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MFM PRACTICE NOTES

South Africa and the Ghost of a Rating Downgrade to Sub-Investment Grade

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Introduction

South Africa is under threat of a downgrade to its sovereign credit rating since Standard and Poors (S&P) lowered its foreign-currency long-term credit rating from BBB to BBB- in June 2014, with Fitch following suit in December 2015. Moody's, the third major global rating agency, maintained South Africa's credit rating one notch above S&P and Fitch, or two notches above sub-IG. With economic growth continuing to slow and perceptions of high policy uncertainty², some observers expected S&P or Fitch to remove South Africa's high-prized investment grade credit rating during the rating review that ended in June 2016. Instead, both raters (including Moody's) confirmed their previous assessments. While the ghost of a downgrade has been banished for now it will continue to haunt South Africa until the next rating decision of S&P and Fitch in December 2016.

This Note explores what would likely have happened if South Africa had been downgraded to sub-IG by S&P or Fitch (or both) in June 2016, focusing on short-term government borrowing costs. To this end it applies the findings of the authors' recent analysis of rating downgrades in

a country panel to the specific case of South Africa.³

This application comes with a number of important caveats. First, there have in fact only been relatively few events of sovereign downgrades to sub-IG and many of them occurred in the recent past. The analysis applied in this Note thus builds on insights from a relatively limited number of countries, resulting in potentially large margins of error. Second, South African public debt is predominantly denominated in local currency (88%⁴) and the effects of a downgrade of the foreign-currency rating may be less pronounced in this case than in the other countries that the analysis derives its estimates from (South Africa's local currency credit rating by S&P remains two notches above the foreign currency one).

Third, data coverage restricted the country panel to interest maturities of less than one year: Treasury-bills (or T-bills). Risk premia are more pronounced in longer-maturity debt instruments, so the study is likely to underestimate the effects of rating downgrades to the extent that a government relies on longer-term bonds to finance its obligations⁵. In South Africa's 2016

¹ This MFM Practice Note was cleared by Mark Thomas, Practice Manager (GMFDR).

² See IMF *Article IV 2016, Annual Country Report on South Africa*, Report No. 16/217.

³ Hanusch, M., Hassan, S., Algu, Y., Soobyah, L., and Kranz, A. (2016) 'The Ghost of a Rating Downgrade: What Happens to Borrowing Costs when a Government Loses its Investment Grade Credit Rating?' *MFM Discussion Paper No 13*, World Bank Group.

⁴ This is the average estimate for 2016; data is sourced from Haver Analytics.

⁵ According to the South African Reserve Bank's *Monetary Policy Review April 2016* (page: 4), the increase in long yields is estimated to be at least 24 basis points larger than that for short yields.

Budget, T-bills only account for 16% of the government's borrowing requirements for the fiscal year 2016/17.

Given these caveats, the results presented in this Note should be considered with caution: there remains considerable uncertainty as to what would happen if South Africa was downgraded to sub-IG.

Economic Context

Similar to many other commodity-exporters, South Africa has been hit by two crises in recent years: first the global financial crisis of 2007/8 and the following global economic slow-down; and second the end of the commodity super-cycle, heralded by tumbling oil prices in late 2014 and other commodity prices such as iron ore and platinum which are significant export commodities in South Africa. The consequences have been significant for South Africa. Growth slowed from an average 4.3% between 2000 and 2007 to 1.9% between 2008 and 2015. The World Bank estimates growth to slow further in 2016, at 0.6% - well below the growth of the population. The particularly weak growth performance in 2016 is largely due to the pronounced slow-down in mining as well as manufacturing and agriculture due to an El-Niño related drought. Investment has been declining since 2014, partly as the commodity bust depresses mining, but also due to high uncertainty and structural bottlenecks (e.g., in industrial relations, electricity constraints) deterring private investment.

As the economy cooled, the fiscal accounts deteriorated markedly. South Africa ran a primary surplus since 1995⁶, before slipping into the red in 2008. In 2015/16, South Africa's overall budget deficit stood at 3.9% of GDP and the World Bank sees it at 3.6% for 2016.

