investment and development of domestic financial markets. But it also contributed to the emergence of various imbalances, such as the latest asset price boom-bust cycle. After the period of instability in the fourth quarter of 2008, strong private capital inflows resumed, as abundant global liquidity and exceptionally low interest rates in advanced economies renewed investors' interest in emerging countries offering higher returns. This led to an appreciation of the rand of more than 40% in nominal effective terms from December 2008 through December 2010.

This paper discusses the challenges presented by these developments, and suggests improvements that would address these issues and make the economy more resilient to external shocks. It reviews the monetary policy framework and looks into the ways to enhance the credibility of the inflation target. It also explores the options available to the monetary authorities to counteract volatility and persistent appreciation trends of the rand and, more generally, the boom-bust cycles induced by commodity price surges and/or large capital flows. It argues that while monetary policy instruments can help deal with these problems, fiscal policy is likely to play the key role in addressing this issue and preventing overheating. Recent developments suggest that fiscal policy was not sufficiently counter-cyclical during the boom years and the government may have expanded entitlements against a misjudged level of structural revenue. In this connection, the paper discusses the merits of various fiscal rules for South Africa.

The monetary policy framework has served the economy well, but should be strengthened

The South African Reserve Bank (SARB) is one of the most advanced non-OECD central banks in the world, with a strong track record in conducting monetary policy and maintaining financial stability. Its independence, accountability and transparency are all commendable, although the issue of its private ownership has on occasion been an unwelcome distraction (Box 1). The main elements of South Africa's monetary and exchange rate policy framework are inflation targeting (Box 2), a flexible exchange rate and partially liberalised capital flows, with substantially liberalised inflows but a relatively strict control over outflows.[4] Behind this asymmetry are the fully liberalised regime of local purchases of assets by non-residents, who can freely invest and repatriate funds related to such purchases,[5] and restrictions on foreign exchange transactions related to both inflows and outflows for South African resident corporations and individuals.

Box 1. Ownership of the South African Reserve Bank

South Africa is unusual, though not unique, in having private ownership of the central bank. A number of other central banks, including the (regional banks of the) US Federal Reserve, the Bank of Japan and the National Bank of Belgium, have private shareholders, though most are nonetheless majority state-owned: a Bank for International Settlements (BIS) review found only 4% having majority private ownership (BIS, 2009). South Africa, having only ever had private shareholders since its creation in 1921, is highly unusual, therefore. Where private shareholding of central banks is seen it is generally because the bank's public policy role was taken on by an already-existing institution that was wholly or partly privately owned, though South Africa is again atypical in this respect as the SARB was created specifically to undertake central banking functions (in particular, becoming the sole issuer of banknotes).

4. As of 2005, according to the dataset on financial integration (Schindler, 2009), on the scale from 0 to 1, where 0 represents unrestricted transactions, and 1 represents restricted transactions, South Africa's index of capital inflow liberalisation stood at 0.42, while the outflow index stood at 0.83. Restrictions on outflows faced by South Africa's residents have been gradually eased since 2005, but remain substantial, so that the asymmetry between controls on inflows and outflows persists.

5. Non-residents have some restrictions on access to local financing.

In the large majority of cases, central banks are wholly publicly owned, which befits their public policy raison d'être. Unlike a private firm, a central bank is not and should not be concerned with maximising profits. As the SARB itself put it in a press release in March 2010:

"Since monetary policy issues and the economy affect the society as a whole, central banks worldwide are regarded as public entities that fulfil public interest roles. In practice, the pursuit of this role is not synonymous with the realisation of profits. The SARB is required to conduct its activities in the public interest only, without regard to profit maximisation."

Thus, in all cases where there remains a degree of private ownership of the central bank, including South Africa, the important policymaking powers are shielded from private shareholder influence. In the SARB's case, dividend payouts are fixed at a rate of 10% of profits, shareholders cannot remove directors or management, and any one shareholder is not permitted to own more than 0.5% of the shares outstanding. The President appoints the Governor and the Deputy Governors, and shareholders have no say in the day-to-day operations of the bank. The functions of the SARB are set out in legislation (the South African Reserve Bank Act of 1989) and its independence is entrenched in the Constitution.

Nonetheless, despite the safeguards, private ownership can create problems for the smooth functioning of the central bank. South Africa is not alone in having seen legal challenges from "rogue" shareholders, which can both divert the central bank's time and resources and raise uncertainty about its role and motivation. Efforts have apparently been made by some SARB shareholders to circumvent the limits on individual shareholdings, and they have launched challenges *via* the courts and calls for extraordinary general meetings of the shareholders. The government has responded by introducing legislation to reinforce the restrictions on shareholders. Under the South African Reserve Bank Amendment Bill, the concepts of associates and close relatives would be introduced to prevent shareholders from forming voting blocks. Also, shareholders, which currently appoint 7 of the 14-member Board, would be able only to nominate 4 directors, which would be subject to review by a selection panel. The Board would be increased to 15, with eight members appointed by the President, and the powers of the Governor and management would be clarified to limit the Board's role to corporate governance.

The Reserve Bank Amendment Bill is a sensible response to the problem of rogue shareholders seeking to undermine the independence of the SARB. Whether it will resolve all uncertainty created by the private ownership of the central bank is less clear. Public debate about monetary policy has sometimes become mixed up with the issue of the SARB's ownership, even though shareholders have in fact played no role in policy decisions. The main argument advanced for retaining private shareholders is that they provide community representation and participation in the oversight of the SARB, thereby enhancing its independence, transparency and accountability. It is unclear whether this is in fact the result, however: as in most advanced countries, these goals are primarily achieved by the central bank's legal mandate and the requirements placed on it to consult with government and report to parliament. The SARB also maintains a high degree of transparency through its website and publications, statements of the Governor and other senior officials, and *via* its outreach efforts. In this context, private shareholding of the SARB appears to be somewhat analogous to an appendix - a vestigial organ that usually does neither harm nor good but which can on occasion flare up and create problems.

Box 2. The inflation-targeting framework in South Africa[1]

The inflation-targeting framework was introduced in February 2000. The legally independent South African Reserve Bank (SARB) adjusts the repurchase rate to achieve the inflation objective set by the government. The current target is for the headline CPI[2] to be within the target range of 3 to 6% on a continuous basis. The policy rate decision is made by the Monetary Policy Committee (MPC) and reflects a consensus or a majority view without a formal vote. The MPC usually holds six meetings per year. During 2009, the MPC exceptionally moved to monthly meetings, but in November 2009 decided to revert to the regular schedule. After each meeting, the MPC statement is released, but the minutes from the meeting are not published. The *Monetary Policy Review* is issued twice per year, providing a comprehensive assessment of the recent inflation developments and the inflation outlook. The *Review* contains the inflation forecast, and since May 2010 also the forecast for real GDP growth. The inflation forecast is based on the constant policy rate assumption over the projection horizon.

The SARB's mandate explicitly allows inflation to temporarily deviate from the target due to an adverse supply shock, such as an oil price shock, a drought, a natural disaster, or financial contagion affecting the currency. This is known as the "explanation clause" which states that if such a shock hits the economy, the SARB

should inform the public of the nature of the shock, the anticipated impact on inflation, the monetary policy response to ensure that inflation returns to the target, and the time frame over which this will occur. The explanation clause provided a certain degree of flexibility to the regime. In the aftermath of the recession, the central bank's mandate was further clarified in February 2010 in a letter from the Minister of Finance to the SARB's Governor. The letter confirmed that monetary policy should be conducted in a consistent and transparent manner within a flexible inflation targeting framework, focusing on a medium-term horizon. The time frame for the adjustment to the shock over which monetary policy has no control should be chosen with the aim of avoiding unnecessary instability in output and interest rates, and should be clearly communicated to the public. The letter also stated that policy response should take into account factors that may hinder the attainment of balanced and sustainable growth and give rise to an unsustainable balance of payments position or unsustainable public and private debt burdens. The letter said that such factors included the source of the inflation shock, the size of the gap between actual and potential growth, credit extension and asset bubbles, employment and other labour market developments and the stability and competitiveness of the exchange rate.

1. This box draws on various SARB publications (2007, 2008, 2010) and Mnyande (2008).

2. Until February 2009, the targeted inflation measure was the CPIX (headline CPI excluding mortgage interest cost). In January 2009, the headline CPI was redefined reflecting changes in the treatment of owner-occupied housing cost from mortgage interest cost to the rental equivalence approach. In addition, the geographical coverage of the CPI was extended. In February 2009 the revised CPI became the new measure for targeted inflation, replacing the CPIX.

The transparency and predictability of monetary policy appear to have improved under inflation targeting. According to Dincer and Eichengreen (2009) who compiled an index of central bank transparency for 100 countries from 1998 to 2006, based on the methodology developed by Eijffinger and Geraats (2006), South Africa's central bank transparency improved from a score of 4.5 in 1999 to 9 in 2001 (out of the maximum of fifteen)[6]. As of 2006, the SARB was among the fifteen most transparent central banks in the world, on a par with Australia and Poland. Based on the methodology developed by Minegishi and Cournède (2009) that focuses on four elements of communication practices of central banks with respect to monetary policy decisions - transparency about policy objectives, policy decisions, economic analysis and decision-making process - the SARB's communication strategies are in line with the practices of major OECD central banks along most of these dimensions. The overall transparency index of 0.71 (out of a maximum of 1) achieved by the SARB in early 2011 is slightly below the average for eleven OECD central banks for which an assessment was done in 2009, and above those of the Federal Reserve and the European Central Bank (see Annex 1). Aron and Muellbauer (2009) also find that interest rates have become more predictable, indicating that the policy reaction function is well understood by the markets.

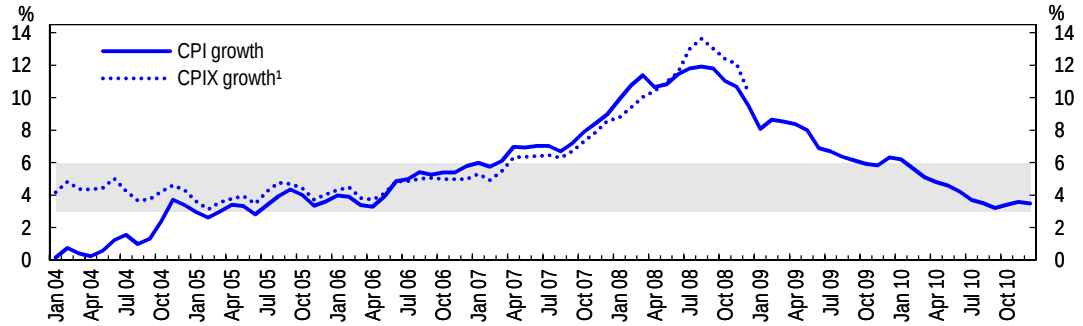
After an initial period of instability related to the emerging market crisis in 2001 and a sharp depreciation of the rand, inflation moderated and fell within the target zone for the CPIX[7] (Figure 1A). The inflation expectations of various economic agents converged (Figure 1B), and between September 2003 and March 2007, the targeted measure of inflation remained within the 3-6% zone. In the period from 2000 up to the second quarter of 2008 average inflation and inflation variability as well as interest rate variability declined compared to the pre-targeting period (Kahn, 2008). However, the regime came under stress when the adverse shock related to sharply increasing international prices for food and energy that began in 2006 and peaked in mid-2008 fed through to domestic prices.

6. This methodology assesses transparency across five categories: political, economic, procedural, policy and operational.

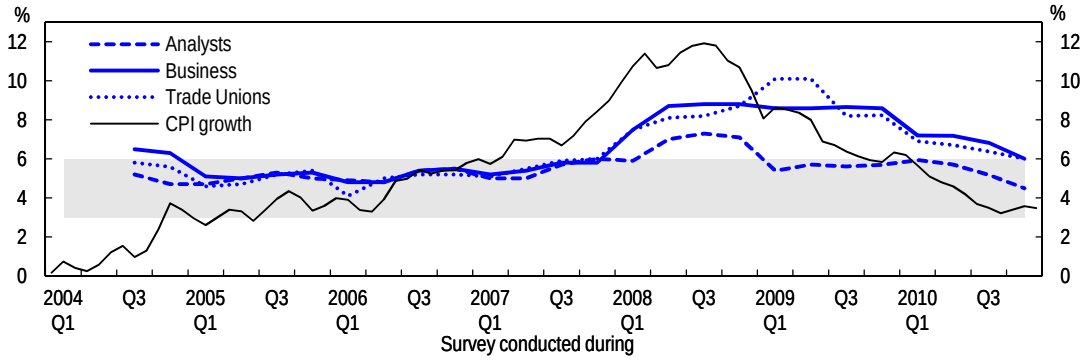
7. CPIX is equal to CPI excluding mortgage interest cost. In 2009, the newly defined CPI replaced CPIX as the basis for the inflation target (see also Box 2).

