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INTERNATIONAL MONETARY FUND

BOTSWANA

SELECTED ISSUES

July 26, 2023

Approved By
African Department

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REFORMING THE SOE SECTOR IN BOTSWANA[1]

A. Introduction

1. In many economies, state-owned enterprises (SOEs) have a major influence on productivity and competitiveness. In Botswana, SOEs are prevalent in transport, energy, and communications, as well as financial services (both in retail banking and development finance). In general, SOEs have monopoly powers and prices are often regulated. As recipients of support from the budget in the form of transfers, guarantees and on-lending, SOEs are also a source of fiscal costs and risks.

2. The authorities are committed to diversifying the economy and growing the relative size of the private sector but, until now, progress has been limited. State involvement in the economy remains high, including in markets that have been identified as drivers of future growth or that have large private-sector players.[2] In the two decades since government first adopted a privatization policy in 2000, the only changes have been the transformation of the Botswana Telecommunications Company (BTC) into a limited liability company and the establishment of the communications sector regulatory body—Botswana Communications Regulatory Authority (BOCRA). Over the same period, several new SOEs have been created, including the Mineral Development Company of Botswana (MDCB).

3. This chapter provides an overview of SOE performance and discusses policy options for reform. The chapter is based on the IMF definition of SOEs as outlined in Box 1. Section B discusses the Botswana SOE landscape, including basic characteristics, the legal and institutional framework, and fiscal implications. Section C discusses SOE performance, including comparing Botswana's SOEs against international benchmarks. Section D outlines international experience with SOE reform and policy options. Section E concludes.

Box 1. Classification of SOEs

According to the IMF *Government Finance Statistics Manual (2014)*, eight indicators are used to assess whether an entity is classified as an SOE:

- Ownership of the majority of the voting interest.
- Control of the board or other governing body.
- Control of the appointment and removal of key personnel.
- Control of key committees of the entity.

[1] This SIP was prepared by Ian Stuart, Qianqian Zhang (both AFR), and Sybi Hida (FAD) with assistance from Nan Li (RES), and greatly benefitted from comments of participants at the joint MoF-BoB seminar organized in the context of the 2023 Article IV mission.

[2] For example, the Botswana Meat Commission (BMC) sets prices in a sector where large cattle producers are private companies.

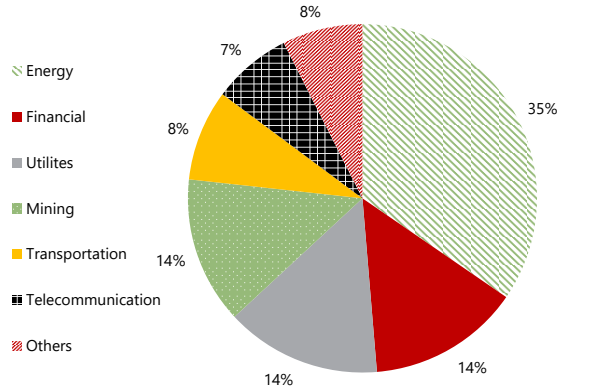
Box 1. Classification of SOEs (concluded)
• Golden shares and options. • Regulation and control. • Control by a dominant public sector customer or group of public sector customer. • Control attached to borrowing from the government. Usually, a single indicator could be sufficient to establish control; in other cases, a number of separate indicators may collectively indicate control. The definition of government control is broader than capital share, which means that an SOE's capital share of the government could be lower than 100 percent.
Source: IMF staff.

B. Botswana's SOE Landscape

Basic Characteristics

4. Botswana has 62 parastatals, accounting for about 5 percent[3] of total formal employment (as of 2021). Parastatals are companies or agencies that are created by the state (by Act of Parliament) to achieve a specific social or economic goal determined by the government. Of this total, 42 parastatals are fully financed by the state, whereas 20 are revenue-generating (also referred to as SOEs in the rest of the paper) and operating commercially, but typically with some fiscal support. The 20 SOEs comprise 16 non-financial and 4 financial corporations. Government is usually the only shareholder, except for Botswana Stock Exchange (BSE) at 76 percent government shareholdings, Botswana Telecommunications Corporation (BTCL) at 51 percent, and Banyana Ltd. as a joint venture.

Figure 1. SOE by Sector in FY2020
(Percent of total financial and non-financial assets)



Sources: Statements of income, and IMF staff calculations.

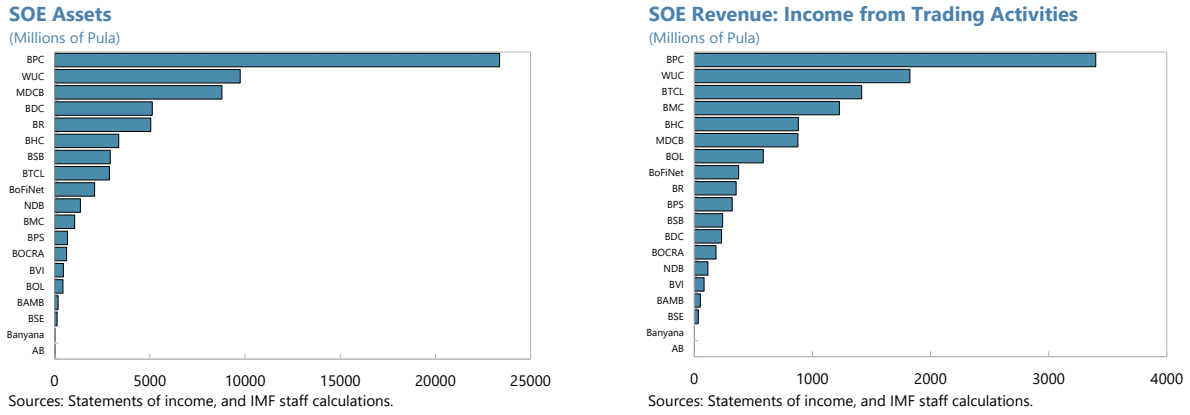
5. Total SOE assets amounted to 32 percent of GDP in 2021 (Figure 1).[4] Financial SOEs account for 14 percent of total assets, comprised of the Botswana Development Corporation (BDC), National Development Bank (NDB), Botswana Stock Exchange (BSE), and Botswana Savings Bank (BSB). The largest non-financial SOEs are Botswana Power Corporation (BPC) and Water Utilities Corporation (WUC) (Figure 2). As of 2021, SOEs with large assets base such as BPC and WUC

[3] Between 2005 and 2018, parastatals accounted for 4.6 percent of total employment, on average (BoB, 2022).

[4] Assets considered in this chart are those reported in the SOEs' annual financial statements and include both financial and non-financial assets.

generated the largest revenues, and financial SOEs generated about 12 percent of total operating revenues.

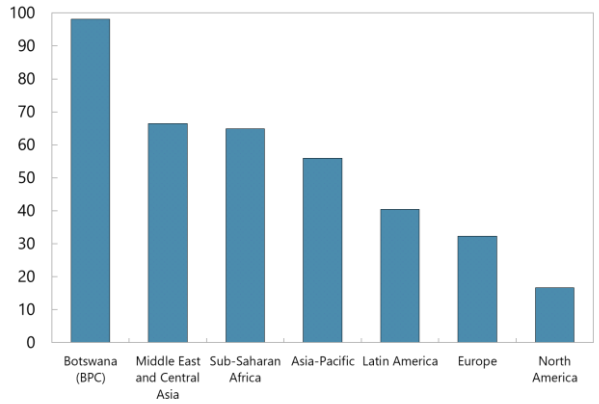
Figure 2. SOE Assets and Operating Revenue, FY2020



Note: Acronyms are defined in Annex I.

6. SOEs tend to dominate the sectors in which they operate, and these are typically heavily regulated. Many were initially created in response to inadequate private sector presence in some sectors. Some SOEs are state-mandated monopolies, including the Botswana Meat Commission, the Water Utilities Corporation, Botswana Railways, and the Botswana Power Corporation (Figure 3). As a result, key network industries (e.g., electricity provision, transport of raw materials) are dominated by SOEs, and prices are regulated. Currently, Botswana has a total of 32 administered prices, including fuel, electricity, water, and some forms of housing. The Botswana Meat Commission (BMC) has a monopoly on exports of cattle and beef, buying from farmers at regulated prices.

Figure 3. SOE Power Generation Capacity
(Percent of total by region, 2017)



Sources: IMF Fiscal Monitor Report April 2020, and UDI World Electric Power Plant database.

7. Compared to other emerging markets (EMs), SOEs operate in similar industries but government ownership is considerably higher in Botswana. Internationally, SOEs are prevalent in utilities, transportation, and banking.[5] While the BPC and WUC are 100 percent government owned, 60 percent of utility companies in other EMs have a mix of public and private ownership. In the financial sector, government ownership of large commercial banks is more prevalent in EMs.

[5] IMF Fiscal Monitor, April 2020.

Botswana's financial SOEs are small compared to the size of the banking system (4 percent of banking system assets) and, besides BSB, do not take deposits from the public.

8. The authorities are taking steps to liberalize some sectors, as part of efforts to enhance productivity and improve market functioning. For example, the BMC Act, supported by the recently passed Meat Industry Regulatory Authority Bill, could assist with liberalizing the meat sector. Despite considerable background work by the authorities on the rationalization and privatization of SOEs, implementation progress has thus far been limited (Box 2).

Box 2. Botswana's SOE Privatization History

Flowing from the Privatization Policy for Botswana of 2000, the first Privatization Master Plan was approved by the Government of Botswana in 2005. The purpose of the Master Plan was to provide a framework and guidelines for increasing private sector participation in the economy through divestiture, restructuring, contracting out, commercialization, and public private partnerships. SOEs listed in the document included the National Development Bank (NDB), the Botswana Power Corporation (BPC) and Air Botswana.

Implementation of privatization commitments under the Master Plan has, so far, been limited. The most significant step was the January 2016 sale offer of 49 percent of the stock of the state-owned Botswana Telecommunications Corporation to Botswana citizens. In February 2017, the Government of Botswana issued an expression of interest for the privatization of its national airline, but the airline remains wholly government owned. Similarly, the announced privatization of the Botswana Meat Commission is still under way. Since 2012, the government has created new SOEs such as the Okavango Diamond Company, the Mineral Development Company, and Botswana Oil Limited.

Other entities are being reformed. The National Development Bank Transition Act, for example, which allows for the transformation of National Development Bank (NDB) into a limited liability company under the Companies Act, was passed by Parliament in December 2013. However, privatization of the bank never took place. The government recently proposed that the NDB—which already has a non-performing loan ratio of around 40 percent—focus more lending towards the agriculture sector.

Institutional Framework

9. SOEs are managed through a decentralized system, with no overarching policy on state ownership or on the state's role in the governance of parastatals.[6] Ministries have the discretion to constitute parastatals either as statutory corporations with their own governing acts, or as companies under the Companies Act. As a result, governance rules differ between companies, and are not consistent with the private sector.[7] Ministries are also responsible for providing policy and strategic direction, funding, regulation, and reform strategies. Through the board chairperson, parastatals sign shareholder compacts (including key performance indicators) with their respective ministers. SOE boards have substantial independence in developing operational plans.

[6] A draft of ownership policy is currently pending for verification by stakeholders.

[7] Botswana Public Enterprises Evaluation and Privatization Agency, Concept Paper: Public Enterprises Ownership Policy for Botswana, April 2015.

