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BOTSWANA

Selected Issues and Statistical Appendix

Prepared by T. Dorsey (head-PDR), O. Basdevant, J. Yeon Kim and A. Iimi (all AFR)

Approved by the African Department

October 6, 2006

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I. Are Diamonds Forever? Using a Lifecycle Approach to Analyze Botswana's Reliance on Diamond Revenues [1]

A. Introduction

1. **Diamond exports, Botswana's main source of foreign exchange, accounted for an average of 75 percent of total annual exports over the past 10 years.** Fiscal revenues also depend heavily on diamonds,[2] which account for 95 percent of minerals revenues. Over the same period, minerals revenues accounted for 63 percent of tax revenues. Botswana is expected to remain the world's leading producer of diamonds well beyond the next decade.

2. **This study assesses the fiscal sustainability of Botswana's diamond sector using an analysis designed for oil-exporting countries** (see Davoodi 2002, for a general presentation, and Barnett and Ossowski 2003 for an application to oil-producing countries). It applies the permanent income hypothesis (Friedman, 1957) to diamond-related fiscal revenues and the lifecycle approach (Modigliani and Brumberg, 1954) to different expenditure options.

3. **This study does not address the optimality of the fiscal policy, since it is not derived from the maximization of an intertemporal utility function.** Instead, Botswana's current fiscal rule, which imposes a strict balance between expenditure and revenue, is considered as a given constraint. As a result, government expenditure, over the medium and long term, is constrained by fiscal revenue generated by the economy. Any level of expenditure permanently above fiscal revenue would be unsustainable.

4. **Botswana's economy faces a difficult challenge with the depletion of its diamond resources, which are expected to be exhausted around 2030** (Section B). Under the current fiscal rule, and without any additional saving effort, the depletion of diamond resources would imply a sharp fall in government expenditure. A reduction in expenditure of 1 point of GDP per year would generate savings high enough to smooth the adjustment imposed by the depletion of diamond resources. The main specific messages are as follows.

- Strong fiscal adjustment may be necessary to ensure that diamond revenues benefit future generations. Revenue-raising measures would help preserve expenditure, either in level (Section D) or per capita (Section E).

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[1] Prepared by Olivier Basdevant.

[2] Botswana's diamond production is composed for half of industrial diamonds and half of jewelry diamonds. The latter makes about 80 percent of Diamond revenues.

- The results are sensitive to the uncertainty regarding diamond prices and resources. One additional year of above-ground extraction with a high extraction rate would significantly increase Botswana's capacity to smooth the adjustment (Section E).

- If the economy fails to diversify and create additional sources of growth before the full depletion of diamond resources, then the contraction of fiscal revenue would be far greater, hence putting additional constraint on expenditure (Section E).

5. The rest of this paper is organized as follows. Section B presents an overview of Botswana's diamond sector. Section C introduces a simple model of permanent income, which is applied in section D to evaluate different policy scenarios (e.g., saving to soften future adjustment), while alternative assumptions (e.g., diamond stock, prices, and GDP growth) are explored in Section E. Section F discusses some issues indirectly related to the analysis.

B. The Diamond Sector in Botswana

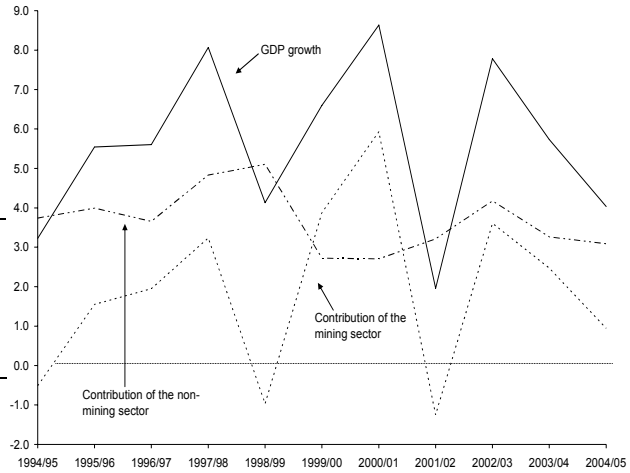
6. **Botswana is one of sub-Saharan Africa's few upper middle-income countries.** The diamond industry has been a major contributor to Botswana's growth. Over the past 10 years, the mining sector represented an average of 34.5 percent of GDP, with diamonds constituting nearly 94 percent of the sector's total exports (see Table 1). The mining sector was also a main factor contributor to fluctuations in the GDP growth rate over the past decade (see Figure 1).

Table I. 1. Share of Diamond and Mining Industries in GDP 1995–2005

	Average	Std. Dev.
Share of the mining sector	34.5	1.2
Share of diamond in the mining sector	93.9	3.2

Source: Botswana authorities and Fund staff computation.

Figure I. 1. Mining and Nonmining Sector Contribution to GDP Growth, 1994/95–2004/05



Sources: Botswana authorities and Fund staff computations.

7. **Over the medium term, Botswana is expected to enjoy sustained growth of around 4 percent a year. Meanwhile, diamond production will continue at high levels until 2021, when a sharp decline will set in until diamond resources are depleted around 2030.** The end of diamond production, which now accounts for one-third of GDP and half of government revenues, will severely affect real GDP growth (projected at 3.5 percent in the long run). However, Botswana's efforts to build diamond processing capacity, for domestic as well as foreign mines, could yield additional revenues and help offset diamond production losses.

8. **Because of the rapid depletion of diamond resources, fiscal revenues are expected to shrink by about two-thirds from 2021 to 2029.** Still, diamond extraction will remain be the main contributor to mineral revenue. Despite expected new mine production (i.e., copper, nickel, and gold), other-mineral profits will likely be relatively modest.

9. **When its new plant opens, Debswana, Botswana's joint venture with De Beers, will increase its diamond extraction by 35 percent, though income is expected to grow by a more modest 12–15 percent.** Using more modern techniques, the new plant will extract more, though smaller (and thus less profitable), diamonds from Debswana's mine tailings. The plant will also be able to extract more diamonds from the site's large stocks of waste.

10. **Nevertheless, production is expected to decrease after 2017, as diamond reserves are drawn down, and then to decrease further as mining goes underground.** Sometime between 2015 and 2020, when surface mines are expected to grow fallow, Debswana will need to shift to underground mining, resulting in lower profits (owing to higher extraction costs and decreased output). The profitability and economic feasibility of underground mining are open to question. Though there is some uncertainty about the stock of diamonds, most analysts expect reserves to be depleted by 2029.

C. The Structure of the Model

11. **This paper draws on the permanent income hypothesis (PIH) of consumption, an approach widely applied to countries with significant natural resources (oil, gas, and minerals).** The steps are as follows: (i) the total diamond resource is estimated; (ii) the net present value (NPV) of this resource is taken to be a financial asset generating a permanent income; and (iii) the income figure is then used to determine how much the government can spend without eroding its long-term fiscal position.

12. **The dynamic structure of the approach is based on the intertemporal budget constraint**, which can be written in period t as follows:

$$T_t^D + T_t^O + i_t A_{t-1} - G_t = A_t - A_{t-1}, \tag{1}$$

where T^D is diamond-related revenue; T^O is other (tax and nontax) revenue; i_t is the interest on net government financial assets, A_t; and G is government consumption.

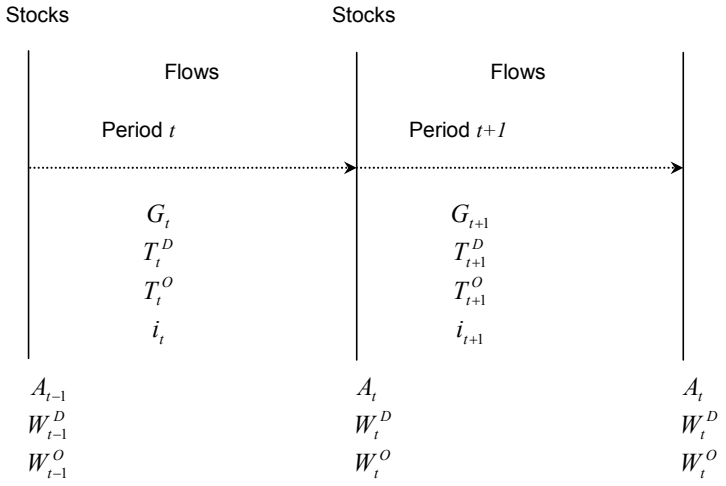
13. Let W^D be the NPV of diamond revenues. At date t, it is defined as

$$i_t W_{t-1}^D - T_t^D = W_t^D - W_{t-1}^D,$$

or:
$$W_t^D = \sum_{j=t+1}^{T} \frac{T_t^D}{\prod_{\tau=t+1}^{j}(1+i_\tau)}, \tag{2}$$

where T is the period beyond which diamond resources are totally exhausted. Equation 2 accurately defines $W,^{\mathrm{D}}$ which is inherently forward looking and based on both expected interest rates and expected revenues (see Figure 2). The results therefore depend not only on the structure of the model but also on the uncertainty surrounding the measurement of future variables.

Figure I. 2: Time Structure of the Model



14. **The total financial wealth of the government is used as an annuity, which is translated into a permanent and sustained flow of public expenditure.** Let W^O be the net financial asset generated by nondiamond revenues:

$$W_t^O = \sum_{j=t+1}^{+\infty} \frac{T_j^O}{\prod_{\tau=t+1}^{j}(1+i_\tau)}. \tag{3}$$

The budget constraint of the government imposes a balanced budget over the long run. The intertemporal budget constraint can be derived from equation 1:

$$A_t = \sum_{j=t+1}^{+\infty} \frac{\left(T_j^O + T_j^D - G_j\right)}{\prod_{\tau=t+1}^{j}(1+i_\tau)}. \tag{4}$$

That is, the net financial asset at period t should be equal to future net savings (NPV of future net revenue minus consumption). Assuming, for simplicity, that $A_t=0$, it follows that

$$\sum_{j=t+1}^{+\infty} \frac{G_j}{\prod_{\tau=t+1}^{j}(1+i_\tau)} = W_t^D + W_t^O . \tag{5}$$

That is, the NPV of future consumption is equal to the total financial wealth at the government's disposal.

If we now turn to the PIH, assuming that consumption grows at a constant rate g: $\forall \tau \geq t+1$ $G_\tau = (1+g)^{\tau-t-1} G_{t+1}$. With a constant interest i, the result is:

$$\begin{aligned} W_t^D + W_t^O &= \sum_{j=t+1}^{+\infty} \left(\tfrac{1}{1+i}\right)^{j-t} G_j \\ &= G_{t+1} \sum_{j=t+1}^{+\infty} \tfrac{(1+g)^{j-t-1}}{(1+i)^{j-t}} \\ &= \tfrac{1}{1+g} G_{t+1} \sum_{j=t+1}^{+\infty} \left(\tfrac{1+g}{1+i}\right)^{j-t} \\ &= \tfrac{1}{1+g} G_{t+1} \left(\tfrac{1+g}{i-g}\right) \\ &\Leftrightarrow G_{t+1} = (i-g)\left(W_t^D + W_t^O\right) \end{aligned} , \tag{6}$$

and

$$\forall \tau \geq t+1 \quad G_\tau = (i-g)(1+g)^{\tau-t-1}\left(W_t^O + W_t^D\right). \tag{7}$$

15. The total wealth generated by diamond revenues can also be used as quasipermanent income to generate income for a certain time horizon, T'. Let Y^D be this revenue flow:

$$\sum_{j=t+1}^{T'} \left(\tfrac{1}{1+i}\right)^{j-t} Y_j^D = W_t^D . \tag{8}$$

Assuming that this flow is used to generate quasipermanent income that grows at a rate of g, it follows that:

$$Y_{t+1}^D = (i-g)\left(1-\left(\tfrac{1+g}{1+i}\right)^{T'-t}\right)^{-1} W_t^D , \tag{8}$$

and

$$\forall T' \geq \tau \geq t+1 \quad Y_\tau^D = (1+g)^{\tau-t-1}(i-g)\left(1-\left(\tfrac{1+g}{1+i}\right)^{T'-t}\right)^{-1} W_t^D . \tag{10}$$

Equation 7 would then be rewritten as follows:

$$\begin{cases} \forall T' \geq \tau \geq t+1 \quad G_\tau = (i-g)(1+g)^{\tau-t-1} T_t^O + Y_t^D \\ \forall \tau > T' \quad C_\tau = (i-g)(1+g)^{\tau-t-1} T_t^O \end{cases} . \tag{11}$$

Thus, the quasipermanent income approach consists in concentrating the annuities generated by diamond revenues in a finite period, which induces a higher revenue for this period but necessitates an adjustment beyond it. Section D shows how this approach might be relevant to Botswana, where diamond resources may not provide permanent income high enough to both ensure fiscal sustainability and meet the authorities' development objectives.

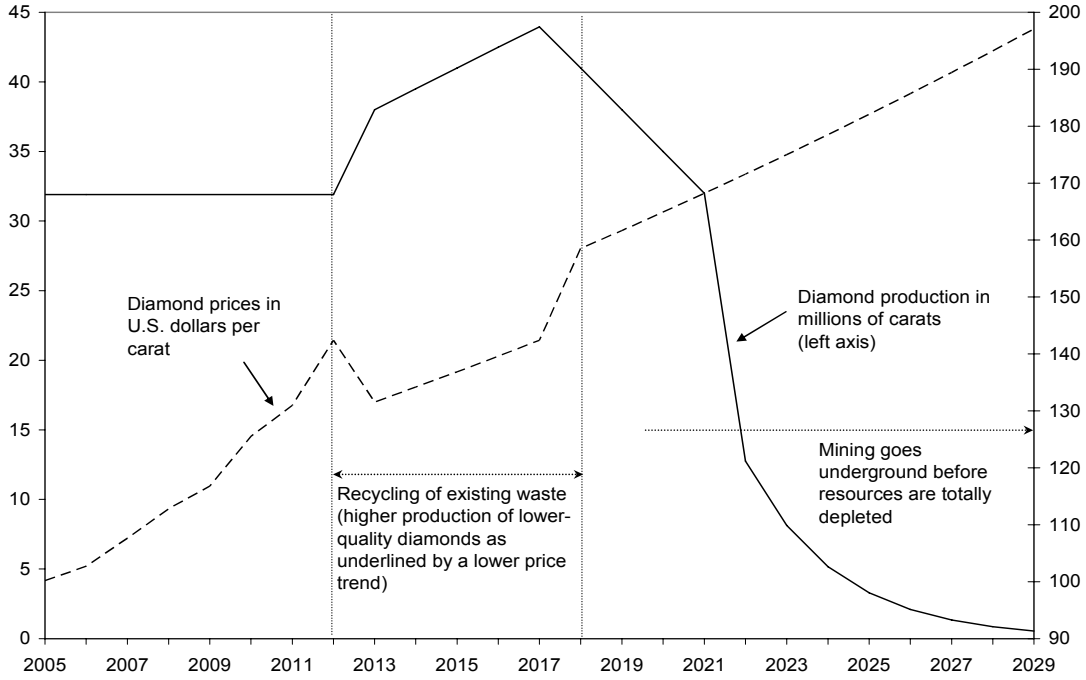
D. Application of the Model to Botswana

16. **Diamond revenue's projections results from projections of diamond production and prices** (Figure 3 and 4). The profile for diamond production and prices summarized in Figure I. 3 is a stylized representation of information gathered from Debswana and the Ministry of Minerals and Water Resources.[3] The price trend is a result of three assumptions: (i) a constant price in real terms of about US$100 a carat, (ii) a nominal 2 percent inflation rate, and (iii) a discounted average price for 2012–18 to reflect the reprocessing of waste using newer extraction technologies. Production increases gradually, from 32 million carats in 2005 to 44 million carats in 2017, mostly reflecting diamond production from reprocessed mine waste. Them from 2017 production will fall as resources accesible from above-ground resources are depleted, until 2021 where another decline will occur as underground resources are much less rich and more difficult to extract, making mining less productive.

17. **Diamond resources are not adequate to permanently finance a significant share of government expenditure.** Applying the PIH with an infinite time horizon, projected diamond revenues represent only 1 percent of GDP, compared to 19.5 percent for nondiamond revenues. Using the assumptions summarized in Table 2, and assuming, for simplicity, that interest rates are constant, the NPV of diamond revenues in 2005 would be W^D = 158 billion pula. Once converted into a permanent income growing at the same rate of GDP, this sum leads to a long-run annuity of 1 percent of GDP, compared with the 2005 values of 19.8 percent of GDP for nondiamond fiscal revenues and 19.5 percent of GDP for diamond revenues.