Figure 1. Inflation, inflation expectations and interest rates

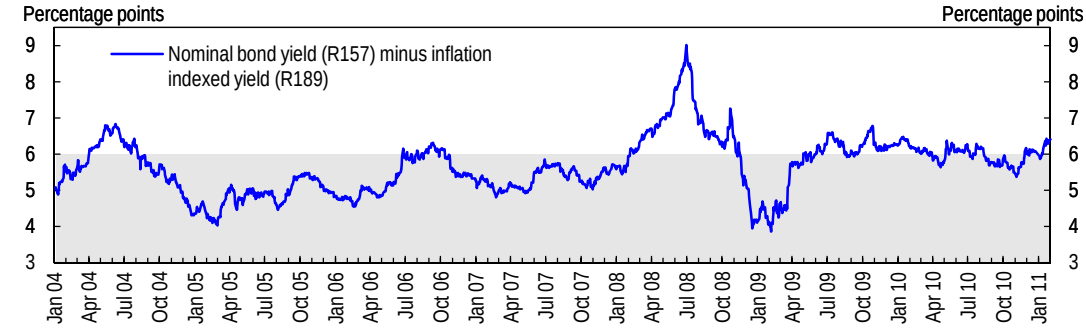
A. Inflation



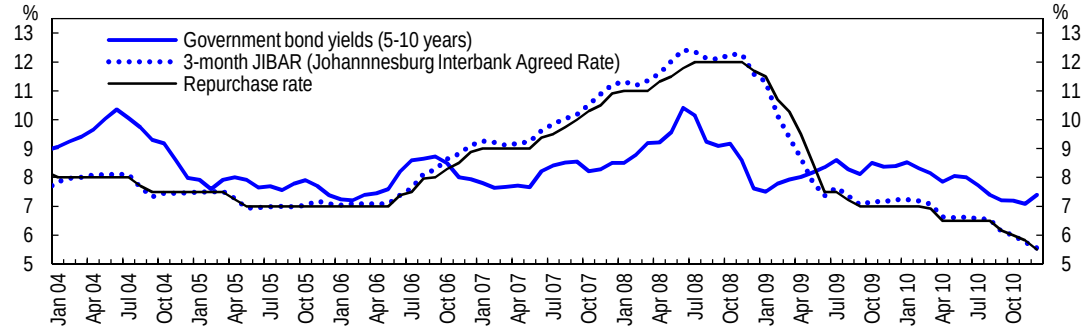
B. Inflation expectations for the coming year2



C. Yield gap between inflation-indexed and nominal bonds



D. Interest rates (average of daily rates)



1. The CPIX is equal to the CPI excluding mortgage interest cost.
2. CPIX up to the fourth quarter of 2008. Headline CPI (which replaced the CPIX as an inflation target in February 2009) onwards.

Source: Datastream, Bureau of Economic Research, National Treasury and Statistics South Africa.

The inflation-targeting framework has proven to be flexible, but its credibility can be strengthened

The optimal response of an inflation-targeting central bank to developments that are exogenous to the framework, such as international prices for food and energy, or administratively regulated prices, is a challenging policy dilemma. Stiglitz (2010) argued that the fundamental issue with an inflation-targeting framework is that it requires interest rates to be raised as a response to inflation exceeding the target level regardless of the source of price growth. In fact, inflation targeting can and should differentiate between the sources of inflation. One approach is to target core inflation; however, the choice of the operational target involves a trade-off between transparency and controllability. In particular in emerging markets, where food and energy constitute a large part of consumption basket, a divergence between headline and core inflation would result in a loss of transparency and credibility of the central bank. The second-round effects can also push up core inflation. Another way is a flexible targeting of headline inflation, allowing inflation to be outside the target band due to the first-round effects of a supply shock.

This sort of flexibility is explicitly provided for in the SARB's mandate (Box 2) and was reflected in its response to rising inflation in the 2007-08 period. The rise in policy rates in the period between May 2007 and April 2008, from 9 to 12% (Figure 1D), was less steep than warranted by inflation developments alone (Aron and Muellbauer, 2009). As a result, inflation remained outside the target band for 30 consecutive months. This created a dilemma for the SARB. On the one hand, rising headline inflation affected inflation expectations, which ratcheted upwards despite the tightening cycle (Figure 1B and C). This suggests that the credibility of the central bank suffered. At the same time, the SARB was criticised for an inappropriate tightening in response to inflationary developments that were outside of its control and, more generally, for not paying attention to growth and employment objectives.

Enhancing the credibility of the inflation target is crucial for the success of the framework. Not only is the anchoring of expectations the main precondition for the stability of inflation outcomes, but greater credibility would also provide the SARB with more freedom to implement a flexible approach to inflation targeting in the future. A high degree of transparency and convincing monetary policy reports are considered to be indispensable for establishing and maintaining credibility (Svensson, 2010). Empirical evidence suggests that higher transparency is "an integral part of monetary frameworks that are associated with better anchored inflation expectations and more stable inflation outcomes" (Minegishi and Cournède, 2009). The SARB's communications strategies are in line with those adopted by the major OECD central banks along many dimensions, such as announcement and explanation of the policy changes in the Monetary Policy Committee (MPC) statements and publication of the central bank's forward-looking assessment of the economy, including inflation and output forecasts (Box 2 and Annex 1). At the same time, the SARB provides less guidance regarding future policy inclinations, assuming a constant-interest-rate path over the projection horizon in its inflation forecast. This assumption is generally unrealistic and can lead to biased forecasts (Svensson, 2010). Relaxing this assumption would allow the central bank to decide on and communicate to the public the optimal inflation path, instead of limiting this path to a single possible outlook for inflation given an unchanged policy rate. The practice of deciding on and publishing the optimal policy rate path was pioneered by the Reserve Bank of New Zealand and has been adopted by several other central banks, including those of Norway and Sweden. While there is a concern that a non-constant rate forecast published by a central bank may be misinterpreted by the private sector as a commitment, rather than a forecast subject to uncertainty, evidence suggests that in all three countries, the private sector has understood well the conditional nature of the forecast (Svensson, 2009). To further increase transparency and signal commitment to price stability over the longer term, the SARB should consider moving in the direction of announcing a policy rate path consistent with the inflation objective. Beginning in 2010, the SARB Governor started to offer more guidance about the future direction of monetary policy, and from the second half of 2010, the MPC has provided some explicit forward-looking

guidance in Monetary Policy Statements[8]. Ultimately, the SARB could begin to publish a projected path in the *Monetary Policy Review*.

Additional efforts are warranted to ensure that the social partners use the inflation target as guidance for wage and price setting. Empirical results suggest that wage settlements are the major source of inflation inertia in South Africa (Aron and Muellbauer, 2009). A closer look at the composition of expectations reveals that financial analysts had a greater trust in the SARB's ability to combat inflation (Figure 1B). Break-even inflation rates on inflation-indexed bonds indicate that between February and November 2008, financial markets expected average inflation over the five-year horizon to be outside the target band, but with the onset of the recession, expectations fell within the target zone (Figure 1C).[9] By contrast, the trade unions' expectations remained elevated and in fact backward-looking: even with the onset of the recession, trade unions did not expect inflation to subside. Inflation expectations of business respondents and trade union officials have trended downwards since the second quarter of 2009, but only descended to the upper bound of the target zone in the fourth quarter of 2010. Communication is important as well, and the outreach initiative introduced by the SARB in December 2009 that aims at improving the central bank's interaction with various stakeholders is a useful step in that direction. At the same time, more could be done to influence expectations more directly. More centralised wage co-ordination, with the participation of the government, which would put more emphasis on future inflation developments, might be helpful in this regard.[10]

Some experts have argued that the target band needs to be widened to accommodate the shocks from imported inflation, *e.g.* Garrow (2008). The majority of central banks in advanced economies formulate their inflation objective around 2%. Taking into account that emerging market central banks should aim for somewhat higher inflation rates than advanced countries due to Balassa-Samuelson effects, possibly 1-2% higher (Amato and Gerlach, 2002), an upper bound of 6% seems on the high end and in fact is one of the highest among all inflation-targeting countries, including emerging economies. The benefits of moving towards the higher upper bound are hard to justify for South Africa, while the loss of credibility is a real risk. The target band of 3-6% for consumer price inflation is appropriate and should be maintained.

Flexible exchange rate arrangements are appropriate for South Africa …

A flexible exchange rate is a prerequisite for successful inflation targeting as the central bank cannot credibly commit to a second objective under an inflation-targeting framework. A flexible exchange rate also works as a shock absorber, in particular for a country like South Africa which is frequently exposed to large terms-of-trade shocks. In addition, the negative impact of currency fluctuations on balance sheets, arguably one of the key reasons for currency management, is less pronounced in South Africa due to the relatively low levels of foreign-currency denominated debt and dollarisation of domestic contracts compared to other emerging markets. More than 40% of external debt is denominated in rand (Figure 2), and the level of dollarisation is extremely low at 2.6%.[11]

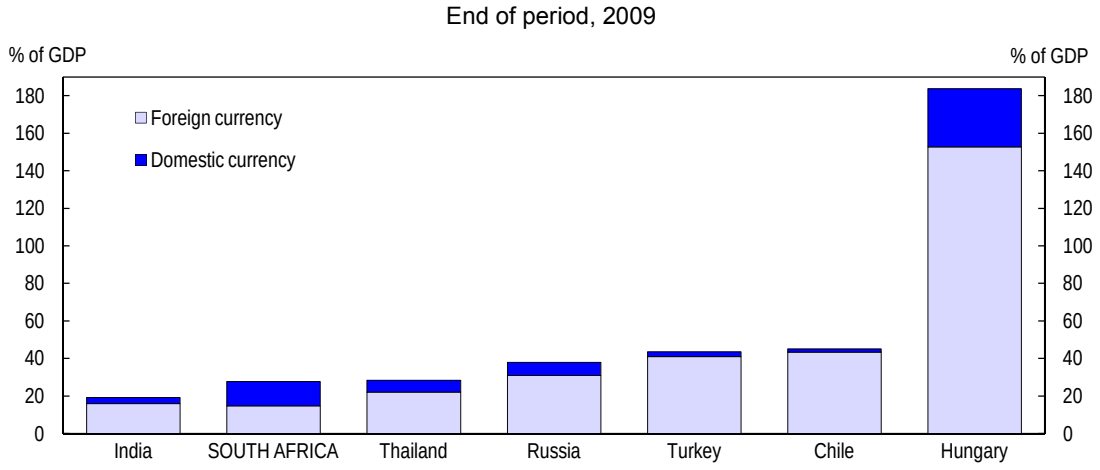
8. There is evidence that even before that observers were consistently able to extract signals of future policy decisions from MPC statements (Reid and du Plessis, 2010).

9. Movements in the break-even inflation rates sometimes reflect low liquidity of the market and some technical factors. For this and other reasons, the results should be interpreted cautiously as a measure of private sector inflation expectations. See Garcia and Van Rixtel (2007).

10. See OECD (2010a).

11. Measured as the share of foreign-currency denominated deposits to total deposits as of end-2009.

Figure 2. External debt by currencies



Source: World Bank, *Quarterly External Debt Statistics Database*, *WDI Database* and Central Bank of Russia.