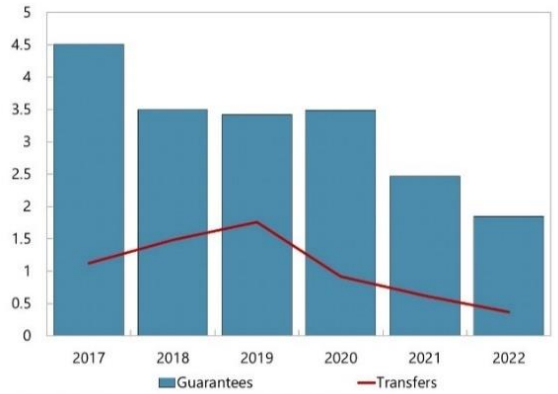
10. SOEs have commercial and social mandates, but this distinction is not always clear. In recent years, some SOEs have engaged in quasi-fiscal activities (QFAs)[8] charging less than the commercial (cost recovery) price for the provision of goods and services. There could be overlaps in SOE mandates, resulting in inefficient use of resources and budgetary allocations. There is currently no comprehensive information or estimated cost for the SOEs of these obligations.

11. Two entities are involved in the oversight and monitoring of SOEs, potentially creating risks of overlap and duplication. The Public Enterprises Evaluation and Privatization Agency (PEEPA), created in 2001, is responsible for monitoring all parastatals and advising the government on potential privatization opportunities.[9] The Enterprise Development Policy Unit within the Ministry of Finance is working to build capacity and tools to monitor financial performance of SOEs. Work is also underway to establish a Fiscal Risk Framework and introduce explicit provisions in the PFM Act (or an overarching SOE Act) to facilitate access to financial performance information, including SOE strategies, plans, and annual reports.

Fiscal Implications

12. Fiscal support to SOEs has recently decreased but remains substantial (Figure 4). In FY2021,[10] direct transfers to SOEs amounted to 0.4 percent of GDP compared to an average of 1 percent from FY2016 to FY2020. Government guarantees on SOE borrowing amounted to 1.8 percent of GDP, a decline from an average of 3.5 percent during FY2016 to FY2020.

Figure 4. Fiscal Support to SOEs
(Percent of GDP)



Sources: Statements of income, and IMF staff calculations.
Note: All years refer to fiscal years.

13. Fiscal support to SOEs is highly concentrated. From FY2016 to FY2021, BPC alone accounted for more than half of total transfers to SOEs and almost 90 percent of government guarantees. The transportation sector—including Botswana Air (BA), Botswana Railways (BR), and Botswana Post (BP)—received about 10 percent of total transfers, while only 1 percent of transfers went to the telecommunication sector (i.e., Botswana Fibre Networks (BoFiNet) and Botswana Telecommunications Corporation (BTCL)). The Mineral Development Company Botswana (MDCB) has received about 12.5 percent of government transfers and about 10 percent of government guarantees over the same period.

[8] Operations undertaken in pursuit of a public policy objective that remain partially or fully uncompensated and worsen the SOE' financial position relative to the strictly commercial profit maximizing level (IMF 2018).

[9] PEEPA was initially a parastatal under the responsibility of the Ministry of Finance, before moving to the Office of the President (OP) in 2016. As of April 2023, PEEPA has moved back to Ministry of Finance.

[10] The fiscal year runs from April 1 of the calendar year to March 31 of the following year.

14. Returns to the government (as shareholder) are low, while risks to the outlook remain high. Some SOEs operate in markets where private companies generate profits for their shareholders. Over the past five years, however, dividends paid to government by SOEs have been minimal. The latest medium-term budget for FY2023–25 (published in February 2023) projects declining fiscal transfers to SOEs over the medium term, but these transfers may be insufficient if progress with SOE restructuring plans, especially in the electricity sector, does not accelerate.

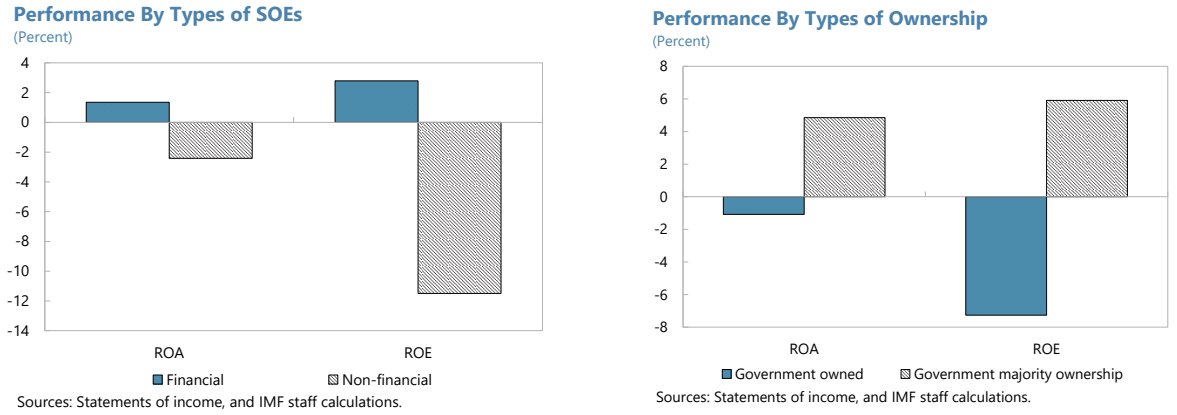
C. SOE Performance

15. This section explores SOE performance in Botswana, including comparison by sector and level of government ownership, and an analysis of wage premiums. It then applies two IMF toolkits—the SOE Health Check Tool and the SOE Stress Test Tool—to identify trends and compare Botswana's SOEs against international benchmarks.

SOE Profitability and Wage Premium in Botswana

16. Overall, SOE profitability varies by sector and by type of ownership. In general, financial SOEs achieved better returns than non-financial SOEs (Figure 5). On average, from FY2016-FY2020, the four financial SOEs earned a small net profit.[11] Over the same period, non-financial SOEs in transportation, telecommunications and water all earned net profits, whereas SOEs in energy, manufacturing, and mining incurred losses. As of FY2020, the two government majority-owned SOEs generated better average returns (ROE or ROA) than fully government-owned SOEs.

Figure 5. SOE Profitability in Botswana, FY2020



Note: Return on Assets (ROA) is defined as net profit divided by total assets, while Return on Equity (ROE) is defined as net profit divided by total equity.

17. Wage premiums for parastatals are high. After accounting for a range of factors (including years of schooling and work experience), staff estimated a 56 percent parastatal wage

[11] Defined as earnings after deducting all operating, interest, and tax expenses.

premium compared to central and local governments, the private sector, and other sectors (e.g., non-governmental organizations, self-employed). The methodology is presented in Box 3.

Box 3. Wage Premium Analysis for Parastatals in Botswana

Based on the Multi-Topic Survey data[1] for 2020, staff applied a traditional Mincer equation to estimate wage premiums across different sectors. A propensity score matching method is employed to ensure comparability across samples, and wage differences are estimated while controlling for education, age, marital status, region, as well as household size and composition. In Botswana's case, the data allows for comparing four categories of employment: government, parastatals, private sector, and others.

The baseline specification of the regressions is as follows:

$$logW = \beta_0 + \beta_1 Sector + \beta_2 Age + \beta_3 Age^2 + \beta_5 Gender + \beta_5 Edu + \varepsilon$$

where W is wage, $Sector$ represents the dummy variables for the sector where the respondent works, Age is included as a proxy for years of employment, $Gender$ is the dummy variable for gender, Edu is the highest level of education, and ε is the error term. The regressions are heteroscedasticity robust and clustered to the district level. Robustness checks include alternative scenarios that control for other factors than the baseline scenario, including marital status and household characteristics. The survey data contain almost 2,500 observations.

[1] Statistics Botswana, Q4 2020, Quarterly Multi-Topic Survey: Labor Force Module

Results from the IMF SOE Health Check Tool

18. To gauge levels of financial vulnerability, the IMF SOE Health Check Tool[12] is applied to 9 SOEs,[13] based on data availability for FY2021. The tool provides a framework for detailed analysis of fiscal risks stemming from SOEs, by comparing measures of profitability, liquidity, and solvency against typical international risk thresholds (Table 1). A composite indicator of overall risk is estimated for each company, ranked from low (Category 1 and 2), to moderate (Category 3), to high and very high risk (Category 4 and 5).

Table 1. Botswana: International Financial Performance Benchmarks

	Thresholds				
	Very Low Risk	Low Risk	Moderate Risk	High Risk	Very High Risk
Profitability					
Return on Assets	greater than	8.0	4.0	0.0	-5.0
Return on Equity	greater than	15.0	8.0	0.0	-10.0
Cost Recovery	greater than	1.5	1.3	1.0	0.8
Liquidity					
Current Ratio	greater than	2.0	1.5	1.3	1.0
Quick Ratio	greater than	1.2	1.0	0.8	0.7
Solvency					
Debt to Assets	less than	0.3	0.5	0.8	1.0
Debt to Equity	less than	0.5	1.0	1.5	2.0
Debt to EBITDA	less than	1.5	2.0	3.0	5.0
Debt Coverage	greater than	0.5	0.3	0.2	0.1

[12] The toolkit was developed by the Fiscal Affairs Department of the IMF and is available at: https://www.imf.org/en/Topics/fiscal-policies/Fiscal-Risks/Fiscal-Risks-Toolkit/Fiscal-Risks-Toolkit-SOE-HCT

[13] The nine SOEs are BHC, BTCL, NDB, BPS, BOCRA, BOL, BPC, WUC, and BSB, which represent 70 percent of SOE assets.

19. The tool shows that 7 out of 9 SOEs fall into the moderate and high risk categories against international benchmarks (see Annex II for detailed scores). Almost all SOEs pass the test of cost recovery by generating adequate revenues to cover their operating expenses. A majority of SOEs are also able to meet their short-term liabilities with enough liquid short-term assets (Figure 6, first chart). Nonetheless, ROA and ROE remain low; and the SOEs have struggled to service their debt—reflected in the low debt coverage ratio[14] and high debt to EBITDA (calculated by total liabilities divided by earnings before interest, tax, depreciation, and amortization) (Figure 6, second chart). The 7 SOEs with moderate to high risk had weak profitability, liquidity, and solvency indicators, especially the three SOEs in Category 4—BPC, WUC, BSB—that account for most of the energy and utility sectors. The BTCL—which is the only partially-privatized company in this group – has stronger debt-to-equity, debt-to-asset, and debt coverage ratios.

20. On average, all 9 SOEs have yet to recover fully from the COVID-19 pandemic. Profitability remained low in 2022, as reflected in their collective ROA and ROE.[15] Liabilities have increased significantly since the pandemic and the ability to service debt has markedly deteriorated (Figure 6, third to sixth charts). Liquidity has been relatively stable and has mostly recovered.

Results from the IMF SOE Stress Test Tool

21. The SOE Stress Test Tool[16] provides an assessment of the strength and resilience of SOE financial position, relative to SOEs in other countries. While the Health Check Tool compares Botswana's SOEs against benchmark measures of profitability, liquidity, and solvency, the Stress Test Tool focuses more on relative performance by sector.