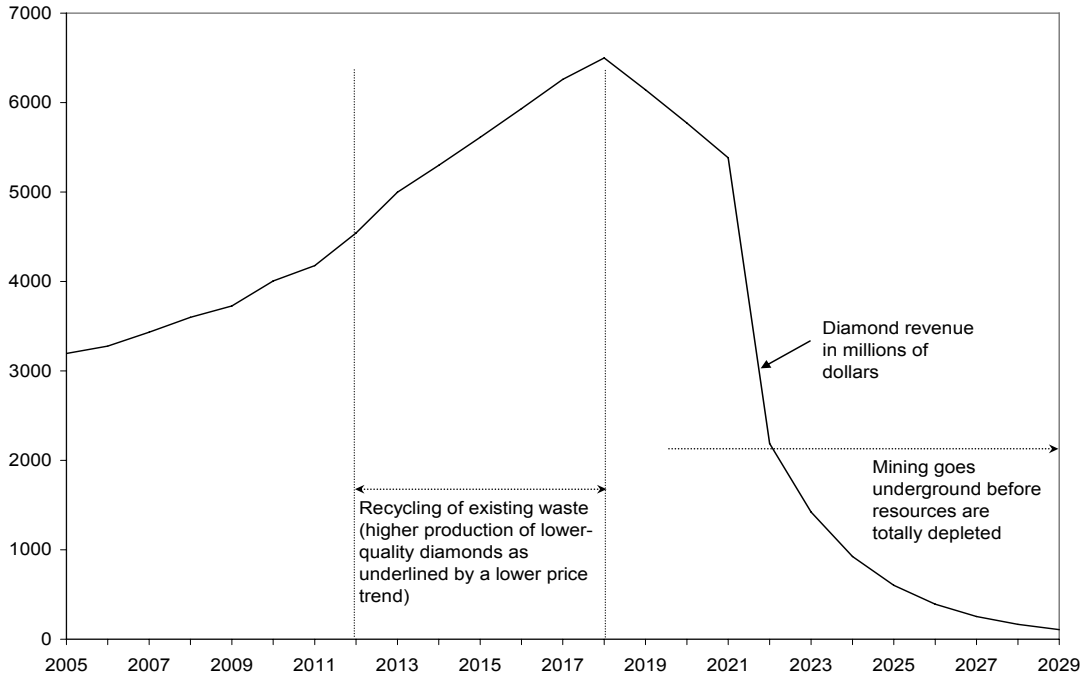
[3] To protect the confidentiality of information, the actual data were smoothed and stylized, although more precise calculations were discussed with the authorities.

Figure I. 3. Projected Diamond Production and Nominal Prices 2005–29



Source: Fund staff computations based on government information.

Figure I. 4. Diamond Revenues (million dollars) 2005–29.



Source: Fund staff computations based on government information.

18. **When applying the model, the main assumptions made for the long term are as follows.**

- In the long run, all real variables, notably the GDP grow at the same rate of 4.5 percent a year.

- Purchasing power parity holds in relative terms. World inflation is 2 percent, while domestic inflation is 4.5 percent.

- As of 2005, the population is 1.7 million and grows at a constant rate of 2 percent a year.

19. **The authorities might thus consider (i) smoothing the path of diamond revenues over the medium term, (ii) continuing to diversify the economy, and (iii) creating new sources of income to help finance Botswana's development needs.** As implied by the PIH exercise, unlike some oil-producing countries, Botswana cannot rely on its diamond resources to finance long-term expenditure. The exercise also suggests that, given the expected short-term horizon of remaining diamond resources, a strategy of revenue saving must be implemented before (or in addition to) other revenue-generating measures.

20. **Under a quasipermanent income approach, an alternative to the infinite horizon PIH, diamond resources could generate income of 2.7 percent of GDP in 2021–49,[4] while preserving much higher revenue through 2021** (see Figure 4). The revised assumptions are as follows:

- The time horizon is shortened to 2049, leaving 20 years of annuities once diamond production ends. In addition, along with a gradual partial adjustment in savings, long-term reforms would ensure that public expenditures are fully sustainable.

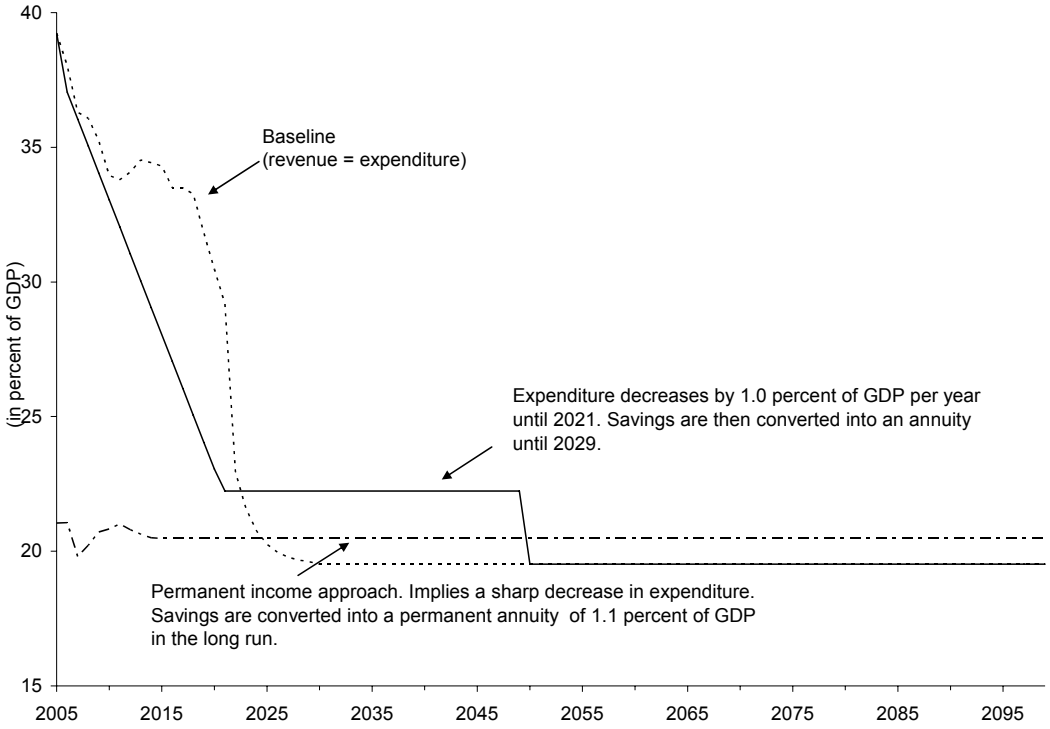
- Instead of assuming that the current NPV of diamond stocks is directly transformed into a financial annuity growing at a constant rate, the authorities are assumed to gradually increase their saving of diamond revenues. The first years of revenue mostly finance expenditures, though some savings could be used to finance an annuity until a certain date (2049 is proposed here), after which further adjustment would be needed.

- More gradual adjustment in savings would limit the impact on development and poverty-related expenditures. The pure PIH approach, by contrast, implies a sharp drop in revenues in the first few years.

[4] The time horizon in the quasipermanent income approach is fixed arbitrarily to 2049, i.e. a time-horizon rather long. The main point here is to propose an adjustment in two steps, where 2049 represents this second step, i.e. the end of the diamond-related annuity, which is far enough in the future to prepare an adjustment over a time horizon longer than the one of diamond depletion.

- The quasipermanent income approach implies a three-phase adjustment: (i) during the diamond extraction period, savings are increased gradually, though by much less than in the PIH; (ii) during a protracted period (between 2021 and 2049 here), these savings generate a higher annuity (2.7 percent of GDP) than in the PIH (1 percent of GDP), owing to the finite time horizon; and (iii) beyond 2050, additional adjustment would be needed, including structural and other measures to support growth and create more public spending resources.

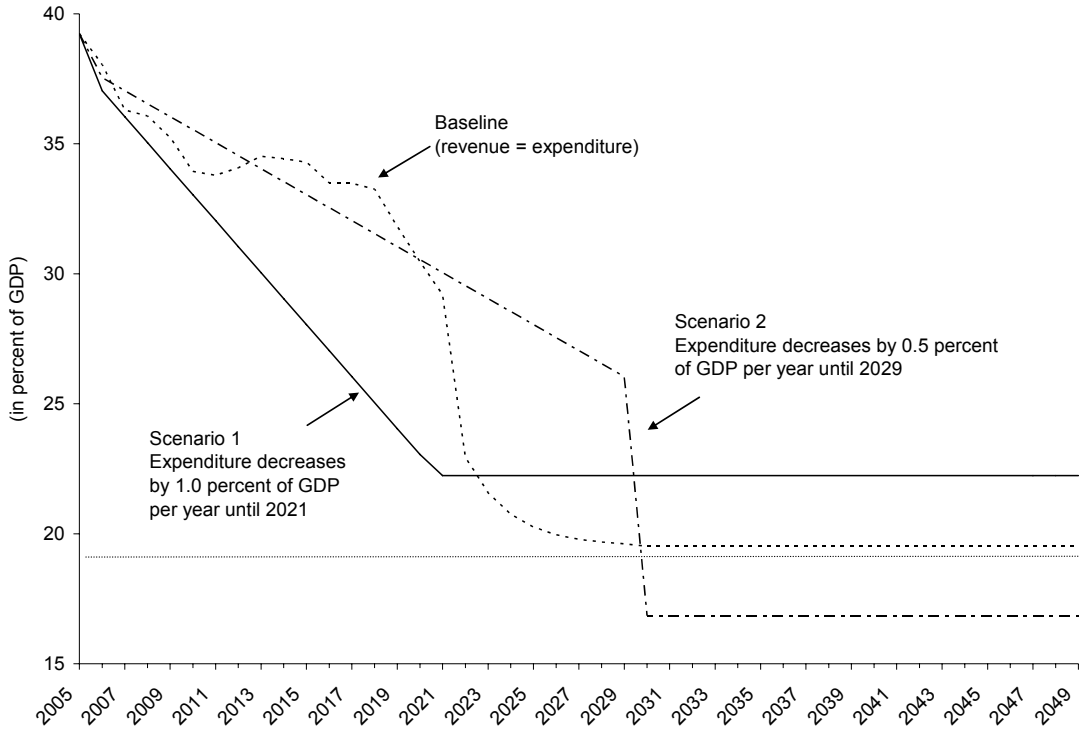
Figure I. 5. Permanent and Quasipermanent Income Approaches, 2005–2100



Source: Botswana authorities and Fund staff computations.

21. **The adjustment needed for a soft landing requires a sharp reduction in spending as a share of GDP.** Of the adjustment options open to the authorities, the ideal would: (i) avoid cutting expenditure too steeply in the short term, which could be disruptive; and (ii) cut enough to ensure a soft landing. The simple approach adopted here evaluates two policies—reducing expenditure by 1.0 percent of GDP a year and by 0.5 percent a year. As shown in Figure I. 6, an adjustment of 0.5 percent per year, a considerable amount, would allow the economy to sustain high government expenditure over a longer period, though deficits would accumulate even before diamond resources were exhausted, creating the need for greater adjustment later on. Thus, in the absence of offsetting revenues from economic diversification, only an adjustment of 1 percent a year or more would likely ease the impact of diamond depletion.

Figure I. 6. Two Alternative Quasipermanent Income Approaches, 2005–49



Source: Botswana authorities and Fund staff computations.

E. Sensitivity Analysis

22. **Because Botswana is a price maker in the diamond market, lower production is likely to lead to higher prices, hence offering a partial compensation for a lower production.** Because a sharp drop in Botswana's production would imply a major structural change in the diamond market, and because of a lack of data, it is almost impossible to quantify Botswana's market power. However, being in a situation of a quasi-monopoly it would definitely be possible to exploit this situation and to extend the production period, hence increasing the profit per carat, in order to maximize the net present value of diamond-related fiscal revenues. Bostswana's market power might also vanish as production decline, because the production of other countries could increase and impose greater competition.

23. **Because we cannot precisely quantify Botswana's market power, we present a partial analysis showing, everything being equal, where a 1 percent price increase, during the period of diamond depletion, induces a increase of 0.1 percent of the NPV of diamond revenues** (see Table 3). The impact on the long-term value of the annuity is rather modest, with an increase of 0.01 percentage point of the GDP. While the absolute impact, particularly on the annuity, is small, the precise relationship between world diamond prices and Botswana's production needs further investigation.

24. **With one more year of high-return above-ground extraction (production of about 32 million carats), the NPV of diamond revenues would increase by 3.8 percent**

and the long-term annuity by 1.1 percent of GDP (see Table 3). As noted earlier, the exact magnitude of diamond resources has not been fully assessed yet. Although both Debswana and the Ministry of Mineral and Water Resources expect production to end around 2029, above-ground extraction could last another year or more. An additional year of above-ground extraction would put production at a much higher level, say, the same as in 2021 (32 million carats), compared with 12.8 million carats in the baseline scenario. In addition, the indirect impact of the authorities' saving effort (owing to the cap on government expenditure) would boost revenue. Indeed, in 2022 the saving rate of diamond revenue would be 24.9 percent, compared with 2.5 percent in the baseline scenario.

Table I. 2. Changes in Diamond Prices and Production

	NPV of Diamond Revenues [1]	Long-Term Value of Annuity [2]
Increase in diamond prices (+1 percent a year 2022-29)	0.1	0.01
One additional year of above-ground extraction [3]	3.8	1.1

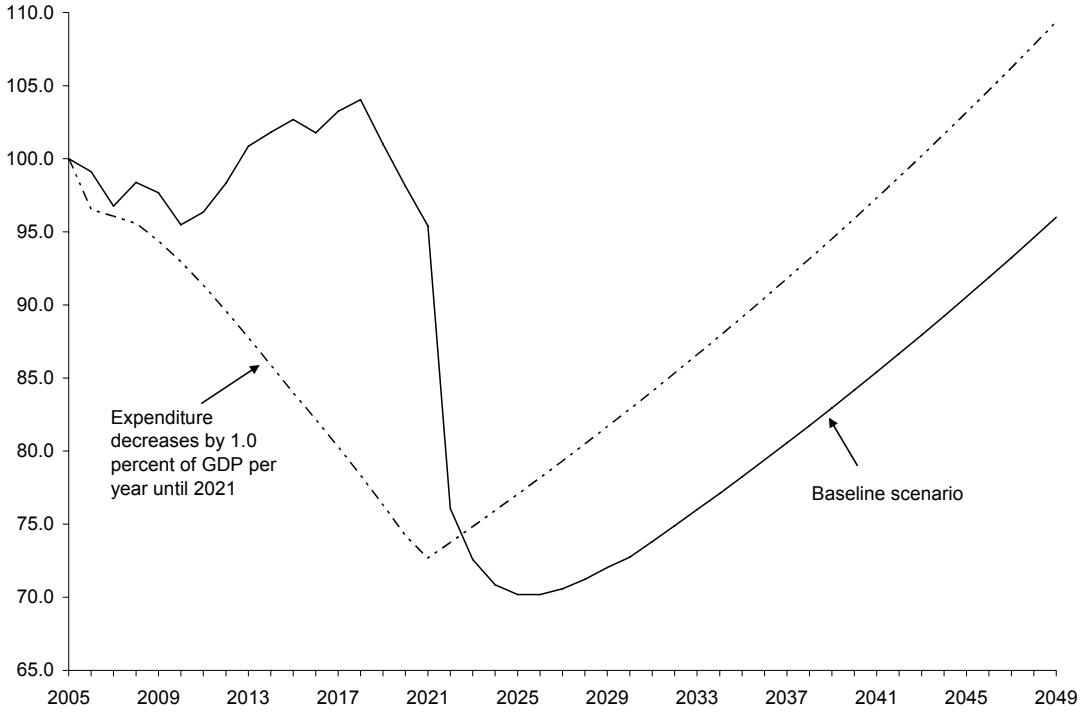
[1] Percentage change from baseline.

[2] Percentage of GDP change from baseline. The long-term value refers to the constant annuity applying once diamond resources are exhausted.

[3] Assumes that production in 2022 is the same as in 2021 and that production from 2022 to 2030 decreases at the same rate as that between 2021 and 2029 in the baseline scenario.