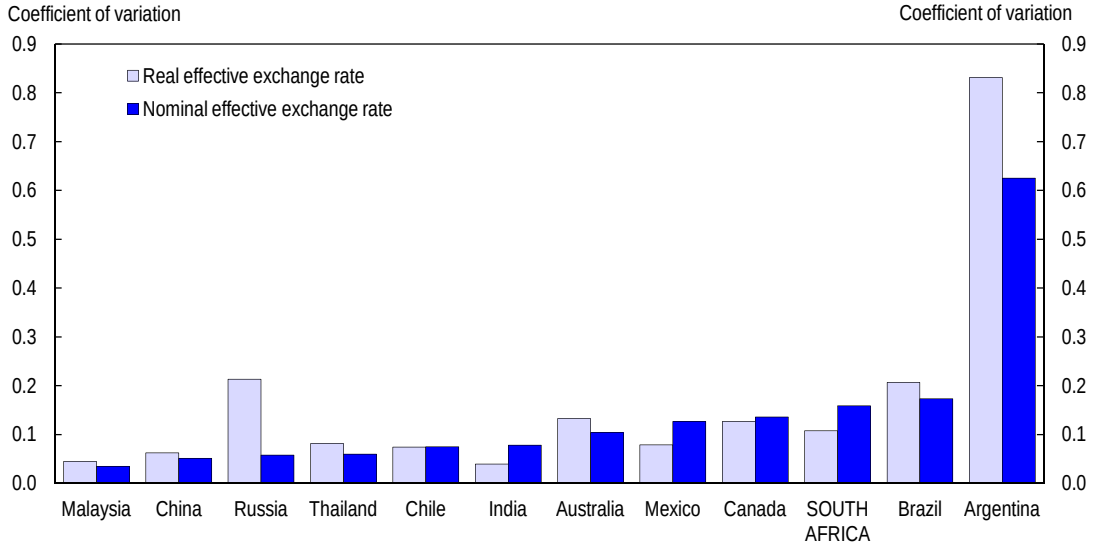
… but exchange rate developments should be taken into account while formulating policies

While the exchange rate cannot be the main policy objective under inflation targeting, paying attention to exchange rate developments is warranted, as it remains one of the key macroeconomic variables in South Africa. First and foremost, exchange rate movements have a direct effect on domestic prices (the so-called exchange rate pass-through). Empirical estimates suggest that the exchange rate is a significant determinant of inflation in South Africa. This implies that currency volatility is translated into volatility of domestic inflation. Mihaljek and Klau (2008) estimate the pass-through coefficient to domestic prices of final goods at around 8%, similar to the SARB's own estimates. Karoro *et al*. (2009) find that the pass-through of the exchange rate on import prices is relatively high. Examining the pass-through effects at a disaggregated level, Parsley (2010) estimates the pass-through coefficient to import prices at around 60%, but reports a relatively low pass-through to prices of final goods. Aron *et al.* (2010) find that short-run pass-through to import prices is incomplete at about 50 percent within a year and 30% in six months, while equilibrium pass-through, ignoring feedback effects, is around 75%. There is also evidence that the pass-through is asymmetric, *i.e.* that currency depreciation has a larger effect on domestic prices than appreciation[12]. This implies that downward exchange rate movements can generate a series of price hikes that are not fully offset when the currency bounces back. This may be linked to competition-hampering business regulation.[13] Another channel through which the exchange rate affects economic developments is its impact on the relative price competitiveness of domestic producers of tradable goods and services. A large real appreciation will have a detrimental effect on the tradables sector and export performance, which may endure even if the appreciating trend is reversed because of ratchet effects (Krugman and Baldwin, 1987).

12. See Karoro *et al.* (2009). Mihaljek and Klau (2008) find no evidence of the asymmetry, however, the SARB's own assessment reported in their paper suggests that the pass-through is asymmetric, with depreciation having a larger impact than appreciation.

13. As suggested by the OECD PMR indicators calculated for South Africa (OECD, 2008).

Figure 3. Nominal and real effective exchange rate variability, Jan 1999-Jan 2010



Source: OECD calculations based on IMF, *IFS Database* and OECD estimates.

In particular, episodes of prolonged misalignment of the exchange rate linked to large sentiment-driven capital inflows warrant a policy response. The pre-crisis episode of rapid appreciation reflected in part the rising terms of trade, but also to a significant extent large capital inflows, which were in turn linked to the commodity boom (Frankel *et al.*, 2008). It is notoriously difficult to estimate long-term equilibrium commodity prices, but it is likely that the levels observed prior to the crisis represented deviations from equilibrium.[14] It is even more obvious that the appreciation induced by capital inflows did not reflect fundamental changes in relative prices, and thus led to a misalignment relative to the fundamentals. While misalignment of the real exchange rate is usually associated with pegs, evidence shows that flexible exchange rates are also prone to overshooting, and a trend nominal appreciation can persist for lengthy periods (Ho and McCauley, 2003; Hannoun, 2007).[15] Moreover, appreciation episodes are often associated with high-yielding currencies, such as the rand.[16] In the current environment of abundant liquidity internationally and exceptionally low interest rates in advanced economies, large interest rate differentials have resulted in a renewed wave of capital inflows to South Africa.

Exchange rate volatility was identified by the South African authorities as one of the constraints on growth in AsgiSA in 2006. South Africa's nominal exchange rate volatility is among the highest of all

14. Collier (2007) argues that commodity prices tend to see long gradual declines punctuated by sudden spikes, of which the episode that began in 2004 was one.

15. In principle, if such nominal overshooting is compensated by a corresponding fall in domestic prices, or if domestic inflation is lower than that of trading partners by an amount sufficient to offset the nominal appreciation, the result can be either no change in the real exchange rate or even real depreciation. As South Africa's inflation rate has been higher than its trading partners', nominal appreciation of the rand has always resulted in real appreciation.

16. This demonstrates that uncovered interest rate parity (UIP) may not hold for lengthy periods of time. According to UIP, interest rate differentials should be fully compensated by exchange rate movements, *i.e.* low-yielding currencies should be expected to appreciate and high-yielding currencies to depreciate. However, in reality the opposite occurs for a prolonged period of time (Hannoun, 2007; White, 2009). Even if the episodes of prolonged misalignment eventually correct themselves, a correction of such a trend usually results in instability.

commodity exporters and emerging markets (Figure 3). As noted before, to the extent that exchange rates reflect the changes in relative prices linked to fundamentals, their movement helps the economy adjust to shocks. However, excessive volatility may diminish the role of the exchange rates as shock absorbers, and become a source of vulnerability itself.[17]

There is scope within the inflation-targeting framework to counteract unsustainable real appreciating trends and reduce volatility of the exchange rate. Keeping inflation at low and stable levels in line with the central bank's mandate is a priority, as this would reduce inflation differentials between the country and its trading partners, which is one of the factors behind real appreciation. Lower inflation rates would also translate into lower nominal interest rates, discouraging the carry trade. To respond to the pressures on the nominal exchange rate, once inflation is under control, one option would be to include the exchange rate in the policy response function. While this is conceptually legitimate (Edwards, 2007), it is usually difficult to judge the effects of monetary policy on the exchange rate. For example, traditionally, decreasing the policy rate is associated with depreciation, as interest rate differentials become smaller, discouraging capital inflows. However, as a large share of portfolio flows in South Africa goes to equities, to the extent that falling real interest rates are perceived as good for growth, this can boost capital inflows. While it is likely that with large interest rate differentials the traditional effect will dominate, the effect of changes in the policy rate is ambiguous.

Reserve accumulation and sterilised intervention, at least in the short term, can mitigate the pressures on the exchange rate, while domestic objectives can be controlled with the policy rate (Blanchard *et al*., 2010). The SARB has already tended to accumulate reserves when appreciation pressures have been strongest, while refraining from intervening to resist depreciation. Nonetheless, a somewhat more active intervention policy providing for a more rapid accumulation of reserves when net inflows are strong and allowing depreciation when they ebb, as long as this remains consistent with the primary goal of keeping inflation in the SARB's target range, could do more to avoid or mitigate overvaluation. The central bank's international reserves, while increasing gradually, have remained relatively low by international standards (IMF, 2009a), and there is scope for increasing reserve holdings on prudential grounds. The purchases will need to be sterilised, and there are costs associated with this sterilization, but they may be small compared to the economic costs of overvaluation. Foreign exchange intervention, albeit not always effective and certainly no panacea, should be used more actively within the constraints of the inflation targeting regime to mitigate rand overvaluation. In current circumstances, with a strong rand and still relatively low reserves, the accumulation of reserves should be more rapid when net inflows are strong, while depreciation should be allowed when they ebb.

The elimination of remaining controls on outward investment by South African residents could also help to resist pressures for overvaluation. The asymmetric liberalization of capital flows, with no restrictions on flows related to purchases of local assets by non-residents, but various controls over foreign exchange transactions of South African resident corporations and individuals, has created an environment in which foreign investors' sentiment plays a disproportionate role in foreign exchange developments. While exchange controls do not exclude residents from participation in the foreign exchange market, they create obstacles for efficient portfolio allocation, and discourage many potential participants. South Africa has taken steps to liberalise controls on capital outflows by residents, but they remain significant.[18] Removal of such controls would deepen foreign exchange markets and make them less dependent on the

17. See, for example, Pétursson (2009), also for a selected review of the literature pursuing this argument. It should be noted that over long time intervals exchange rate volatility is not necessarily lower under fixed rate regimes, as a prolonged misalignment with a subsequent adjustment episode may produce extreme fluctuations, raising overall volatility.

18. See du Plessis and du Rand (2010) and Leape and Thomas (2009) for reviews of the current system of exchange controls on South African residents.

attitude of foreign investors towards South Africa, while eliminating the associated administrative costs. In particular, liberalising outward investment by residents would, other things being equal, put downward pressure on the rand. To the extent that the resulting foreign exposure poses a risk, prudential regulations should be used. Another, related, measure which could have an even more significant effect is raising the foreign investment limits on government-owned investment institutions.

When the limits of other measures, such as sterilized intervention, removal of exchange control on residents and fiscal tightening (discussed in the next section) are reached, the option of temporary market-based measures to discourage capital inflows ("speed-bumps"), such as unremunerated deposit requirements or taxes on some capital inflows, could be considered. A number of other emerging market countries have resorted to such measures in the post-crisis period as capital inflows surged, creating strong appreciation pressures. The empirical literature is inconclusive on the effectiveness of such measures, although there is some evidence that capital controls on inflows can make monetary policy more independent, alter the composition of capital flows, and reduce real exchange rate pressures, even though the evidence here is more controversial (Magud and Reinhart, 2006). Such controls involve non-negligible administrative costs, as well as costs in terms of distorted prices. Controls may also damage the country's reputation for openness, although the latter can be mitigated by other actions to liberalise trade and foreign direct investment, and the previously discussed lifting of exchange controls on residents' outward investment, which are worthwhile in their own right. Such costs should be weighed against the growth and employment costs of prolonged overvaluation.

Enhancing the stabilising role of fiscal policy and safeguarding sustainability

The decade of fiscal reforms paid dividends

The fiscal situation improved markedly between the mid-1990s and the early 2000s, with a decline in budget deficits from the high levels of the early 1990s (Figure 4) and a reduction in public debt and the interest rate burden (Figure 5). This notable progress was based on the successful implementation of several important fiscal initiatives. Revenue collection was strengthened through tax reforms that broadened the tax base and increased effective tax rates, while reducing marginal rates and improving tax administration and compliance. Nevertheless, the extremely unequal income distribution means that only every third employee is registered as an income taxpayer.[19] A reprioritisation of government expenditure towards social services went in parallel with radically improved fiscal discipline, with the share of expenditure in GDP decreasing slowly but steadily. The predictability and transparency of the budgetary process have increased with the adoption of the Medium-Term Expenditure Framework (MTEF), which outlines multi-year expenditure targets and spending priorities.[20]

19. Those not registered include informal sector employees and formal sector employees with annual income below 60 000 rand. A reform is underway requiring every employee to become a registered taxpayer.