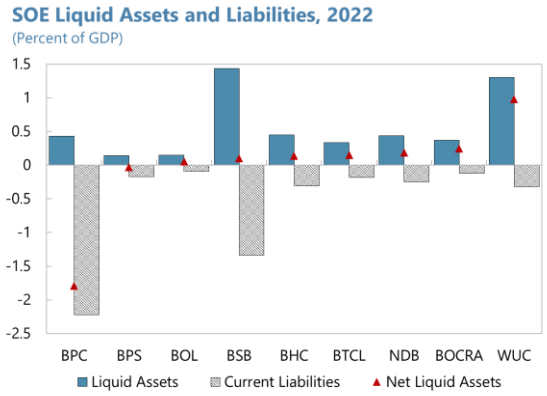
22. A comparison of SOE profitability by sector indicates opportunities for improvement. The tool results show that the median ROA in 35 international SOEs operating in electricity and gas supply was 2.7 percent for 2010–17, while BPC's return on assets was negative during the same period (see Figure 7). Similarly, 61 international SOEs operating in the telecom sector produced a median rate of return on assets of 3.6 percent, while the BTC averaged 0.1 percent. SOEs in Botswana performed in line with the international benchmark range for some other measures, including the current ratio (an indicator of liquidity), and for the labor cost per operating revenue (an indicator of efficiency).

[14] Debt coverage is defined as the ratio of earnings to debt.

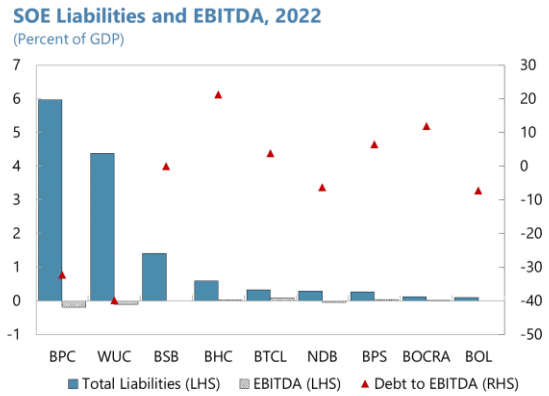
[15] Aggregation is based on simple average of the indicators.

[16] The toolkit was developed by the Fiscal Affairs Department of the IMF and is available at: https://www.imf.org/en/Topics/fiscal-policies/Fiscal-Risks/Fiscal-Risks-Toolkit/Fiscal-Risks-Toolkit-SOE-ST

Figure 6. SOE Health Check Tool Results



Sources: IMF FAD State-Owned Enterprise Health Check Toolkit.



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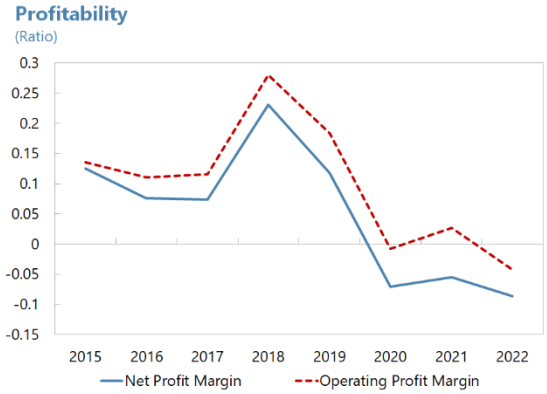

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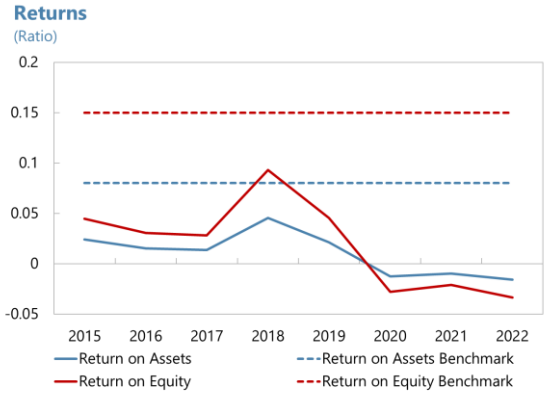

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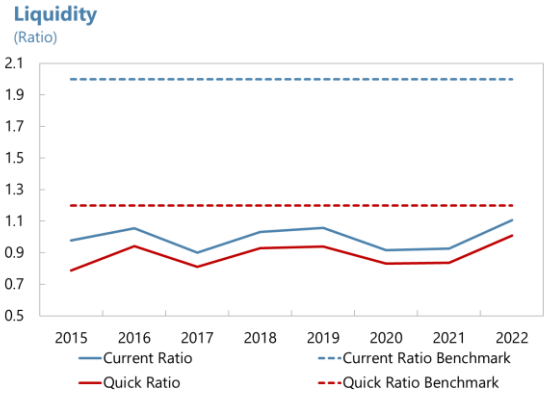

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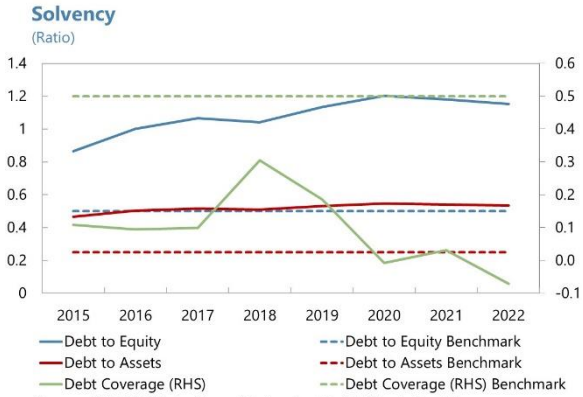

Sources: IMF FAD State-Owned Enterprise Health Check Toolkit.

Note: The last four charts are all in simple averages, and all international benchmarks are based on low risk thresholds (Category 2). In the profitability chart, net profit margin equals to net profit after tax divided by total revenue excluding government grants, while operating profit margin equals to earnings before interest and taxes (EBIT) divided by total revenue excluding government grants. In the return chart, return on assets is defined by net profit divided by total assets, and return on equity is defined by net profit divided by total equity. In the liquidity chart, current ratio is total current assets divided by total current liabilities, and quick ratio is the difference between total current asset and inventory divided total current liabilities. Solvency is proxied with 1) debt to equity which is the ratio between total liabilities and total assets; 2) debt to assets that is the ratio between total liabilities and total equity; and 3) debt coverage which is the ratio between earnings before interest, taxes, depreciation, and amortization (EBITDA) and the sum of debt (including short-term and long-term) and financial leases.

Figure 7. SOE Stress Test Tool Results

Note: Due to data availability, all indicators are calculated using an average of 2010-17, except for Botswana SOEs' labor cost which reports the latest data available. Return on assets is defined by net profit divided by total assets, Current ratio is total current assets divided by total current liabilities. Comparators refer to a sample of SOEs operating in the same sector in other countries.

D. Conducting SOE Reforms Successfully

Lessons from International Experience

23. A review of past country experiences with SOE reforms highlights several key ingredients for success. Many SOE reforms are based on the OECD Guidelines (2015), which are the only internationally recognized standards for SOE governance, accepted by many countries and institutions such as the World Bank and IMF. The country cases described in World Bank (1995, 2020), OECD (2015, 2021), and IMF (2020, 2021) point to the following elements of successful reforms:

- **A favorable political environment combined with strengthened state oversight and monitoring functions.** In many countries, this has been achieved by either vesting ownership and oversight responsibilities with a single entity or establishing a central coordinating agency to oversee SOEs. State ownership policies are typically explicitly set out in legislation, government decisions, policy statements, or some combination of these

elements. All successful SOE reforms have been supported by strong political leadership, including a commitment to compensating those that stand to lose from the reform process.

- **Enhanced competition with the private sector.** Several countries now subject SOEs to competition law, compensating them for public service obligations, requiring them to separate the accounts of commercial and non-commercial activities, setting guidelines for financing decisions, or establishing financial performance targets. Some countries also benchmark SOEs performance against the private sector. In addition, some EMs have removed barriers to entry by eliminating specific advantages enjoyed by SOEs, such as special tax treatments, superior regulatory treatment, and preferential procurement procedures.

- **Professionalized governing bodies.** Many countries have taken steps to support the independence and autonomy of SOE board members. In addition to qualification criteria, there is a growing consensus that ministers, state secretaries, or other direct representatives of the executive power or closely related parties should not be represented on SOE boards.[17] Governments are increasingly promoting board evaluations against their mandates and goals as a way of maximizing performance and minimizing risk—a common practice in private companies. Additionally, governments have established policies and criteria for executive and director remuneration, including performance contracts (e.g., fixed-term contracts), outside of the civil service legal framework.

- **Enhanced data transparency and integrity.** Since the publication of the OECD Guidelines (2015), many countries have introduced or strengthened requirements for disclosure and transparency. SOEs should maintain accounts according to international accounting standards, subject financial statements to independent external audits, and establish comprehensive internal audit procedures. Compilation and dissemination of SOE data in line with the Government Finance Statistics Manual 2014 and as part of a broader coverage of public sector fiscal and debt statistics are essential for improved transparency. Positive developments include new requirements concerning the role of audit committees in SOEs, clarifications regarding the state's role in selecting audit firms, and in some countries, the introduction of aggregate reporting on the entire SOE portfolio.

- **Increased private sector participation.** EMs have promoted private sector involvement either by broadening the ownership structure of the SOEs (opening it to the private sector in a variety of ways) or by using management contracts to hire private sector managerial expertise in open and transparent competitive processes. Some countries maintained a minority shareholding after a sale of the majority to the private sector (e.g., Brazil, UK,

[17] Reforms to limit politicization included increasing professional qualifications and strengthening rules against conflict of interest (Germany, Italy, Spain, and Singapore), reducing board sizes (Korea, France, Poland, and Spain), and the introduction of guidelines for remuneration and employment that apply across the SOEs (Finland, Norway, Sweden, Czech Republic).

Norway, Spain, Poland), and others undertook full privatization (e.g., Brazil, Argentina, New Zealand). Countries have typically increased private ownership more in competitive markets.

- **Strengthened regulation.** Several EMs have increased the role of regulators to reduce the monopolistic pricing power of SOEs. Safeguards have also been introduced to protect private suppliers to SOEs from predatory pricing.

Policy Options for Botswana

24. In the short term, the priority should be to get a better grasp on the financial situation of the SOEs and clarify the oversight structure.

- **Undertaking a comprehensive analysis of the SOE sector.** Taking stock of the existing SOEs (including subnational SOEs and SOE subsidiaries) in terms of their commercial viability, public policy objectives, track record, and success in addressing market failures could inform strategic decisions and fill in current information gaps. All annual financial statements should be published in timely manner and shared with the Ministry of Finance. Additionally, the Ministry could compare SOE performance with private firms (where feasible) or international SOEs to establish an efficiency benchmark to support understanding of their overall efficiency. The analysis should prioritize SOEs that are targeted for privatization and those operating in sectors where private firms are present.

- **Strengthening monitoring and oversight of the SOE sector.** Clarifying the roles and avoiding duplication risks between PEEPA and the Enterprise Development Policy Unit would be an important first step. Ideally, a single unit should be responsible for monitoring performance, enhancing SOE governance, and implementing the reform strategy, including support for board members' nomination and evaluations.[18]

25. In the medium term, various policies could be envisaged to improve the efficiency of SOE operations to reduce fiscal risks. Historically, many reform strategies, action plans, and detailed policies have been created (e.g., a 2015 ownership policy concept paper), but implementation has been limited.