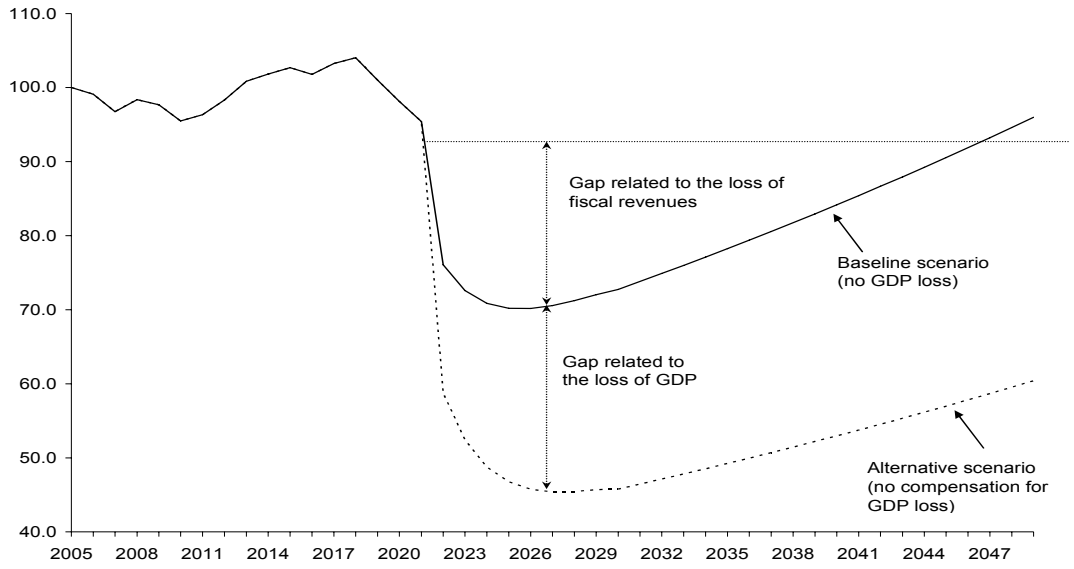
25. **Reducing government expenditure by 1 percent of GDP a year would also imply reducing real government expenditure per capita, which might have a major impact on the economy.** Balancing expenditures and revenues is a necessary condition for fiscal sustainability and Botswana's fiscal law imposes a strictly balanced budget with no debt accumulation. If revenues as a percentage of GDP, are falling, the increased savings will carry a social cost—a net reduction in expenditure per capita—unless GDP growth increases sharply. Figure I. 7 shows the patterns implied by (i) the baseline scenario, which features no adjustment before diamond production declines, and (ii) the scenario assuming a gradual decline in public expenditure of 1 percent of GDP a year. Not surprisingly, the decreased public expenditure leads to a sharper decrease in expenditure per capita. However, greater savings leads government expenditure per capita to recover more quickly during the post-diamond period. The minimum expenditure per capita is also higher in this scenario.

Figure I. 7. Real Government Expenditures per Capita Index (100=2005), 2005–49



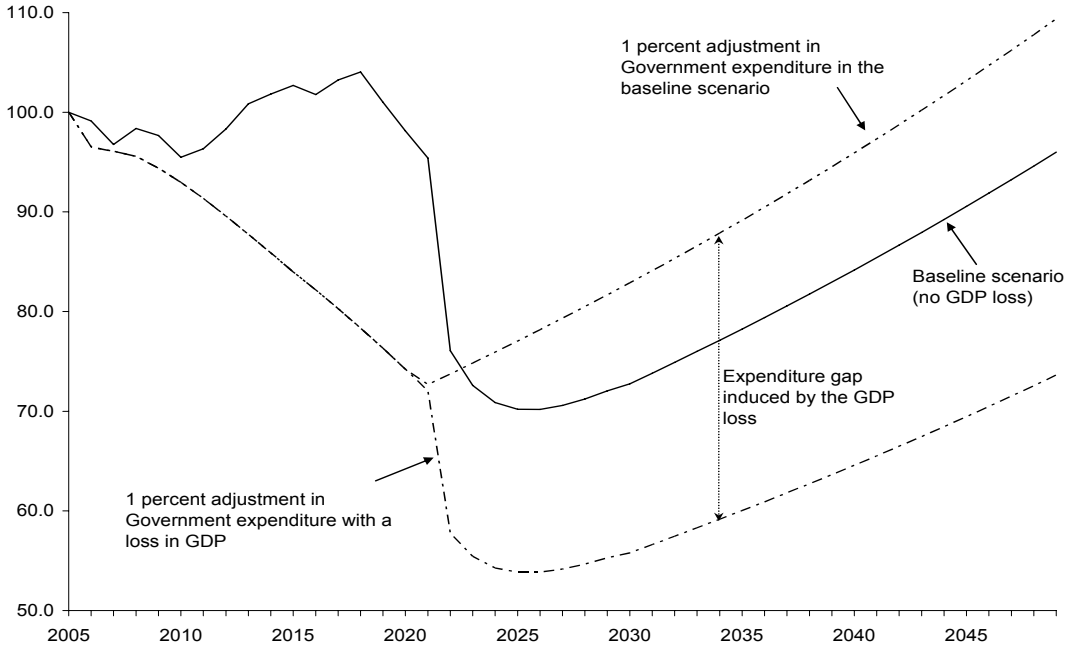
26. **Unless the economy is diversified, projected GDP growth is projected to fall sharply after 2021 (by –24.2 percent in 2022, followed by several years of stagnation).** All the scenarios proposed so far assume for total GDP a constant long-term growth of 3.5 percent a year, even with the sharp decline in diamond production. Thus, the baseline projection assumes that greater diversification of the economy would lead to a strong nondiamond-realted GDP growth, which fully compensates for the diamond-related GDP loss, while the alternative scenario assumes that the GDP loss would not be offset in any way. Potential growth, however, is likely to be somewhere in between, since diversification would likely only partly compensate for the GDP loss. For instance, diversification could come partly from diamond processing, since Botswana has invested in this activity, but it would suffer as well from the depletion of diamond resources hence partly compensating for the loss. Figure I. 8, which summarizes both scenarios, shows that the GDP contraction would almost double the cost of the end of diamond production, assuming expenditure per capita in 2021 holds throughout the period. Thus, in this scenario, annual government expenditure per capita would be only 48.7 percent of its 2005 level during the 2022–32 period, before gradually recovering.

Figure I. 8. Impact of a Recession Induced by the End of Diamond Production, 2005–49



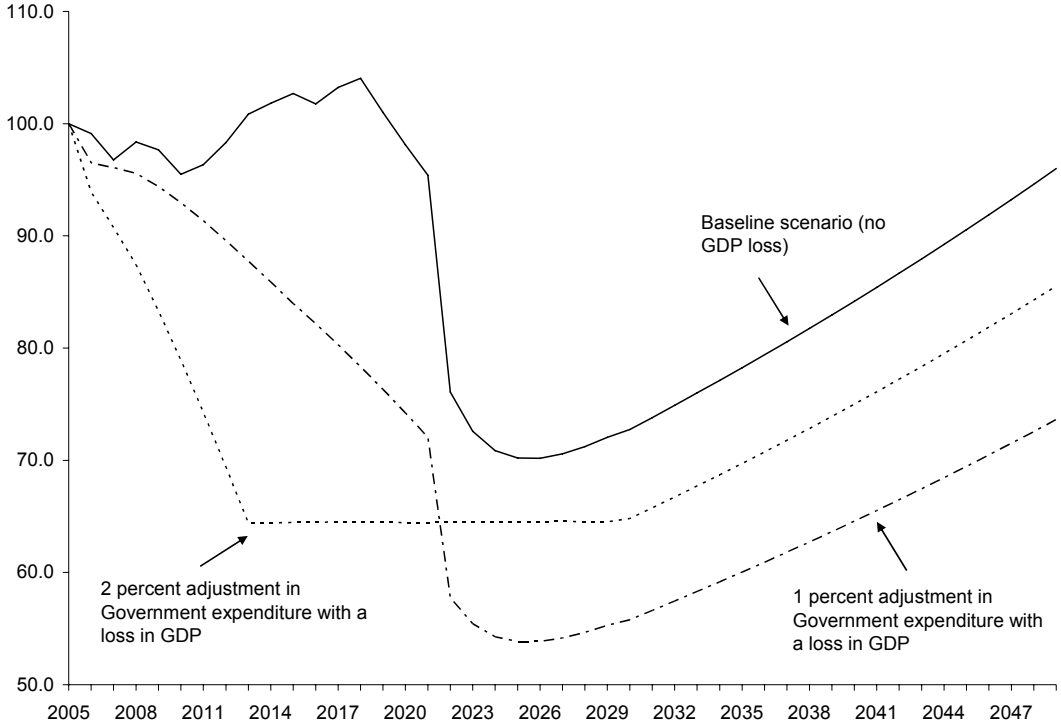
27. **With a gradual adjustment in expenditure, the authorities could save additional resources, which would considerably lower the long-term cost of the GDP loss.** Additional savings, even without economic diversification, would generate enough quasipermanent income to compensate for the GDP loss. For example, expenditure per capita in 2022–32 would be 55.2 percent of the 2005 level, compared with 48.7 percent (see Figure 8).

Figure I. 9. Preparing for Recession by Saving More, 2005–49



28. **Another way to smooth the per capita expenditure would be to impose increase savings during the intial years of the transition** (Figure 10). With an stronger adjustment in expenditure, namely a decrease by 2 percent of GDP until 2013, Botswana would be able to accumulate greater savings, which would.then be used after 2013 to avoid a too sharp decrease in per capita expenditure. However, since the short term effort would be a lot higher, it would require particularly strong political and social support in order to be implemented.

Figure I. 10. Alternative adjustment, 2005–49



29. **For simplicity, the precise link between diamond and nondiamond sectors and/or revenues are not explicitly modeled in this study.** The purpose of this analysis is just to provide some benchmarks on the impact of no compensation for diamond production loss. However, if the economy fails to diversify, the fall of diamond production could spread to the rest of the economy, hence leading to a sharper recession. This would put the economy further below than the scenario with no compensation for GDP loss provided here, which reinforces the need for early adjustment and further diversifying the economy.

F. Lessons from the Simulation Exercises and Sensitivity Analysis

30. **Diamond reserves are not adequate to generate enough permanent revenue to support the current level of expenditure**. Under the current fiscal rule, i.e. no accumulation of debt, higher savings will be necessary in order to avoid a too sharp adjustment over the medium term. However several points should be underlined.

- To be viable, higher savings in the short and medium term require a strong political consensus, given that the current economic situation does not require such an adjustment. Thus the viability of any adjustment will be judged by the ability of the authorities to gather a large political and social support for it, which could possibly imply further constraints to keep pro-poor expenditures per capita very stable in real terms.

- Economic diversification implies further attracting foreign investors, so as to improve the growth potential further. Moreover, new partnerships with the private sector could be considered for infrastructure financing.

- Budget contingency planning might be necessary to accommodate uncertainty about the actual stock of diamonds.

- The nondiamond fiscal deficit demands continued scrutiny. For example, if the nondiamond deficit widens, a tighter fiscal policy would be appropriate even if diamond-related revenue is high, precisely because of the economy cannot rely on diamond resources over the long term. Moreover, the nondiamond deficit might be associated with lower long-term growth (see Sachs and Warner, 2001, for a literature review of countries dependent on hydrocarbon resources).

- Finally, the nondiamond fiscal stance might be of better use for assessing the soundness of fiscal policy relative to the business cycle On the expenditure side, a greater focus on productivity would alleviate additional pressures on fiscal policy.

31. **In conclusion, it should be also noted that the HIV/AIDS epidemic is likely to affect both the growth potential of the economy (by lowering it) and government expenditure (which would need to be increased).** Although a specific analysis of these linkages is beyond the scope of this study, it reinforces the need for initiating the adjustment rapidly, since the epidemic could only complicate further the adjustment.

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A NARROW ECONOMY AND HIGH UNEMPLOYMENT, TWIN PROBLEMS FOR BOTSWANA[5]

A. Introduction

32. Botswana, a resource-rich middle-income country, has been praised for its stable democratic government, rapid economic growth, and prudent management of its large diamond resources. However, the country is highly dependent on the diamond mining industry and a large government sector. While nondiamond exports have grown, diamonds still dominate exports at around 75 percent, most other exports are mining-related, and growth in the nonmining private sector is weak. Foreign direct investment (FDI) has been concentrated in the mining sector, which offers limited employment opportunities because it is capital-intensive.

33. Botswana's unemployment has been high, and as a result social indicators often lag behind those of other economies in similar income levels. Unemployment has been persistently above 20 percent, and the rate is rising, particularly among the young. The government has been the largest employer, and the main export industry, the mining industry, accounts for only 3 percent of formal employment. The result of high unemployment is that about a third of the population lives below the national poverty line (roughly comparable to $2 a day), and the Gini coefficient is at almost 0.6, compared to 0.3-0.5 in most middle-income countries[6]. Botswana also has one of the highest HIV/AIDS infection rates in the world (about 35 percent of adult population, according to UNAIDS), which puts further pressure on social development and costs.

34. The purpose of this paper is to understand (i) why, despite global recognition of Botswana's institutional transparency and stable economy, the economy relies so heavily on diamonds and a large government sector; and (ii) why unemployment and poverty rates are high when the economy has been growing rapidly. It argues that the large size of the government causes two problems:

- Diamond revenues have allowed the government to become the largest employer with an average wage well above the rest of the economy. This may have tilted the workers' preference towards limited job opportunities in the government sector than to seek employment opportunities in the private sector.

- At the same time, the government has provided various types of social safety net programs. This, and financial support from extended families may have increased

[5] Prepared by Jung Yeon Kim.

[6] While absolute poverty is likely to have decreased since 1993 in light of Botswana's high growth rate, the increase in the unemployment rate and the only modest decline in the Gini coefficient suggest that high levels of relative poverty exist.

their reservation wage: potential workers are unemployed because they are unwilling to work at a market-clearing wage.

35. The result is economic waste with high unemployment and employers, including potential foreign investors, offering fewer jobs than they otherwise would. Hence, FDI continues to be limited to the capital-intensive mining sector.

Table 1. Selected Social Indicators in 2002

	Botswana	Sub-Saharan Africa	SACU 2/	Upper-middle income countries	Lower-middle income countries
Rank in UNDP Human Development Index out of 175 countries 1/	128	152	129	80	131
GDP per capita (US$, 2003 for Botswana)	4,660.0	464.0	1,363.5	5,110.0	1,184.0
Population below US$1 a day (percent, 2003 for Botswana)	30.0	46.5	29.6	…	…
Adult literacy rate (percent)	78.9	63.2	82.9	89.7	63.6
Net primary enrolment ratio (percent of relevant age group)	81.0	…	82.3	93.0	…
Infant mortality rate (per 1,000)	80.0	108.0	76.0	19.0	104.0
Fixed line and mobile telephones (per 1,000 people)	328.0	54.0	…	344.0	45.0
Life expectancy at birth (years)	41.4	45.8	41.5	73.0	59.2

Sources: United Nations, Human Development Report 2004; WDI Database; and staff estimates

1/ Based on average of HDI value of group of countries except Botswana.
2/ Includes Lesotho, Namibia, South Africa and Swaziland.

B. Sources for Botswana's Rapid Growth

36. Botswana's per capita income rose from US$80 at the time of its independence in the mid-1960s to US$4,600 in 2005. The rapid growth has been attributed to a stable political environment, good governance, and the rich diamond resource.

37. Despite the magnitude of diamond revenues, there has been no domestic political instability or conflict over control of revenue in Botswana. First, the ethnic fighting that has wounded much of Africa has not been a problem because most of the people are ethnic Tswanas. Second, after independence, the central government established itself as the holder of mineral rights in all tribal lands, thereby establishing the authority of the state over the entire country. This has helped it to avoid regional conflict due to diamond deposit–led income differences between regions.[7] Botswana has also been praised for its institutional transparency; it is ranked among the top 25 percent (the highest in Africa) in Transparency International's *Corruption Perception Index*.[8]

[7] See Acemoglu et. al (2001) and Transparency International (2006).

[8] Standard and Poor's and Moody's have both rated Botswana's sovereign credit at A (highest in Africa).

38. Botswana is the largest diamond producer in the world by both carats and value. Its successful partnership with De Beers, the world's largest diamond mining company, has also contributed to the development of the mining sector. In 2004 Botswana's four major mines produced 31 million carats of diamonds, about 66 percent of total DeBeers Group output. The fact that Botswana's diamond deposits are in kimberlite pipes where diamonds are concentrated in a small area makes it much easier to secure the mines from diamond smugglers. This makes possible large-scale diamond production at low cost, which in turn contributes to high government revenues through corporate taxes, royalties, and profits from Botswana's 50 percent share in its joint venture with DeBeers (Debswana) and its 15 percent stake in DeBeers itself.

