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EXECUTIVE SUMMARY[1]

This background paper associated with the 2012 Article IV consultations with Cape Verde, Namibia and Swaziland aims to highlight the policy commonalities and the potential for synergy among the small middle-income countries (MICs) in sub-Saharan Africa (SSA). The paper distills the key lessons that can be drawn from the critical common policy challenges facing these economies with a view to strengthen Fund policy advice and make it more focused and issues oriented.

The economy of a small MIC in sub-Saharan Africa (SSA) is often characterized by the following features: (i) low population (ii) per capita income in the range of $3000–$10,000 (PPP basis); (iii) somewhat undiversified; and (iv) structural and institutional weaknesses that often resemble those of low-income countries (LICs). Beyond the narrow criteria of per capita income level, there are a number of areas including macroeconomic policy implementation capacity, where small MICs in SSA are a lot stronger than the low-income countries in the region and are in fact closer to large MICs elsewhere.

This selected issues paper has three chapters:

Chapter I. Macroeconomic Vulnerability in small Middle-Income Countries in SSA—Reserve Adequacy and Fiscal Policy: This chapter asks the question of whether the level of international reserves is adequate for these economies to withstand large shocks especially given that most of them used part of their policy buffers during the 2008–09 global financial crisis. Using self-insurance models, the analysis finds that international reserves held by the some of the MICs are broadly adequate to smooth large shocks. However, in Cape Verde and Namibia, both with pegged exchange rate regimes, reserves remain either too close to or below adequate levels suggesting the need for further fiscal consolidation over the medium-term as emphasized in their bilateral consultations reports.

Chapter II. Enhancing Inclusive Growth and Employment in Small MICs: Despite their positive growth record over the last few decades, the benefits of this strong growth have not been evenly shared across the population. Trend growth in many small MICs in SSA has also generally declined in recent years, while unemployment remains high. A key policy lesson drawn from this analysis is that reducing income inequalities has the potential to lead to significant gains in terms of increasing the duration of growth spells in small MICs. Moreover, policies that lead to a more sustained reduction in structural unemployment would also help to enhance more inclusive growth.

[1] While this is a background paper that accompanies the 2012 Article IV consultations for Cape Verde, Namibia and Swaziland, the results of the cross-country analysis employed in the paper are applicable to other small MICs in SSA and could generate peer learning among these countries. Although this is not a homogenous group of countries given their idiosyncratic features, they do share a few critical common policy challenges among themselves.

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Chapter III. Financial Stability Issues in Small MICs: While these MICs in SSA have relatively more developed financial systems compared with LICs in the region, they are still challenged by lingering financial sector vulnerabilities, most notably concentration risks for the banking sector. Specifically, Cape Verde's banking system has a sizable component of emigrant deposits and Namibia's banking system is highly exposed to the property market. Beyond this, the financial landscape in many of these economies is changing rapidly with nonbank financial institutions becoming a dominant part of the financial system, while their supervisory and regulatory frameworks lag behind. The interplay of concentration and regulatory risks is a key source of potential vulnerability to financial stability in small MICs given the cross-linkages between the banking and the non-banking system.

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I. MACROECONOMIC VULNERABILITY IN SMALL MIDDLE-INCOME COUNTRIES IN SUB-SAHARAN AFRICA—RESERVE ADEQUACY AND FISCAL POLICY[1]

A. Introduction

1. The turbulence in global markets in the last few years underscores the importance of reassessing the adequacy of international reserves, including for small middle-income countries (MICs) in SSA. Many of them tend to be much more susceptible to global shocks and outward spillovers given their less diversified economies, open capital accounts, and lower fiscal policy buffers (Figure 1). Reflecting the fixed costs of operating an independent monetary policy or weaker monetary transmission mechanisms in small MICs, they have mostly opted for intermediate regimes, soft or hard pegs, and therefore do not have domestic policy levers beyond fiscal policy to react counter-cyclically to shocks.[2] Without the buffer of nominal exchange rate flexibility, and given their higher exposure to macroeconomic volatility, maintaining adequate reserves is of particular importance in small MICs. At the same time, some of the small MICs are also working on closing their infrastructure gaps and are grappling with the best practice macroeconomic and fiscal policy framework to help address this challenge, while preserving macroeconomic stability. How to address this issue with a less-than-adequate level of reserve coverage in a pegged exchange-rate regime, amidst the current fragile global environment, is a key policy challenge.[3]

2. In the last decade, reserves of MICs in SSA increased five times in dollar terms. The desire of countries to hold more reserves is driven by the important role of reserves in both preventing crises and mitigating their impact. However, holding reserves is costly and the utility of reserves has diminishing returns. It is important to strike a balance between reserves' crises prevention and the mitigation feature and their cost.

