

A fiscal risk framework for South Africa

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Abstract

This paper describes the process of developing a fiscal risk framework for South Africa. Risk frameworks aim to anticipate spending and revenue shocks, thereby raising the probability of achieving fiscal targets. This is the first time that such a framework has been designed and applied to South Africa's public finances. Responding to these risks has become increasingly important in the context of slow global growth and rising government debt. Because many risks stem from unreported deficits outside of national government, the process has also been a catalyst for improving the breadth of financial reporting on the public sector. We discuss the contextual definition of risk, methods for dealing with uncertainty, and the breadth of reporting covered by the risks register. We conclude with an overview of the type of risks emanating from government, public entities, state-owned companies, and the private sector.

JEL: H50, H61

Introduction

In late 2014 the National Treasury of South Africa introduced a fiscal risks committee in response to growing awareness of diverse calls on the fiscus that were not considered during normal budget processes. A major goal of this reform was to bring together many areas of expertise in order to build consensus on the nature and quantum of financial risks facing government.

The need for comprehensive risk reporting has become more pressing in light of slowing growth and tighter fiscal conditions. As was the case for many governments, South Africa had estimated in 2010 that the economy would quickly recover to pre-crisis growth rates. Countercyclical stimulus was expected to reduce the time it would take for the economy to return to potential levels of output. These growth projections proved to be over-optimistic; a secular decline in growth delayed fiscal consolidation and produced rising levels of debt. The weaker economy also exposed financial difficulties in the wider public sector, including state-owned companies.

In response, the National Treasury has introduced a series of institutional reforms. An expenditure ceiling was introduced in 2012/13 which turned the medium-term expenditure estimates into hard targets, rather than indicative baselines. A comprehensive modelling of the long-term fiscal outlook was undertaken to estimate the sustainability of large social programmes. Most recently, National Treasury has introduced a fiscal risks process to manage risks to the fiscal consolidation. Because of the comprehensive nature of the risks facing the fiscus, this reform has built on many earlier pieces of fiscal research, including the

¹ National Treasury of South Africa. This research paper represents work in progress, and does not necessarily reflect the official views of the National Treasury.

long-term model and forecast error analysis². The reform has also impacted on the quantity and transparency of information published in the budget.

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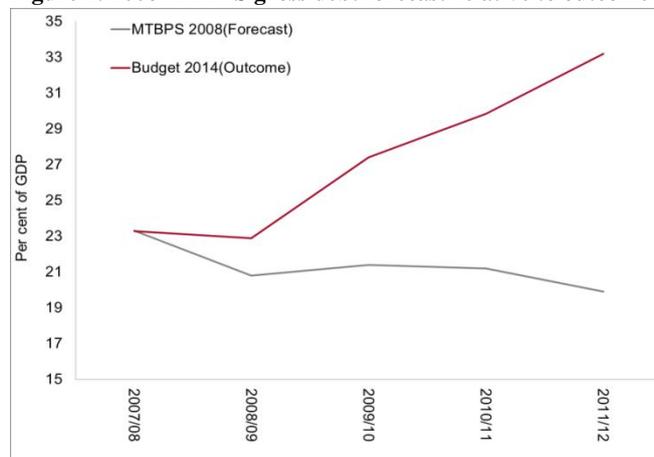
Motivation for fiscal risks management

In 2012, the International Monetary Fund (IMF) published a review of ten countries that saw the largest unanticipated increases in government debt between 2007 and 2010. The increases were split into three explanatory factors: shortcomings in governments' understanding of their fiscal positions, underestimation of potential risks to the public finances, and policy changes introduced in response to the financial crisis.

Of a total unanticipated increase of 26 percentage points of GDP, about 6 per cent was due to shortcomings in governments' understanding of their underlying fiscal position. These fiscal 'blind spots' included unreported deficits often hidden in local government or social security sectors, quasi-fiscal activity of state-owned companies, and expenditure arrears and other flows not captured in cash-based reports. Another 10 percentage points was due to governments' underestimation of prospective fiscal shocks, in particular the impact of the collapse in GDP on government revenue and expenditure and the realisation of contingent liabilities to the financial sector. A further 10 percentage points was due to countercyclical policy measures and other factors.