Table 2. World Diamond Production Estimates (US$ billion) 1/

	2001	2002	2003	2004
Angola	0.9	0.9	1.1	1.2
Australia	0.3	0.4	0.4	0.3
Botswana	2.3	1.8	2.2	2.9
Canada	0.6	0.6	1.0	1.4
Namibia	0.5	0.5	0.5	0.7
Others	0.5	0.4	0.5	0.7
Russia	1.8	1.5	1.6	2.0
South Africa	0.9	0.8	1.0	1.3
D.R. Congo	0.4	0.4	0.7	0.7
Total	8.2	7.3	9.0	11.2

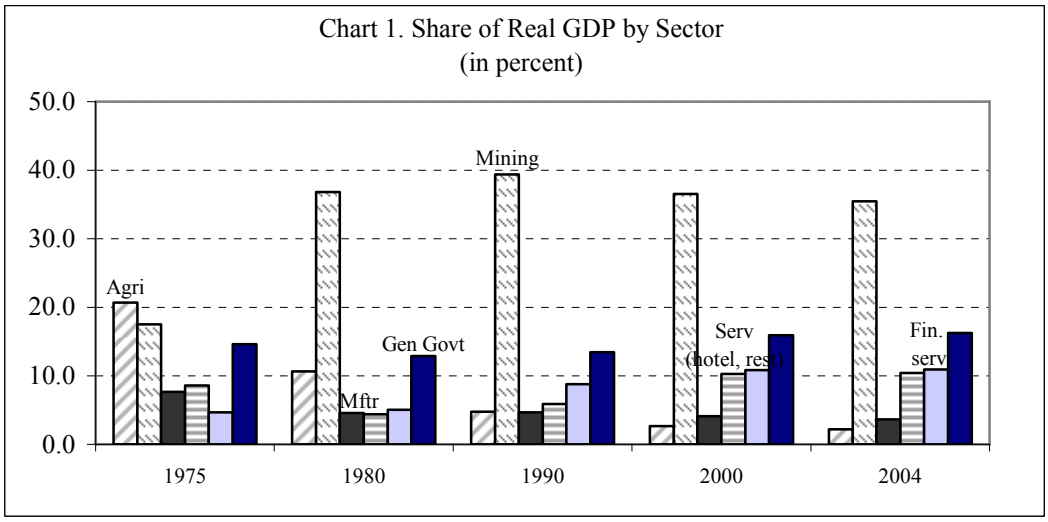
Source: DeBeers
1/ Estimates of the market value of rough production.

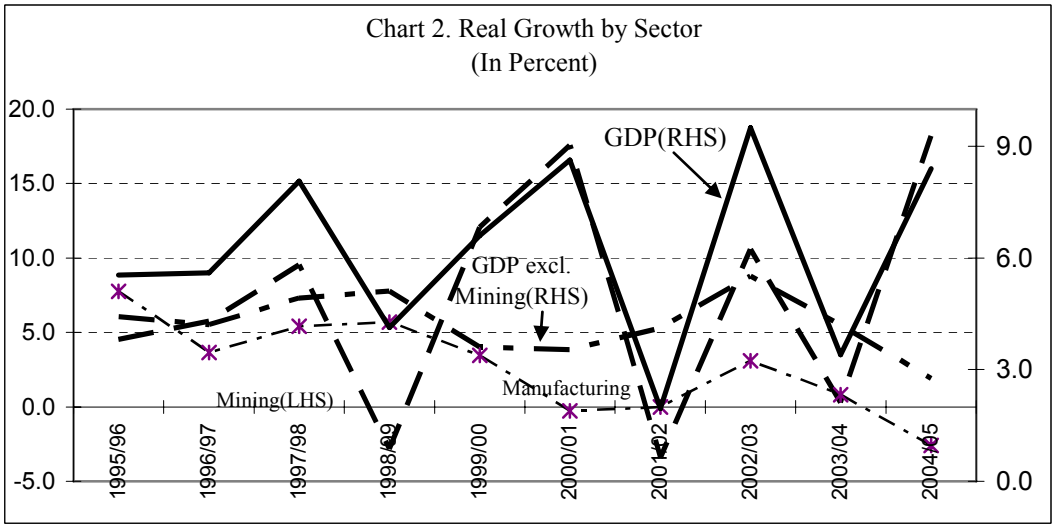
C. Slow Diversification and High Unemployment

Progress on Economic Diversification

39. Botswana's economy is dominated by two sectors, mining and government, and economic diversification has been slow. In 2005 the mining sector constituted 35 percent and the government 16 percent of GDP, shares that have not changed significantly over the last decade. Mining grew at an average annual rate of 5.1 percent and government at 6.2 percent between 1994/95 and 2003/04. Growth in other sectors has been minimal; it in fact decelerated from an annual average of 7 percent from 1984/85 to 1993/94 to about 1 percent in the following decade. Growth was particularly weak in the agricultural sector, which fell from about 10 percent of GDP in 1981 to about 2 percent in 2004/05. The manufacturing sector also slowed markedly, from about 13 percent in the previous decade to around 3 percent over the decade to 2004/05. During these two decades, growth in the construction sector slowed from 11 to 4 percent. The trade, hotels, and restaurants sector seems relatively resilient. It registered average annual growth about 7 percent—but this is also a significant drop from over 18 percent growth in the previous decade.

40. FDI has been largely limited to the mining sector. Despite Botswana's liberal approach to trade and finance and its ranking in the top third in global competitiveness report (ahead of China, India, and Mexico)[9], net FDI has been concentrated in diamond mining.





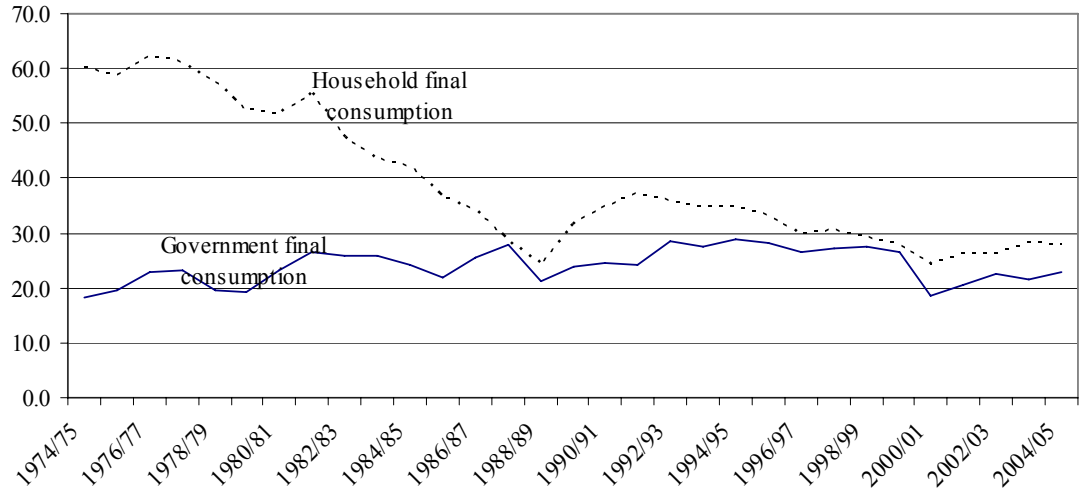
D. The Size of Government

41. The government plays a large role in Botswana's economy with government consumption accounting for roughly one quarter of GDP ever since the early 1980s. At the same time, the share of household consumption declined from about 60 percent of GDP to less than half that by 2004/05. The government sector accounted for more than half of

[9] *Global Competitiveness Report*, 2004 by World Economic Forum.

nonmining GDP in 2003/04. In particular, government development spending has given impetus to such sectors as construction while pushing domestic demand more generally. The government has also played a significant role in the domestic financial sector with budget surpluses being a major source of savings in the economy. Moreover, several publicly owned development finance institutions were established, and the Government was also engaged in substantial lending to parastatals and local authorities from its Public Debt Service Fund (PDSF) and Revenue Stabilization Fund (RSF). From the early 1980s to the late 1990s, total lending out of these funds was higher than the combined lending of all other financial institutions in Botswana. As the largest employer in the economy, the government was responsible for about 40 percent of total formal sector employment in the decade ending in 2004/05.

Chart 3. Share of Government and Household Consumptions
(in percent of nominal GDP, 1974/75-2004/05)



E. Labor Market Conditions and Rising Social Problems

42. Slow growth in the nonmining private sector has meant that growth in employment has not been sufficient to absorb the rising labor force. Based on the 2004 Botswana AIDS Impact Survey (BAIS), unemployment is estimated at about 24.6 percent, compared to an average of 12 percent among other countries in similar income level.[10] While changes in methodology and coverage make intertemporal comparisons difficult, unemployment roughly doubled from the early 1980s to exceed 20 percent by the early 1990s through to the

[10] World Bank, *2006 World Development Indicators.*

present. Unemployment is highest among unskilled youth, at 60.8 percent for 15- to 19-year-olds and 45.6 percent for those aged 20-24. Yet significant shortages persist in more skilled occupations. Unemployment is higher in urban than rural areas, and female unemployment exceeded male by about 30 percent.

43. Botswana does not seem to have the kind of labor market rigidities often observed in European countries. The main law governing relations between employers and employees is the Employment Act of 1984 as amended, which prescribes minimum standards for contracts that apply to all employment relations. Depending on the reasons, the employer can even terminate employment contracts without notice.[11] An employer can also lay off employees to reduce the size of the work force. Although there are binding sector-specific minimum wages, there is no unemployment insurance and the employer is not required to make pension, health insurance, and unemployment insurance contributions on behalf of the employee. Though labor unions exist, reportedly they are not aggressive in collective actions. Employers have stated that in general they do not see labor regulation as an impediment to doing business.

F. Factors Underlying the Narrow Economic Base and High Unemployment

44. This section attempts to provide some explanations for high unemployment and slow diversification in Botswana, with special attention to public employment and productivity. The fact that the large flow of diamond revenues allows the government to be the largest and a generous employer may unintentionally lead to twin problems for the labor market and economic diversification: (i) a rise in the reservation wage of workers results in high unemployment and poor social conditions, and (ii) the higher cost of production and low productivity, low FDI inflow, and slow private sector-led growth, industrialization and diversification.

Employment and Wages in the Public Sector

45. The 42 percent of Botswana's formal-sector workers employed by the government claimed over 50 percent of total formal sector wage earnings in 2005. Though large public sector employment has been observed in some other countries in Anglophone Africa, in Botswana it is more pronounced (see table 3).

46. The government wage expenditure has increased significantly over the past decade. It rose on average by 13.3 percent annually from 1995/96 to 2004/05, though average annual inflation was just 8.2 percent. As a result, in 2005 the average wage of citizens working for the government exceeded those in the private sector and parastatals by over 40 percent. The

[11] Prior written notice of termination must be given unless the employee is paid per day, is in the probation period, or is guilty of serious misconduct.

contrast is even more stark when the parastatals are eliminated. Total public wage expenditure for 2004/05 constituted almost 30 percent of public spending[12] (12 percent of GDP). Botswana's public wage–GDP per capita ratio, which indicates whether government employees are under- or overpaid in comparison to the prevailing standard of living, is also considerably higher than in other middle-income countries.[13] Moreover, it appears that the wage differential between public and private sectors widens at the lower end of the wage scale, making it more desirable for less skilled workers to work for the public sector.

Table 3. Average Monthly Cash Earnings of Botswana Citizens by Sector, 1998–2004
(In Pula)

	% share in total formal employment	1998	1999	2000	2001	2002	2003	2004 1/
Private and parastatal	57.5	1,067	1,243	1,605	1,414	1,560	1,719	2,141
Private	53.1	…	…	…	…	…	…	1,765
Paraastatal	4.4	…	…	…	…	…	…	6,702
Agriculture	1.6	346	383	434	409	563	542	697
Mining and quarrying	3.1	1,950	2,249	3,010	2,423	3,206	3,362	4,518
Manufacturing	10.8	632	785	1,096	835	849	944	1,219
Electricity and water	0.8	2,043	3,166	3,616	3,525	4,517	5,569	6,124
Construction	8.0	754	776	1,006	917	997	1,050	1,138
Commerce	18.7	867	953	1,001	1,179	989	1,253	1,533
Transport and communications	4.1	1,725	2,318	2,689	2,616	3,510	3,597	3,585
Finance and business services	6.8	1,593	1,979	2,164	2,251	3,056	3,080	3,336
Community and personal services	1.6	1,249	1,413	1,669	1,660	1,998	1,965	2,472
Education	2.1	1,983	2,261	3,069	2,775	2,895	2,830	5,010
Government	42.5	1,334	1,512	1,747	1,952	2,336	2,447	2,694
Local government	33.8	1,190	1,496	1,732	1,948	1,866	2,502	2,545
Central government	8.6	1,566	1,733	2,001	2,232	2,804	2,781	3,122
	100.0							

Source: Central Statistics Office

1/ 2004 data based on sources from Ministry of Labour and Home Affairs.

[12] As a rule of thumb, when this ratio rises above 25 percent, governments risk reducing their effectiveness by squeezing nonwage expenditure for goods and services, maintenance, and capital investments.

[13] This is common in developing countries where the number of dependents per wage earner is large, trained labor is scarce, and the standard of living is low.

Table 4. Public sector in the labor market

	GDP per capita (2004, US$)	Public employment (% of total)	Public wage/GDP per capita
Chile	5,220	16.3	0.1
Mauritius	4,640	19.0	1.4
Malaysia	4,520	8.6	…
Costa Rica	4,470	14.1	0.2
Botswana	**4,360**	**43.7**	**2.7**
South Africa	3,630	34.3	0.3
Thailand	2,490	8.1	…
Namibia	2,380	…	3.4

Source: ILO Laborstat 2006

Industrialization in nonmining sector

47. In Botswana, unlike many newly industrialized economies, nonmining manufacturing has not been a dynamic labor absorber. Rather, its share in GDP has been declining. Some efforts have been made in the past to boost the textile industry and take advantage of access to the U.S. market under the African Growth and Opportunity Act (AGOA), but this has become difficult now due to strong competition from other developing countries. The manufacturing sector took an upturn when the Motor Company Botswana (Hyundai) opened its plant, but this was soon closed in 2002/03.

48. Botswana's proximity to neighboring giant South Africa may also have deterred efforts to build the manufacturing sector. South Africa, with its large domestic market and abundant labor supply, has a strong competitive advantage over Botswana; it may be cheaper for Botswana to import from South Africa than to manufacture goods domestically. For example, many automobile manufacturing plants based in South Africa service the whole continent.

49. The large diamond endowment and subsequent reliance on natural resources may have diminished its need to coordinate labor supply and demand, which can slow down industrialization. Rich natural resources can lessen political incentive to pursue difficult policies to build a labor-intensive nonmining manufacturing export sector. Experiences from emerging market countries show that resource-poor countries tend to grow through internationally competitive industrialization.[14] Their governments tend to abandon closed trade policies at a low per capita income and, since commodity exports are limited, labor-intensive manufactured exports expand rapidly and soon absorb excess labor. This allows the economy to diversify within the skill-intensive manufacturing sector and later to enter into competitive capital-intensive industries so that the economy becomes more resilient to external shocks. The early elimination of surplus labor and the incentives from competitive manufacturing curb unemployment and boost saving and investment. Low unemployment

[14] "The East Asian Miracle-Economic Growth and Public Policy", 1993, The International Bank for Reconstruction and Development, The World Bank .

leads to improvement in income inequality. In Botswana, on the contrary, unemployment remains stubbornly above 20 percent, one of the highest rates among middle-income countries.

Reservation Wage

50. A large government employment share and generous government wages may have raised the reservation wage of workers. Workers may be unwilling to work unless they receive salaries well in excess of the market clearing level in the rest of the economy. This can continue for relatively long periods if dependence on extended families for financial support can allow unemployment to persist.

51. Concerns about a rising reservation wage despite high unemployment have been expressed by the authorities on several occasions. These are expressed in the Mid-Term Review of National Development Plan (NDP) 9, paragraph 86, as well as the 2006 Budget Speech by the Minister of Finance and Development Planning , paragraph 21, which states, " … Botswana workers have become selective in the jobs they are willing to accept, choosing instead to rely on relatives or social safety nets". The authorities have indicated that young university graduates often desire only white-collar jobs, the availability of which is becoming more limited as private sector-led economic diversification is slow. Employers needing workers with less skill have had to hire noncitizens who were willing to accept the jobs and the wages citizens have refused.