3. This chapter has applied a new framework, developed by the IMF, to determine the adequacy of reserves for selected MICs in SSA.[4] Using self-insurance models, the analysis finds that international reserves held by the some of the MICs are broadly adequate to smooth large shocks. However, in Cape Verde and Namibia, both with pegged exchange rate regimes, reserves remain either too close to or below adequate levels which suggests the need for more medium-term fiscal consolidation as emphasized in their bilateral consultation reports.

---

[1] Prepared by Ara Stepanyan drawing on the work done by Marcio Ronci on Cape Verde and Olivier Basdevant on Swaziland.

[2] Note that both Namibia and Swaziland are members of the Common Monetary Area along with Botswana, South Africa and Lesotho"

[3] Crispolti and Tsibouris (2012) find that, even when reserve coverage is at levels normally considered adequate, island states may suffer persistent macroeconomic costs in the aftermath of an external shock.

[4] For more detail discussion of the new approach see IMF paper on "Assessing Reserve Adequacy" prepared in 2011.

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B. Empirical Analysis

4. The first methodology employed here uses a metric-based approach, which focuses on potential balance of payments pressures. The new metric is based on the weighted average index of export earnings, two separate external liability shocks, and capital flight risk. In general, this approach suggests that reserve coverage in the neighborhood of about 100–150 percent of the metric is broadly adequate. Table I.1 shows that Botswana, Lesotho, and Mauritius have comfortable amount of reserves, while the level of reserves of Cape Verde, Namibia, and Swaziland were somewhat too close to the 100 percent suggested by the metric in 2007–12. [1,2]

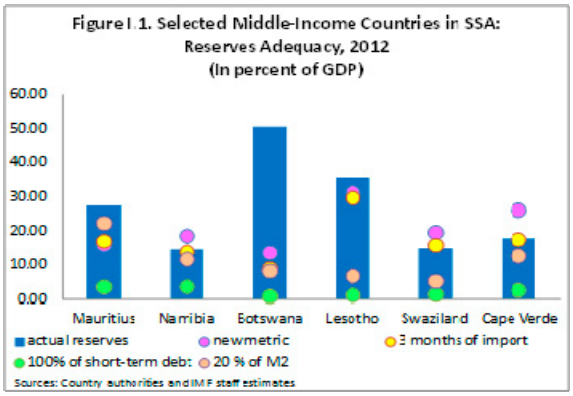
Table I.1. Middle-Income Countries in SSA: Adequacy of International Reserves

	2006	2007	2008	2009	2010	2011	2012*
	(Actual reserves versus metrics suggestion, in percent)						
Mauritius	187.1	213.2	109.8	144.7	145.3	159.4	169.5
Namibia	39.9	69.7	98.0	118.8	67.7	86.5	78.7
Botswana	445.7	474.2	502.9	516.4	393.1	359.2	366.6
Lesotho	209.2	258.1	301.5	260.6	205.1	220.3	114.2
Swaziland	72.3	124.8	149.3	143.3	97.6	73.2	76.2
Cape Verde	77.0	92.8	99.4	93.7	87.8	75.9	75.4

Sources: Country authorities, WEO database, and IMF staff estimates.

* Data for 2012 are estimates.

5. The chapter also presents other estimates of optimal level of reserves for MICs based on standard methodologies. [3] We show estimates of how much reserves would be required to satisfy simple rules of thumb that have been widely used for measuring reserves adequacy. The comparison of the results from traditional rules of thumb and the new metrics against the actual holdings of reserves for MICs in SSA is presented in Figure I.1.



[1] Given the role of the current account in most of MICs in SSA, we reduced the weight on short-term debt relative to exports by 10 percentage points for all countries except for Mauritius and Cape Verde.

[2] Note that other more traditional methodologies of reserve adequacy suggest that both Cape Verde and Swaziland were broadly in the range of what would be considered adequate.