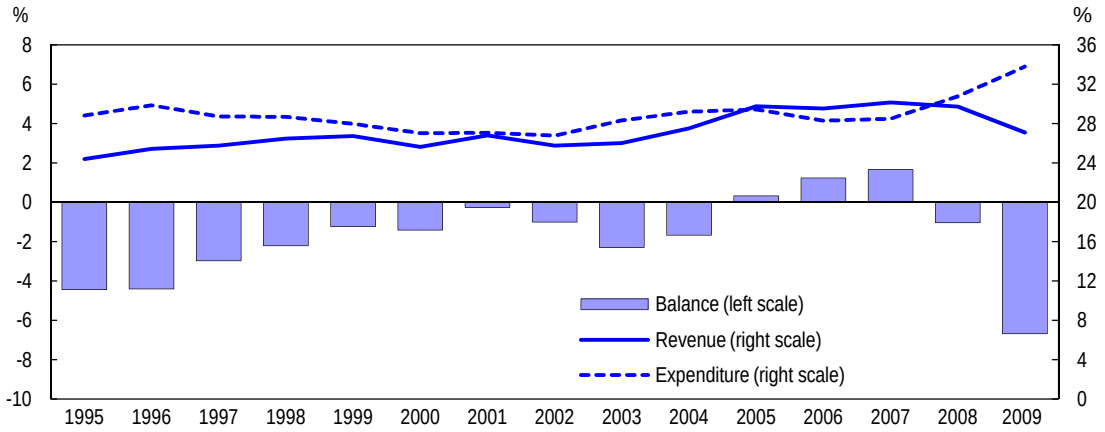
20. See Calitz and Siebrits (2003), du Plessis and Boshoff (2007) and Ajam and Aron (2009) for a more detailed discussion of the fiscal reforms in South Africa since 1994.

The boom years brought further improvements in the headline fiscal position …

The improvements in the headline fiscal position accelerated during the boom phase of the latest cyclical upturn (Figure 4). The consolidated government budget[21] turned to a surplus in FY 2005/06 and continued to register growing surpluses over three consecutive fiscal years. This mainly reflected a surge in revenues, which were boosted by the acceleration of growth in 2004. Between FY 2004/05 and FY 2007/08, consolidated government revenues increased by 2.6 percentage points of GDP, more than during the previous decade (Figure 6). The downward trend in expenditure was reversed in FY 2003/2004, and consolidated government outlays stabilised in relation to GDP.

Figure 4. Government finances

As a percentage of GDP

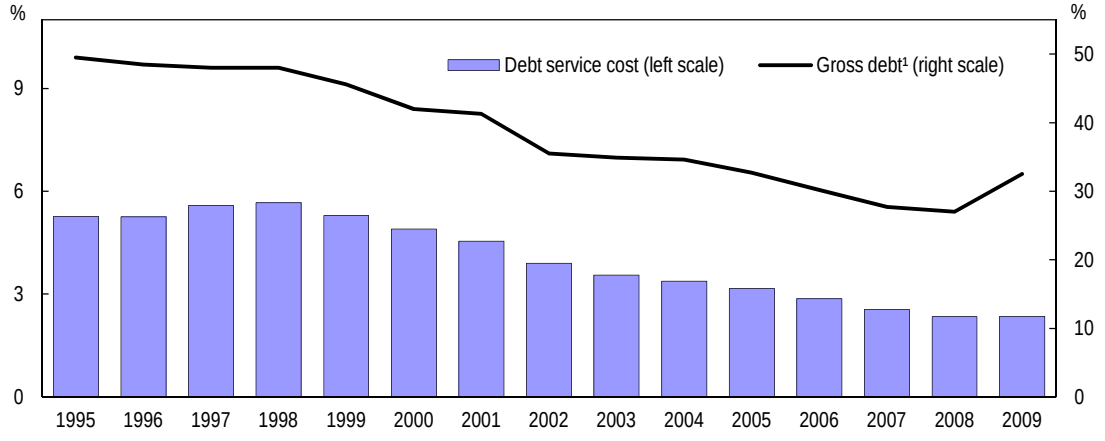


Note: Consolidated budget, fiscal years (1 April-31 March).

Source: National Treasury, *GFS Database*.

Figure 5. Public debt and debt service cost

As a percentage of GDP



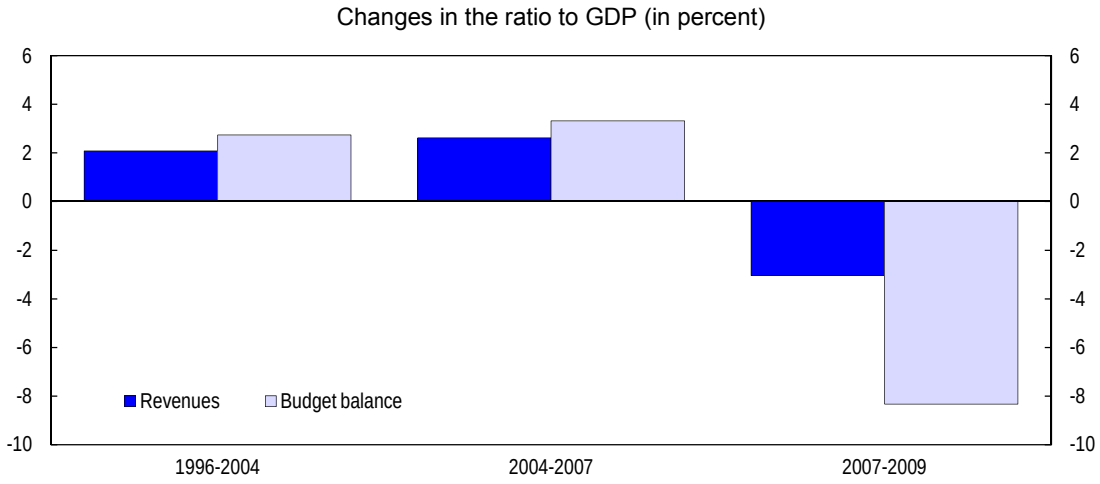
Note: Fiscal years (1 April- 31 March).
1. Gross debt of the national government, end of period.

Source: National Treasury, *GFS Database*.

21. Includes national and provincial governments, social security funds and some public entities.

Tax buoyancy has proved to have been driven by the cyclical upswing. Growth in government revenues decelerated sharply as the economy slowed down and turned negative with the onset of recession. As revenues were falling faster than the economy, the fiscal gains of the boom years were quickly lost and the share of revenue in GDP returned to the level of 2004 (Figure 4).

Figure 6. Budget balance and government revenues, 1996-2009



1. Consolidated budget, fiscal years (1 April-31 March).

Source: OECD calculations based on the data from National treasury and *GFS Database*.

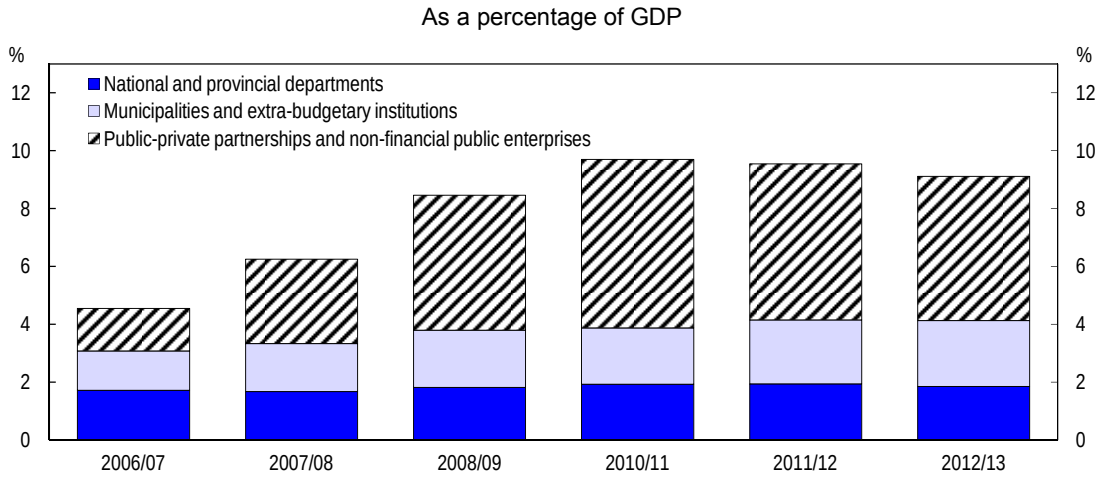
Government spending plans ratcheted upwards just as the cycle was peaking. The 2008 Budget proposals pushed up expenditure over the three-year horizon compared to the plans outlined in the MTEF by 116 billion rand (around 6% of 2007 GDP). Spending plans were again revised upwards later in 2008, when the economy began to slow down, with an increase of 1.1% GDP for 2008 and an additional allocation of about 170 billion rand over the 2009/10-2011/12 fiscal years (7.4% of 2008 GDP) compared to the previously announced targets. As the crisis hit, the government decided to proceed with the spending plan for FY 2009/10, despite the deteriorating revenue environment, and slightly expand planned expenditure for FY 2010/11. In FY 2009/10, the share of consolidated government expenditure in GDP surged to a historical high of over 34% of GDP. Spending increased across the board, with the shares of current and capital expenditure and transfers to households all rising relative to GDP. The wage bill surged in FY 2008/09 and FY 2009/10, as employment and salaries in the public sector increased. Capital spending also increased strongly, reflecting investment in infrastructure, including social infrastructure like schools and hospitals. The overall picture is one of an upward drift in public spending at just the time when revenues were being hit by the downturn.

In parallel to increased general government investment in recent years, major capital expenditure programmes are being implemented by some public enterprises, especially Eskom, the electricity supplier, and the transport conglomerate Transnet.[22] Public-sector infrastructure expenditure increased from 4.6% in FY 2006/07 to 8.5% of GDP in FY 2008/09, with public enterprises accounting for the largest share of this growth (Figure 7). Eskom's and Transnet's five-year capital spending programmes over the FY 2009/10 to FY 2013/14 period, amounting respectively to 342 billion rand (15% of 2008 GDP) and 80 billion rand, were similarly approved before the onset of the crisis and were not adjusted downwards despite the much

22. Other sizeable capital expenditure programmes are being implemented by the South African National Roads Agency, the Central Energy Fund, the Trans-Caledon Tunnel Authority and the Airports Company of South Africa.

more challenging financing environment during the global crisis. Moreover, Eskom's capital spending plans escalated to 460.2 billion rand over FY 2009/10 to FY 2013/14 period (National Treasury, 2010). For the public sector as a whole, current plans envisage annual infrastructure spending around 9% of GDP (Figure 7), which is high relative to other countries[23].

Figure 7. Public sector spending on infrastructure



Source: National Treasury (2010).

The headline budget balance swung to a deficit in FY 2008/09 and deteriorated significantly in FY 2009/10. Overall, between the 2007/08 and 2009/10 fiscal years the budget balance worsened by about 8.5 percentage points of GDP, with the largest part coming from increased expenditure. The public sector borrowing requirement, which takes into account the financing needs of state-owned enterprises, amounted to about 11% of GDP in FY 2009/10.

… but the structural balance remained in deficit

The movements in the headline budget position over the latest boom-recession cycle have reflected the effects of automatic stabilisers as well as of discretionary policy measures. The decomposition of the budget balance into a cyclical component (*i.e.* related to the deviation of various factors from the level consistent with potential output) and a structural component helps assess the magnitude of automatic stabilisers and the degree of counter-cyclicality of discretionary fiscal policy actions, as well as the sustainability of the fiscal position.

Fiscal developments over the past decade indicate a high degree of sensitivity of the budget balance to the cycle. According to standard OECD methodology for estimating the cyclical component of the budget position with respect to the output gap (Girouard and André, 2005), structural revenues and spending are defined as those that would have been collected and spent if output had been at its potential level that year, and the difference between the actual and structural measures is attributed to cyclical effects. Changes in the fiscal balance due to the cycle are referred to as automatic stabilisation, since their effect is to withdraw

23. Methodological differences make exact comparisons difficult. General government spending on infrastructure is below 3% of GDP for the OECD countries. However, the data for infrastructure spending of state-owned enterprises, which account for a significant part of public sector spending in South Africa, are not always readily available for other countries. For most OECD countries such expenditures would be relatively modest, certainly smaller than the gap between South Africa's total public infrastructure spending of 9% of GDP and the level of general government infrastructure spending in OECD countries.

demand from the economy during cyclical upswings and increase demand during downturns. Estimates show that the cyclical component amounted to about 2-2.8% of GDP annually during 2006-08. In practice, the cyclical component of spending is minor, reflecting the small size of unemployment benefits. Thus, in South Africa, automatic stabilisation takes place almost exclusively on the revenue side.