52. The social programs in Botswana may also have contributed to a relatively high reservation wage (See Table 5). Social programs in Botswana target a large population. While these are mostly people too old or too young to be in the labor force, the programs—from which about a third of the population benefit—may indirectly provide incentives to dependency, as can be inferred by the rising number of welfare beneficiaries and the high unemployment despite solid economic growth. Government expenditure on social programs more than doubled from 1997/98 (P1.4 billion) to 2004/05 (P3.2 billion). This may have positive implications because more people are elevated from absolute poverty, and it also signals that when all government programs are considered, the effective poverty level may not be as severe as some international indices suggest. Until very recently, the government provided free health care and education to its entire people. However, the rising number of social program beneficiaries, the increasing share of social in total expenditure, and continuing HIV/AIDS-related expenditure are putting pressure on government finances at a time when medium-term growth and the fiscal envelope are likely to become more constrained. Appropriate responses to the situation would be to broaden labor force participation, reduce the dependency ratio, and design policies to reduce unemployment.

Table 5 . Social Welfare Schemes in Botswana

Type	Purpose	Target citizens	Type of support	Participation rate	Qualifications
Destitute Program	provide minimum assistance to destitute persons	All destitute	Food basket (1750 calories/day), shelter, medicare, occasional fares, funeral expenses, exemption from levies/taxes, school fees, water charges, tools for rehabilitation projects		Means tested
Old Age Pension (OAP)	Support elderly	All aged 65 or above	Monetary support	95% of those eligible	Entitlement programs, not means tested
World War II Veterans	Support elderly	WWII veterans or their surviving spouses or children aged 21 or under	Monetary support	95% of those eligible	Entitlement programs, not means tested
Primary School Feeding Program (PSFP)	Minimize child malnutrition or stunting	All primary school students	Snack and full midday meal (1/3 of daily calorie need)	312,000 students	not means tested
Vulnerable Group Feeding Program (VGFP)	Minimize malnutrition to vulnerable group	Children aged under 5, pregnant and lactating women, TB patients		268,000 people	not means tested
Orphans and Vulnerable Children (OVC) program	Provide immediate needs of orphans	Orphans and children of adults registered in CHBC	Food, clothing, education, shelter, protection and care	57,800 people, or 60% of total eligible orphans	Means tested
Community Home Based Care (CHBC)	HIV positive persons with fully-blown AIDS	provide food and care in their homes	Monthly monetary benefits ranging from P200 to P1,500	14,900 people (est.)	
Remote Area Development Program (RADP)	Provision of social service infrastructure	Citizens in 64 designated settlements	Access to basic infrastructure and small scale CEDA assistance with a built-in training component		
Labor Based Relief Program (LBRP)	A drought relief program that becomes operational on a declaration of drought but otherwise resides as a part of Labor Intensive Public Works Program (LIPWP)		Employment opportunities in construction or maintenance of public facilities/ short-term employment opportunities		

Production Costs, Productivity, and FDI

53. Botswana has followed textbook macroeconomic advice on attracting investment inflows, which are an important source of knowledge spillover and industrialization, increases in employment, and human capital development. That may be why it is ranked highest in Africa for competitiveness and institutional transparency (Table 6).

Table 6. Indices of International Competitiveness

Corruption Percention Index, 2004 by Transparency International	Global Competitiveness Report, 2004 by World Economic Forum	Africa Competitiveness Report, 2004 by World Economic Forum	Africa Public Institutions Index, 2003 by World Economic Forum
1. Finland	1. Finland	**1. Botswana**	**1. Botswana**
2. New Zealand	2. United States	2. Tunisia	2. Tunisia
3. Denmark	3. Sweden	3. South Africa	3. Gambia
5. Singapore	6. Norway	4. Mauritius	4. South Africa
15. Germany	7. Singapore	5. Namibia	5. Mauritius
17. United States	**45. Botswana**	6. Gambia	6. Egypt
31. Botswana	47. Italy	7. Egypt	7. Tanzania
77. Morocco	66. Turkey	8. Morocco	8. Ghana
90. Tanzania	76. Philippines	9. Tanzania	9. Algeria
144. Nigeria	93. Nigeria	10. Ghana	10. Morocco

54. Nevertheless, FDI inflow into Botswana is small and mostly concentrated in the mining sector. Larger FDI flows have been going to South Africa, where the size of domestic market is large. This highlights the importance of two factors on which multinational enterprises base their FDI decisions: (i) anticipated profit, which incorporates production cost, and (ii) market access. Since its utility and transportation costs are high because geographical location, other costs of production must be sufficiently low if Botswana is to attract foreign investors. However, as the authorities have noted in the Mid-Term Review of NDP 9, reducing production costs is difficult because Botswana lacks a local entrepreneurial culture and productivity generally is low. The Minister of Finance's 2005/06 budget speech also cites concerns about worker productivity and work ethics to enhance its competitiveness.

55. Low productivity in the nonmining sector may be both the cause and the effect of slow economic diversification. Productivity indicators illustrate that productivity improvement in most sectors other than mining has been modest at best. In particular, as indicated in the recent study by Botswana National Productivity Centre, the productivity trends in manufacturing, which have been negative since NDP 8 period (1997-2003), have worsened in recent years (see Table 7). Both labor and capital productivity declined significantly during this period. While output grew only about 5.8 percent from 1998 to

2003, employment increased by 31.2 percent and the average monthly wage by almost 50 percent in nominal terms.

56. Higher costs mean that potential employers offer fewer jobs than they otherwise would. They also discourage the inflow of FDI, since in addition to its small market and high utility and transportation costs, Botswana's labor force may be less attractive to foreign investors than the labor force in countries where people are willing to work for less. Hence, FDI continues to be concentrated in the capital-intensive mining sector, which does little to generate employment and reduce poverty.

Table 7. Average Annual Growth Rates of Multifactor Productivity by Sector 1/

	Mining	Manufacturing	Construction	Commerce	Finance/ business service	Business (non-farm, non-mining)
NDP 5 2/	12.1	-11.0	5.0	-1.2	4.1	-5.6
NDP 6	0.3	0.6	-0.2	6.5	6.0	3.6
NDP 7	0.5	1.2	0.5	11.6	0.5	3.4
NDP 8	4.0	-1.6	-0.4	0.6	2.0	1.1
2003/04 3/	4.1	-3.0	2.4	-1.7	1.5	0.0

Source: Botswana Productivity Statistics, 2005

1/ Multifactor productivity is derived using a chain-based index involving weighting of labor input, capital input and real output.

2/ Reference years pertaining to NDP are as follows. NDP 5: 1979-85, NDP 6:1985-91, NDP 7: 1991-97, NDP 8: 1997-03, and NDP 9: 2003-09.

3/ Provisional.

G. Conclusion and Policy Implications

57. This paper argues that in Botswana, unemployment and slow economic diversification are two sides of the same coin, arising from rich endowment of natural resources and large government. Sizable revenue from diamonds may have made it difficult for the government to follow through on painful labor market reform. Instead, the government has been the largest employer both in size and in wages as a share in the economy. This, combined with financial support from extended families, may raise the reservation wage of workers. Low productivity is another factor; it raises production costs and discourages inflow of FDI, an important source of knowledge spillovers and diversification. Thus, despite strong overall growth, in Botswana a pattern of dependence on diamond revenue and high unemployment persists.

58. Botswana's twin problems can be solved only by long-term strategies to transform the economy. These must be directed to (i) reducing the size of government, (ii) expanding education and vocational training programs to raise the skill level of workers and to meet labor market demands, (iii) enhancing the efficiency of social welfare programs and devising exit strategies, and (iv) creating incentives for FDI inflow by reforming the labor market.

While these categories are by no means complete, they could be a good start. Recognizing the needs, the government has already begun to formulate and apply remedial policies.

Reducing the size of government

- Reducing the total number of government employees is particularly important for local governments. The authorities have begun to limit the growth of new positions by hiring new employees only when an existing post becomes vacant. They also indicated that government wages would be adjusted by only half the inflation rate from 2006

- The government might continue to actively pursue outsourcing of services, especially those that require less lower skill.

Education and vocational training adapted to labor market demands

- Labor and education policies might be designed to increase the number of experts and technicians with skills industry needs. The government is proceeding with plans to establish a university specializing in science and engineering.

- More vocational schools should be established and technical programs developed to attract youth.

Social welfare program efficiency and exit strategies

- The government could aim to better target the beneficiaries of welfare programs to reduce dependency and the cost of programs. Welfare programs should be means tested and should provide incentives to graduate from them.

Labor market reform to attract FDI inflow

- Improvement in labor productivity is key to attracting foreign investors. Both public and private sector entities might introduce the Performance Management System already implemented in certain government positions to enhance competition among workers. The government could also implement social campaigns to improve the perception of blue collar jobs and improve the work ethic.

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II. A NOTE ON INFLATION

A. Introduction[15]

1. Botswana's annual inflation rate has averaged 7–9 percent since the mid-1990s, despite a period of historically low inflation among its main trading partners, South Africa, the United States, and the United Kingdom (Table III.1). In 2005, year-on-year inflation exceeded single digits, reaching a 13-year high of 14 percent by April 2006, triggered by the May 2005 pula devaluation, high international oil prices, and one-off factors.

2. This note explores Botswana's recent inflation developments, focusing on monetary aggregates and the exchange rate, the most powerful long-run determinants of Botswana's inflation rate. Using a unit-root econometric technique, we estimate a simple reduced-form inflation equation with quarterly 1993–2005 data. According to the results, South African inflation has the greatest influence on price movements in Botswana. The paper also finds that, while both exchange rate depreciation against the South African rand and monetary expansion are inflationary, the impact of exchange rate depreciations is much larger.

Table III.1. Annual Inflation, 1993–2005
(Percent; period average)

	1993–97	1998–2002	2003	2004	2005
Botswana	10.9	7.5	9.3	6.9	8.6
South Africa	8.7	6.5	5.9	1.4	3.4
Industrial countries	2.4	1.8	1.9	2.0	2.3

Sources: Botswana authorities; and *International Financial Statistics.*

B. Inflation Trends in Botswana, 1993–2005

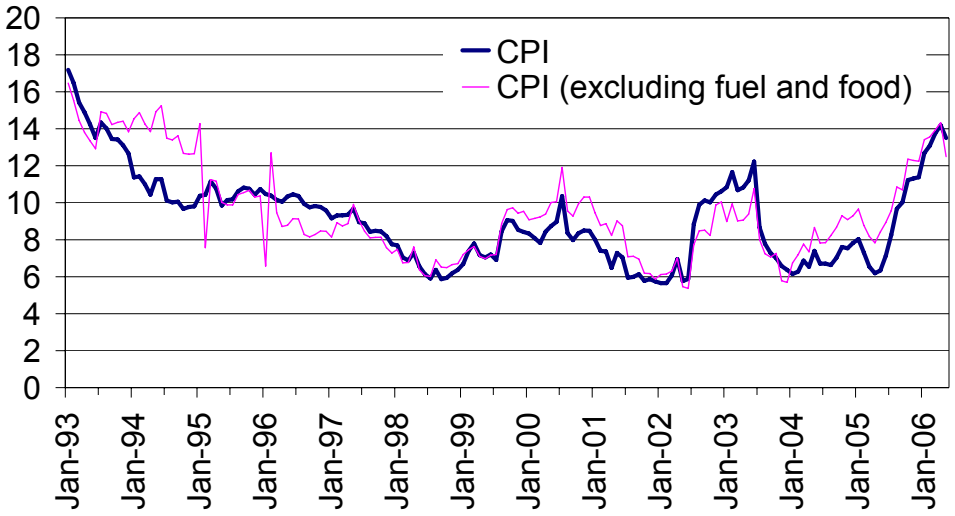
3. After the high inflation of 1992–93, Botswana experienced gradual disinflation towards 6 percent until recently, despite some inflationary pressures, including high international oil prices owing to the 1999 cuts in OPEC crude oil production and a new value-added tax (VAT) in 2002 (Figure III.1). While inflation for fuel and power items peaked at 25½ percent in mid-2000, the 10 percent VAT pushed overall inflation to 12 percent by mid-2003.

4. More recently, inflation has trended downward, falling to 6 percent in early 2005. However, two factors—a 12 percent devaluation of the national currency against the basket and the May 2005 introduction of a crawling peg—once again pushed inflation beyond the

[15] Prepared by Atsushi Iimi (AFR).

authorities' targeted 4–7 percent range. On May 29, 2005, the Botswana government devalued the pula by 12 percent against the basket (comprising the South African rand and the SDR) and adopted a forward-looking crawling peg exchange rate arrangement, in which the pula's exchange rate to the basket would adjust continuously rather than in steps.[16] It also increased the margin between the buy and sell rates for currencies quoted by the Bank of Botswana (from ±0.125 percent to ±0.5 percent around the central rate). By year-end 2005, inflation had risen to about 11 percent. Additional inflationary pressures, including higher administered fuel and transport prices and the reintroduction of secondary education fees, pushed inflation to about 14 percent in the first half of 2006.[17]

Figure III.1. Inflation, Jan. 1993–May 2006
(12-month percentage change)



Sources: Botswana authorities; and Fund staff estimates.

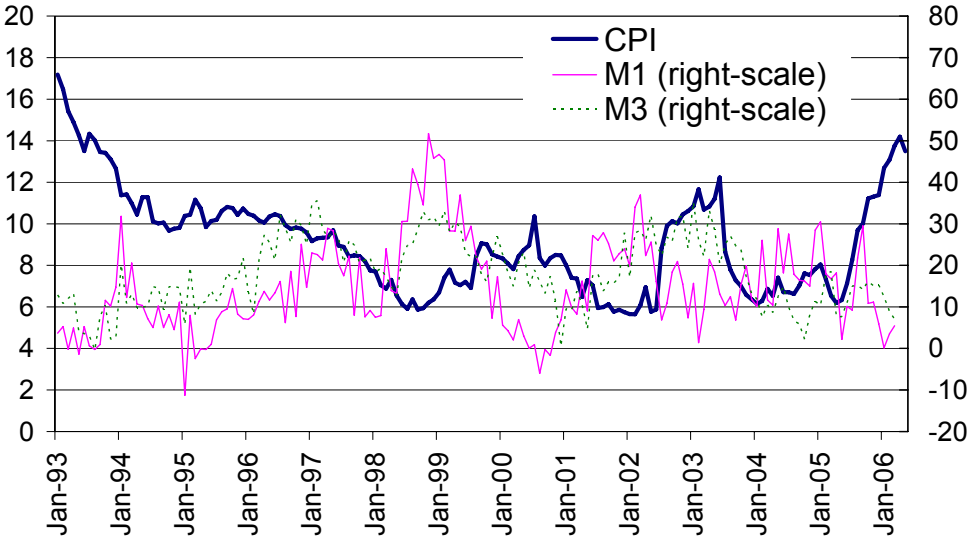
5. The underlying relationship between inflation and growth in monetary aggregates has been weak, possibly owing to time lags in the transmission of monetary policy and noisy data. In the 1993–98 disinflation period, for instance, monetary aggregates generally increased. The M1 12-month growth rate peaked at about 50 percent in November 1998, and broad money (M3) grew more than 30 percent at the end of 1998 (Figure III.2). In contrast,

[16] According to a government press release, "the rate of crawl [will] be reviewed from time to time to align it with the differential between the expected rate of inflation in Botswana and the expected rate of inflation in the currencies of the basket" (May 29, 2005).

[17] The Bank of Botswana (BoB) raised its policy lending rate, Bank Rate, by ¼ percent in August and October 2005 and by ½ percent in February 2006.

when inflation picked up in 1999–2000, the growth in monetary aggregates quickly shrank. Since 2001, the monetary aggregates have been highly volatile, moving independently of the price level.