- **Devising and implementing an SOE governance reform strategy.** Based on the OECD Guidelines (2015), government should accelerate an analysis of the rationale and future role of each SOE. Based on this strategy, the government should swiftly implement an ownership policy—a formal document that describes the roles and responsibilities of the institutions involved in the oversight and governance of SOEs. An inter-ministerial working group should be assigned the responsibility of designing and implementing the strategy. To follow best practices, policies are needed to guide the SOE activities and limit overlap between SOEs. Any obligations and responsibilities that a SOE is required to undertake beyond its normal

[18] A good example of a centralized oversight unit in the region is the Public Enterprise Monitoring Commission in Seychelles—the only authority to oversee public enterprises.

commercial functions should be clearly mandated, disclosed to the public, and their costs covered in a transparent manner. Authorities may wish to develop a set of criteria for prioritization and sequencing, including fiscal impact, importance of sectoral development, market readiness, and cost of reform.

- **Strengthening the independence of SOE board members and management.** Government should clarify the roles of the boards, management, and state as owner, and ensure uniformity across SOEs. The board nominations process should be formalized and conducted by the oversight unit and shared with line ministries through an open process. To ensure a quick replacement process, a single public database of potential candidates could be established. Government should enhance the monitoring of the shareholder's compacts, focusing on high-level financial and non-financial objectives and making them public. This will empower SOE boards to set the entity strategy, while selecting and supervising the management team.

E. Conclusion

26. The financial performance of Botswana's SOEs has generally been weaker than international benchmarks. The sector is also an outlier in terms of the high percentage of government ownership and the limited progress in advancing private sector involvement. Although direct fiscal support to SOEs has declined in recent years, the sector's weak recovery since the pandemic represents a fiscal risk.

27. Reforming SOEs could level the playing field for private companies, facilitate market access, improve resource allocation, and spur competition and innovation. Parastatals account for a significant share of total employment and tend to pay large wage premiums. SOEs generally dominate the sectors in which they operate, and these are typically heavily regulated.

28. Despite substantial background work on reform of the SOE sector, implementation has lagged. As a first step, the authorities could accelerate a comprehensive analysis of the SOE sector and clarify oversight roles. Over the medium term, authorities should introduce an updated SOE governance reform strategy, while taking steps to strengthen SOE boards and management.

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Annex I. List of State-Owned Enterprises

No	Institution	Institution	% GoB shareholding	Sector	Dept
1	Botswana Agricultural Marketing Board (BAMB)	BAMB	100%	Agriculture	Agriculture
2	Banyana (PTY) Ltd	Banyana (PTY) Ltd	Joint Venture	Agriculture	Agriculture
3	Botswana Vaccine Institute (BVI)	BVI	100%	Agriculture	Agriculture
4	Botswana Housing Corporation (BHC)	BHC	100%	Construction	Lands and housing
5	Botswana Power Corporation (BPC)	BPC	100%	Electricity, Gas, Steam and Air Conditions Supply	Energy
6	Botswana Development Corporation Limited (BDC)	BDC	100%	Financial /Insurance	MITI
7	Botswana Savings Bank (BSB)	BSB	100%	Financial /Insurance	Finance
8	National Development Bank (NDB)	NDB	100%	Financial /Insurance	Finance
9	Botswana Stock Exchange (BSE)	BSE	76%	Financial /Insurance	Finance
10	Botswana Communications Regulatory Authority	BOCRA	100%	Information	MCKT
11	Botswana Fibre Networks (BoFiNet)	BoFiNet	100%	Information	MCKT
12	Botswana Telecommunications Corporation (BTCL)	BTCL	51%	Information	Transport
13	Botswana Meat Commission (BMC)	BMC	100%	Manufacturing	Agriculture
14	Botswana Oil Limited (BOL)	BOL	100%	Mining and Quarrying	Energy
15	Okavango Diamond Company (ODC)	ODC	100%	Mining and Quarrying	Energy
16	Mineral Development Company Botswana (MDCB)	MDCB	100%	Mining and Quarrying	Energy
17	Air Botswana (AB)	AB	100%	Transport	MPTW
18	Botswana Post	BPS	100%	Transport and Storage	Transport
19	Botswana Railways (BR)	BR	100%	Transport and Storage	Transport
20	Water Utilities Corporation (WUC)	WUC	100%	Water supply	Energy

Annex II. SOE Risk Ratings (2022)

Category 5	Higher risk
Category 4	↑
Category 3	
Category 2	↓
Category 1	Lower risk

SOE Risk Ratings (2022)

	Profitability			Liquidity				Solvency						
	Return on Assets	Return on Equity	Cost Recovery	Current Ratio	Quick Ratio	Debtor Turnover Days	Creditor Turnover Days	Debt to Assets	Debt to Equity	Debt to EBITDA	Interest Coverage	Cash Interest Coverage	Debt Coverage	Overall Risk Rating
BHC	Category 3	Category 3	Category 1	Category 1	Category 1	Category 1	Category 5	Category 2	Category 2	Category 5	Category 1	Category 1	Category 4	Category 2
BTCL	Category 2	Category 3	Category 1	Category 2	Category 1	Category 3	Category 5	Category 1	Category 1	Category 4			Category 1	Category 2
NDB	Category 5	Category 5	Category 1	Category 2	Category 1	Category 5	Category 1	Category 3	Category 3	Category 5			Category 5	Category 3
BPS	Category 2	Category 1	Category 1	Category 5	Category 3	Category 5	Category 5	Category 4	Category 5	Category 5	Category 1	Category 1	Category 2	Category 3
BOCRA	Category 2	Category 3	Category 1	Category 1	Category 1	Category 5	Category 5	Category 2	Category 1	Category 5				Category 3
BOL	Category 4	Category 5	Category 1	Category 2	Category 1	Category 2	Category 2	Category 3	Category 3	Category 5	Category 5	Category 5	Category 5	Category 3
BPC	Category 4	Category 4	Category 1	Category 5	Category 5	Category 1		Category 2	Category 2	Category 5	Category 5	Category 5	Category 5	Category 4
WUC	Category 4	Category 4	Category 1	Category 1	Category 1	Category 5		Category 3	Category 4	Category 5	Category 5	Category 5	Category 5	Category 4
BSB	Category 4	Category 4		Category 4	Category 2			Category 4	Category 5				Category 5	Category 4

BOTSWANA'S REAL EFFECTIVE EXCHANGE RATE TARGETING REGIME: TAKING STOCK AND LOOKING FORWARD[1]

1. The REER targeting regime has served Botswana well in the past decades but is currently challenged by structural and conjunctural factors. The currency regime, introduced in 2005, has delivered low and stable inflation and helped mitigate "Dutch disease" risks faced by commodity exporters with flexible exchange rates. Nonetheless, despite some REER stability, non-mineral exports have declined in percent of total exports, and economic diversification has stalled over the last ten years. The regime may have also amplified recent inflationary pressures, and more generally complicates the conduct of monetary policy.

2. This selected issue paper (SIP) reviews the key features of Botswana's REER targeting regime, discusses its main costs and benefits, and explores potential alternatives. The analysis generally suggests that a crawling regime is still well suited to Botswana's economic and financial characteristics. Small changes to the existing framework (related to the choice of currency weights and price indices) could mitigate some problems faced by the exchange rate regime, as currently implemented, including the gradual deterioration of price competitiveness. More significant changes could be even more beneficial given the resurgence of inflation shocks and the risk of recurrent tensions between monetary policy and exchange rate policy objectives going forward. In this context, a transition to a nominal (NEER) targeting regime—where the crawl rate is adjusted to meet the inflation target—could make Botswana's monetary framework more robust. While this new regime would be more in line with international best practices and come with important benefits, it would also require some institutional reforms, including by assigning all responsibilities for exchange rate policy to the central bank.

A. An Overview of the REER Targeting Regime in Botswana

History and Design

3. The current exchange rate (ER) regime is geared towards promoting export competitiveness and economic diversification. The rapid appreciation of the Nominal Effective Exchange Rate (NEER), along with higher inflation in Botswana compared to trading partner countries, led to a severe appreciation of the Real Effective Exchange Rate (REER) in the early 2000s (Figure 1, Panel A). In response, the authorities decided to use the NEER as an active policy instrument. After two discrete devaluations in 2004 and 2005, the Bank of Botswana (BoB) started implementing an automatic nominal adjustment of the Pula exchange rate—the "crawling band exchange rate mechanism"—which aims at maintaining REER stability, thereby supporting the

[1] This SIP was prepared by Damien Puy (RES) and benefitted from discussions with David Hofman (MCM), Romain Veyrune (MCM), Gunes Kamber (MCM), Nan Li (RES), Adrian Alter (MCD), Simon Gray (Consultant), as well as comments from participants at the joint MoF-BoB seminar organized in the context of the 2023 Article IV mission.

competitiveness of local producers of tradeable goods and services and, by extension, encouraging economic diversification.[2]

4. This policy rule has changed little since 2005. Since May 2005, the monetary authorities have been adjusting the NEER of the Pula against a defined basket of currencies to compensate (predicted) inflation gaps—measured by headline CPI—between Botswana and countries in the basket.[3] Specifically, the projected inflation gap is offset by a "crawl rate" of the nominal exchange rate, which corresponds to the growth rate of the pula against the basket (in nominal terms) over the next 12 months. The crawl rate is announced every year in December but can be changed later in case of large and unexpected shocks) and is implemented in small (daily) steps throughout the year.[4] Except for the weights applied to the different currencies in the basket, the parameters behind this policy rule have changed little. Since 2005, the crawl rate has been most of the time in negative territory, implying that the authorities have implemented a nominal depreciation rate of the Pula in order to offset positive inflation differentials with countries in the basket and, therefore, prevent real appreciation pressures (Figure 1, Panel B).

5. The REER targeting coexists with an internal price stability objective for monetary policy. The central bank has a price stability mandate and an inflation objective range of 3–6 percent for headline inflation over the medium term, defined as a 3-year rolling window. Its main policy instrument is a 7-day Bank of Botswana Certificate (BoBC) rate—also called the monetary policy rate (MOPR)—with certificates auctioned on a weekly basis since May 2022. De facto, Botswana operates a "two targets, two instruments" framework (Ostry et al., 2012).[5] While the policy rate is used to meet the inflation target, interventions in the foreign exchange market are geared towards the exchange rate objective. This arrangement is made possible by the relatively low de facto level of financial openness.[6]

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[2] This SIP was prepared by Damien Puy (RES) and benefitted from discussions with David Hofman (MCM), Romain Veyrune (MCM), Gunes Kamber (MCM), Nan Li (RES), Adrian Alter (MCD), Simon Gray (Consultant), as well as comments from participants at the joint MoF-BoB seminar organized in the context of the 2023 Article IV mission.

[3] Weights went from 60 percent ZAR and 40 percent SDR in 2007 to 45 percent ZAR and 55 percent in 2017, respectively. Those weights have not changed since then, and broadly reflect the composition of trade between Botswana and the rest of the world (see Figure 3, Panel A).

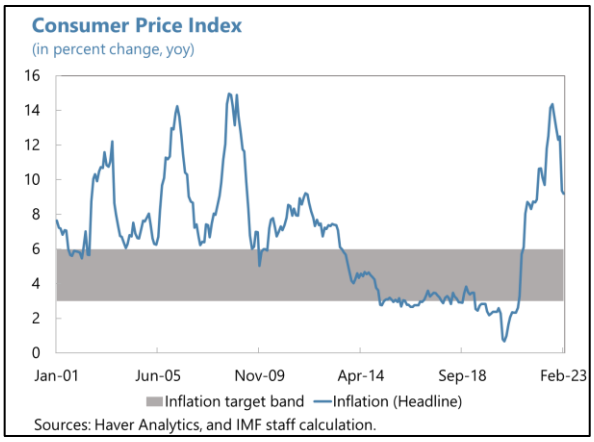
[4] The annual crawl rate is divided by the number of trading days and implemented gradually daily throughout the year. FX transactions are conducted by the BoB, which quotes bid and offer rates to authorized primary dealers (commercial banks). These bid/ask rates are the prices at which it will buy or sell unlimited quantities of foreign currencies against Pula, like in a standing facility. There is no maximum cap on trading but a minimum amount of USD 1 million equivalent for each trade.