Beyond the impact of the traditional business cycle, revenue performance may have been affected by other temporary factors, in particular, exceptionally high global commodity prices during the latest boom. One way to address this issue is to separate commodity revenues from the budget and adjust the "non-commodity balance" to the cycle, while adjusting commodity-related revenues for the effects of fluctuations in global commodity prices.[24] Applying this approach to South Africa should not have a large effect on the results, however, as revenue streams corresponding to the extraction of commodities – limited to the corporate income tax levied on mining companies – have been relatively low over the last decade, even during the recent period of exceptionally high global commodity prices. In FY 2007/08 corporate income tax from the mining and quarrying sector accounted for 3.3% of total revenues, or 1% of GDP. This is significantly below the size of commodity-related revenues in other resource-rich countries (Table 1). While the share in GDP of the natural resource sector in these countries is about twice as large as in South Africa, the size of commodity-related revenues in relation to GDP is some 8-10 times larger. This suggests that there is significant potential for raising greater tax revenues in this area. Even though tax revenues from mining were relatively low, the commodity boom had a significant effect on total budget revenues *via* effects on economic activity, boosting income and consumption, as well as profits of domestic companies that benefited from increasing domestic demand, in particular in the non-tradable sector.[25]

Table 1. Commodity-related revenues in selected commodity-exporting countries, 2007

	% total revenues	% GDP
South Africa	3.3	1.0
Chile	31.3	8.6
Mexico	35.4	7.9
Norway	24.3	14.3
Russia	26.2	10.5

Source: OECD calculations based on national sources.

Another factor that may have boosted revenue performance but which is not captured by the output gap directly is the asset price boom. Asset price movements may have a significant impact on revenues, directly (*e.g.* through capital gains taxes) or indirectly *via* the impact of wealth on consumption. Another potential reason for increases in revenues may have been improved tax compliance and administration. While all these effects could have been important, accounting for them would not be straightforward.[26]

24. This is done for example in Chile, where non-commodity revenues are adjusted to the cycle, while commodity-related revenues are adjusted with the gaps between actual and long-run prices of copper and molybdenum. See OECD (2010b).

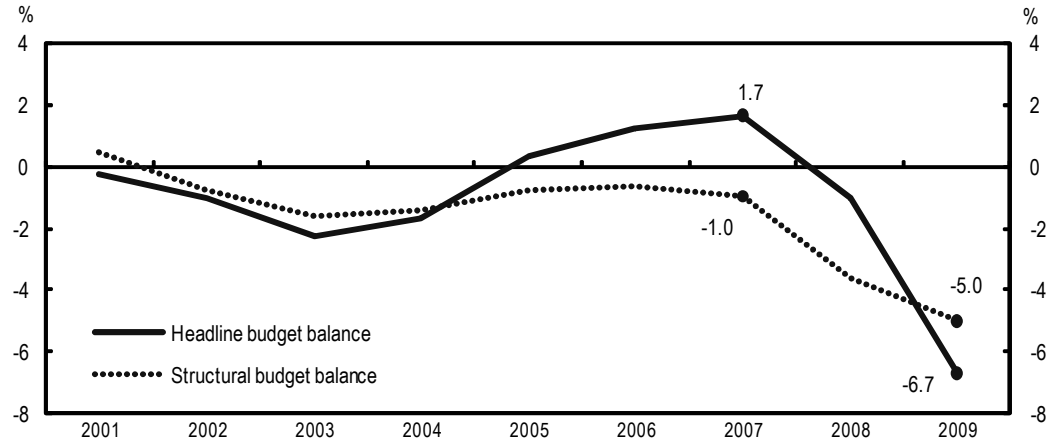
25. Total government revenues can be adjusted for terms-of-trade effects (Turner, 2006). Applying this approach requires estimating long-run equilibrium terms of trade, which is notoriously difficult. Also, the effect of the changes in export commodities on budget revenues is expected to be larger than the effect of the movements in imported commodities, such as oil, whereas the terms of trade changes capture both effects. Given these and other methodological limitations, this adjustment has not been applied to the calculation of the structural balance for South Africa.

26. The OECD is carrying out work on developing the methodology for accounting for the impact of asset price cycles on revenue performance in a systematic way (see Sutherland *et al.*, 2010). Regarding

OECD estimates show that the cyclically-adjusted, or structural balance[27] of the consolidated government remained in deficit throughout the boom years, even though the headline position was in surplus from FY 2005/06 through FY 2007/08 (Figure 8). The cyclically adjusted fiscal position began to deteriorate in FY 2007/08 and worsened considerably in FY 2008/09. While the estimates of the structural balances are subject to substantial uncertainties, the results point to an overspending during the boom of what turned out to be unsustainable revenues.

Headline budget balances have moved in a counter-cyclical way since 2003 (Figure 9). The decomposition of the movements in the headline fiscal position into the changes in cyclical and structural components suggests that the cyclical contribution from automatic stabilisers was reinforced by a discretionary counter-cyclical fiscal stance between 2003 and 2006. However, discretionary fiscal policy turned procyclical as spending rose in the second part of the latest cyclical upswing, partially offseting the effect of the automatic stabilisers (Figure 9). Discretionary policy became counter-cyclical again at the onset of the crisis, as the government decided to maintain the pre-crisis expenditure level, amplifying the impact of the revenue-side automatic stabilisers.

Figure 8. Headline and structural budget balances



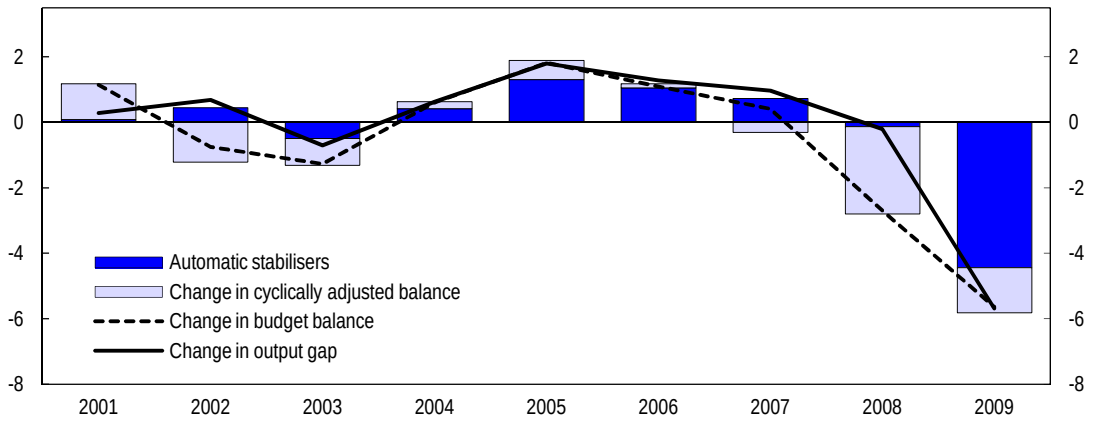
Note: Consolidated budget, fiscal years (1 April-31 March). Headline balance: percentage of GDP; structural balance: percentage of potential GDP.

Source: National Treasury, *GFS*; OECD estimates.

compliance, there is some evidence it may itself be cyclical in South Africa, increasing during the good times but falling during the economic downturn.

27. Calculated as cyclically adjusted revenue minus expenditure. The value of expenditure is not adjusted for South Africa as expenditures are acyclical.

Figure 9. Output gap and decomposition of budget balance into structural and cyclical component

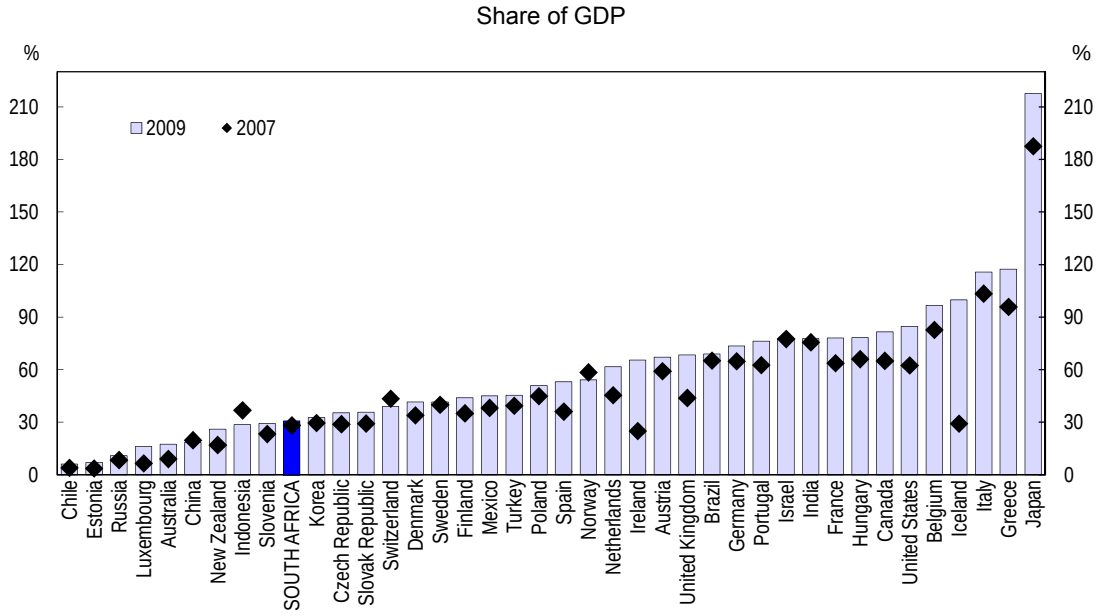


Note: Headline budget balance: changes in the ratio to GDP; structural balance: changes in the ratio to potential GDP; automatic stabilisers: changes in the cyclical component. Output gap as a percentage of potential output.

Source: OECD calculations.

The conduct of fiscal policy during the boom and recession phases has been generally sound but can be strengthened along two important dimensions: improving fiscal management over the cycle and reinforcing the credibility of the commitment to the sustainability of public finances. These issues are interrelated. Preventing fiscal loosening during the periods of revenue buoyancy is essential to avoid additional overheating during the boom and a subsequent worsening in the headline fiscal position once the economy slows down. The authorities successfully pursued counter-cyclical fiscal policy for a number of years, but did not save enough of the revenue windfalls during the boom years and launched an ambitious spending programme just before the cycle turned. One reason for fiscal loosening may be overestimation of the level of structural revenue during the boom. This may in turn have happened because of overly optimistic estimates of potential output, or because the sensitivity of revenues to the cyclical factors was higher than the government assumed. In particular, the sensitivity of corporate income tax to cyclical developments may have been considerably underestimated. Taking into account all these effects, it is likely that some part of the temporary revenue gains was wrongly seen as permanent. In addition, pressures to increase spending intensified when the headline budget position moved into surplus, as the financing constraint was relaxed and fiscal unsustainability no longer appeared to be the major risk. These political economy forces explain why it became increasingly difficult to protect fiscal surpluses. The decision to maintain pre-crisis expenditure, together with a large increase in public sector wages, acted as a fiscal stimulus which supported domestic demand through the recession. However, this increase in spending, even if it happened to be timely and to a large extent targeted, was not designed to be temporary and a withdrawal has not been envisaged. While the government debt position at the onset of the crisis looked favourable compared to many OECD countries thanks to the previous efforts to reduce the debt burden (Figure 10), there has been a sharp reversal in the declining trend, and careful attention should be paid to debt dynamics to ensure that hard-won fiscal sustainability is not undermined. The recent experience in the euro area periphery is a reminder that markets can quickly penalise the economy if confidence in the sustainability of the public finances is shaken. Not only will the public sector face higher interest rates due to the increase in the risk premium, but so will private agents, as sovereign credit ratings serve as a benchmark for the private sector.

Figure 10. General government gross debt



Source: IMF, *WEO Database*, October 2010.

Making fiscal policy more rule-based

Strong budgetary rules that institutionally constrain discretionary fiscal policy may be useful in an environment of mounting pressure for fiscal expansion. These rules can also assist governments in the consolidation of their budget positions. For such rules to be effective, they have to be transparent and easy to monitor, sufficiently flexible to respond to various shocks, and backed by political will to maintain prudent public finances. Evidence suggests that fiscal rules are associated with improved fiscal performance (IMF, 2009b). The technical aspects of administering such rules, such as providing macroeconomic assumptions and estimating potential output and revenue elasticities, could be assisted by using input from a group of independent experts, as is done in a number of OECD countries, including Chile, Sweden and the United Kingdom. Such "fiscal councils" or other independent entities can also facilitate public acceptance of the need for fiscal prudence, as has been consistently advocated by the National Treasury.