Schick (2013:5) found that many of the countries with seemingly strong budgets on the eve of crisis were particularly hard hit, because their headline figures masked underlying imbalances. These included liabilities in social security systems that had built up on the back of over-optimistic growth projections. He noted that 'countries ... need deeper insight into fiscal strength and vulnerability than is provided by a single year's nominal budget outturn.'

Figure 1: 2008 MTBPS gross debt forecast relative to outcome



² See, for example, Calitz, Siebrits and Stuart (2013)

Like the countries surveyed by the IMF (2012), South Africa has experienced a sharp increase in its debt-to-GDP ratio. Part of this change reflects post-recession economic growth which has been 2.4 percentage points lower than the average between 2000/01 and 2008/09. Expenditure has also grown rapidly, partly as a result of a larger-than-anticipated wage bill. Compared to the benign forecast made at the time of the 2008 MTBPS, the gross debt-to-GDP ratio has increased from 26 per cent in 2008/09 to 44 per cent in 2014/15.

Other trends have also highlighted the need for more comprehensive risk management. Beginning in 2012/13, the National Treasury introduced an explicit limit on main budget non-interest spending – an ‘expenditure ceiling’. During the long period of uninterrupted growth between 1999 and 2008, indicative baselines functioned as a floor rather than a ceiling on spending. As a result, expenditure outcomes over the medium term forecast were consistently above projections. Since the introduction of the ceiling, however, spending growth has fallen and actual expenditure has tracked medium-term forecasts. Maintaining the ceiling has become a key element of the fiscal policy package.

The worsening economic outlook has also highlighted pressures emanating from outside of main budget. Slower growth has exposed fragilities of some state-owned companies’ balance sheets. Several non-commercial public entities have also seen a worsening of their financial position (Budget Review 2015). The South African Reserve Bank’s curatorship of African Bank stands as a good example of the risks that can emanate from the financial sector.

Defining fiscal risk

The IMF (2009) defines fiscal risk as the ‘possibility of deviations of fiscal outcomes from what was expected at the time when fiscal targets were set (typically during the tabling of the budget). The OECD proposes a similar definition, but adds a time element by making a distinction between short-term and long-term risks. The OECD narrowly specifies risk as those events that lead to unexpected increases in public indebtedness, difficulty in refinancing or rolling-over debt and increases the probability of a sovereign default (Kopits, 2014).

The National Treasury’s risk register considers both a time dimension and a likelihood element. Fiscal risk is defined as probable negative events that would significantly affect the likelihood of government achieving its budgetary commitments and/or its long-term fiscal sustainability. In practice, in order to keep the discussion more focused on measurable risks, risk is defined as the likelihood of contingent events that would result in an unplanned call on the National Revenue Fund.

Fiscal risk is categorised as short-term if it is likely to occur during the current financial year, and medium-term if it is likely to materialise over the 3-year budgeting cycle (termed the Medium Term Expenditure Framework or MTEF). Long-term risks are those that are likely to materialise beyond the MTEF. The definition also quantitatively defines a risk as one that results in fiscal target slippage of at least 0.1 per cent of GDP in the short- to medium-term, or around R4 billion in 2014/15. Beyond the medium term, only large-scale risks are considered.

International experience in risk reporting

Because reporting on the risks to public finances is a relatively new area of interest, few 'hard and fast' rules exist. The IMF recommends, at minimum, disclosures on macroeconomic risks and contingent liability reporting (Velloso, 2008). In examining international examples, one can identify several essential features of risk reporting, some of which South Africa has implemented. These include:

- Economic forecast scenarios which explain likely deviations from the main economic forecast, and implications for the fiscal balances.
- Fan chart analysis and a review of historical forecast errors to capture the degree of uncertainty around the economic forecast.
- Detailed reporting on contingent liabilities and policy commitments which may result in additional expenditures.
- The balance sheet of the national government and explanation of changes to its assets and liabilities.

A major consequence of the risk-based approach is a greater emphasis on the balance sheets of the public sector, rather than the cash accounts used in budget documents. By closing reporting gaps around assets and liabilities, government can generate a public sector balance sheet. The balance sheet allows government to determine whether the public sector is becoming wealthier or poorer over time.