[5] As discussed below, although an explicit REER targeting per se has become much less common today, dual objectives are not uncommon.

[6] The local capital market is small and pension funds are required to invest 50 percent of their assets locally, resulting in imperfect capital mobility and a low risk of speculative inflows.

Recent Challenges

6. The current regime has generally served Botswana well in the past two decades. Botswana's economic performance while pursuing a REER targeting regime has been strong. Between the Global Financial Crisis (GFC) and the Covid-19 pandemic, the policy framework has managed to deliver relatively low and stable inflation and has contributed to closing the historical gap in inflation between Botswana and neighboring South Africa (Botswana's largest trading partner) and larger advanced economies. This achievement is partly due to Botswana's sound policy framework, which already incorporates many of features that characterize effective policy frameworks in countries with independent monetary policy (IMF, 2015a and Box 1). Nonetheless, some challenges have emerged over time.



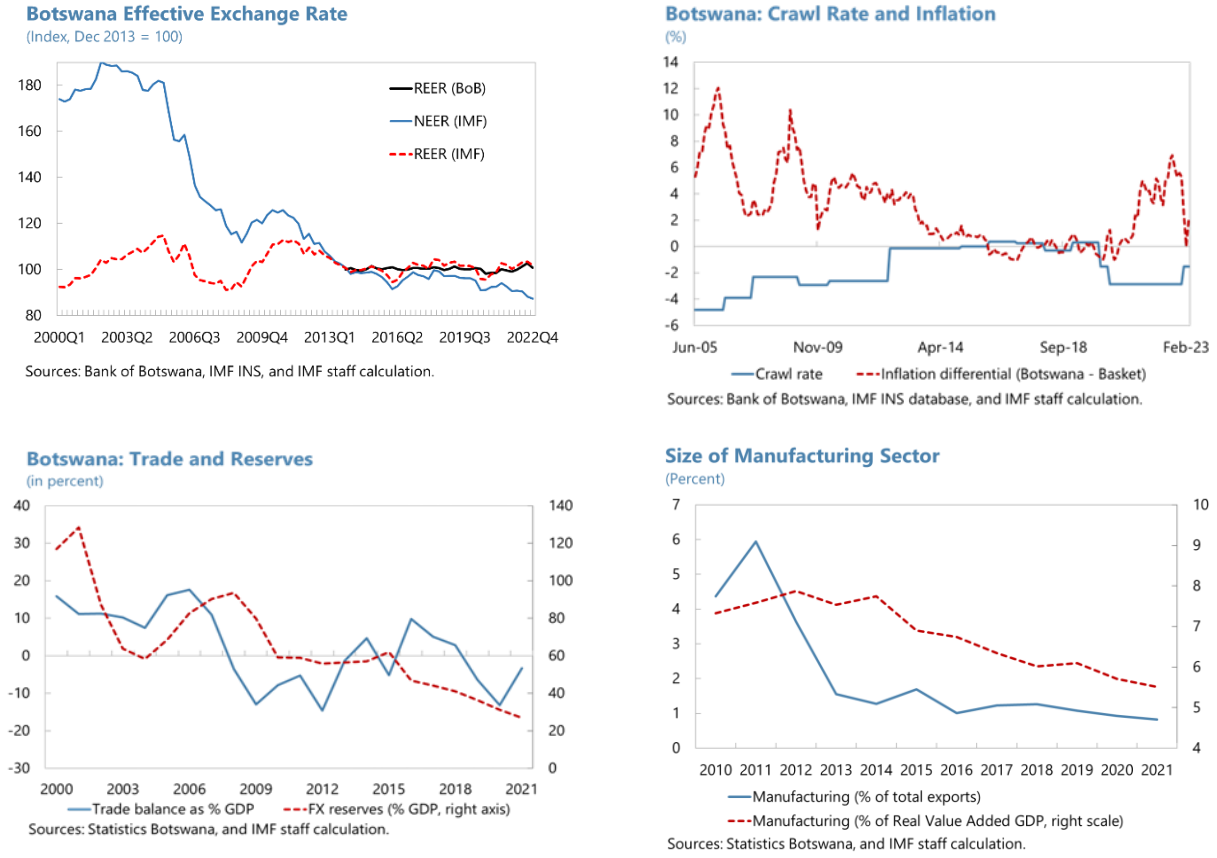
7. Despite relative REER stability, export performance has slowly deteriorated, and diversification has stalled. After a period of REER appreciation between 2005 and 2013, the REER, as measured by the IMF and BoB, held steady around its 2014 value in subsequent years (Figure 1, Panel A), implying that the current regime successfully delivered REER stability. Two issues have emerged, however. First, despite the post-COVID-19 rebound in exports, evidence still points towards a steady deterioration in the trade balance and foreign exchange reserves since the GFC (Figure 2, Panel C). Second, despite efforts to support price competitiveness and foster economic diversification, the share of non-mineral goods—in particular manufacturing goods—has shrunk since 2012, as a share of both exports and GDP (Figure 1, Panel D).[7] Taken together, these developments suggest that the central bank's objective of REER stability has not been sufficient to prevent a deterioration of competitiveness (including price competitiveness as explained below).

8. More recently, the pandemic and the Ukraine war have also challenged the framework. The resurgence of inflation, on the back of the spike in global food and energy prices, has also raised practical issues for the conduct of monetary policy. While the inflation outlook required a tightening of the monetary policy stance in 2022, the ER regime called for a depreciation of the NEER rate to offset the positive inflation differential between Botswana and its trading partners, implying a negative crawl rate of 2.87 percent during these two years (Figure 1, Panel B). Given the large weight of imported tradables in the CPI basket and the significant exchange rate pass-through

[7] It should be noted that the lackluster performance of manufacturing is not specific to Botswana and predates 2012. Between 1991–95 and 2008–12, the share of Sub-Saharan Africa's manufacturing exports declined as a share of global exports (IMF, 2015b).

(ERPT), such a nominal depreciation is likely to have generated additional inflation pressures, thereby leading to a potential tension with between competitiveness and price stability objectives.[8]

Figure 1. Exchange Rate and External Sector



Note: In Panel A, both the NEER and REER are calculated using the IMF methodology, while BoB's REER is based on basket weights. Due to lack of historical data, BoB's REER is only available after 2014. In Panel B, country-specific inflation rates are weighted according to weights in the basket. In Panel D, manufacturing exports refers to the sum of vehicles/car parts and textile exports.

9. These challenges, combined with the persistent decline in foreign exchange reserves over the past two decades, suggest that a review of the current ER regime could be beneficial. Is the current policy rule still "optimal" for Botswana or should it be changed? If so, why, and how? While the weak performance of the external sector suggests implementation problems that could be addressed by "tweaking" the system at the margin, the fact that the ER regime may conflict with monetary policy points to more structural issues, which may require more substantial changes. This paper addresses these questions in two steps. To start, section B provides a conceptual framework that clarifies (i) which objectives the REER targeting tries to achieve in the first place and whether these are desirable for an economy like Botswana, and (ii) the trade-offs associated with the current

[8] Although the extent of the current pass-through is not precisely known, prior IMF work estimates a pass-through of roughly 0.5 after one year from changes in the NEER to the headline CPI in Botswana (IMF, 2021). Beyond the mechanical impact of the depreciation on inflation through the cost of imports, a nominal depreciation also stimulates external demand for local products (all else equal), which also fuels price pressures.

regime. It also discusses in more detail the performance of the existing framework over the recent past. Building on international experiences and best practices (IMF, 2015a, IMF, 2022a, IMF 2022b), potential reform options, along with their respective merits, are then explored in Section C. Section D offers concluding remarks.

B. Assessing the REER Targeting Regime: Theory and Practice

REER Targeting: Pros and Cons

Benefits of a Competitive and Stable REER

10. Empirical evidence suggest that a competitive real exchange rate can support growth. In general, the literature finds that large overvaluations have an adverse effect on growth, both in the short and in the long run (Easterly, 2005). Conversely, achieving a competitive REER—i.e., maintaining an undervalued currency relative to its equilibrium value—tends to promote economic development through both real and financial channels (Rodrik, 2008; Frenkel and Rapetti, 2014; Guzman et al., 2018).[9] Among the former, a large literature, which inspired Botswana's current framework, has focused on its impact on export performance and, by extension, economic diversification. By stimulating foreign and domestic demand for locally produced goods, a competitive REER not only boosts growth in the short run, but also in the long term by inducing a reallocation of resources towards the tradable sector.[10]

11. Growth benefits may be particularly large for commodity exporters. Resource-rich countries like Botswana typically suffer from chronic non-competitive exchange rates because of large inflows of foreign currency, which can stifle the growth of non-commodity tradables and inhibit economic diversification (Spatafora and Warner, 1995; Ismail, 2010). Beyond undermining structural growth prospects through the channels discussed above, low diversification aggravates the effect of terms of trade shocks on output and leads to higher macro-economic volatility (Guzman et al., 2018). Containing this "Dutch disease" has pushed many countries to adopt policies aiming at limiting appreciations using foreign exchange interventions, with the explicit view that an

[9] On the financial side, a competitive REER facilitates current account surpluses and FX accumulation, which serves as an insurance against financial instability and sudden stops (Aizenman and Lee (2007)). Those financial stability benefits are less relevant for Botswana, however, given limited capital market development. On the other hand, the literature also discusses the theoretical possibility that exchange rate depreciations may be contractionary due to a contractionary real income effect (e.g., Auclert et al., 2021) or adverse balance sheet effects (e.g., Aghion et al., 2001).

[10] The literature argues that the tradable sector is "special" and that its growth comes with several benefits (IMF, 2015b). This includes learning externalities and technological spillovers (Rodrik 2008), complementarities between activities that can spur integration into global value chains (Eichengreen, 2007) and economies of scale. However, institutional weaknesses and market failures disproportionately affect the tradable sector in low- and middle-income countries, generally resulting in an under allocation of resources to the tradable sector and low growth in the long run. Maintaining a competitive real exchange rate therefore helps correct some of the misallocation of resources.

undervalued real exchange rate serves as a protection for domestic industries (Levy-Yeyati et al., 2013). Whether commodity exporters succeeded in doing so, is still disputed.[11]

12. Beyond a competitive REER, a stable REER can also support growth and investment. Real exchange rate stability is generally associated with increased investment and growth in developing countries (Eichengreen, 2007).[12] While several channels have been proposed to rationalize this finding, it is believed that a stable REER can help catalyze investment, both foreign and domestic, by reducing uncertainty. However, empirical evidence suggests that the benefits of a stable REER materialize only when the real exchange rate is "competitive" (Aghion, 2009). In other words, while a stable and competitive REER can be beneficial, REER stability alone might not.