Running primary surpluses in the early 2000s had allowed the South African government to considerably bring down its public debt, nearly halving it between 2000 and 2008; the trend then reversed and public debt in South Africa more than doubled again, reaching 44.3% of GDP in

2015/16 (in net terms). The government first declared its commitment to stabilize the public-debt to GDP ratio in its 2014 Medium-Term Budget Policy Statement, yet given continued downward revisions to growth, the stabilization level has continuously been shifted upward until the most recent Budget Review of February 2016.

Cognizant of the need to control the public debt ratio, the 2016 Budget Review took measures to move debt stabilization forward to 2017/18 (and 2018/19 in gross terms). Two thirds of these measures are to be shouldered by the revenue side.

For a while, the credit rating agencies had been expressing concern about weak growth, significant fiscal and external deficits, and policy uncertainty, amongst others. This led some observers to believe that South Africa would be downgraded during the latest rating review by S&P and Fitch in June 2016. Yet the government's fiscal consolidation effort contributed to all three raters affirming their ratings: S&P and Fitch continue to rate South Africa's foreign-currency long-term denominated debt one notch above sub-IG (S&P maintained a negative outlook). S&P rates South Africa's local currency denominated debt three notches above sub-IG; whereas Fitch has this rating on par with the foreign currency rating at one notch above sub-IG. Moody's rates South Africa's public debt and foreign-currency debt two notches above sub-IG.

Downgrades and Public Borrowing Costs

Governments want to prevent a rating downgrade because it is associated with higher borrowing costs. It may also cost them an election as a downgrade reflects as much a deterioration of national solvency conditions as the government's inability to avert it.⁷ A downgrade to sub-IG (i.e., into speculative debt territory) is particularly painful: it triggers forced sales by investors whose bond holdings are restricted to investment grade paper, and results in a narrower demand base for the sovereign's bonds.⁸ Thus, the downgrade to sub-IG is a special case and its effects on

⁶ Source: SARB

⁷ Hanusch, M. and Vaaler P. (2015) 'Credit Ratings and Fiscal Responsibility' *MFM Discussion Paper No 4*, World Bank Group.

⁸ A particularly strong concern if downgrades of local-currency debt follow.

borrowing costs are likely to be larger than downgrades at other points along the rating scale.

Technically, markets (most notably funds with investment grade requirements) only consider a country's debt sub-IG when at least two credit rating agencies issue a sub-IG rating. Yet the study applied in this Note finds that the first downgrade to sub-IG has the largest effect on T-bill rates. Using a sample of 20 countries between 1998 and 2015 the analysis suggests that a downgrade to sub-IG by one major rating agency increased Treasury bill yields by 138 basis points on average. Should a second rater follow suit, Treasury bill rates increased by another 56 basis points (although this effect is not statistically significant).

To arrive at this result, the study aims to tease out the extent to which credit ratings reflect economic fundamentals and to which extent they represent rater-specific information that may be news to markets. This latter component can be expected not to be priced in by the time the rating decision is made.

The study thus estimates two equations. Equation 1 estimates a predicted rating from fundamentals (last year's rating, GDP growth, the budget balance, government debt, and inflation): this is what markets would expect as fundamentals that can be observed. The residual of the regression is the average of the three rating agencies assessment that is independent of these fundamentals.

Equation 1:

$$\begin{aligned} & \text{Average rating}_{i,t} \\ &= \alpha_0 + \alpha_1 \text{Average rating}_{i,t-1} + \alpha_2 \text{GDP growth}_{i,t} \\ &+ \alpha_3 \text{Budget balance (\% of GDP)}_{i,t} \\ &+ \alpha_4 \text{Net government debt (\% of GDP)}_{i,t} \\ &+ \alpha_5 \text{Inflation}_{i,t} + \theta_i + \vartheta_t + \varepsilon_{i,t} \end{aligned}$$

Equation 2:

$$\begin{aligned} Tbill_{i,t} = & \beta_0 + \beta_1 Tbill_{i,t-1} + \beta_2 \text{ExpectedRating}_{i,t} \\ & + \beta_3 \text{UnexpectedRating}_{i,t} \\ & + \beta_4 \text{Downgrade(1st rater)}_{i,t} \\ & + \beta_5 \text{Downgrade(2nd rater)}_{i,t} \\ & + \beta_6 \text{PolicyRate}_{i,t} + \delta_i + \omega_t + \nu_{i,t} \end{aligned}$$

Both the predicted and unpredicted rating are used as key independent variables in equation 2 to estimate annual T-bill rates (the policy rate is also included as a control since it strongly influences short-term rates).