[3] Box I.1 describes the various methodologies used to assess reserve adequacy in this chapter. The data used here is based on the Fund's World Economic Outlook (WEO) and Government Finance Statistics databases.

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6. Considerable developments have occurred in the theoretical literature on the determinants of reserves. The literature identifies two main motives for holding reserves: the precautionary and mercantile motives, and it uses different type of variables to measure the size of these motives. We have grouped the determinants of international reserves into two broad categories: (i) describing countries' external position, and (ii) describing countries' macroeconomic policy.

7. A long-run relationship between reserves and their macroeconomic determinants is identified for small MICs in SSA. We used annual data from 1990 through 2011 and employed panel cointegration techniques. Seven statistics are used to identify the cointegrating relationship between gross reserves and its determinants. The statistics below presents the results of our cointegration analysis among reserves, exports plus current transfers, and government spending adjusted for external budgetary grants. Three statistics out of seven reject the hypothesis of no cointegration with a 95 percent confidence interval, and one statistics rejects the null hypotheses with 90 percent confidence interval. It is worth noting that the group-mean ADF tests, which tend to have a better performance in short panels, rejects no cointegration hypothesis with 95 percent confidence interval. A fully modified ordinary least squares method is used to estimate coefficients of the cointegration vector. This method deals with both serial correlation and endogeneity.[1]

Cointegration Analysis Results

panel v-stat =	1.38591
panel rho-stat =	-1.06914
panel pp-stat =	-2.22092**
panel adf-stat =	-1.74045*
group rho-stat =	0.39500
group pp-stat =	-2.47184**
group adf-stat =	-2.16855**

* Rejection with 90 percent confidence interval
** Rejection with 95 percent confidence interval

Panel stats are weighted by long run variances

Source: IMF staff estimates.

Dependant Variable: Log(Reserves)

Panel Group FMOLS Results

	Coefficient	t-statistic
Log(export +current transfers)	1.55	(-2.90)***
Log(expenditure – grants)	-1.22	(-2.20)**

** Rejection with 95 percent confidence interval, *** Rejection with 99 percent confidence interval.
Source: IMF staff estimates.

[1] We added current transfers to exports because the series for current transfers has negative numbers, which do not allow the use of a logarithm specification for the series. We adjusted the expenditure variable for external budgetary grant to eliminate the impact of grants both on expenditures and reserves.

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Box I.1. Standard and Modern Approaches for Estimating Reserve Adequacy[1]

Standard measures are based on a simple ratio of gross official reserves. They do not have a theoretical or empirical underpinning. Four measures are typically identified:

- For a country with a fixed exchange rate, the level of reserves should be at least three months of prospective imports of goods and services.
- Another metric is to ensure full coverage of short-term debt service by remaining maturity. Specifically, reserves should be sufficient to cover the payment of debt service outflows over the next 12 months in full.
- The ratio of gross official reserves to base or reserve money (typically M0) gives a measure of the backing of currency in circulation. This measure is most relevant in currency boards, where the law requires the central bank to maintain a high percentage of reserves (60–100 percent) to be freely available to be exchanged for domestic currency in circulation.
- The reserve coverage of broad money (typically M2) is another popular measure. The metric is intended to capture the risk of capital flight, and a ratio of 20 percent is commonly used as the minimum threshold for countries with a fixed exchange rate regime.

Model-based approaches derive the adequate level from a cost/benefit analysis. The benefits of holding reserves (i.e., reducing the probability of a crisis and smoothing consumption) are assessed against the cost of holding reserves, in terms of foregone investment in the economy. The benefits are typically defined in two broad categories:

- Protecting the economy against a sudden stop in capital flows (Caballero and Panageas, 2004, Jeanne and Rancière, 2006).
- Reducing the probability of a crisis and its cost (Garcia and Soto, 2004).

Along these lines, Dabla-Norris et al. (2011) have proposed a new methodology to assess reserve adequacy for low-income countries and small island developing states. Dabla-Norris's model takes into account both costs and benefits of holding reserves. In this framework, a crisis is defined as a sharp drop in absorption, and the optimal level of reserves is determined when the crisis prevention and mitigation benefits of reserves are balanced against the net financial cost of reserves, defined as foregone investment opportunities measured by the marginal product of capital.