The Australian *Statement of Fiscal Risks* focuses on contingent liabilities and policy commitments made by the government. There are several notable innovations in this report, including the classification of different contingent liabilities by likelihood and whether or not they have been quantified. The report also discusses trigger events for each of these contingent liabilities, and the setting of a contingency reserve to finance these expenditures when they arise. Similarly, New Zealand reports on uncertain expenditures or contingent liabilities from specific policy commitments made by the government (e.g. student bursary schemes).

Australia and New Zealand both report on net worth of the government for the purpose of highlighting the resilience of their public finances to deterioration in operating conditions (e.g. a surge in pension beneficiaries) (Kennedy & Janine, 2003). In the case of Australia, balance sheet reporting is a key indicator of fiscal performance; government is committed to improving the net worth of the public sector (i.e. ensuring that the stock of assets is growing faster than liabilities over time).

Other countries with valuable lessons for South Africa are Finland and the Philippines. In addition to balance sheet reporting, Finland reports a provision for the maximum callable capital that would be required should a banking crisis arise in the Eurozone. The Philippines includes comprehensive reporting on the implicit contingent liability exposure from their financial sector, as well as risks stemming from participation in public-private partnerships (PPPs).

These reports contrast with the South African approach where only explicit guarantees of the government (i.e. liabilities and loans incurred by a state agency that are underwritten by the National Revenue Fund) are discussed in detail and any other contingent liability is reported in an annexure of the annual budget documents. The South African budget documents also do not report on the triggers of the liability or contingent assets (i.e. assets that can be used to service the obligation).

Designing a risks framework for South Africa

A framework should aim to monitor all relevant fiscal risks stemming from the economy and the public sector in a systematic way. Its aim is to anticipate and respond to likely changes in the fiscal framework by closing gaps in reporting and highlighting linkages between different areas of risk. The information gathering and research process requires close interaction between different areas of specialisation. For example, an unanticipated increase in the public-sector wage bill would impact both the medium-term expenditure outlook and the financial position of the Government Employee Pension Fund (GEPF). As such, the creation of a formal risks process can help to generate a more complete overview of common fiscal risks.

The elements of this risk process can include:

- **Macroeconomic risks:** The budget and associated debt outlook is heavily influenced by changes to the GDP forecast. The fiscal consolidation path, for example, has been strongly influenced by slower-than-expected nominal GDP and revenue growth. Certain kinds of expenditure, including wages and social grants, are directly linked to inflation. Changes to exchange rates and interest rates influence the costs of servicing our debt.
- **Expenditure pressures:** The risk framework is concerned with likely risks to existing spending plans and does not consider budget bids that follow the normal budget process. The recently signed public-sector wage agreement, for example, confirmed that compensation budgets would have to be revised up significantly over the medium term.
- **Contingent and accrual liabilities:** Government's major contingent risk stems from the borrowing guarantees afforded to state-owned companies (currently amounting to R461 billion). Accrual liabilities typically reflect long-term commitments made by the GEPF and other social security funds. For example, a risk is that decisions on current benefit payments will result in long-term underfunding of the GEPF, ultimately requiring a capital injection from government.
- **Long-term expenditure commitments:** National Treasury has undertaken a long-term modelling exercise to determine the sustainability of its major social spending programmes. There is currently great uncertainty around the long-term population and economic growth outlooks. Changes to the level and age structure of population have significant implications for the costs of social programmes. Any downward revisions to potential real GDP growth are also likely to put pressure on the fiscus over the long term.