Budget balance and debt rules that set a numerical limit on the respective fiscal indicators score well on simplicity and transparency, and have a close link to debt sustainability. As a member of the South African Development Community, South Africa agreed to macroeconomic convergence criteria: a ceiling for the budget deficit of 5% of GDP by 2008 and 3% by 2012, and a 60% limit on the ratio of public debt (including provisions and contingent liabilities) to GDP. The Treasury's non-binding objective for public debt is even below this limit, at 50% GDP. However, as the previous discussion demonstrates, the budget deficit target did not prevent pro-cyclical spending at the end of the latest economic upswing. Moreover, adherence to this target would have induced pro-cyclical tightening in the current downturn, as discretionary spending cuts would have been required to offset the working of automatic stabilisers. Likewise, the debt target did not sufficiently constrain fiscal policy during the boom, as public debt was

well below this limit. However, as public debt approaches this threshold,[28] this objective could come into play as a factor encouraging fiscal consolidation.

From the macroeconomic stabilisation perspective, the structural budget balance is in principle preferable to the headline budget balance as a target since it permits the full working of the automatic stabilisers, which should attenuate the cycle. However, in practice, the techniques related to the estimates and forecasting of the structural balance need to be sufficiently robust for such rules to become effective. Advancing the work on the estimates of the cyclical indicators in line with international best practice, while taking into account country-specific circumstances, would help in this regard. Such work is warranted, whether or not there is a formal rule. Better understanding on the part of policy-makers of the cyclical position of the economy, the sources of revenue gains and the magnitude of automatic stabilisers is one important step. Another is the proper communication of these elements to the public, as this would help raise public awareness about the likely temporary nature of revenue windfalls during economic booms and disseminate a more realistic view of the amount of resources available to the government over the longer term, thereby reducing pressures for a fiscal expansion during cyclical upswings.

The government has already taken some steps in this direction. The Treasury began publishing information on structural balances in 2007, and expanded this work in the subsequent budget documents, emphasising the role of cyclical factors in exceptionally strong revenue performance during the boom years. The efforts devoted to assessing the impact of cyclical factors on fiscal developments and informing the public about the current fiscal stance are welcome. The government should deepen its work on assessing the underlying fiscal position and publish more detailed information about the business cycle and the cyclical fiscal stance in official documents. Consideration should be given to setting a target for the structural balance, consistent with the Treasury's public debt objective.

Setting a target for the structural balance, while enhancing the conduct of fiscal policy, may not be sufficient to entirely prevent overspending during the boom (Joumard and André, 2008). An expenditure rule may be useful in restraining fiscal expansion in upturns, and has been adopted in some OECD countries, such as Finland, the Netherlands and Sweden. Expenditure rules are relatively transparent and easy to implement and monitor, and the use of fiscal rules which include expenditure targets has been associated with larger and longer fiscal adjustments (Guichard *et al.*, 2007). Expenditure rules usually set multi-annual (at least three years) spending ceilings, and the government makes an explicit commitment not to exceed this level (Ljungman, 2008). A spending rule has counter-cyclical properties, as it will allow the full working of automatic stabilisers (Anderson and Minarik, 2006), at least in countries like South Africa where spending is not cyclically sensitive. Expenditure ceilings are not usually set as permanent, but are renewed through the political process or on a rolling basis (for the next three years, for example).

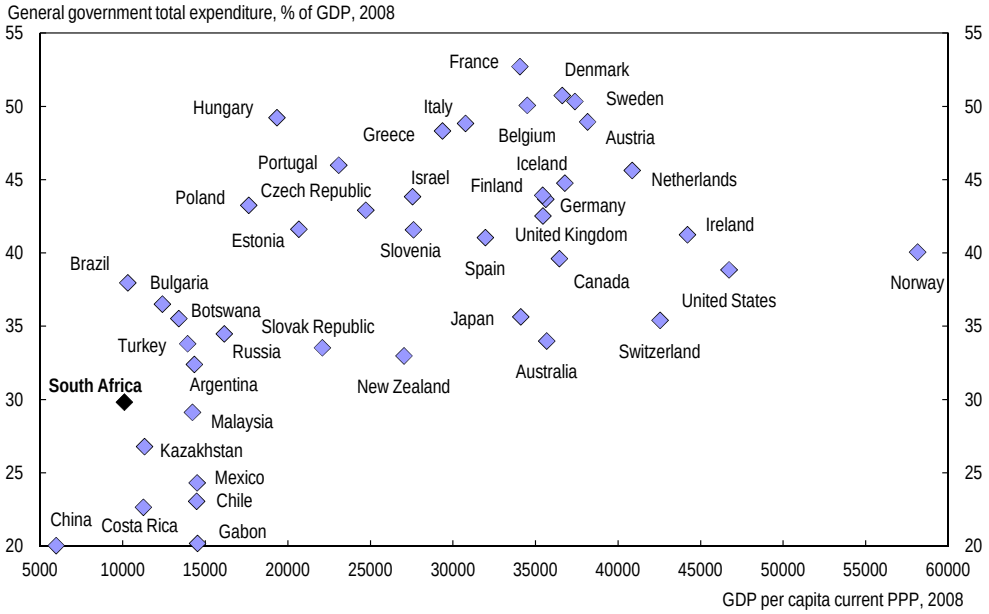
Implementing an expenditure rule is a promising avenue for strengthening fiscal discipline in South Africa. The country has already established a multi-annual framework, and the three-year fiscal plans are set out in the annual Budget and the Medium Term Budget Policy Statement. These plans are, however, non-binding, and have been subject to major upward revisions in the past. The existing multi-year expenditure projections could be given greater status, such as by making the expenditure envelope for the out-years legally binding, such that legal amendments would be required to revise them.[29] This would expose such amendments to greater public and parliamentary scrutiny.

28. According to the Treasury's own baseline scenario, net public debt, including provisions and contingent liabilities, is expected to reach 53.6% of GDP by end-FY 2012/13 (National Treasury, 2010).

29. This is not equivalent to multi-year budgeting as the individual items are not supposed to become binding. The proposed multi-year allocations for individual items outlined in the Budget Review and the Medium

Expenditure ceilings should not be viewed as externally imposed targets, as there is no "right" level of expenditure unambiguously associated with better economic outcomes. Ultimately, the decisions regarding the size of the government are based on social consensus and reflect the preferences of the society. While it might be expected that the relative size of the government will increase as income rises, a correlation between GDP *per capita* and the level of government expenditure is hard to detect beyond a certain threshold (Figure 11). That said, the overall level of government expenditure in South Africa is comparable to some high-income economies, and is higher than in some countries with similar levels of income *per capita*. This reflects the strong public commitment to address major social challenges, to improve access to public services and promote long-term growth by investing in physical infrastructure and human capital. These commendable objectives need to be supported by an adequate level of structural revenues, to ensure that they can be met on a sustainable basis.

Figure 11. General government total expenditure and GDP per capita



Source: World Bank, *WDI Database* and IMF, *WEO*, April 2010.

Prioritising spending and increasing public sector efficiency would help ensure that these objectives remain supported during the necessary fiscal consolidation that lies ahead. Maintaining obligations at the current level, let alone making substantial new commitments, such as the proposed comprehensive healthcare reform,[30] would require the revision of the existing tax arrangements. The pros and cons of raising the tax burden need to be weighed, but whether or not such a decision is taken, it is worth exploring the potential for improving the efficiency of government spending. The *2010 Budget Review* reinforced the commitment to the main targeted outcomes, including improving the quality of education, upgrading health care, promoting public safety, building sustainable human settlements and encouraging efficient local government. The government is reviewing the performance of individual departments to identify potential efficiency gains and reprioritise spending. The government's efforts to increase efficiency, improve performance and reprioritise spending are welcome and should be continued.

Term Budget Policy Statement provide an important insight into the government spending priorities, but flexibility to reallocate spending within the budget should not be compromised.

30. See National Treasury (2010) for details.

Implementing a more counter-cyclical fiscal policy would likely result in larger fiscal surpluses than previously seen during cyclical upswings. How best to manage such surpluses is an important issue. For this purpose, several resource-rich countries, including Chile, Mexico and Russia have established dedicated commodity funds that accumulate windfall revenues during commodity booms and run them down when commodity prices are low. Apart from this stabilisation role, commodity funds can have the longer-term objective of saving revenues gained from the depletion of non-renewable resources for the benefit of future generations. This is the case in Norway, where government oil and gas revenues are accumulated in the Government Pension Fund Global. Norway's medium-term fiscal guideline stipulates that, over time, the cyclically-adjusted non-petroleum budget deficit should average 4% of the value of the Fund (representing the assumed long-run real return on the assets), so that the real value of the fund is not reduced. Commodity funds often invest the savings in foreign assets, which can help to mitigate the pressure on the real exchange rate emanating from the surge in currency inflows linked to high commodity prices or big discoveries of natural resource deposits. Such funds are generally viewed as a successful mechanism to manage resource wealth (Davis *et al.*, 2001). As the share of commodity-related budget revenues is relatively low in South Africa, and revenues come from a number of commodities, it is somewhat less obvious whether establishing a commodity fund is justified. If such a fund were to accumulate assets *via* the transfer of commodity-related revenues, it would grow rather slowly. As an example, even if all profits of the mining companies had been transferred to such a fund over the period 2001-07, it would only have accumulated assets amounting to about 3.5% of 2007 GDP.[31] Alternatively, all budget surpluses generated by the structural balance rule could be transferred to the fund, as is done in Chile. Still, the link between the commodity prices and the budget balance is more straightforward in Chile. Nevertheless, perhaps in conjunction with a greater effort to identify and tax economic rents from natural resource extraction, a mechanism to ensure that commodity price windfalls are saved should be given further consideration. If budget revenue streams related to production and exports of commodities in South Africa become more sizeable, the country can consider establishing a commodity fund. In the meanwhile, the best strategy for South Africa would be to use windfall revenues from high commodity prices to make faster debt repayments, which would reduce the interest rate burden and provide more space for increasing non-interest expenditure.

31. Assuming a 4% return on investment of the fund, and not taking into account possible valuation effects.

BIBLIOGRAPHY

Ajam, T. and J. Aron (2009), "Transforming Fiscal Governance", in Aron, J. *et al.* (eds.), *South African Economic Policy under Democracy*, Chapter 4, Oxford University Press, Oxford.

Amato, J. and S. Gerlach (2002), "Inflation Targeting in Emerging Market and Transition Economies: Lessons after a Decade", *European Economic Review*, No. 46, pp. 781-790.

Anderson, B. and J. Minarik (2006), "Design Choices for Fiscal Policy Rules", *OECD Journal on Budgeting*, Vol. 5, No. 4, OECD, Paris.

Aron, J. and J. Muellbauer (2009), "The Development of Transparent and Effective Monetary and Exchange Rate Policy", in Aron, J. *et al.* (eds.), *South African Economic Policy under Democracy*, Chapter 3, Oxford University Press, Oxford.

Aron. J., G. Farrell, J. Muellbauer and P. Sinclair (2010), "Exchange Rate Pass-Through and Monetary Policy in South Africa", *CEPR Discussion Series*, Discussion Paper No. 8153, December.

Bank for International Settlements (2009), *Issues in the Governance of Central Banks - a Report from the Central Bank Governance Group*, Bank for International Settlements, Basel, May.

Blanchard, O., G. Dell'Ariccia and P. Mauro (2010), "Rethinking Macroeconomic Policy", *IMF Staff Position Note*, SPN/10/03, IMF, Washington, DC.

Calitz, E. and K. Siebrits (2003), "Fiscal Policy in the 1990s", *South African Journal of Economic History*, Vol. 18, Issues 1 and 2, September 2003, pp. 50-75.

Collier, P. (2007), "Managing Commodity Booms: Lessons of International Experience", paper prepared for the African Economic Research Consortium, January.

Davis, R., J. Ossowski, J. Daniel and S. Barnett (2001), "Stabilization and savings funds for non-renewable resources. Experience and fiscal policy implications", *IMF Occasional Paper*, No. 205.

Dincer, N. and B. Eichengreen (2009), "Central Bank Transparency: Causes, Consequences and Updates", *NBER Working Papers*, No. 1479, National Bureau of Economic Research, Cambridge, MA.

Du Plessis, S. and W. Boshoff (2007), "A Fiscal Rule to Produce Counter-Cyclical Fiscal Policy in South Africa", *Stellenbosch Economic Working Papers,* No. 13/07, Stellenbosch University, Stellenbosch.