A new model-based approach has also been developed by the IMF (2011b) to derive the optimal reserve holdings. Since 2002, emerging market and low-income countries have outpaced the traditional reserve adequacy metrics. Subsequently, during shocks, these reserves have provided a useful cushion against economic crises, including during the 2008–09 global financial crisis.

This new model-based approach provides a framework for optimal reserves. For emerging market (EM) economies, a two-stage methodology is employed.

- The first stage estimates different potential losses of foreign reserves. The potential outflows during periods of exchange market pressure are estimated, when the specific sources of loss identified are (i) a potential loss of export earnings from a drop in external demand or a terms-of-trade shock; (ii) an external liability shock to short-term debt and medium- and long-term debt and equity liabilities; and (iii) a capital flight risk.
- In the second stage, the reserve coverage a country should hold is estimated based on the metric obtained from the first stage. For countries with a fixed exchange rate regime, it proposes to use the following risk weights, based on tail event outflows during exchange market pressure: 10 percent of export income, 30 percent of short-term debt, 15 percent of other portfolio liabilities, and 10 percent of broad money, which in this case is a proxy for liquid domestic assets.

[1] Drawn from IMF, 2011.

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8. The results show that while countries' reserves holdings increase with exports and current transfers, they decrease in response to an increase in government spending. These results could be used by policymakers in small MICs in SSA to guide their macroeconomic policies to ensure the adequacy of reserves and the sustainability of those policies.

9. Our analysis of reserves adequacy uses a multi-dimensional approach. We employed a variety of methods for measuring optimal level of reserves based on the results obtained using the new metric. In particular, we used the Dabla-Norris and others (2011) and Ben-Bassat and Gottlieb (1992) methods that are based on cost-benefit models and provide a comprehensive framework to determine the optimal level of reserves. However, these models are sensitive to the assumptions about economic structure, costs and benefits of holding reserves. Thus, we also used Frenkel and Jovanovic's buffer stock model (1981) of assessing reserve adequacy.

10. We first apply these tools for assessing reserve adequacy on Namibia. The calculations are extended based on the new metrics of reserves adequacy for Namibia through 2015 using the framework developed by Dabla-Norris and others (2011). The results suggest that, on average, in 2012–15 the projected gross reserves will be about 73 percent of the average level of reserves generated by the new metric. The results based on Dabla-Norris and others' methodology suggests that, on average, for 2007–11 the optimal level of reserves for Namibia was 4.8 month of imports, whereas the actual level for that period was 3.6 months. We also used the current projections until 2015 to assess whether over the medium term the level of reserves is expected to approach the optimal level. The results confirmed the outcome obtained using the new metrics and suggest that the current gap between the optimal and projected reserve levels based on current plans will widen over the medium term, which is a potential source of vulnerability for Namibia.[1] [2]

11. Similar analysis of reserve adequacy for Cape Verde suggests that current reserve levels are below what is considered adequate. The estimates for the optimal level of reserves for 2009–11 are between 2.7 and 4 months of imports in line with actual outcome of 3.9 for the same period, suggesting that the central bank's reserve holdings were adequate. However, for 2012–15, estimates for reserve adequacy are between 3.7 and 5 months of imports compared with 3.4 months on average in the current macroeconomic framework. Given the increasing public debt, the minimally adequate level of reserves and uncertainties regarding external inflows, in staff's view strengthening of the international reserves position in Cape Verde would be appropriate.

[1] Staff's additional simulation experiments show that in the event of a further worsening in the global economic environment compared to current WEO projections, which may lead to a decline in Namibia's exports prices and therefore a deterioration in its terms of trade, the gap between the optimal and projected level of reserves would widen further, in the absence of offsetting policy actions.

[2] Uncertainties about the completion of the economic partnership agreements add further vulnerabilities to Namibia's external accounts over the medium term.

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Namibia: Optimal Level for Reserves Using Dabla-Norris Approach

	Actual 2007—2011	Proj. 2012—2015
International reserves (months of imports)		
Optimal level	4.8	4.8
Current macroframework	3.6	3.0
Assumptions:		
Government balance (% of GDP)	-2.8	-2.5
CPIA	4.0	4.0
External demand growth (percent)	3.5	3.5
Terms of trade change (percent)	-2.3	1.0
Change in FDI-to-GDP ratio	0.7	0.7
Cost of holding reserves (percent)	3.6	4.0
Fund program (=1)	0.0	0.0

Sources: Dabla-Norris (2011) and IMF staff estimates.