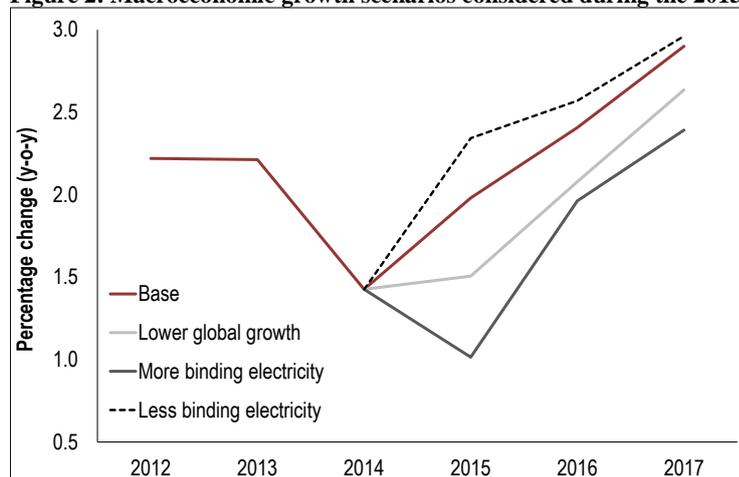
Many of the short-term risks are perennial and can be estimated fairly accurately, allowing the evolution of a strategy to combat these risks. These include, for example, short-term revisions to real GDP growth. The real danger, however, is that a number of these risks materialise simultaneously. Fiscal slippage on the main budget fiscal targets could result in a downgrade of the credit rating, thereby pushing up borrowing costs of state-owned companies. The correlation of these risks can be significant, and is far more difficult to estimate.

Macroeconomic and revenue risks

The macroeconomic forecast is the starting point for the budget process because it determines the tax revenue outlook and impacts the sustainability of the fiscal stance over the medium term. Macroeconomic performance is also the primary in-year factor which determines whether the fiscal targets will be met. Quantifying these risks typically involves three types of analyses: sensitivity analysis, scenario testing and forecast error analysis.

In South Africa, because the expenditure ceiling is fixed in nominal terms, a change in the budget deficit is most likely to materialise through tax revenues. As a first approximation, ‘ready-reckoners’ or rules-of-thumb can be used to assess the sensitivity of taxes to changes in the economic cycle. A more comprehensive scenario-testing process examines the impact of higher and lower growth on the debt outlook. Figure 2 shows the macroeconomic growth scenarios considered by the National Treasury at the time of the 2015 Budget. Each growth scenario reflects possible (in this case, more binding electricity constraints or slower global growth), which are used to generate revenue projections. The purpose is to test how much the primary deficit is likely to widen, and at what level debt-to-GDP would stabilise.

Figure 2: Macroeconomic growth scenarios considered during the 2015 Budget



In addition to scenario-testing, a risks framework should also test for bias by comparing the official forecast to those of the private sector and multilateral institutions. By undertaking forecast error analysis, government is also able to assess the level of certainty associated with the medium-term forecast.

Figure 2 illustrates the accuracy of the nominal economic growth forecasts published by the National Treasury in relation to the final outcome. The figure shows two distinct patterns

emerging; the first was a tendency to underestimate growth over the budgeting cycle during the 2001/02 and 2007/08 period, while post-recession the tendency has been to overestimate nominal growth. The upward trend in each of the post-recession forecasts indicates a slight positive bias. This finding is in line with international experience, where many governments over-estimated the rate at which the global economy would recover from the financial crisis.

Figure 3: Historical nominal GDP forecasts relative to outcome

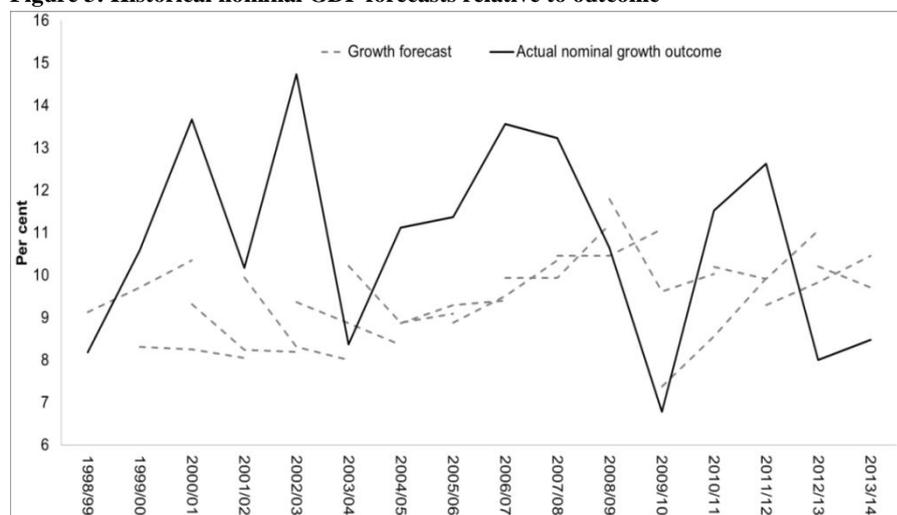


Table 1 shows that, despite the tendency to overestimate growth in the post-recession period, the accuracy of forecasts has improved. Overall, the absolute value of the median forecast error declined since 2007/08. As expected, the accuracy of the forecast improves over shorter forecast periods.