13. An exchange rate policy is a standard policy tool to support growth and competitiveness. In principle, a stable and competitive REER can be achieved through various policies. Real devaluations, in particular, could be obtained through fiscal policy, income policy, saving policy, capital account management or a mix of those (Rodrik, 2008). In practice, nominal depreciations engineered through interventions on the foreign exchange market offer several advantages. FX interventions are easy to design, fast to implement, and circumvent several political economy barriers that can plague industrial, structural, or fiscal policy tools. The active management of the exchange rate is also particularly appealing to countries where nominal depreciations are less costly for the economy. In Botswana, for instance, a nominal depreciation is unlikely to cause financial instability because unhedged currency mismatches in the balance sheets of agents are relatively limited. Fiscal authorities are also likely to profit from a depreciation of the Pula.[13]

Costs of REER Targeting

14. REER targeting still poses several challenges. Several conceptual and practical issues come with the implementation of a REER targeting, in particular:

- **A stable REER might hinder structural adjustment to external shocks.** A constant REER might not always be desirable, especially in the presence of large shocks that change the equilibrium REER. In this context, a stable REER prevents the adjustment of relative prices from taking place in the economy. This can be particularly problematic when large and transitory terms of trade (ToT) shocks, which are common in large commodity exporting

[11] Although there is evidence that FX interventions do depreciate the REER, there is much less consensus on (i) the size of the impact on growth, especially on the growth of sectors typically targeted by such policies and (ii) the channel at play.

[12] Bleaney and Greenaway (2001) found that investment was negatively impacted by real exchange rate volatility in Sub-Saharan Africa. More recently, Aghion et al. (2009) linked REER stability to productivity growth in financially underdeveloped economies.

[13] Since a large part of the fiscal revenues are based on foreign currency proceeds, the value of fiscal revenues increases (in pula terms). Valuation effects also affect fiscal authorities positively.

countries, result in periodical real over/undervaluation of the REER.[14] In such cases, the extent of misalignment would depend on the persistence of underlying shocks.

- **Implementation can be challenging.** In practice, a REER targeting regime involves many parameters and inputs (e.g., trading partners/currencies in the basket, weights, price indices). However, theory offers generally little guidance on the value of parameters and choice of indicators, and even when a consensus exists, some concepts might be hard to measure empirically (Ahn, Mano, and Zhou, 2020). These difficulties open the door to mistakes in the implementation of the regime, and potentially large gaps between the observed REER and its "right" level.

- **Tensions between monetary policy and exchange rate policy may materialize.** The growth rate of the nominal exchange rate (or crawl rate) that is consistent with the stabilization of the REER is unlikely to be always consistent with the inflation target, generating potentially a conflict between the two objectives and making it harder for the central bank to achieve its inflation target in the short run. In principle, this tension may undermine the credibility of the monetary framework and risks de-anchoring inflation expectations in case of large shocks, especially in countries where no clear hierarchy between objectives exist.[15] Text Table 1 illustrates the conditions under which this conflict may arise in practice in the case of Botswana (red squares).[16] In such instances, nominal depreciations (appreciations) raise (reduce) inflation. How often this kind of conflict arises will depend on the parametrization of the regime and the external environment.

Text Table 1. Botswana: Consistency between Monetary Policy and Exchange Rate Policy

ER Policy / MP Policy	Nominal Appreciation	Nominal Depreciation
MP Tightening Stance		BoB Inflation forecast above both BoB target & trading partners' inflation forecast
MP Loosening Stance	BoB Inflation forecast below both BoB target & trading partners' inflation forecast	

[14] Despite REER stability since 2012, REER assessments based on the EBA methodology (IMF, 2019) have fluctuated significantly from undervaluation in the early 2010 to overvaluation more recently, as a result of transitory shocks to the demand for diamonds.

[15] The theoretical literature generally argues that a real peg is inconsistent with maintaining price stability over the long run (Uribe, 2003). Empirical evidence based on country experience is mixed, however (Fanizza et al., 2002).

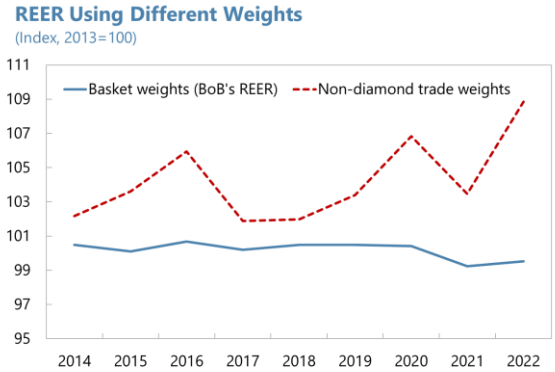
[16] Botswana is more exposed to the upper right corner (i.e., a nominal depreciation conflicting with the need to tighten the stance) than the opposite.

- **Sterilization can be costly**. The exchange rate policy enforcing REER stability may entail costs for the central bank. For instance, in the case of nominal depreciations, efforts to sterilize the effect of FX operations on money supply can be costly for the central bank because foreign reserves (e.g., US Treasuries) tend to earn lower returns than domestic assets issued by the BoB to absorb excess liquidity (e.g., BOBCs).[17]

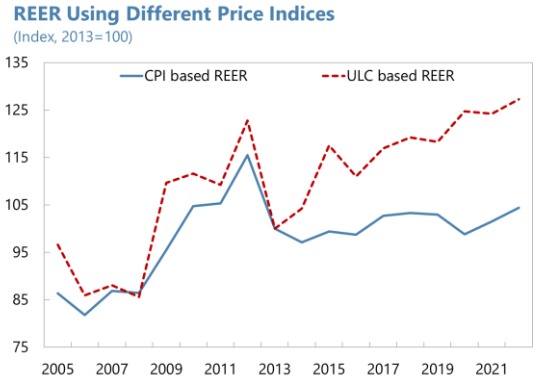
REER Targeting in Practice: How has the Current Regime Performed in Botswana?

15. Botswana's competitiveness problems could be partly caused by the currency regime, which has allowed some appreciation of the real exchange rate over time. While BoB's official REER estimate has been relatively stable over the last ten years, a trade-based REER index based on non-diamond exports points to a 10 percent appreciation of the price of tradables in Botswana since 2013 (Figure 2, Panel A). Using Unit Labor Costs (ULC), rather than CPI, to measure inflation in trading partners suggest an appreciation of larger magnitude (Figure 2, Panel B), implying a potentially large loss of competitiveness over the same period (~20 percent). This deterioration, which is mainly explained by the large appreciation of the pula against the South African Rand (ZAR) since 2012 (~40 percent), could explain the poor performance of non-mineral tradables (Figure 1) and motivate a change in weights and/or using a different price index. In line with the previous discussion, these charts also illustrate that implementation challenges can result in large deviations from the "ideal" REER.

Figure 2. Alternative REER Indices



Sources: Botswana Financial Statistics, OECD, IMF INS database, and IMF staff calculations



Sources: OECD, IMF INS database, and IMF staff calculations.

Note: Panel A compares the evolution of BoB's REER computed using official basket weights to a REER computed using non-diamond trade weights. Both indices use CPI. Non-diamond trade weights are reported in Figure 3. Panel B compares the evolution of a ULC-based REER with a CPI based REER, using overall trade weights as a benchmark. Overall trade weights are also reported in Figure 3.

16. Conflicts between monetary policy and exchange rate policy seem to have been limited, until recently. Inflationary spirals have not materialized since the introduction of the crawl mechanism in 2005. Inflation has been relatively contained with no sign of expectation de-

[17] If FX interventions are not sterilized, the cost will be borne in terms of additional tightening, since the extra liquidity injected will loosen monetary conditions, at a moment where the monetary policy stance is trying to tighten them.

anchoring, even after changes in the crawl rate induced NEER depreciations (see figure). This lack of tension between monetary and exchange rate frameworks is due to both conjunctural and structural factors. Since 2008, the monetary policy stance has generally been accommodative, while the REER targeting regime was mainly calling for nominal depreciations, implying no de facto conflict between the two objectives during most of the period. The regime faces its first real test at the current juncture, with the combination of monetary policy tightening and nominal depreciation. Potential second round effects of depreciations on inflation have also been limited by structural forces, such as relatively tight financing conditions and prudent management on the fiscal side over the whole period.

17. Sterilization costs have likely been contained. While the interest rate differential between Botswana and the SDR basket rates has been mainly positive since 2005, two factors have presumably dampened sterilization costs. First, the absence of conflict with the monetary policy stance should have limited the need to sterilize in the first place, suggesting potentially very low *de facto* sterilization over most of the period. Second, although the domestic return on BOBCs (used by the central bank to mop up the liquidity created by the FX interventions) have been generally higher than foreign interest rates offered in major economies (e.g., US Treasuries), this gap is likely small after accounting for exchange rate movements, since the pula significantly depreciated against the SDR basket in the past two decades.

18. Nonetheless, the costs of the REER targeting framework could increase in the future. The previous assessment suggests limited trade benefits but also limited costs associated with the implementation of the REER targeting regime until now. However, this trade-off could deteriorate in the future. Global demand for manufacturing goods is likely to deteriorate because of tighter monetary policy and the recent deterioration in financial conditions (IMF, 2023), suggesting structurally limited growth for the non-mineral trade sector—and therefore diversification prospects—going forward. At the same time, the end of the global low inflation environment could put the regime under pressure. Large and persistent inflationary shocks could become more common in the future, as a result of geopolitical tensions and climate change, increasing the occurrence of conflicts with monetary policy and the costs associated with the regime's implementation. In such an environment, an alternative regime—or a modified version of the existing regime—might serve Botswana better. The next section discusses potential reform options.

C. Reform Options: Tweaking or Changing the System?

19. Drawing on international best practices and experiences, this section reviews potential avenues for reform.[18] After discussing corner solutions in subsection C.1—i.e., fixed and fully flexible exchange rate arrangements—the rest of the section focuses on intermediate regimes. Subsection C.2 discusses potential adjustments to the current REER targeting framework, whereas

[18] For a recent review of international best practices regarding the design of monetary policy and exchange rate regimes, see IMF (2015a), IMF (2022a), and IMF (2022b).

section C.3 considers a more beneficial shift to a NEER targeting regime, where the crawl rate would be calibrated to meet the inflation target.

Fixed, Floating or Intermediate Exchange Rate Regime?

20. An intermediate exchange rate regime still seems warranted at the current juncture. Although a wide range of ER regimes exist, Botswana's characteristics seem well suited to an intermediate regime (IMF, 2022a). "Polar" regimes at both ends of the spectrum appear inferior in the current circumstances:

- *Hard peg*. Despite the country's close commercial and financial ties with South Africa (see Figure 3), the benefits of a hard (nominal) peg to the Rand, as part of a currency union, seem very limited.[19] The credibility of BoB is well established, and the monetary policy framework has been successful in providing a nominal anchor. More importantly, the importance of the diamond industry in Botswana still implies that a large part of trade is invoiced in USD and that business cycles in Botswana and South Africa are still poorly correlated, which reduces the benefits from joining the Common Monetary Area.[20]

- *Pure float*. A pure float could also come with important downsides. While complementary policies (like pro-competitiveness structural reforms or fiscal adjustment) can be used to prevent excessive real appreciation, large diamond proceeds in foreign currency still expose Botswana to the risk of Dutch disease. A freely floating pula would also significantly increase FX volatility and make it harder for the central bank to achieve its inflation target given the importance of the exchange rate pass-through, especially as financial integration intensifies. The small size and lumpiness of transactions on the FX market in Botswana could, in particular, lead to large exchange rate fluctuations.[21]

21. Both fixed and fully flexible ER regime could be contemplated in the longer term, assuming necessary conditions are met. Over the long run, a structural transformation of the economy could justify moving to corner solutions. For instance, a drastic reduction in the diamond economy and deeper trade integration with the rest of the SACU region could make a hard nominal peg with the rand (i.e., joining the CMA) more attractive. On the other hand, managing the exchange rate would become more difficult and costlier if financial integration intensifies. A persistent drop in foreign exchange reserves could also jeopardize the ability of the central bank to manage the exchange rate. This type of environment could justify moving gradually to a floating exchange rate. However, such a transition would need to be carefully planned and sequenced (IMF, 2022b).