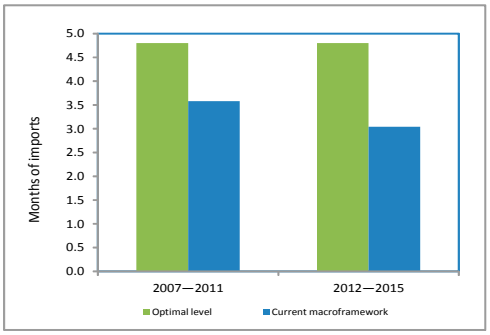

Table I.2. Cape Verde: Summary of the Results of Reserves Adequacy Estimates
(months of imports)

	Actual 2009-2011	Projected 2012-2015
Ben-Bassat and Gottlieb Approach	4.0	5.0
Buffer-stock model	3.3	5.2
Dabla-Norris' approach	2.7	3.7
Macroframework	**3.9**	**3.4**

Sources: Country authorities and IMF staff estimates.

12. Swaziland's level of gross official reserves is broadly adequate to protect the country against external shocks.[1] By reflecting the relevant level of risk of the different possible sources of balance of payment pressures, it is estimated that the minimum level of reserves needed to cover the risk of potential balance of payments outflows in Swaziland is 17 percent of GDP (about E 5.1 billion for 2012). With the surge in Southern African Customs Union (SACU) transfers in 2012/13, the level of reserves at the central bank has improved and since October 2012 has been broadly adequate. However, between quarterly SACU transfers, reserves are decreasing rapidly as the government meets its budgetary obligations. The factor underlying the weakness is structural, and would require addressing the vulnerability of the whole balance of payments through a significant fiscal adjustment. Therefore, the recommended level of reserves of 17 percent of GDP should be viewed as a minimum. Swaziland is exposed to terms-of-trade shocks because it is an oil importer

[1] See also a forthcoming African Departmental Paper Series: "Restoring Stability in a Changing Global Environment: Options for Swaziland."

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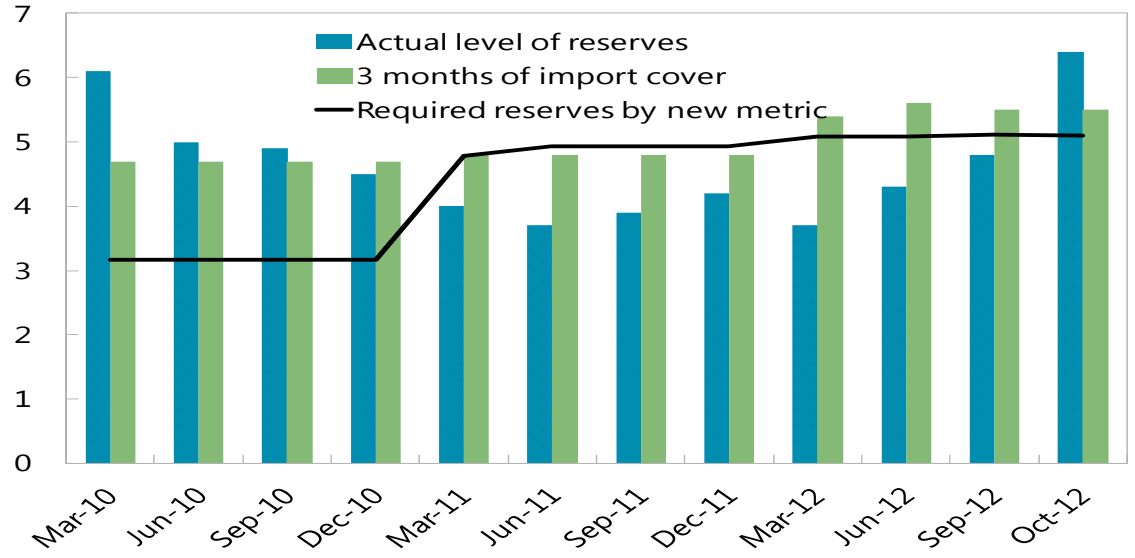
and a sugar exporter. In addition, it has a fully open capital account with South Africa, and is thus exposed to capital outflows, while Swaziland does not have access to international capital markets. Consequently, the central bank would be well advised to aim for a level of reserves beyond the recommended 17 percent of GDP. Specifically, the central bank needs a larger base of reserve coverage to address potential liquidity pressures faced by commercial banks while protecting the parity with the rand. Should portfolio outflows occur, the current level of reserves may not be sufficient for the central bank to be in a position to provide liquidity to commercial banks.