Table 1 Median nominal growth forecast error over period

Per cent	1998/99-2008/09	2009/10-2013/14
In-year error (February)	2.4%	-0.6%
1-year ahead error	2.3%	-1.2%
2-years ahead error	2.8%	-2.0%

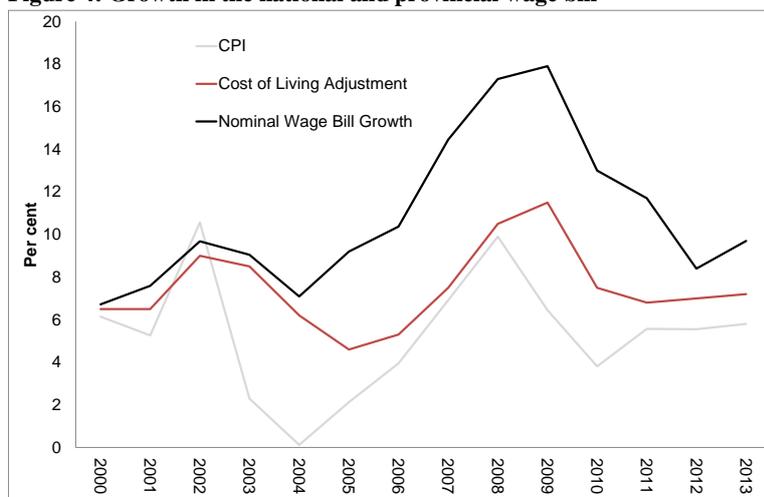
Source: National Treasury

Expenditure risks

The implementation of the expenditure ceiling has constrained the growth of spending and played a key role in the fiscal consolidation process. On the expenditure side, two main risks exist: the first is a breach of the ceiling; the second is a significant change to the composition of expenditure. There is also credibility risk associated with significant revisions to spending estimates.

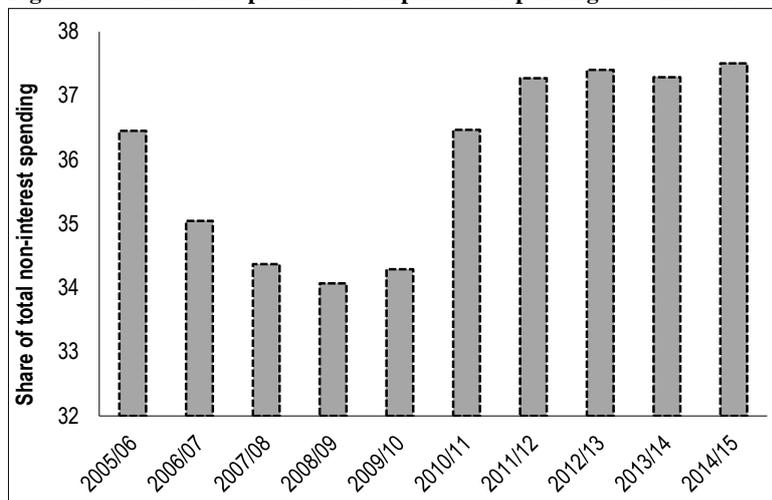
The wage bill remains a major source of fiscal risk. From 2003, above-inflation wage bill growth was driven by headcount growth, high cost-of-living adjustments (particularly in the late 2000s), as well as the implementation of the occupation-specific dispensation for certain categories of employees. Since 2009/10, growth in the wage bill of national and provincial government has been a significant driver of the budget deficit. In addition, because the public service wage agreement is linked to inflation, any worsening of the inflation outlook feeds through to compensation budgets.