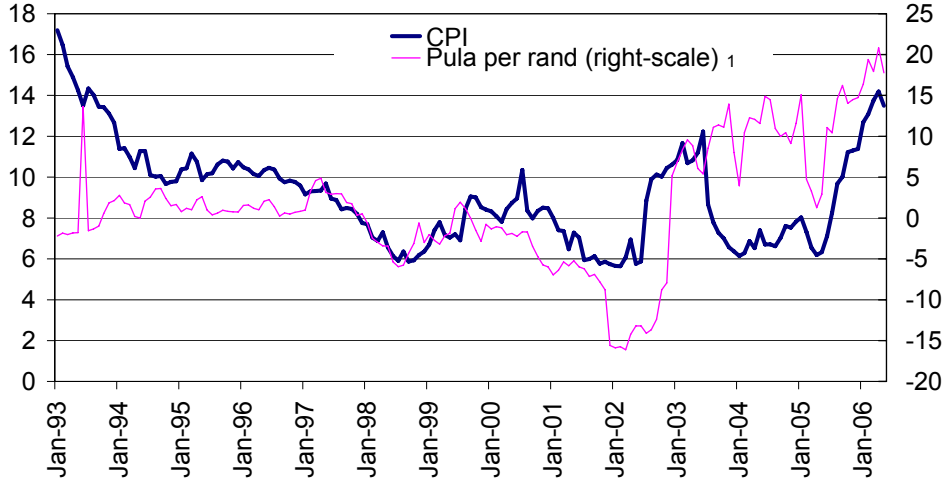
Figure III.2. Inflation and Monetary Growth, Jan. 1993–May 2006
(12-month percentage change)



Sources: Botswana authorities; and *International Financial Statistics*.

6. Given that Botswana is a small open economy, one might expect inflation to be influenced by exchange rate movements. Botswana's current consumption basket is 24 percent domestic tradables, 47 percent imported tradables, and 29 percent nontradables. As shown by the data, exchange rate depreciations against the South African rand (Botswana imports most of its household goods and food from South Africa) seem to have played an essential role in explaining changes in the country's domestic prices, especially since 1995 (Figure III.3 and Table III.2).

Figure III.3. Inflation and Exchange Rate against the Rand: Jan. 1993–May 2006
(12-month percentage change)



Sources: Botswana authorities; and *International Financial Statistics*.

[1] The exchange rate is shown in pula per foreign currency terms.

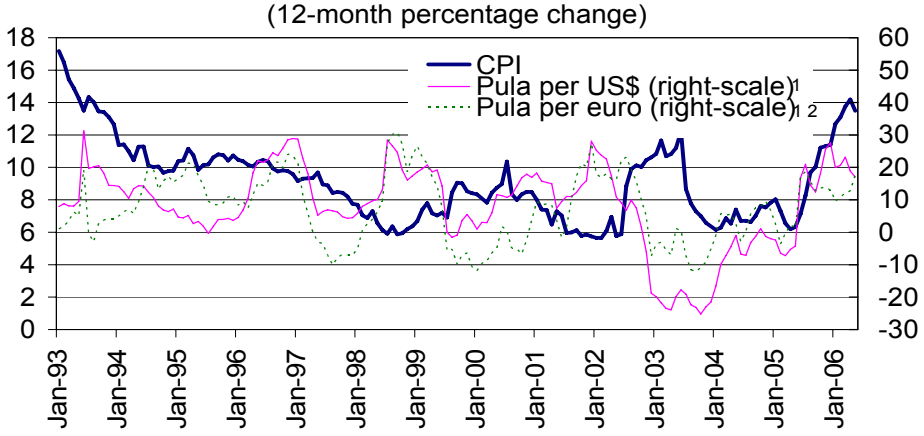
Table III.2. Correlation between Inflation and Exchange Rate Depreciation

Period	Rand	US$	Euro	SDR
Jan. 2003–May 2006	0.28	0.10	-0.05	0.06
Jan. 1993–Dec. 1994	-0.41	0.17	-0.70	-0.47
Jan. 1995–Jun. 2003	0.64	-0.51	-0.22	-0.45
Jul. 2003–May 2006	0.64	0.68	0.53	0.48

Source: Author estimations.

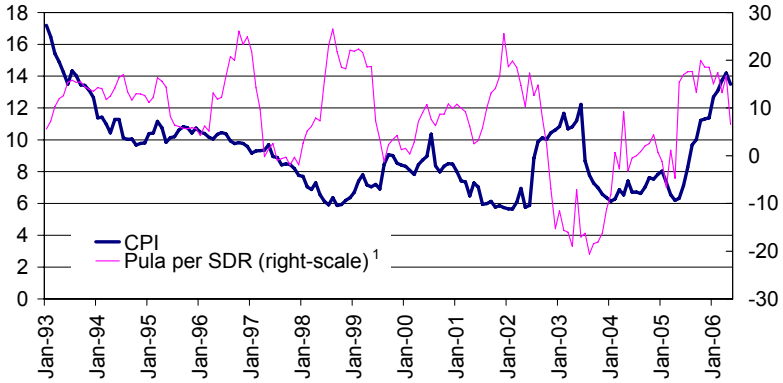
7. By contrast, only recently have changes in the exchange rate against major industrial country currencies, such as the U.S. dollar and the euro, affected Botswana's inflation rate (Figure III.4). The relationship, after being fairly weak, appears to have strengthened in the past three years, according to a simple correlation of inflation and the pula's depreciation against the U.S. dollar (about 0.7) and against the euro (0.5) (Table III.2). Similarly, after appearing to move independently of domestic inflation, the pula-SDR exchange rate, which comprises part of the currency basket of Botswana, has demonstrated a certain correlation with inflation in recent years (Figure III.5 and Table III.2).

Figure III.4. Inflation and Exchange Rates against the US$ and Euro: Jan. 1993–May 2006
(12-month percentage change)



Sources: Botswana authorities; and *International Financial Statistics*.
[1] The exchange rates are shown in pula per foreign currency terms.
[2] The ECM was replaced with euro at a 1:1 rate in January 1999.

Figure III.5. Inflation and Exchange Rate against the SDR: Jan. 1993–May 2006
(12-month percentage change)



Sources: Botswana authorities; and *International Financial Statistics*.
[1] The exchange rate is shown in pula per foreign currency terms.

C. Empirical Model and Data

Vector error-correction (VEC) model

8. To explore the relationship between money, the exchange rate, real GDP, interest rates, and prices, we estimate a simple inflation model. The price level (*CPI*) is, in general, a weighted average of tradable prices (CPI^T) and nontradable prices (CPI^N):[18]

[18] The derivation of the empirical model in this note depends on Nassar (2005). Also see Gasha (2003), Kuijs (2000), Muñoz (2005), and Williams and Adedeji (2004).

$$\ln CPI = \lambda \ln CPI^T + (1-\lambda) \ln CPI^N , \quad (1)$$

where λ is the weight of tradables in the consumption basket. For Botswana, the weight amounts to 70.8 percent of total household expenditure. As specified by the law of one price of tradables, the price level of tradables is determined by the world price in foreign currency terms (CPI^*) and the exchange rate (ER), defined in units of foreign currency per one unit of domestic currency:[19]

$$\ln CPI^T = \ln CPI^* - \ln ER . \quad (2)$$

9. The price level of nontradables is supposed to be determined by disequilibrium between the money supply and the demand in the domestic money market. The money supply (M^s) (which is, in principle, a policy variable), and an increase in M^s would inflate domestic prices. On the other hand, the increased demand for money (M^d) mitigates inflationary pressures, and is assumed to be a function of real GDP growth ($RGDP$) and the nominal interest rate ($INTR$). While higher interest rates make holding money more costly and reduce money demand, real economic expansion increases the transaction demand for money, leading to disinflation.[20] Thus, inflation of nontradables can be written as:

$$\ln CPI^N = \phi(M^S, M^d(RGDP, INTR)) . \quad (3)$$

10. We estimate the following reduced-form equation for inflation, derived from equations (1) to (3):

$$CPI = \underset{+}{f}(\underset{+}{CPI^*}, \underset{-}{ER}, \underset{+}{M^S}, \underset{-}{M^d}(\underset{-}{RGDP}, \underset{+}{INTR})) . \quad (4)$$

Following earlier studies (e.g., Johansen, 1995), the above relationship is specified by a vector error-correction (VEC) model with two lags:[21]

[19] For the empirical analysis that follows, all types of exchange rates are defined in foreign-currency terms, meaning that an increase in the exchange rate indicates appreciation.

[20] This assumption, which may simplify the economy too much, ignores the importance of the gap between demand and supply for real goods and services in determining inflation; but it does make the model much more tractable, given the limited sample data.

[21] The number of lags varies from model to model. In most current analysis, the models with two lags have been found to be the most reasonable, though some models have one or three lags.

$$\Delta \ln CPI_t = \beta_0 + \sum_k \beta_{1k} \Delta \ln CPI_{t-k} + \sum_k \beta_{2k} \Delta \ln M^S_{t-k} + \sum_k \beta_{3k} \Delta \ln ER_{t-k} + \sum_k \beta_{4k} \Delta \ln RGDP_{t-k} + \sum_k \beta_{5k} \Delta INTR_{t-k} + \sum_k \beta_{6k} \Delta \ln CPI^*_{t-k} + \beta_7 ECM \ln CPI_{t-1} + \varepsilon_t, \quad (5)$$

where *Δln* is the first difference in logs of the variables, and $ECM \ln CPI_t$ is an error correction term associated with disequilibrium from the long-term equilibrium in the money market:

$$ECM \ln CPI_t = \alpha_1 \ln CPI_t - \alpha_2 \ln M^S_t - \alpha_3 \ln ER_t - \alpha_4 \ln RGDP_t - \alpha_5 \ln INTR_t - \alpha_6 \ln CPI^*_t. \quad (6)$$

Data

11. The analysis uses quarterly data for the period 1993–2005. Before this period, Botswana's high inflation makes it difficult to maintain the common structure assumption of price behavior. The sample period includes the latest quarter for which applicable data are available. The baseline model includes the following seven variables in the system: general consumer prices (*CPI*), broad money (*M2*), the exchange rates against the rand (*Rand/Pula*) and the U.S. dollar (*US$/Pula*), quarterly real GDP (*RGDP*), the 88-day notice deposit rate (*Term deposit rate*), and South Africa's price level (*CPI of SA*).

12. These variables were selected over other specifications on the basis of statistical reliability and theoretical consistency (see ANNEX III.II for details). Notably, money supply, which is represented by M2 (currency in circulation plus current and time deposits), while partly interest bearing, does not include Bank of Botswana Certificates (BoBCs). The two foreign exchange variables—the rand per pula and the U.S. dollar per pula—were selected because these two foreign currencies play such an important role in domestic trade patterns. Although a large share of Botswana's imports come from South Africa,[22] some of them (e.g., oil) are denominated in U.S. dollars. Exports prices do not directly affect the CPI basket, but the international trade prices of diamonds denominated in U.S. dollars, of which Botswana is the world's largest producer, may possibly influence the economy to the large extent.

13. For a proxy variable referred to as the level of world prices, we use the consumer price index of South Africa, given that half of all goods and materials traded in Botswana are imported, with three-quarters of them coming from South Africa. For GDP data, we use the

[22] Botswana imported 85.1 percent of total imports from Southern African Customs Union (SACU) members, mainly South Africa, in 2005.

three-period moving average of quarterly GDP.[23] The average deposit interest rate—though viewed as problematic owing to current negative real interest rates—is the only interest rate variable that has enough time series data and variation over time.

D. Estimation Results

Unrestricted model

14. The augmented Dickey-Fuller unit root tests indicate that almost all variables are nonstationary in levels but stationary in their first differences (Table III.3).[24] The data also suggest that the trace test statistic can reject the null hypothesis of no cointegration in favor of one cointegrating vector at the 5 percent significance level (Table III.4).[25]

Table III.3. Unit Root Tests

	Augmented Dickey-Fuller statistics	
	In levels	In first differences
lnCPI	-2.455	-6.783 ***
lnCPI (exclucing fuel and foo	-2.500	-6.193 ***
lnCPI (tradables)	-2.991 **	-6.178 ***
lnCPI (nontradables)	-1.335	-7.744 ***
lnM0	-1.254	-9.830 ***
lnM1	-0.386	-8.723 ***
lnM2	0.121	-7.954 ***
lnM3	-0.134	-7.576 ***
lnM4	-0.385	-7.246 ***
lnRand/Pula	-1.165	-5.409 ***
lnUS$/Pula	-1.958	-5.954 ***
lnEuro/Pula	-1.830	-6.905 ***
lnSDR/Pula	-2.209	-5.414 ***
lnNEER	-2.363	-5.206 ***
lnRGDP	-0.422	-6.203 ***
Term deposit rate	-3.393 **	-7.563 ***
Bank Rate	-2.022	-8.427 ***
Prime lending rate	-1.283	-6.959 ***
lnCPI (South Africa)	-2.635 *	-5.746 ***

*: 10 percent significance level; **: 5 percent significance level; ***: 1 percent significance level.

[23] This technique smooths data but does not make the data more accurate.

[24] Table III.3 includes not only the variables used in the baseline estimation but also the alternative definitions discussed in Annex III.II.

[25] For the trace test, see Johansen (1998).

Table III.4. Cointegration Tests

Rank	Eigenvalue	Trace statistics	5% critical value
0		128.463	124.24
1	0.6511	82.133 **	94.15
2	0.4919	52.341	68.52
3	0.3271	34.908	47.21

**: 5 percent significance level.

15. Given the above, the cointegrating equation is estimated as follows:

$$\begin{aligned}\ln CPI = {} & \underset{(0.063)}{0.142}\ln M2 - \underset{(0.072)}{0.356}\ln Rand/Pula + \underset{(0.040)}{0.029}\ln US\$/Pula \\ & - \underset{(0.179)}{0.476}\ln RGDP + \underset{(0.005)}{0.035}TermDepositRate + \underset{(0.129)}{1.562}\ln CPIofSA + 0.246\end{aligned} \tag{7}$$

The estimated dynamic error-correction inflation equation is presented in ANNEX III.I. Note that the cointegrating vector, which makes a set of variables in the system stationary by a suitable choice of its initial distribution, can be interpreted as a long-term equilibrium relationship among monetary aggregates, the exchange rate, real GDP, interest rate, and the price level. All but one sign, that for the exchange rate against the U.S. dollar, are as expected in theory and statistically significant.[26] The overall fit of the equation is satisfactory.[27] According to the conventional χ^2 test, the hypothesis of all the coefficients being zero can easily be rejected. The test statistics is significantly large at 6129.7 (see Table III.7).

16. The null hypothesis of no autocorrelation in the residual (of Equation (5)) cannot be rejected at the conventional significance level. The Lagrange-multiplier (LM) test statistic is estimated at 50.62, for which the *p*-value is 0.409. In terms of stability, the largest modulus of other potential cointegrating vectors is at 0.5873, meaning no modulus is close to the unit root, thus indicating that the estimated cointegrating equation is stable. Finally, the normality test based on the skewness statistics cannot reject the null of normality at the conventional 5 percent significance level, though it can be rejected at the 10 percent significance level.

[26] The restriction that the coefficient of the US$-pula exchange rate is zero produced similar estimation results but did not improve the overall fit of the equation and the normality assumption statistics. See the first and sixth columns in Table III.8.

[27] These events may raise a concern about possible structural changes in the behavior of inflation over the sample period. However, inclusion of the time indicator variables for these periods did not generate more reliable estimation results than the baseline model, which is presented in the following sections.

This finding, though somewhat weak, confirms that the disturbance for the inflation equation is normally distributed.

Restricted model

17. Imposing some linear restrictions can generate a more concise result. Equations (5) and (6) have the following two restrictions:

$$\beta_{2k} = -\beta_{4k} \text{ and } \alpha_2 = -\alpha_4 \quad \text{for } \forall k \,. \tag{8}$$

$$\beta_{6k} = -\beta_{3k} \text{ and } \alpha_6 = -\alpha_3 \quad \text{for } \forall k \,. \tag{9}$$

Empirically, equation (7) may not support these restrictions, because the hypothesis for these linear restrictions can be rejected by the standard Wald tests; however, they have a theoretical basis; equation (8) holds under the quantity theory of money with stability of money velocity, and equation (9) implies that imported tradables prices are exactly calculated by the world price and the exchange rate (following equation (2)).

18. With the restrictions, the estimated cointegrating equation is:[28]

$$\begin{aligned} \ln CPI = {} & \underset{(0.064)}{0.485}(\ln M2 - \ln RGDP) + \underset{(0.014)}{0.067} TermDepositRate \\ & + \underset{(0.141)}{0.582}(\ln CPIofSA - \ln Rand/Pula) + 1.515 \end{aligned} \,. \tag{10}$$

The significance of the coefficients is better than in the unrestricted model. The necessary estimation assumptions are also satisfied, and the dynamic error-correction model is reasonable, though it contains some margins of error, as shown in ANNEX III.I and III.II.