Finally, to account for discontinuities arising from the threshold effect of downgrades to sub-IG status, dummy variables are included for the first and second downgrade to sub-IG status.

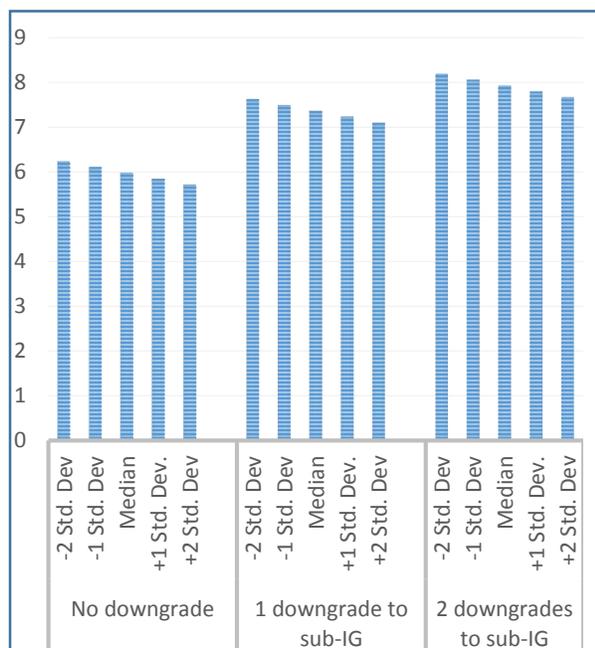
Application to South Africa

Applying the results of the analysis to the South African case, T-bill rates for the year 2016 are predicted at 6% if markets and rating agencies would have been aligned in their assessment that a downgrade to sub-IG was not warranted (Figure 1). If rating agencies had been considerably more (less) optimistic than markets in their assessment—two standard deviations below (above) their average assessment—rates are predicted at 5.7% and 6.2% respectively⁹.

Yet in the first half of 2016, average T-bill rates (91 days) stood at 7%, and at 7.2% in June. This is much closer to estimates for the case where one rating agency downgraded South Africa to sub-IG—with T-bill rates estimated in the range of 7.1% to 7.6%. This suggests that markets already price in a downgrade.

⁹ These estimates were done prior to the most recent repo rate increase.

Figure 1: Estimated T-bill yields for South Africa under different scenarios



If one agency had downgraded South Africa to sub-IG in June 2016, average 2016 T-bill rates should have been at 7.4% in line with market expectations. This would have required an increase in T-bill rates of about 80 basis points¹⁰ compared to the average of the first half of 2016, or by 60 basis points compared to June 2016 levels. If a second rater had followed, the increase would have been starker.

According to the 2016 budget, South Africa intends to borrow ZAR 25 billion in T-bills in

2016/17. One rating downgrade to sub-IG would accordingly have resulted in ZAR 100 million in additional costs for 2016 alone. This is likely to have only been the lower bound as the bulk of South African liabilities are long-term (82.3% or R141 billion).

Following S&P's and Fitch's affirmation of South Africa's credit rating, T-bill rates have barely changed (although the rand instantly appreciated by 3.3% following the announcement by S&P). This suggests that markets continue to expect a downgrade to sub-IG. The ghost of a downgrade appears to continue haunting South Africa.

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¹⁰ This corresponds to findings in Hassan, S. and Soobyah L. (2016) 'Sovereign credit ratings and cost of funding' SARB

Economic Note 2016-1 (in SARB's Monetary Policy Review, April 2016).