Figure 4: Growth in the national and provincial wage bill



Strong growth in the wage bill can also impact on the composition of spending. This trend can be seen in figure 5, which shows an increase in compensation as a share of national and provincial non-interest spending. Over the same period, capital investment spending has typically fallen short of budget estimates. A worsening composition of expenditure is likely to harm service delivery and weaken the public balance sheet over time. Underspending on infrastructure delays infrastructure delivery and maintenance programmes with long-run costs to the fiscus (Budget Review 2015).

Figure 5: National and provincial compensation spending as a share of total non-interest spending, 2005/06 – 2014/15



The credibility of fiscal targets can be undermined by large swings in estimated expenditure. For example, despite making up only 14 per cent of total consolidated public sector expenditure, public entities accounted for almost half of the spending revisions between the Budget 2012 initial spending estimate and the final outcome. Between 2010/11 and 2012/13, public entities consistently swung from a projected deficit to a surplus outcome.

Spending targets can also be influenced by changes to projected debt-service costs. Any change to the primary balance will result in changes to future debt issuances and associated

debt repayments. In addition, debt-service costs can be influenced by changes to the financing environment (e.g. a sharp rise in interest rates). The structure of debt, including type of debt instruments used and their length to maturity, also introduces liquidity and refinancing risks. For example, in order to fund its revenue shortfall in 2008/09, government had to rapidly increase its debt issuance. The 2015 Budget Review noted that a significant number of bonds issued around the time of the financial crisis would fall due from 2017/18 onwards, pushing up government's gross borrowing requirement.

Contingent liabilities

Government's portfolio of contingent liabilities is made up of explicit guarantees, provisions as well as other contingencies (such as court cases) which may result in a claim against the National Revenue Fund. Implicit contingent liabilities, where government has no legal obligation to honour the claim, are not included in the risk reporting of contingent liabilities unless it is highly likely that a claim will arise.

Debt guarantees to state-owned companies play an important role in supporting the infrastructure build programme of the public sector. However, guarantees also bind the fiscus to possible future payments without going through the formal appropriations process. Government's portfolio of utilised guarantees stood at R224 billion or 10.2 per cent of GDP in 2014/15. The fiscal risk associated with guarantees is realised when the entity is no longer able to service the guaranteed obligations or the entity is in default. Because contingent liabilities are factored into the sovereign credit assessment, guarantees can also increase the national government's borrowing costs (Standard & Poors, 2013).

Estimating the likelihood of a guarantee being called is complicated by several factors. An entity may be in default despite being able to make interest repayments due to a breach of its debt covenants. There are two ways in which a guarantee can be called. The first is a 'step-in' clause requiring government to service the debt as if it were the borrowing entity. In most instances the debt has ring-fenced revenue or earmarked taxes (termed a contingent asset) which government takes over once the entity defaults. The second is an outright call on the National Revenue Fund once an entity is in default. In this instance, an immediate payment of the loan principle and outstanding interest is required. The additional risk is that government's own cash balances at any point in time are insufficient to make this principle repayment and service its other obligations.

Accrual liabilities

Accrual liabilities arise from insurance and pension funds that receive contributions, accumulate assets and make payments to beneficiaries from these pooled resources. Fiscal risks are realised when these funds are no longer able to settle claims or meet the obligations to policy holders. One example is the liability of the Road Accident Fund, which was estimated at around R100 billion in 2014/15.

The GEPP is a defined benefit pension fund, which means that government assumes the fund's investment risk. Policy decisions and macroeconomic events may not immediately

lead to a call on the fiscus, but may result in a worsening balance sheet over time. A persistent shortfall between income (i.e. contributions and investment returns) and benefit payments would likely require a recapitalisation of the fund by government. Currently, the GEPP does not pose a significant risk, with the funding position of the fund having improved significantly since 2010 (Budget Review 2015).

Apart from increasing the fiscal contributions to pension plans, wage settlements significantly above inflation also increase the fund's liabilities and worsen its funding position. This is because pensioners' benefits are determined using a formula based on years of service and the employees' income at or near retirement.