[19] Botswana is the only South African Custom Union (SACU) member that does not belong to the Common Monetary Area (CMA), which covers South Africa, Namibia, Lesotho and Eswatini.

[20] Correlation of GDP growth (yoy) between Botswana and South Africa is around 20 percent in normal times (i.e., excluding the GFC and the COVID years). This correlation drops to 14 percent when using quarterly growth rates.

[21] While revenues from diamond sales - and hence the supply of foreign exchange – are received in few large transactions, demand for foreign exchange (from importers) is relatively stable throughout the year. In this environment, a market determined exchange rate could be very volatile.

Experience shows that a successful transition to exchange rate flexibility hinges on several critical prerequisites, including (but not limited to) strong fundamentals, well-functioning domestic monetary operations and deep and liquid capital and FX markets. Flexible exchange rate regimes also expose economies to new risks (e.g., FX mismatches), which should be managed through other policies and instruments, such as macroprudential policies and financial regulation. Box 2 summarizes the general lessons that emerge with regards to the transition to more FX flexibility and highlights recent case studies that could be relevant for Botswana in the future.

22. Among all possible intermediate regimes, a crawl arrangement still seems the most appropriate for Botswana. With a few exceptions (see below), crawls or crawl-like arrangements are typically used by smaller countries without highly developed financial systems (IMF, 2022a). They combine the operational simplicity of an exchange rate anchor, while still providing greater room to maneuver for domestic monetary and fiscal policies, especially when capital integration is imperfect. Several large commodity exporters have adopted this regime, with recent IMF research suggesting benefits in terms of resilience to shocks (Al Sadiq et al., 2022).

23. While some degree of FX management is warranted, the ER regime should be consistent with the price stability mandate of the central bank. Experience shows that the pursuit of multiple—and at times inconsistent—objectives complicates policy design and is often the source of policy slippages (IMF, 2015a). Those challenges are particularly acute in a high inflation environment and in the presence of large external shocks. In this context, the rest of the paper discusses two main options. Section 2 discusses how the current REER regime could be tweaked to better support export performance while minimizing potential conflicts with monetary policy. Section 3 considers transitioning to a NEER targeting regime, where the crawl rate is adjusted to achieve the inflation target, rather than to compensate inflation differentials with trading partners.

Tweaking the Current REER Regime

24. "Tweaking" the current REER targeting regime by adjusting its parameters (weights and price indices) could better support competitiveness. Two adjustments could be contemplated:

- *Basket weights* currently differ from the structure of Botswana's trade, in particular non-diamond trade (Figure 3, Panel A). By giving too much weight to developed economies (the United States in particular), the current regime underestimates the true loss of competitiveness vis-a-vis actual competitors (such as South Africa), especially for manufactured goods. As a result, price competitiveness has deteriorated despite the REER (as measured by the central bank) being broadly stable.

- *Price indices.* Price competitiveness might be poorly captured by headline CPI indices. ULC-based REER indices have been shown to better reflect the relative price of goods that are relevant for external balance adjustments. For instance, Ahn, Mano, and Zhou (2020) find that only the REER deflated by unit labor cost exhibits contemporaneous patterns consistent

with the expenditure-switching mechanism, based on data on 35 developed and emerging market economies over 1995-2017.

- Thus, using (i) non-diamond trade weights and (ii) ULC to capture prices developments would better align the framework with its conceptual target. While implementing both changes would be optimal, changing weights would be operationally faster and easier to communicate than transitioning to ULCs.[22]

25. These adjustments could also mitigate, to some extent, the risk of conflicts between REER stability and inflation objectives, although tensions may not fully disappear. Reducing advanced countries' weights in the basket would also limit potential interference with monetary policy, since advanced economies tend to have structurally lower inflation than Botswana (Figure 3, Panel B). However, reducing advanced countries' weights would mechanically increase South Africa's weight, likely resulting in (i) more frequent two-sided adjustments to the crawl rate (rather than systematic one-sided negative crawl rates observed over the last 15 years) and (ii) potentially higher (ex-post) volatility in the REER.[23]

26. Furthermore, improving transparency and communication could help the framework deal with large inflationary shocks. Although the current regime is broadly transparent, the authorities have substantial flexibility when determining the crawl rate. In particular, there is no one-to-one mapping historically between predicted inflation differentials and crawl rates. This flexibility, which allows the authorities to balance long-term goals (competitiveness) with short-term stabilization objectives, could be exploited further. For instance, the authorities could deal with temporary inflation pressures by explicitly adopting a smaller crawl rate than what would be prescribed by the mechanical stabilization of the REER. Communicating and explaining why the crawl rate deviated, albeit temporarily, from the general REER stabilization rule could policy tradeoffs, and help anchor expectations when inflation pressures are high.

27. Nonetheless, adjusting parameters may not be sufficient to fully address the price competitiveness losses experienced over the last 10 years. While changing weights and/or price indices will help maintain Botswana's price competitiveness going forward, these adjustments will not compensate past losses. Offsetting them losses would require a large nominal depreciation, which would have a significant impact on inflation.[24] In that case, a gradual approach could be

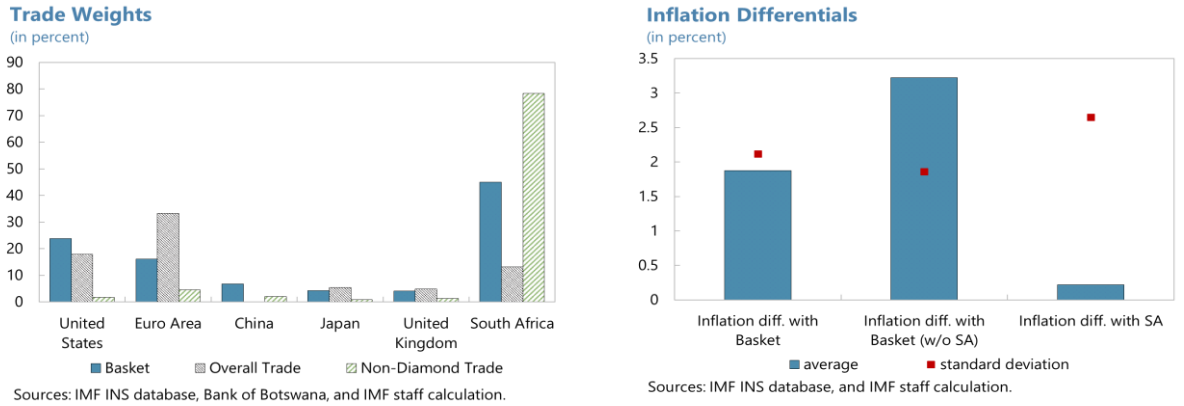
[22] Projecting ULCs in trading partners might be challenging, and market participants might be generally more familiar with CPI indices.

[23] Figure 3 (Panel B) shows that the average inflation gap was still large between Botswana and SDR countries between 2010 and 2022, but marginal with South Africa (blue bars). At the same time, it was more volatile (red dots). Assuming this trend persists, giving more weight to South Africa would therefore require less downward adjustment to the crawl but could also result in slightly more REER volatility.

[24] A 10–15 percent real depreciation would probably be required (Figure 2). This, in turn, would require a 20–30 percent nominal depreciation and generate a 10–15 percent inflation increase over one year (assuming a pass-through of 0.5).

warranted to prevent an abrupt adjustment in prices, especially in a context where inflationary pressures are already elevated.

Figure 3. Trade Structure and Inflation Differentials



Note: In panel A, trade is measured as the sum of M and X from (or to) each country (as % of total M and X). Panel B reports the average inflation gap between Botswana and its main trading partners since 2010 (bars), as well as its standard deviation (red dots). Left bar reports results for the whole basket (using basket weights). Middle bar excludes South Africa from the basket, keeping relative weights constant for advanced countries. Right bar only includes South Africa. Results are computed using headline CPI for all countries and are similar when using a longer time span.

28. Thus, complementary measures outside monetary policy would be critical to support competitiveness. While tweaking the parameters of the framework, or changing its design at the margin, could bring some benefits, several reforms lying beyond the scope of the ER regime would likely be needed to bolster export performance and diversification efforts over the medium term. For instance, containing other sources of price pressures in the non-mineral sector—such as wage pressures—would contribute to maintaining price competitiveness and reduce the need for adjustments through the exchange rate, thereby limiting the occurrence of conflict with monetary policy. More generally, demand pressures—potentially stemming from loose fiscal policy—should be kept under control. In addition, preliminary evidence suggests that the non-mining trade balance in Botswana reacts little when the REER depreciates (i.e., weak expenditure switching effects). Conditions should be met so that supply can respond when price competitiveness improves, including firms' access to credit and skilled labor. Finally, other factors that affect firms' competitiveness more broadly—such as infrastructure quality, governance, or competition policy—will play a key role. The relatively low rank of Botswana in the latest Global Competitiveness Index (91st among 141 countries) suggests a large scope for improving the business environment as well as physical and digital infrastructure, where Botswana lags peers.

Shifting to Nominal Effective Exchange Rate (NEER) Targeting

29. Another option, probably more beneficial in the longer term, would be to shift to a "NEER targeting" regime, defined as a nominal crawling peg where the crawl rate is calibrated to meet the inflation target. An alternative to the existing regime would be to refocus the whole framework on price stability and rely on two operational targets to achieve it, namely (i) the short-

term interest rate and (ii) a NEER crawling peg. In that regime, both the crawl rate and basket weights would be calibrated to achieve the inflation objective—rather than predicted gaps between domestic and foreign inflation forecasts—considering the exchange rate pass-through to inflation. In line with current practices, the desired NEER would be achieved through interventions on the foreign exchange market.[25] Although similar in practice to the existing arrangement, a NEER targeting regime would formally establish the primacy of the (internal) price stability objective.

30. While the exchange rate policy would not interfere with monetary policy anymore, competitiveness might suffer, at least in the short run. Calibrating the crawl rate and the policy rate to achieve the inflation objective would ensure that both operational targets (the NEER and the interest rate, see Box 1) are used to achieve the same objective, effectively ending potential conflicts with monetary policy. At the same time, the REER could appreciate in the short run since current inflationary pressures would likely call for an appreciation of the NEER—rather than a depreciation under the current regime. However, a large real appreciation is unlikely in the short run, given the elevated size of the exchange rate pass-through (implying that the appreciation of the NEER could have significant disinflationary effects, mitigating the effect on the REER). In the long run, achieving low and stable inflation would support price competitiveness. The proximity between Botswana's inflation target and the targets of its main trading partners and competitors (e.g., South Africa) would also minimize the risk of a structural deterioration in relative price competitiveness.

31. This new regime would be closer to international best practices and simple to operate and communicate. While formal or informal crawls are still widespread and used by low—, middle- and high-income countries alike (see below), the REER targeting regime per se has become a rarity.[26] Crawl or crawl-like arrangements have been increasingly used to pursue price stability—rather than competitiveness or financial stability objectives—, with 13 countries relying exclusively on a crawl to anchor inflation as of 2021 (IMF, 2015a, IMF AREAAR, 2021). Among those, the use of a composite target—defined as the use of two or more currencies for the nominal anchor—is also common.[27] Overall, the NEER targeting regime would realign Botswana's exchange rate regime with current international standards by maintaining the benefits of a crawling peg arrangement—strong nominal anchor, operational simplicity—without the risk of interference with monetary policy.