Figure I.2**:** Swaziland: Actual and Adequate Level of Reserves
(Emalangeni billions)



Sources: Country authorities and IMF staff estimates.

13. In general, macroeconomic policies in these small MICs should aim to rebuild policy buffers to help cushion against large external shocks. Given the pegged exchange-rate regime in Cape Verde, Namibia and Swaziland, the role of monetary policy is constrained. The only active policy tool left, therefore, for counter-cyclical purposes is fiscal policy. Our analysis suggests that further fiscal policy consolidation could possibly help to accumulate reserves faster.

14. Specifically, our results suggest that for Namibia, a more ambitious fiscal effort beyond the authorities' current plans would be advisable to rebuild reserves to its adequate levels. Specifically, fiscal consolidation should be accelerated through reducing the expenditure-to-GDP ratio by an additional six percentage points by 2015 over and above current plans. In order to achieve the adequate level of reserves for Namibia, the annual growth rate of reserves should increase by 6 percentage points on average until 2015 compared with current projections. Given the estimated elasticity of -1.22 percent between government expenditure and gross reserves, to achieve accelerated reserves accumulation, the average annual growth rate of government

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expenditure should be reduced by about 5 percentage points, which implies 6 percentage points reduction in the expenditure-to-GDP ratio by 2015 compared with current projections.[1] Given the possible impact of further fiscal consolidation on growth, Namibia needs to undertake a fiscal consolidation process that increases government savings and reprioritize the composition of public expenditure in favor of development spending to enhance productivity. Thus, reining in spending would have to focus on the government sector wage bill as well as transfers and subsidies to loss-making state-owned enterprises. Beyond fiscal consolidation, structural reforms to strengthen export competitiveness should also help the needed reserves buildup.

15. For Cape Verde, similar analysis suggests that rebuilding reserves above minimally adequate levels would involve significant fiscal consolidation over the medium term. To ensure above minimally adequate level of reserves by 2015, reserve holdings of Cape Verde should grow by 14 percent annually, while currently they are projected to grow by 3.4 percent. Applying our estimated elasticity between government expenditure and gross reserves on the difference of needed and projected reserves accumulation suggests that the expenditure-to-GDP ratio for Cape Verde should decrease by 2.5 percentage points by 2015. Thus, Cape Verde's efforts to ease the significant infrastructure bottlenecks in the economy would need to continue following a good practice macroeconomic and fiscal policy framework to help address these challenges in a growth-promoting manner and thus avoid non-productive spending. This will help to preserve fiscal and external stability over the medium term. In recent years, Cape Verde's tax reform agenda has aimed to yield a more neutral tax system that is less reliant on incentives, boost export competitiveness and rebuild the fiscal buffers following efforts to close the infrastructure gap, which entailed an increase in capital spending.

C. Conclusions

16. The analysis of reserve adequacy for selected small MICs in sub-Saharan Africa suggests a mixed picture. Although international reserves held by some of the MICs are broadly adequate to smooth large shocks, however, in Cape Verde and Namibia, both with pegged exchange rate regimes, reserves remain either too close to or below adequate levels, suggesting the need for further fiscal consolidation over the medium term. The results of this analysis are however, sensitive to both the assumptions of the medium-term external outlook, which is based on the Fund's latest WEO projections, as well as the model assumptions on the opportunity costs of holding reserves. Finally, the debt levels in some of these small MICs, a detailed analysis of which is beyond the scope of this chapter, also remain relatively low.[2]

[1] For analysis of wage bills within the Southern African Customs Union, see Chapter 4 of the recent regional work in a forthcoming book "Building a Common Future in Southern Africa," Mongardini, J., (ed. 2013), IMF, Washington, D.C.