Du Plessis, S. and G. du Rand (2010), "Review of Exchange Controls and the Exchange Rate", *mimeo,* Stellenbosch University, Stellenbosch.

Edwards, S. (2007), "The Relationship between Exchange Rates and Inflation Targeting Revisited", in Mishkin, F.S. and K. Schmidt-Hebbel (eds.), *Monetary Policy Under Inflation Targeting*, Central Bank of Chile, Santiago.

Eijffinger, S. and P. Geraats (2006), "How Transparent are Central Banks?", *European Journal of Political Economy*, 22(1), pp. 1-21.

Frankel, J., B. Smit and F. Sturzenegger (2008), "South Africa: Macroeconomic Challenges after a Decade of Success", *Economics of Transition*, Vol. 16(4), pp. 639-677.

Garcia, J. and A. van Rixtel (2007),"Inflation-Linked Bonds from a Central Bank Perspective", *European Central Bank Occasional Paper Series*, European Central Bank, Frankfurt.

Garrow, C. (2008), "Challenges of Inflation Targeting for Emerging-Market Economies: the South African Case", Commentary, *Challenges for Monetary Policy-makers in Emerging Markets*, South African Reserve Bank Conference Series.

Girouard, N. and C. André (2005), "Measuring Cyclically-Adjusted Budget Balances for OECD Countries", *OECD Economics Department Working Papers,* No. 434, OECD, Paris.

Guichard, S., M. Kennedy, E. Wurzel and C. André (2007), "What Promotes Fiscal Consolidation: OECD Country Experiences", *OECD Economics Department Working Papers*, No. 553, OECD, Paris.

Hannoun, H. (2007), "Policy Responses to the Challenges Posed by Capital Inflows in Asia", speech at the 42nd SEACEN Governors' Conference, Bangkok, 28 July.

Ho, C. and R. McCauley (2003), "Living with Flexible Exchange Rates: Issues and Recent Experience in Inflation Targeting Emerging Market Economies", *BIS Working Papers*, No. 130, Bank for International Settlements, Basel.

IMF (2009a), *South Africa: 2009 Article IV Consultation – Staff Report*, IMF, Washington, DC, September.

IMF (2009b), *Fiscal Rules – Anchoring Expectations for Sustainable Public Finances*, IMF, Washington, DC.

Joumard, I. and C. André (2008), "Revenue Buoyancy and its Fiscal Policy Implications", *OECD Economics Department Working Papers,* No. 598, OECD, Paris.

Kahn, B. (2008), "Challenges of Inflation Targeting for Emerging-Market Economies: The South African Case", in *Challenges for Monetary Policy-Makers in Emerging Markets*, South African Reserve Bank Conference Series.

Karoro, T., M. Aziakpono and N. Cattaneo (2009), "Exchange Rate Pass-Through to Import Prices in South Africa: Is There Asymmetry?", *South African Journal of Economics,* Vol. 77:3, pp. 1-27, September.

Krugman, P. and R. Baldwin (1987), "The Persistence of the US Trade Deficit", *Brookings Papers on Economic Activity*, No. 1,

Leape, J. and L. Thomas (2009), "Capital Flows, Financial Markets, and the External Balance Sheet", in Aron, J. *et al.* (eds.), *South African Economic Policy under Democracy*, Chapter 5, Oxford University Press, Oxford.

Ljungman, G. (2008), "Expenditure Ceilings – a Survey", *IMF Working Papers*, No. 08-282, IMF, Washington, DC.

Magud, N. and C. Reinhart (2006), "Capital Controls: an Evaluation", *NBER Working Papers*, No. 11973, NBER, Boston, MA.

Mihaljek. D. and M. Klau (2008), "Exchange Rate Pass-Through in Emerging Market Economies: What Has Changed and Why?", *BIS Papers*, No. 35, Bank for International Settlements, Basel.

Minegishi, M. and B. Cournède (2009), "The Role of Transparency in the Conduct of Monetary Policy", *OECD Economics Department Working Papers*, No. 724, OECD, Paris.

Mnyande, M. (2008), "South Africa's Experience with Monetary Policy within an Inflation-targeting Policy Framework", in *Monetary Policies and Inflation Targeting in Emerging Economies*, OECD, Paris.

National Treasury (2010), *Budget Review 2010*, Pretoria, February.

OECD (2008), *OECD Economic Surveys: South Africa Economic Assessment*, OECD, Paris.

OECD (2010a), *OECD Economic Surveys: South Africa*, OECD, Paris.

OECD (2010b), *OECD Economic Surveys: Chile*, OECD, Paris.

Parsley, D. (2010), "Exchange Rate Pass-Through in South Africa: Panel Evidence from Individual Goods and Services", *South African Reserve Bank Working Papers*, forthcoming.

Pétursson, T. (2009), "Does Inflation Targeting Lead to Excessive Exchange Rate Volatility?", *Department of Economics Working Papers,* No. 43, Central Bank of Iceland, Reykjavík.

Reid, M. and S. du Plessis (2010), "Loud and Clear? Can We Hear When the SARB Speaks?", *South African Journal of Economics,* Vol. 78:3, pp. 269-286, September.

Schindler, M. (2009), "Measuring Financial Integration: A New Data Set", *IMF Staff Papers*, Vol. 56, No. 1, pp. 222-238, IMF, Washington, DC.

South African Reserve Bank (2007), "Introduction to the South African Reserve Bank", Pretoria. Available at *www.reservebank.co.za*.

South African Reserve Bank (2008), *Monetary Policy Review*, SARB, Pretoria, November.

South African Reserve Bank (2010), *Monetary Policy Review*, SARB, Pretoria, May.

Stiglitz, J. (2010), *Freefall: Free Markets and the Sinking of the Global Economy*, Allen Lane.

Sutherland, D., P.Hoeller, B.Égert and O.Röhn (2010), "Counter-cyclical Economic Policy", *OECD Economics Department Working Papers*, No. 760, OECD, Paris.

Svensson, L. (2009), "Transparency under Flexible Inflation Targeting: Experiences and Challenges", *Sveriges Riksbank Economic Review*, 1/2009, Sveriges Riksbank, Stockholm, pp. 5-44.

Svensson, L. (2010), "Inflation Targeting", in Friedman, B. and M. Woodford (eds.), *Handbook of Monetary Economics,* Vol. 3a and 3b, North-Holland, *forthcoming*.

Turner, D. (2006), "Should Measures of Fiscal Stance be Adjusted for Terms of Trade Effects?", *OECD Economics Department Working Papers,* No. 519, OECD, Paris.

White, W. (2009), "Should Monetary Policy 'Lean or Clean'?", *Federal Reserve Bank of Dallas Globalization and Monetary Policy Institute Working Papers*, No. 34, *www.dallasfed.org/institute/wpapers/2009/0034.pdf*.

ANNEX 1. ASSESSING COMMUNICATION PRACTICES OF THE SOUTH AFRICAN RESERVE BANK

This Annex presents the details of an assessment of communication practices of the South African Reserve Bank (SARB) based on the methodology developed by Minegishi and Cournède (2009). It shows the scores for 22 individual sub-indicators along four elements of the central bank's communication strategy, relating to transparency about: policy objectives, policy decisions, economic analysis and the decision-making process. The analysis is based on publicly available information, including documents that define the SARB's policy objectives, statements of the Monetary Policy Committee, and Monetary Policy Reviews. Occasional speeches of high-ranking central bank officials are not taken into account: while such speeches can touch upon important issues, their irregularity in terms of timing and content does not allow a systematic classification for the inclusion into the index.

The assessment of the SARB's communication strategies refers to the situation as of early 2011. The scores for all sub-indicators are compared with those for eleven OECD central banks for which the assessment refers to the end of the second quarter of 2009: the Federal Reserve (Fed), European Central Bank (ECB), Bank of Japan (BoJ), Bank of England (BoE), Bank of Canada (BoC), Sveriges Riksbank, Swiss National Bank (SNB), Norges Bank, Reserve Bank of Australia (RBA), Reserve Bank of New Zealand (RBNZ) and Bank of Korea (BoK).

Individual sub-indicators are listed in the table below.

I. Policy objective	1	Policy objective(s)	
	2	Quantification	
	3	Time horizon	
II. Policy decision	1-1	Policy changes	Announcement
	1-2		Explanation
	2-1	No policy changes	Announcement
	2-2		Explanation
	3	Future policy guidance	
III. Economic analysis	1	Frequency of projection publication	
	2	Endorsement of the decision-making body	
	3-1	Inflation projection	Basic nature
	3-2		Projection time horizon
	3-3		Projection frequency
	3-4		Uncertainty
	4-1	Output projection	Basic nature
	4-2		Projection time horizon
	4-3		Projection frequency
	4-4		Uncertainty
	5	Underlying assumptions	
IV. Decision-making process	1	Minutes	
	2	Voting records	
	3	Public appearances	

I. Transparency about policy objective

1. Policy objective(s)

Is the formal objective of monetary policy clearly specified (such as in central bank law or in a formal agreement with the government)? If there are multiple objectives, do they come with a clear hierarchy?

1.00	One unique objective or multiple objectives with clear hierarchy.
0.75	
0.50	Multiple objectives without prioritization.
0.25	
0.00	No clearly stated objective.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	0.50	1.00	1.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	1.00

SARB: The SARB's mandate is set out in the Constitution as protecting the value of the currency in the interest of balanced economic growth. The SARB regards its primary goal in the South African economic system as "the achievement and maintenance of price stability" (the 2010 SARB mission statement).

2. Quantification

Is the objective communicated in a quantitative manner?

1.00	A clear policy target or a lasting definition of the policy objective is given quantitatively.
0.75	
0.50	A limited degree of quantitative guidance exists.
0.25	Some information is made available to infer the objective quantitatively.
0.00	No quantification.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	0.50	1.00	0.50	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	1.00

SARB: Inflation target since February 2000. The inflation objective is set by the government after consultations between the SARB and the National Treasury. The current target is for the headline CPI to be within the target range of 3 to 6% on a continuous basis.

3. Time horizon

Is the time horizon to achieve the policy objective specified in a clear manner?

1.00	Yes, clearly specified.
0.75	
0.50	To some extent (over the cycle, in the medium run, etc).
0.25	
0.00	No indication of time horizon.

SARB	Fed	ECB	BoJ	BoE	BoC
0.50	0.00	0.50	0.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.00	0.00	0.50	1.00	1.00

SARB: "Monetary policy should be conducted in a consistent and transparent manner within a flexible inflation targeting framework. Monetary policy acts with a lag, and for this reason should continue to focus on a medium-term horizon" (letter of the Minister of Finance to the SARB Governor on clarification of the Reserve Bank's mandate, February 2010).

II. Transparency about policy decisions

1.1. Announcement of policy changes

Is a decision to change policy stance announced without delay?

1.00	Always announced without delay.
0.75	
0.50	Occasionally announced (when there is a concurrent release of another report, etc.).
0.25	
0.00	No immediate announcement.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	1.00	1.00	1.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	1.00

SARB: Always announced without delay.

1.2. Explanation of policy changes

Is the rationale behind the decision to change the policy stance explained when the decision is announced?

1.00	Always explained (by press statement, press conference or a combination of both).
0.75	
0.50	Occasionally explained (when there is a concurrent release of another report, etc.).
0.25	
0.00	No immediate explanation.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	1.00	1.00	1.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	1.00

SARB: Always explained in a statement, followed by a press-conference.

2.1. Announcement of no policy changes

Is a decision to keep the previous policy unchanged announced without delay?

1.00	Always announced without delay.
0.75	
0.50	Occasionally announced (when there is a concurrent release of another report, etc.).
0.25	
0.00	No immediate announcement.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	1.00	1.00	1.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	1.00

SARB: Always announced without delay.

2.2. Explanation of no policy changes

Is the rationale behind a decision to keep the policy unchanged explained when the decision is announced?

1.00	Always explained (by press statement, press conference or a combination of both).
0.75	
0.50	Occasionally explained (when there is a concurrent release of another report, etc.).
0.25	
0.00	No immediate explanation.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	1.00	1.00	1.00	0.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	1.00

SARB: Always explained in a statement, followed by a press-conference.

Does the central bank give explicit guidance concerning its future policy direction?