32. The new regime could be a step towards more exchange rate flexibility in the future. A significant number of middle-income countries and emerging markets are currently operating under such mixed frameworks, with a crawl or crawl like arrangement being used in conjunction with an inflation targeting (or "light" inflation targeting) regime. As of 2021, eight countries were operating

[25] The current operational set-up, which includes a standing facility, could easily be adjusted to fit the new regime.

[26] Real exchange rate targeting regimes were popular in the 1970s and 1980s, especially in Latin America, but had mainly been abandoned by the late 1990s. To our knowledge, Tunisia was the last country other than Botswana to operate under this regime in the early 2000s (see Fanizza et al., 2002) but has now transitioned to a "standard" crawling peg and an inflation targeting framework.

[27] As of 2021, Singapore, Vietnam and Morocco all rely on a composite basket as their exchange rate anchor, with Singapore using a nominal effective exchange rate (NEER) crawling peg. Fiji and Kuwait also use a composite basket but are classified as "other managed arrangement" which we do not count as "crawls".

a crawl-like arrangement under an official inflation targeting regime (Costa Rica, Dominican Republic, Ghana, Philippines, Romania and Uzbekistan, Serbia, and Guatemala) and six others did it in the context of a transition towards inflation targeting (Egypt, Mongolia, Mozambique, Morocco, Tajikistan, and Tunisia). While evaluating the merits of these frameworks goes beyond the scope of this paper, IMF experience shows that such a combination typically serves as an intermediate step towards more exchange rate flexibility, with the crawl giving time to authorities to assemble the key elements behind a fully-fledged inflation targeting framework and to establish the necessary infrastructure to float the exchange rate. Once in place, the role of the nominal exchange rate anchor typically diminishes, and exchange rate flexibility ensues.[28]

33. Transitioning towards the NEER targeting regime may be operationally easy but would require some institutional changes in Botswana. While the experience of countries that transition across regimes varies greatly in terms of speed and challenges (see Box 2), the operational proximity between the two regimes would likely facilitate the transition from the current regime to a NEER targeting regime. BoB already implements a crawl, implying adequate analytical and operational capacity. Economic agents—firms and financial intermediaries in particular—are also familiar with its procedures. At the same time, substantial changes to the institutional setting might be required. While the BoB implements the exchange rate policy, decisions relating to ER regime are currently made by the President on the recommendation of the Minister of Finance after consultation with the Bank. The new regime would imply that the exchange rate becomes an official monetary policy tool under the direct control of BoB, possibly requiring changes to Bank of Botswana Act.

34. Complementary measures will also be critical to promote competitiveness. Exchange rate policy is only geared towards price stability under the NEER targeting regime. Even though low and stable inflation should help maintain price competitiveness, the new regime would necessarily shift the burden of achieving higher competitiveness to structural and fiscal policies. Fiscal discipline and progress on structural reforms front would become critical to mitigate Dutch disease effects, especially if the transition to the new regime happens while diamond proceeds are still large.

D. Conclusion

35. Although the REER targeting regime has generated clear benefits in the past, it is now challenged by conjunctural and structural factors, and some changes may need to be considered. A crawling peg remains well suited to Botswana's economic and financial characteristics, but the performance of the current REER targeting regime seems to have deteriorated in recent years. Inflationary pressures and low diversification, in particular, could justify introducing some adjustments to the existing regime. The analysis suggests that small changes to the framework (for instance, on currency weights and price indices) could improve price competitiveness. Nonetheless, more significant modifications may be warranted to address fundamental issues, like the risk of tensions from pursuing the dual objectives of competitiveness

[28] Several emerging markets which now operate a successful IT framework with floating regimes have gone through this transition. The transition usually involves extending the bands of the crawl progressively. See the example of Poland and Israel in IMF (2015) and Box 2 for details.

and low inflation. A NEER targeting regime-where the crawl rate would be adjusted to meet the inflation target-could provide a more robust monetary policy framework for Botswana in the new environment and re-align the country's exchange rate regime with best international practices.

36. A transition to greater exchange rate flexibility might be necessary over the longer term. Some structural changes in the economy could motivate a transition towards greater exchange rate flexibility in the future. As Botswana's economy deepens its financial and economic integration, monetary policy becomes more market based, and external financing needs increase, maintaining any type of peg will become more and more difficult. Persistent downward pressure on foreign exchange reserves resulting from lower diamond proceeds could also undermine the ability of the central bank to manage the exchange rate over the long run. However, such a transition would need to be gradual and carefully planned and sequenced. In that context, the analysis also suggests that a hybrid regime, in which a NEER targeting regime cohabits with a 'light' inflation targeting framework, is relatively common among middle-income countries and emerging markets (including commodity exporters) and could serve as a transitional arrangement towards a floating regime.

Box 1. Key Elements of an Effective Monetary Policy Framework[1]

The monetary policy framework is composed of a few building blocks. This includes the institutional structure of the central bank and the specification of its goals, instruments, strategy, operating targets and procedures, and communications. The institutional setup encompasses the central bank's statutory mandate, governance structure, and decision-making processes, while the legal mandate specifies the goals of monetary policy and a set of supporting policy instruments. The monetary policy strategy guides the setting of the central bank's operating targets, and its operating procedures specify how its policy instruments should be adjusted to implement those targets. Central bank communications aid the public in understanding the policy framework, the rationale for specific policy decisions and help shape market expectations. Table 1 below summarizes the pillars of the policy framework currently in place in Botswana.

A consensus has emerged about the key elements of a modern, effective monetary policy framework. While frameworks can differ substantially in terms of their exact characteristics—especially with respect to instruments and targets , the economic literature and best practices have identified several building blocks that characterize an effective policy framework in countries where there is scope for independent monetary policy, namely: (i) the central bank should have a clear mandate in terms of its goals, and operational independence to pursue these goals, within the context of public accountability; (ii) price stability should be the primary or overriding objective of monetary policy over the medium term; (iii) consistent with the primacy of price stability, the central bank should have a medium-term inflation objective that serves as the cornerstone for its monetary policy actions and communications; (ii) in determining the magnitude and pace of monetary policy adjustments warranted by the inflation objective, the central bank should carefully take into account the implications for macroeconomic activity and financial stability; (v) the central bank should have a clear and effective operational framework and it should align market conditions with its announced policy stance; (vi) the central bank should have a transparent forward-looking monetary policy strategy that reflects timely and comprehensive assessments of the monetary transmission mechanism; and (vii) the central bank's communications should be transparent and timely, because clear communication enhances the effectiveness of monetary policy.

[1] This box draws on the material exposed in IMF (2015a).

Box 1. Key Elements of an Effective Monetary Policy Framework (concluded)

Many of those principles are already in place in Botswana. The primary objective of the BoB is to achieve price stability, defined as a level of inflation within the medium-term objective range of 3 to 6 percent. The monetary policy framework is already forward looking, with a medium-term outlook that guides BoB's response to projected movements in inflation, while considering prospects for economic growth and financial stability. BoB's policy operational targets and instruments are clearly identified, and monetary policy decisions are communicated and motivated through various publications.[2] At the same time, some hurdles still exist when it comes to the implementation and transmission of monetary policy to the domestic economy, as discussed in the 2023 Article IV report.

Table 1. Botswana: Key Elements of the Monetary Policy and Exchange Rate Frameworks in Botswana

Objective	Intermediate Target	Operational Target	Instrument	Communication
Price Stability	Inflation forecast	Interest Rate	OMO, Standing Facilities, PRR	Monetary Policy Report/Statements
Competitiveness	REER Forecast	NEER	Foreign Exchange Interventions	Monetary Policy Statement

[2] The policy stance over the course of the year is publicly announced in the annual Monetary Policy Statement (MPS), which is released in February each year and reviewed in the Mid-Term Review of the MPS conducted in mid-year. Discussion and data relating to recent monetary policy developments are also included in other Bank publications, including Annual Reports.

Box 2. Transitioning to Greater Exchange Rate Flexibility: Lessons for Botswana[1]

While the experience of countries that have transitioned to greater flexibility has varied greatly, gradual transitions are preferable. Overall, IMF experience suggests that a planned, carefully sequenced transition to a more flexible exchange rate is preferable. Putting in place the preconditions for the successful implementation of a new monetary and exchange rate policy framework takes time and is more easily done in "good times" when growth is robust, and macroeconomic imbalances are limited. The literature identifies the following preconditions: (i) the framework itself should be clearly formulated and supported by adequate legislation; (ii) the necessary central bank operational capacity and communication strategy should be in place for effective implementation; (iii) foreign exchange and other financial markets should have sufficient depth; and (iv) the private sector should have capacity to manage exchange rate risk (e.g., through hedging). In contrast, transitions under pressure tend to be more disruptive, with greater risk of a recession and inflation surge, and less sustainable.

A more flexible exchange rate anchor is often a step towards a full-fledged inflation targeting (IT) framework, and a response to greater financial integration. A significant number of middle-income countries and emerging markets are—or have been—operating under mixed frameworks, with a crawl or crawl like arrangement being used in conjunction with an IT (or "light" IT) regime (see main text). While some countries use this arrangement as the new steady state policy framework, many used it as a transition step towards IT. Among EMs, Israel, and Poland both followed a gradual approach towards exchange rate flexibility in the past, moving from tight exchange rate targeting to a crawling peg with increasingly widening bands, and finally to a full-fledged IT over a prolonged period (twenty and ten years respectively). In both cases, the inherent conflicts between exchange rate management and IT in an environment of increasing capital flows made the move to a floating regime necessary.

The recent experience of Morocco is particularly insightful for Botswana. Morocco moved to more flexible exchange rate in 2016 after pegging the dirham to a trade-weighted basket of currencies for more than 40 years. Capital mobility was still limited by capital flow measures and prudential regulation, and some key elements of an IT framework were already in place. The institutional set-up was also close the one currently in place in Botswana.[2] The first phase of the transition was deemed successful, with the exchange rate freely fluctuating within a band whose size progressively increased.[3] The increased exchange rate volatility contributed to the development of the FX market, in which the central bank eventually stopped intervening in 2018. Morocco is now set to adopt IT with an FX intervention rule based on exchange rate volatility.

The Moroccan experience offers potential lessons for Botswana in the future. Several key factors facilitated the transition in Morocco. First, macroeconomic and market conditions were favorable. A fall in commodity prices had improved the current account, lowered inflation, and boosted FX reserves. Second, fundamentals were strong, with a steady decline in the fiscal deficit in the run up to the transition. Third, financial stability risks were contained. FX mismatches and open positions in the banking sector were limited, but hedging instruments were available in the domestic market. Fourth, the central bank's liquidity management and market operation framework had reached a high level of sophistication. Fifth, the pace was gradual. Bands were widened relatively slowly, and capital flows liberalization was not a priority. This protected the FX market from volatile capital flows without hindering the development of the interbank FX market.

[1] This box draws heavily on the material exposed in IMF (2015a) and IMF (2022b).

[2] The choice of exchange rate arrangement rested with the Ministry of Economy and Finance, while the central bank was responsible for its operational implementation.

[3] Monetary authorities increased the band to 5 percent from 0.6 percent in January 2018 and to 10 percent in March 2020 vis-à-vis a basket comprising the euro and the U.S. dollar, while keeping weights constant at 60 percent and 40 percent respectively.

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