Liabilities from the financial sector

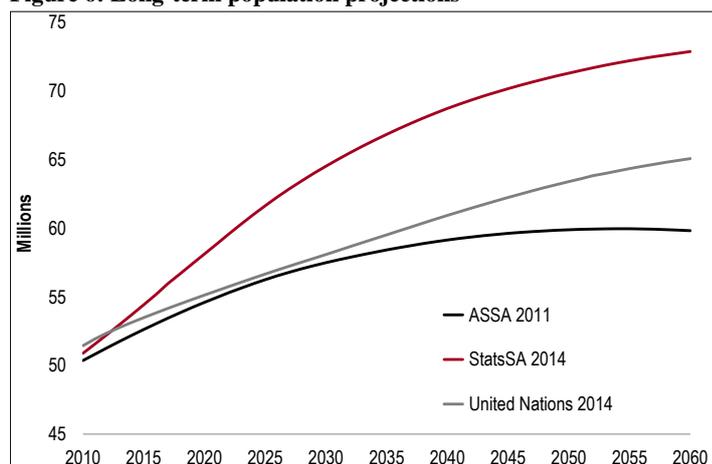
Liabilities from the financial sector have been a major driver of unexpected growth in public debt in advanced economies. Risks from the financial sector are well contained due to the strong regulatory framework South Africa has in place (IMF, 2014). This was particularly evident during the 2008 financial crisis when South Africa's banking sector continued normal operations. Even the recent curatorship of African Bank has been concluded without a bailout from the fiscus; however, a backstop guarantee from National Treasury was issued to the SARB in relation to the liabilities it assumed as part of its involvement in the curatorship.

The IMF regularly conducts financial and corporate sector stress tests known as Financial System Stability Assessments (FSSA) to test their resilience in crisis shocks. The most recent assessment programme found that the financial sector adequately capitalised to withstand 'severe shocks'. The assessment points out, however, that the African Bank curatorship highlights the risks that 'assets can deteriorate quickly in a weak economy' and even small institutions can affect overall financial sector stability.

Long-term expenditure commitments

There are several risks to fiscal sustainability that are likely to materialise beyond the three-year budgeting cycle. The National Treasury has developed a long-term fiscal model which costs social policy programmes and tests whether their implementation results in a stable or declining debt-to-GDP path (Sachs, 2014). The policies considered in the model include implementation of proposals in social development, health, basic education and post-school education. The major finding is that, with GDP growth of around 3.5 per cent over the long term, current social programmes are sustainable.

Figure 6: Long-term population projections



One source of fiscal risk is the lack of consensus between the major sources of population statistics as to the long-run trajectory of population. Higher-than-expected population growth implies that programmes (like social grants) will require additional fiscal resources. Another source of risk relates to uncertainty around the long-run potential growth rate of South Africa. A lower long-term real GDP growth rate of around 2 per cent is likely to result in an unsustainable fiscal outlook.

Impact of the risk process

The National Treasury risk reporting process is new and remains an evolving process. Highlights of this process include the risks discussions in the Medium Term Budget Policy Statement (MTBPS) and Budget Review. The breadth of the budget documents has also been enhanced: the 2015 Budget Review included a new chapter on the financial position of public sector entities, including the social security funds and large state-owned companies.

The process has also been a catalyst for new areas of work. Work on the public sector balance sheet, for example, showed the need for a comprehensive review of provincial assets. In addition, government has started a process of reviewing the financial health of local government pension funds.

The risks process has also re-focused efforts to address complex long-term fiscal problems. The analysis of large imbalances in social security funds was a factor behind the Budget 2015 proposal for a short-term reduction in the Unemployment Insurance Fund (UIF) contributions. The large liability built up by the Road Accident Fund has also been the focus of renewed efforts to move the fund towards long-term solvency.

Conclusion

The aim of this paper is to outline the framework within which South Africa examines its fiscal risks. It is an approach that is informed by work of other governments, but also places great emphasis on the areas of risks that have resulted in South Africa missing its fiscal targets.

For South Africa, the major risks are low economic growth, the public-sector wage bill and weaknesses in financial management of public entities and state-owned companies. The framework acknowledges that the underlying dynamics within each area of risk are complex and require in-depth analysis. Done correctly, however, the monitoring process can promote a coherent response to diverse challenges, and assist the process of building fiscal and institutional buffers against these risks.

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