1.00	A quantitative path of its own future policy rate projections is used as a basis of discussion.
0.75	Some degree of conditional commitment is explicitly given.
0.50	A policy decision statement usually contains some verbal forward-looking guidance.
0.25	Verbal forward-looking guidance is provided less frequently.
0.00	No formal (*i.e.* written) guidance exists.

SARB	Fed	ECB	BoJ	BoE	BoC
0.50	0.50	0.00	0.50	0.00	0.75
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.00	1.00	0.50	1.00	0.50

SARB: From the second half of 2010, some forward-looking guidance has been explicitly provided in Monetary Policy Statements, following the lead of the SARB Governor, who had begun earlier in the year to give more guidance about the likely direction of monetary policy in her speeches.

III. Transparency about economic analysis

1. Frequency of projection publication

How frequently does the central bank publish its own forward-looking assessment of the economy along with its own inflation/output projections?

1.00	More than quarterly.
0.75	Quarterly.
0.50	Three times a year.
0.25	Twice a year (0.3 if with interim assessment in between).
0.00	No projection (0.1 for annual publication).

SARB	Fed	ECB	BoJ	BoE	BoC
0.25	0.75	0.75	0.75	0.75	0.75
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.75	0.50	0.75	0.75	0.50

SARB: The *Monetary Policy Review* is issued twice per year.

2. Endorsement of the decision-making body

Do the projections represent the view of the decision-making body?

1.00	Yes.
0.75	
0.50	
0.25	Not endorsed, but some verbal assessment by decision makers is given.
0.00	No (just "staff" projections).

SARB	Fed	ECB	BoJ	BoE	BoC
0.50	1.00	0.25	1.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	0.00

SARB: The Monetary Policy Committee decides in advance the assumptions for the SARB's model, which is maintained by the staff.

3.1. Inflation projection: basic nature

How are inflation projections presented?

1.00	Full projections are provided.
0.75	
0.50	Only rough account of outlook is given.
0.25	
0.00	No projection.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	1.00	1.00	1.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	1.00

SARB: Full projections.

3.2. Inflation projection: projection time horizon

What is the projection time horizon for inflation projections?

1.00	Three years ahead or longer (Always 12 quarters ahead or more beyond the current quarter).
0.75	Up to three years ahead (Between 9 to 12 quarters ahead beyond the current quarter).
0.50	Up to two years ahead (Between 5 to 8 quarters ahead beyond the current quarter).
0.25	Up to one year ahead (Up to 4 quarters beyond the current quarter).
0.00	No projection.

SARB	Fed	ECB	BoJ	BoE	BoC
0.63	1.00	0.50	0.56	1.00	0.63
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.75	1.00	0.75	1.00	0.50

SARB: Two-year projections: ten quarters beyond the current quarter in May, eight quarters beyond the current quarter in October/November.

3.3. Inflation projection: projection frequency

What is the inflation projection frequency; annual, semi-annual or quarterly?

1.00	Quarterly projection in all periods.
0.75	Quarterly period in the immediate future, subsequently semi-annual.
0.50	Semi-annual projection in all periods.
0.25	Annual projections expressed as 4th-quarter-to-4th-quarter changes (or semi-annual in immediate periods only).
0.00	Calendar / fiscal year average only.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	0.25	0.00	0.00	1.00	0.75
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	0.50	1.00	0.25

SARB: Quarterly projections.

3.4. Inflation projection: uncertainty

Does the projection provide quantitative information on the current degree of uncertainty around the main inflation projection?

1.00	Degree of uncertainty summarised in a single chart.
0.75	Range where distribution within the range are made available.
0.50	Ranges are given that show current degree of uncertainty.
0.25	Ranges are given, but not necessarily showing current degree of uncertainty.
0.00	No quantitative account.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	0.75	0.25	1.00	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.00	1.00	0.00	0.00	0.00

SARB: Fan chart.

4.1. Output projection: basic nature

How are output projections presented?

1.00	Full projections are provided.
0.75	
0.50	Only rough account of outlook is given.
0.25	
0.00	No projection.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	1.00	1.00	1.00	0.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.50	1.00	1.00	1.00	1.00

SARB: Since May 2010, output projections are presented in the Monetary Policy Review.

4.2. Output projection: projection time horizon

What is the projection time horizon for output projections?

1.00	Three years ahead or longer (Always 12 quarters ahead or more beyond the current quarter).
0.75	Up to three years ahead (Between 9 to 12 quarters ahead beyond the current quarter).
0.50	Up to two years ahead (Between 5 to 8 quarters ahead beyond the current quarter).
0.25	Up to one year ahead (Up to 4 quarters beyond the current quarter).
0.00	No projection.

SARB	Fed	ECB	BoJ	BoE	BoC
0.63	1.00	0.50	0.56	1.00	0.63
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.25	1.00	0.75	1.00	0.50

SARB: Two-year projections: ten quarters beyond the current quarter in May, eight quarters beyond the current quarter in October/November.

4.3. Output projection: projection frequency

What is the output projection frequency; annual, semi-annual or quarterly?

1.00	Quarterly projection in all periods.
0.75	Quarterly period in the immediate future, subsequently semi-annual.
0.50	Semi-annual projection in all periods.
0.25	Annual projections expressed as 4th-quarter-to-4th-quarter changes (or semi-annual in immediate periods only).
0.00	Calendar / fiscal year average only.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	0.25	0.00	0.00	1.00	0.75
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.00	1.00	0.50	1.00	0.25

SARB: Quarterly projections.

4.4. Output projection: uncertainty

Does the projection provide quantitative information on the current degree of uncertainty around the main output projection?

1.00	Degree of uncertainty summarised in a single chart.
0.75	Range where distribution within the range are made available.
0.50	Ranges are given that show current degree of uncertainty.
0.25	Ranges are given, but not necessarily showing current degree of uncertainty.
0.00	No quantitative account.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	0.75	0.25	1.00	1.00	0.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.00	1.00	0.00	0.00	0.00

SARB: Fan chart.

5. Underlying assumptions

Do the projections come with explicit account of underlying assumptions (interest rate, exchange rate, commodity prices, growth of trading partners, etc.)?

1.00	Extensive disclosure on underlying assumptions.
0.75	
0.50	Some limited disclosure on the underlying assumption (at least verbal explanation of policy rate assumption).
0.25	
0.00	No explicit information on assumptions.

SARB	Fed	ECB	BoJ	BoE	BoC
0.50	0.00	1.00	0.50	1.00	1.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	1.00	1.00	1.00	1.00	0.50

SARB: Only a rough account of underlying assumptions, including the level of the exchange rate and the rate of increase of administered prices and wage settlements, is given. Interest rates are assumed to be constant.

IV. Transparency about the decision-making process

1. Minutes

Does the central bank reveal, in the form of comprehensive minutes, detailed information about how a decision has been reached? Is this information available in a timely manner?

1.00	Available within four weeks after the meeting and before the next meeting.
0.75	
0.50	Available within four weeks after the meeting but not before the next meeting.
0.25	Available within eight weeks.
0.00	No minutes released (or available but with a substantial lag).

SARB	Fed	ECB	BoJ	BoE	BoC
0.00	1.00	0.00	0.50	1.00	0.00
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.00	0.00	1.00	1.00	0.25

SARB: No minutes published.

2. Voting records

Does the central bank, where decisions are made in committees, disclose voting records with attributions in a timely manner?

1.00	Available immediately after policy meeting.
0.75	Available within four weeks after the meeting and before the next meeting.
0.50	Available within four weeks after the meeting but not before the next meeting.
0.25	Available within eight weeks or explicitly states that decisions are made on "consensus" basis.
0.00	No publication of voting records.

SARB	Fed	ECB	BoJ	BoE	BoC
0.00	1.00	0.25	1.00	0.75	0.25
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
1.00	0.25	0.00	0.25	n/a	0.25

SARB: Not available.

3. Public appearances

Does the central bank have occasions to hold press conferences or testimonies on a regular basis?

1.00	After every policy meeting.
0.75	After policy meeting but not always (only when policy changes, once a month, etc).
0.50	After publication of projections (three to four times a year).
0.25	Other occasions (at least semi-annually).
0.00	No regular appearance.

SARB	Fed	ECB	BoJ	BoE	BoC
1.00	0.25	1.00	1.00	0.50	0.50
Riksbank	SNB	Norges Bank	RBA	RBNZ	BoK
0.75	0.25	1.00	0.25	0.50	1.00

SARB: Press conference after every policy meeting.

WORKING PAPERS

The full series of Economics Department Working Papers can be consulted at www.oecd.org/eco/workingpapers/

846. *To move or not to move: what drives residential mobility rates in the OECD?*
(February 2011) by Aida Caldera Sánchez and Dan Andrews

845. *Reforming the labour market in Spain*
(February 2011) by Anita Wölfl and Juan S. Mora-Sanguinetti

844. *Macroeconomic Impact of Basel III*
*(*February 2011) by Patrick Slovik and Boris Cournède

843. *The policy and institutional drivers of economic growth across OECD and non-OECD economies: new evidence from growth regressions*
(February 2011) by Romain Bouis, Romain Duval, and Fabrice Murtin

842. *Limiting Long-Term Unemployment and Non-Participation in Sweden*
(February 2011) by Niels-Jakob Harbo Hansen

841. *Enhancing the cost-effectiveness of climate change mitigation policies in Sweden*
(February 2011) by Stéphanie Jamet

840. *Policies towards a sustainable use of water in Spain*
(February 2011) by Andrés Fuentes

839. *Increasing public sector efficiency in Slovakia*
(January 2011) by Felix Hüfner

838. *Raising education outcomes in Switzerland*
(January 2011) by Andrés Fuentes

837. *The Price Responsiveness of Housing Supply in OECD Countries*
(January 2011) by Aida Caldera Sánchez and Åsa Johansson

836. *Housing markets and structural policies in OECD countries*
(January 2011) by Dan Andrews, Aida Caldera Sánchez and Åsa Johansson

835. *Raising potential growth after the crisis: A quantitative assessment of the potential gains from various structural reforms in the OECD area and beyond*
(January 2011) by Romain Bouis and Romain Duval

834. *The GDP impact of reform: a simple simulation framework*
(January 2011) by Sebastian Barnes, Romain Bouis, Philippe Briard, Sean Dougherty and Mehmet Eris

833. *Improving the flexibility of the Dutch housing market to enhance labour mobility*
(January 2011) by Jens Høj

832. *Making the Dutch pension system less vulnerable to financial crises*
(January 2011) by Jens Høj

831. *Real house prices in OECD countries: the role of demand shocks and structural policy factors*
(December 2010) by Dan Andrews

830. *International financial integration and the external positions of euro area countries*
(December 2010) by Philip R. Lane

829. *Improving fiscal performance through fiscal councils*
(December 2010) by Robert Hagemann

828. *Minimising risks from imbalances in European banking*
(December 2010) by Sebastian Barnes, Philip Lane and Artur Radziwill

827. *Resolving and avoiding unsustainable imbalances*
(December 2010) by Sebastian Barnes

826. *Current account imbalances in the euro area: a comparative perspective*
(December 2010) by Sebastian Barnes, Jeremy Lawson and Artur Radziwill

825. *Does fiscal decentralisation strengthen social capital? Cross-country evidence and the experiences of Brazil and Indonesia*
(December 2010) by Luiz de Mello

824. *Fiscal decentralisation and public investment: The experience of Latin America*
(December 2010) by Luiz de Mello

823. *Product market regulation and competition in China*
(December 2010) by Paul Conway, Richard Herd, Thomas Chalaux, Ping He and Jianxun Yu

822. *Reforming China's monetary policy framework to meet domestic objectives*
(December 2010) by Paul Conway, Richard Herd and Thomas Chalaux

821. *Regulatory reforms to unlock long-term growth in Turkey*
(December 2010) by Rauf Gönenç and Łukasz Rawdanowicz

820. *After the crisis: mitigating risks of macroeconomic instability in Turkey*
(December 2010) by Łukasz Rawdanowicz

819. *The 2008-09 crisis in Turkey: performance, policy responses and challenges for sustaining the recovery*
(December 2010) by Łukasz Rawdanowicz

818. *Fiscal-consolidation strategies for Canadian governments*
(November 2010) by Yvan Guillemette

817. *The land transport sector: policy and performance*
(November 2010) by Jan Persson and Daeho Song