19. Equations (7) and (10) suggest Botswana's prices over the long term behave as follows:

- Both statistically and economically, the strongest determinant of price movements in Botswana is South African inflation. The estimated elasticity of South Africa's inflation relative to Botswana's is 1.6, suggesting that prices between the two countries gets transmitted to a considerable degree. An elasticity well over one surely

[28] The exchange rate against the US$ is omitted in the restricted model. When only one of the restrictions was imposed, the estimation results were found to be unstable.

includes some secondary, indirect effects on domestic tradables and nontradables.[29] Notably, this result appears consistent with the fact that Botswana's inflation—which averages 9.1 percent over the sample period—has been one-and-a-half times as high as South Africa's average rate—6.6 percent. By contrast, under the restricted model, the estimated elasticity of inflation imported from South Africa is 0.58, somewhat comparable to the share of imported tradables in the basket (i.e., about 50 percent).

- A depreciation of the pula against South Africa's rand also has a significant inflationary impact (the estimated coefficient is -0.36). In the econometric model, the exchange rate is defined in foreign currency units per pula in logarithm. Similar to South Africa's inflation and interest rate effects, this depreciation effect is relatively powerful in a statistical sense.

- By contrast, the depreciation against the U.S. dollar has a statistically insignificant and economically limited impact on inflation, perhaps because only export prices are denominated in U.S. dollars, making such depreciations less relevant to Botswana's domestic inflation.

- Monetary expansion has a small but significant inflationary impact. At 0.14, the coefficient indicates a statistically significant but weak relationship between monetary aggregates and prices in the unrestricted equation; by contrast, the change in the ratio of money to GDP exerted a stronger effect in the restricted model, though it was still below that of the South African CPI, adjusted for changes in the rand-pula exchange rate.

- As expected, inflation decreases with real money demand arising from economic expansion: 1 percent GDP growth would cause a half percent of disinflation in equilibrium.

- Finally, higher price levels are associated with higher interest rates. The equation shows that a 1 percent increase in (term deposit) interest rates is accompanied by a 3.5 percent of inflation.[30,31]

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[29] Even if inflation is measured for only nontradables, South Africa's price level has a significant and large impact (Table III.7), suggesting there is a significant degree of price transmission from tradables to nontradables. In addition, domestic inflation expectations might be highly sensitive to import inflation from South Africa, accelerating domestic prices. Otherwise, the elasticity would not exceed unity.

[30] Note that interest rates are in percent. The other variables are in logarithm. Therefore, the equation implies that $\frac{\Delta CPI}{CPI} = 0.035 \Delta TermDepositRate$.

E. Conclusion

20. The analysis explores the long-term behavior of inflation in Botswana. Not surprisingly, changes in South Africa's consumer prices largely determine inflation. Changes in the exchange rate against the South African rand also affect inflation. These findings support the view that Botswana, as a typical small open economy, is closely linked to a large neighboring economy. This linkage means Botswana's monetary and exchange policies must consider the external economic environment, particularly the pula's exchange rate against the rand. The inflation objective must also be consistent with South Africa's monetary stance.

21. The empirical result also sheds light on the need for prudent monetary policy to keep inflation low. The estimated effect of monetary expansion on inflation looks very small and only marginally different from zero. Nonetheless, it is statistically significant, thus indicating that money growth is modestly inflationary. M2 is the only monetary aggregate variable that produced an estimation result consistent with theory; the estimation using other aggregates implied a negative association between money growth and inflation.

22. In addition to money supply, the interest rate adjustment seems effective in monetary policy transmission to a certain, but not large, extent. The evidence suggests that, in equilibrium, 1 percent of inflation would require 0.3 percent higher (term deposit) interest rates.

[31] The cointegrating equation merely shows the long-run relations between the variables in the economy, toward which the agents try to force the variables back. There is no causality. Thus, the coefficient of 0.035 means that if inflation goes up by 1 percent, the interest rate should rise by about 0.3 percent.

ANNEX III.I: **Estimated Error-Correction Inflation Equation**

23. The error-correction inflation equations associated with the cointegrating equations (7) and (10) are presented in Table III.5. The short-term movements in domestic real GDP and consumer prices in South Africa have significant coefficients in the unrestricted model. Inflation decelerates with real growth and tends to be stimulated by South African inflation. Exchange rate depreciations against the rand also appear to fuel inflation, though the effect is statistically ambiguous. However, the restricted model indicates that the import inflation through the pula-rand exchange rate has a significant effect. The impact of monetary supply and interest rates are also subject to a wide margin of error, a result that may reflect the limited number of sample observations as well as the relatively strong ability of the cointegrating vector to capture the relationship among the endogenous variables.

24. To complement the above estimations, Granger causality tests were performed based on the system of seven error-correction equations (Table III.6). In the unrestricted model, South Africa's inflation Granger-causes inflation in Botswana, and vice versa,[32] revealing that the two countries' price developments are interdependent. It is also finds that, while real growth Granger-causes disinflation, monetary supply does not cause inflation in the short run. The Granger-causality between inflation and exchange rate depreciation remains inconclusive, though the evidence supports the view that Botswanan inflation causes the pula to depreciate against the rand (the *p*-value is 0.197).

25. The impulse response function depicts the effect of one-standard error originating from a variable in the system on other endogenous variables thorough the dynamic structure (Figures III.5 and III.6). Despite the difficulty of assessing the results, owing to generally large standard errors (particularly in the unrestricted model), a positive inflation shock in South Africa would likely raise Botswana's inflation rate for about 12 quarters (three years). A real shock would likely result in some disinflation. Although the impact of monetary and exchange rate shocks are difficult to assess because of their unstable transition paths, the projected response indicates that monetary shocks have a limited short-term impact on prices.

[32] The restricted model suggests that the causality between South Africa's and Botswana's inflation may be insignificant.

Table III.5. Error-Correction Inflation Equation [1]

	Unrestricted	Restricted
ECMlnCPI(-1)	-0.063	-0.065 **
	(0.057)	(0.030)
ΔlnCPI(-1)	-0.021	-0.114
	(0.156)	(0.148)
ΔlnM2(-1)	-0.007	
	(0.033)	
Δ(lnM2-lnRGDP)(-1)		-0.016
		(0.031)
ΔlnRand/pula(-1)	-0.031	
	(0.059)	
ΔlnUS$/pula(-1)	0.019	
	(0.035)	
ΔlnRGDP(-1)	-0.134 **	
	(0.066)	
ΔTerm Deposit Rate(-1)	-0.001	-0.003
	(0.002)	(0.002)
ΔlnCPI of SA(-1)	0.236 *	
	(0.127)	
Δ(lnCPI of SA-lnRand/pula)(-1)		0.092 **
		(0.042)
Constant	0.018	0.020 ***
	(0.004)	(0.003)
Obs.	44	44
R-squared	0.8772	0.8615

[1] * 10 percent significance level; ** 5 percent significance level; *** 1 percent significance level.

Table III.6. Granger Causality [1]

			Chi2 statistics [2]	
			Unrestricted	Restricted
lnM2	->	lnCPI	0.065	
lnCPI	->	lnM2	0.124	
lnM2-lnGDP	->	lnCPI		0.313
lnCPI	->	lnM2-lnGDP		2.048
lnRand/pula	->	lnCPI	0.361	
lnCPI	->	lnRand/pula	1.664	
lnUS$/pula	->	lnCPI	0.374	
lnCPI	->	lnUS$/pula	0.062	
lnRGDP	->	lnCPI	5.143 **	
lnCPI	->	lnRGDP	1.790	
Term Deposit Rate	->	lnCPI	0.585	2.550
lnCPI	->	Term Deposit Rate	0.113	0.034
lnCPI of SA	->	lnCPI	4.315 **	
lnCPI	->	lnCPI of SA	2.766 *	
lnCPI of SA-lnRand/pula	->	lnCPI		5.660 **
lnCPI	->	lnCPI of SA-lnRand/pula		2.450

[1] * 10 percent significance level; ** 5 percent significance level.

[2] The degree of freedom is all equal to one.

Figure III.6. Impulse Response Function, Unrestricted Model

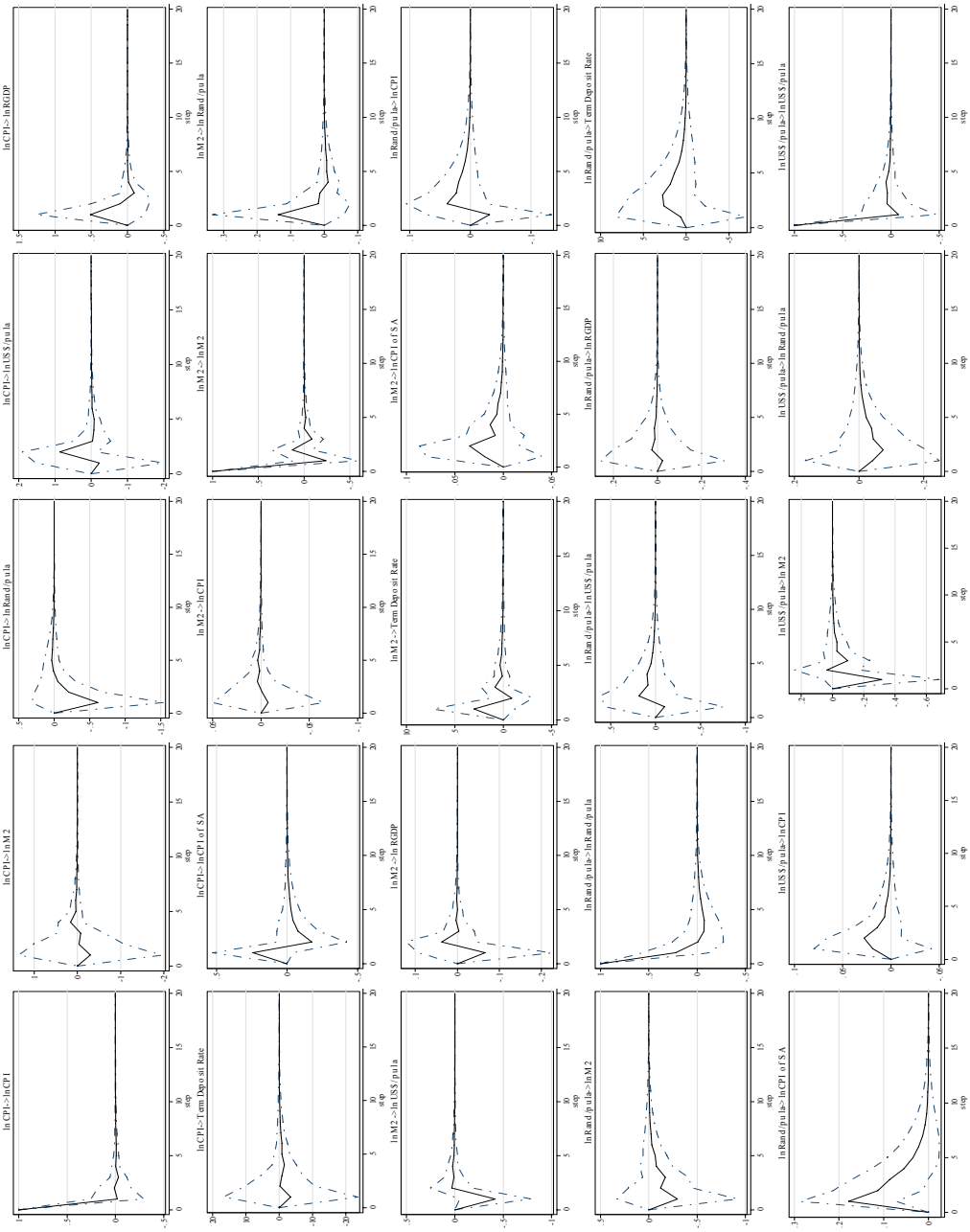


Figure III.6. Impulse Response Function, Unrestricted Model (Contd.)

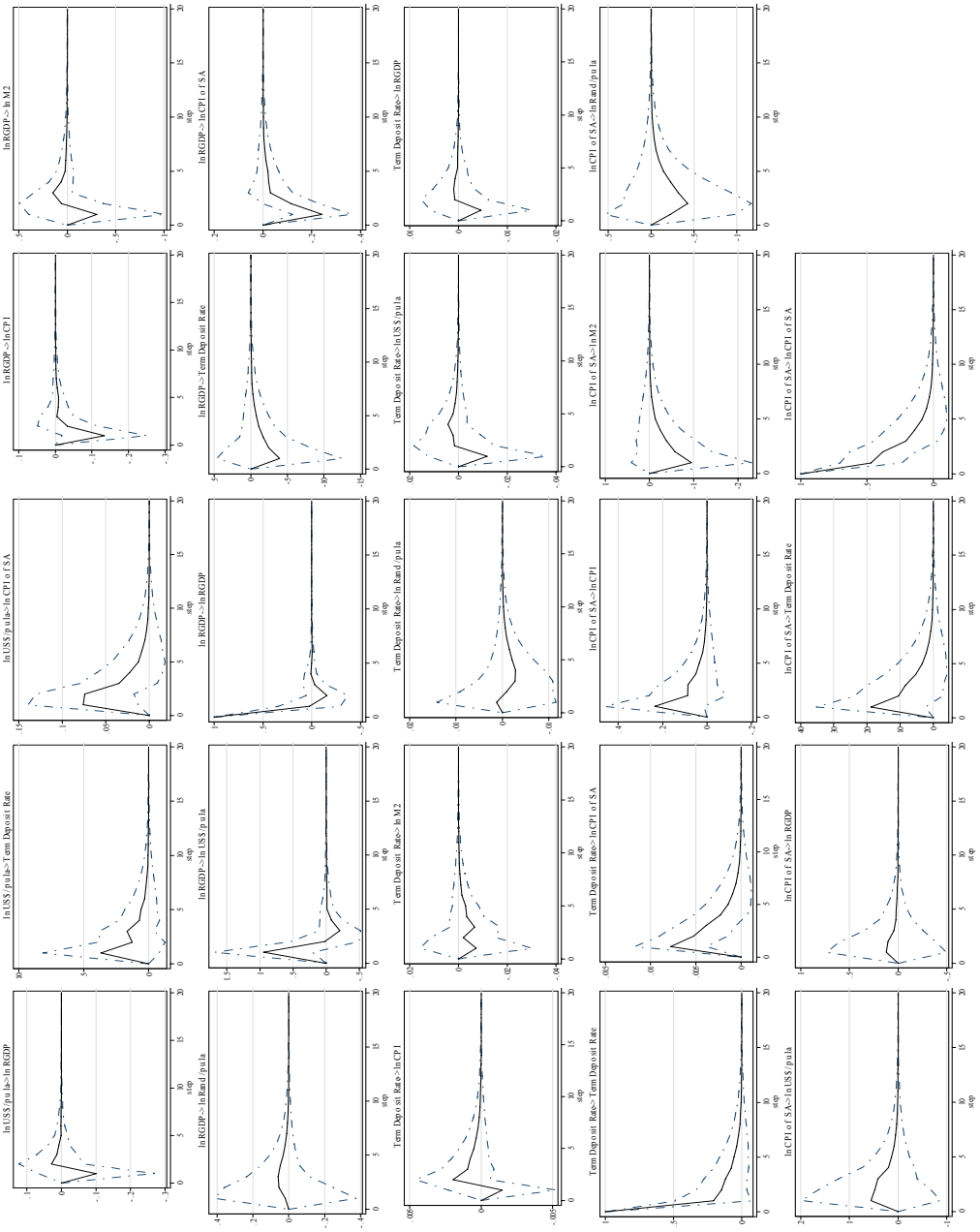
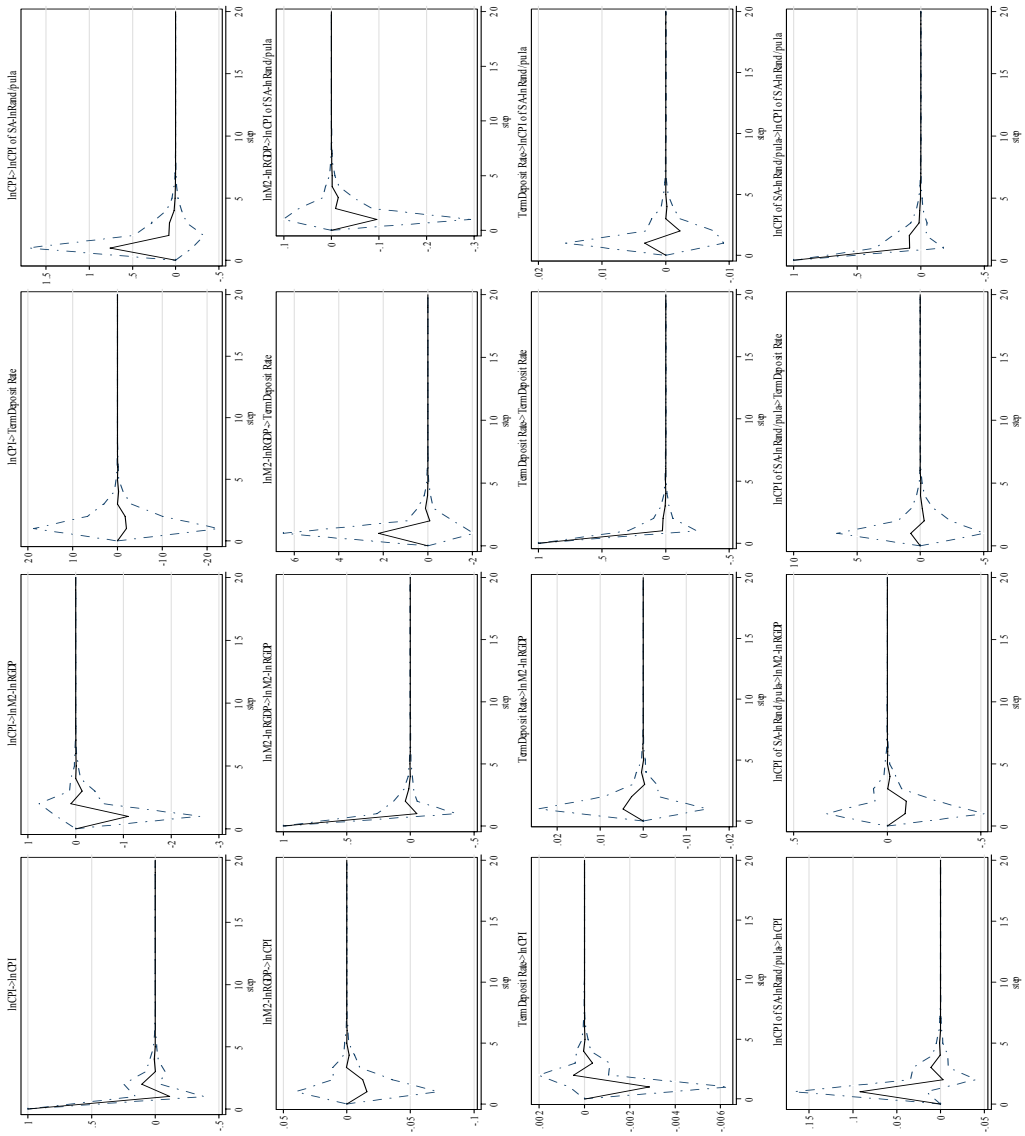