[2] For example, despite the recent increase in the debt level due to the temporary fiscal expansion under the TIPPEG program in Namibia, the debt ratio is expected to decline over the medium term. Namibia has always been a low debt upper middle-income MIC and staff do not envisage the debt path to be explosive given the potential of the economy and its diversified nature compared to other predominantly mineral based MIC economies. Namibia's sovereign credit rating also continues to be investment grade quality.

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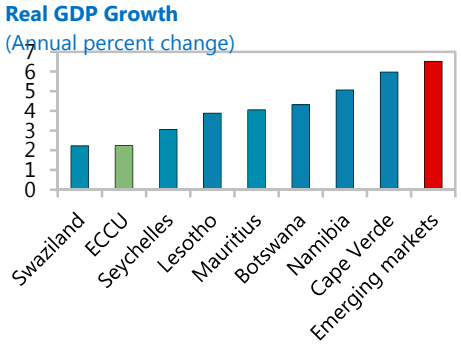
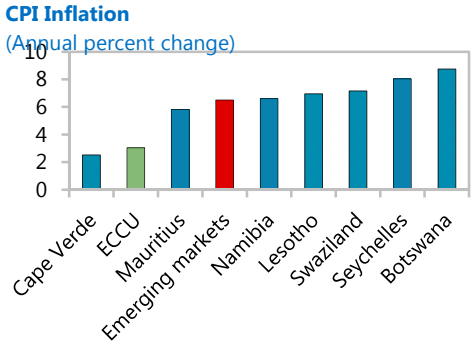
Figure I.3. Small Middle-Income Countries in sub-Saharan Africa, the Eastern Caribbean Currency Union (ECCU) and Emerging Markets Average: Cross-Country Comparison (Average 2002–11, unless otherwise indicated)

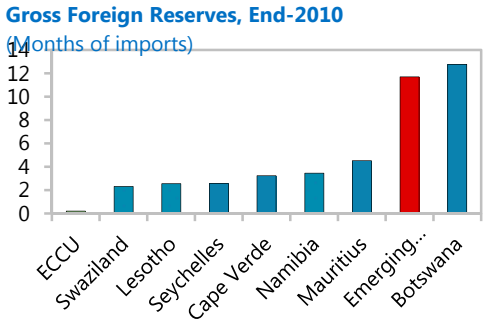
All the small MICs in SSA grew at a slower pace compared with emerging markets on average…



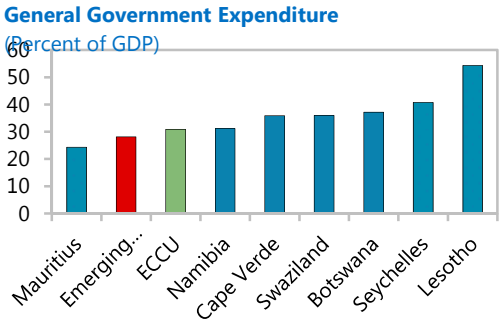
… with inflation above their emerging market peers.



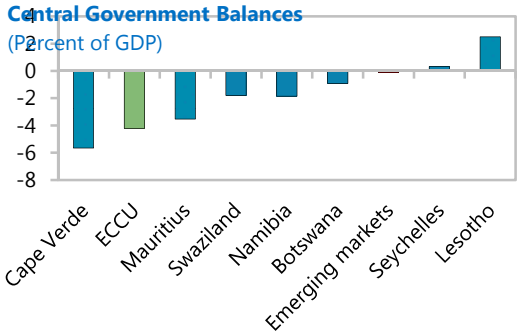
Majority of the small MICs in SSA have much lower policy buffers than an average emerging market economy….



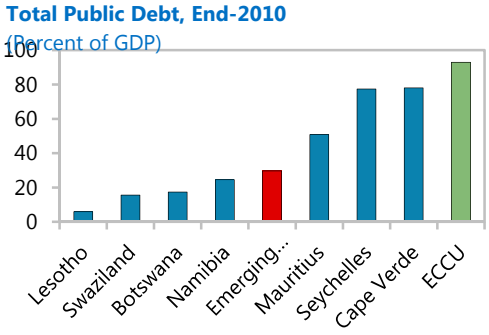
…owing to higher government expenditures ….



…which led to wider underlying fiscal balances…



… and, thus in some cases a high debt burden.



Sources: Country authorities and IMF staff estimates.

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