Figure III.7. Impulse Response Function, Restricted Model



ANNEX III.II: **Alternative Specifications for Cointegrating Equations**

26. This Annex examines the selection of the variables used for the baseline estimation. Compared with other estimation results using different variables, the baseline model is the most significant in a statistical sense and the most consistent with economic theory. The analytical framework is the same as in the main text; the choice of the number of cointegrating equations follows the Johansen's trace test technique, and the stationarity of almost all variables is confirmed in Table III.3.

27. First, in the baseline model, the price level is measured by a general consumer price index (*CPI*). An alternative measurement may be the price level, excluding exogenous factors, such as food and energy prices. The second column in Table III.7 shows the estimated cointegrating equation for CPI, excluding fuel and food items.[33] The result looks similar to the baseline model's, but the overall fit is less favorable, though the disturbance meets the normality assumption more favorably. Meanwhile, when taking CPI for only tradables or nontradables, the estimated equations hardly satisfy the normality assumption. Notably, however, the coefficients between these two models are close, suggesting that tradable prices affect nontradables prices, and vice versa.

28. Second, the baseline model defines money supply as a broader measurement, *M2*, which is defined as currency in circulation plus current and time deposits. This measure covers interest-bearing accounts but does not include the Bank of Botswana Certificates (BoBCs), which are one of Botswana's major saving instruments.[34] With narrower monetary aggregates (*M0* or *M1*) included in the model, the impact of monetary expansion turned negative (Table IV.8), a result that defies theory. On the other hand, with broader monetary aggregates (*M3* or *M4*), the coefficients of money supply are also negative and insignificant; however, this finding may be reasonable because the BoBCs, which are part of *M3* and *M4*, are used to mop up excess liquidity and contain the inflationary impact of monetary growth. Nonetheless, all these alternative models violate the normality assumption.

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[33] Botswana depends on imports for all petroleum products. The domestic retail petroleum prices are periodically reviewed by a joint committee comprising government and private oil companies, based on a predetermined formula that basically aims to pass-through international oil prices with a medium-term price stabilization mechanism (i.e., the National Petrol Fund).

[34] The outstanding amount of BoBCs, excluding those held by banks on their own accounts, reached 8 billion pula, or about 15 percent of GDP at year-end 2005, owing to relatively attractive interest rates. The Bank of Botswana has used the BoBCs to mop up excess liquidity. Given the emerging inflationary pressures in these years, the (period average) share of BoBCs in M3, which is M2 plus BoBCs held by nonbanks, has increased from 25 percent in 1998–2001 to 35 percent in 2002–05.

29. For the exchange rate, the baseline adopted two bilateral exchange rates against the South Africa's rand (*Rand/Pula*) and the U.S. dollar (*US$/Pula*). While Botswana imports most goods from a neighboring country, South Africa, the U.S. dollar figures prominently in the international trade markets, including diamonds. An obvious alternative is the euro (*Euro/Pula*) or the SDR (*SDR/Pula*), but the real growth and monetary growth results were theoretically inconsistent, and a stability concern remained. The estimation using the rand and SDR, both of which make up Botswana's currency basket, is close to the baseline model's, though money does not have a significant coefficient. The nominal effective exchange rate (*NEER*) is another way to incorporate all relevant foreign exchange rates in the model. The VEC estimation with the NEER index, which is employed from the standard IMF Effective Exchange Rate Facility database, generates a cointegrating vector that differs dramatically from that of the other specifications and is inconsistent with theory (the 11th column).

30. Finally, there are two interest rate data other than the 88-day notice deposit rate: the Bank Rate and primary lending rate, both of which are closely related to each other. The estimated cointegrating equation with the Bank Rate is more or less similar to the baseline, though the coefficients of real GDP and money supply are insignificant (though they have correct sign).[35] Notably, the model indicates that 1 percent of inflation would be associated with higher interest rate increases than in the baseline estimation. This finding makes sense because the Bank Rate has varied little over the past decade, and thus tends to be used to respond relatively actively to any given price movement.[36] However, this inelasticity calls into question the empirical validity of the unit-root technique used in the analysis.

[35] In case there are multiple cointegrating vectors, the basic solution would be to interpret them, taking into account structural restrictions based on the original economic models (Johansen and Juselius, 1992).

[36] The standard deviation was 1.27 for the 88-day notice deposit rate for the sample period, 0.87 for the Bank Rate, and 0.90 for the primary lending rate.

Table III.7. Alternative Cointegrating Equations for Different CPIs [1]

Dependent variable	lnCPI [baseline/ unrestricted]	lnCPI [baseline/ restricted]	lnCPI (ex. fuel/food)	lnCPI (tradables)	lnCPI (tradables)	lnCPI (non-tradables)	lnCPI (non-tradables)
lnM2	0.141 **		0.160 **	0.152 **		0.169 **	-0.336 **
	(0.063)		(0.078)	(0.060)		(0.086)	(0.169)
lnM2-lnRGDP		0.485 ***					
		(0.064)					
lnRand/Pula	-0.356 ***		-0.412 ***	-0.375 ***	-0.375 **	-0.347 ***	
	(0.072)		(0.087)	(0.069)	(0.173)	(0.098)	
lnUS$/Pula	0.029		0.037	-0.018	0.530 ***	0.177 ***	
	(0.040)		(0.048)	(0.038)	(0.101)	(0.055)	
lnRGDP	-0.476 ***		-0.387 *	-0.634 ***		-0.431 *	1.951 ***
	(0.179)		(0.212)	(0.175)		(0.238)	(0.411)
Time deposit rate	0.035 ***	0.067 ***	0.048 ***	0.029 ***		0.056 ***	0.081 ***
	(0.005)	(0.014)	(0.006)	(0.005)		(0.007)	(0.014)
lnCPI of SA	1.562 ***		1.478 ***	1.619 ***	2.067 ***	1.685 ***	
	(0.129)		(0.159)	(0.127)	(0.132)	(0.177)	
lnCPI of SA-lnRand/Pula		0.582 ***					
		(0.141)					
Constant	0.246	1.515	-0.680	1.216	-3.709	-0.920	-9.228
Obs.	44	44	44	44	50	44	45
Lags	2	2	2	2	2	2	1
Chi2 statistics	6129.7	585.1	4409.0	6098.9	771.4	3655.3	464.1
No autocorrelation:							
LM test statistics	50.62	15.20	52.29	39.92	14.04	60.18	24.66
p-value	0.409	0.510	0.347	0.819	0.596	0.132	0.076
Skewness test:							
Chi2 statistics	3.23	1.96	0.19	4.53	6.08	7.22	8.50
p-value	0.072	0.162	0.664	0.033	0.014	0.007	0.004

[1] * 10 percent significance level; ** 5 percent significance level; *** 1 percent significance level.

Table III.8. Alternative Cointegrating Equations with Different Independent Variables [1] [2]

	Baseline	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10) [3]	(11)	(12)	(13) [3]
lnM2	0.141 **					0.178 **	-0.329 **	-4.743 ***	0.111	-0.396 ***	-0.753 ***	0.020	-1.444 ***
	(0.063)					(0.080)	(0.168)	(0.988)	(0.086)	(0.154)	(0.279)	(0.074)	(0.329)
lnM0		-0.270 ***											
		(0.098)											
lnM1			-0.045										
			(0.052)										
lnM3				-0.145									
				(0.094)									
lnM4					-0.026								
					(0.077)								
lnRand/Pula	-0.356 ***	-0.575 ***	-0.381 ***	-0.441 ***	-0.399 ***	-0.546 ***			-0.490 ***			-0.275 ***	-0.275
	(0.072)	(0.129)	(0.082)	(0.094)	(0.078)	(0.095)			(0.091)			(0.106)	(0.465)
lnUS$/Pula	0.029	-0.041	0.007	0.029	0.014		0.014					0.174 ***	
	(0.040)	(0.063)	(0.039)	(0.047)	(0.038)		(0.090)					(0.046)	
lnEuro/Pula								-7.873 ***					
								(1.341)					
lnSDR/Pula									-0.075	0.112			
									(0.079)	(0.121)			
lnNEER											-1.165 **		
											(0.474)		
lnRGDP	-0.476 ***	-0.058	-0.033	-0.024	-0.109	-0.672 ***	1.456 ***	22.144 ***	-0.604 **	1.313 ***	3.455 ***	-0.046	4.815 ***
	(0.179)	(0.230)	(0.157)	(0.178)	(0.152)	(0.240)	(0.432)	(3.944)	(0.241)	(0.391)	(0.791)	(0.195)	(0.938)
Time deposit rate	0.035 ***	0.050 ***	0.034 ***	0.035 ***	0.033 ***	0.043 ***	0.051 ***	0.351 ***	0.042 ***		0.130 ***		
	(0.005)	(0.009)	(0.006)	(0.007)	(0.006)	(0.007)	(0.010)	(0.069)	(0.007)		(0.026)		
Bank rate												0.016 **	
												(0.008)	
Prime lending rate													0.058
													(0.049)
lnCPI of SA	1.562 ***	1.959 ***	1.557 ***	1.918 ***	1.623 ***	1.689 ***	0.553 *	-18.356 ***	1.711 ***	1.083 ***	-0.569	1.515 ***	-0.222
	(0.129)	(0.227)	(0.142)	(0.225)	(0.182)	(0.179)	(0.328)	(3.330)	(0.177)	(0.304)	(0.695)	(0.150)	(0.770)
Constant	0.246	-2.394	-1.876	-2.578	-1.625	0.917	-7.397	-69.399	0.692	7.455	-10.556	-1.760	-22.466
Obs.	44	44	44	44	44	44	45	43	44	45	45	45	45
Lags	2	2	2	2	2	2	1	3	2	1	1	1	1
Chi2 statistics	6129.7	2049.9	4960.9	3877.3	5352.6	3047.9	827.6	55.6	3545.8	1181.2	203.1	4198.2	205.8
No autocorrelation:													
LM test statistics	50.62	64.20	63.54	70.14	65.82	36.22	39.83	30.80	31.40	37.29	29.41	47.46	52.88
p-value	0.409	0.071	0.079	0.025	0.055	0.458	0.304	0.714	0.976	0.410	0.774	0.536	0.327
Skewness test:													
Chi2 statistics	3.23	4.23	5.24	6.23	6.00	7.07	3.32	3.94	6.28	3.39	8.13	2.42	2.41
p-value	0.072	0.040	0.022	0.013	0.014	0.008	0.068	0.047	0.012	0.066	0.004	0.120	0.121

[1] The dependent variable is the logarithsm of CPI.

[2] * 10 percent significance level; ** 5 percent significance level; *** 1 percent significance level.

[3] One of the estimated cointegrating equations is shown.

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Table 1. Botswana: GDP by Type of Expenditure at Current Prices, 2000/01–2004/05 1/

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.
			(In millions of pula)		
Total consumption	14,956	16,656	19,303	21,188	24,633
General government	6,518	7,348	8,967	9,162	11,104
Central government	5,759	6,462	7,921	8,045	9,890
Local government	759	886	1,047	1,117	1,214
Private	8,439	9,308	10,336	12,027	13,529
Total investment	13,710	14,798	15,457	18,401	16,958
Gross fixed capital formation	6,898	7,743	8,736	9,018	9,937
Public	3,372	3,824	4,150	4,170	3,895
Private	3,526	3,920	4,586	4,848	6,042
Changes in stocks	6,812	7,055	6,721	9,383	7,021
Net exports of goods and services	7,021	4,355	4,273	3,251	7,162
Exports of goods and services	17,826	16,399	19,182	17,875	24,266
Of which : exports of goods	15,983	13,844	15,797	14,182	19,557
Imports of goods and services	-10,806	-12,044	-14,909	-14,624	-17,105
Of which : imports of goods	-8,965	-10,038	-12,780	-12,112	-14,225
Gross domestic savings 2/	19,831	19,038	20,175	21,392	24,120
Central government	3,742	6,025	5,446	7,031	7,085
Other	12,335	12,945	14,631	16,411	18,665
Resource gap	6,121	4,240	4,718	2,991	7,162
Total GDP	34,787	35,693	39,478	42,580	48,753
			(In percent of GDP)		
Total consumption	43.0	46.7	48.9	49.8	50.5
General government	18.7	20.6	22.7	21.5	22.8
Central government	16.6	18.1	20.1	18.9	20.3
Local government	2.2	2.5	2.7	2.6	2.5
Private	24.3	26.1	26.2	28.2	27.8
Total investment	39.4	41.5	39.2	43.2	34.8
Gross fixed capital formation	19.8	21.7	22.1	21.2	20.4
Public	9.7	10.7	10.5	9.8	8.0
Private	10.1	11.0	11.6	11.4	12.4
Changes in stocks	19.6	19.8	17.0	22.0	14.4
Net exports of goods and services	20.2	12.2	10.8	7.6	14.7
Exports of goods and services	51.2	45.9	48.6	42.0	49.8
Of which : exports of goods	45.9	38.8	40.0	33.3	40.1
Imports of goods and services	-31.1	-33.7	-37.8	-34.3	-35.1
Of which : imports of goods	-25.8	-28.1	-32.4	-28.4	-29.2
Gross domestic savings 2/	57.0	53.3	51.1	50.2	49.5
Central government	10.8	16.9	13.8	16.5	14.5
Other	35.5	36.3	37.1	38.5	38.3
Resource gap	17.6	11.9	11.9	7.0	14.7

Source: Central Statistics Office.

1/ National accounts year beginning July 1.
2/ GDP minus consumption.

Table 2. Botswana: GDP by Type of Expenditure at Constant 1993/94 Prices, 2000/01–2004/05 1/

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.
	(In millions of pula)				
Consumption	9,705	10,586	10,963	9,759	10,434
Public	4,967	5,635	5,969	4,299	4,696
Private	4,738	4,951	4,994	5,461	5,738
Total investment	9,124	8,183	7,992	8,361	7,710
Gross fixed capital formation	4,194	4,451	4,516	4,148	4,159
Of which : general government	7,431	6,664	6,509	6,810	6,279
Changes in stocks	4,930	3,732	3,476	4,212	3,551
Net exports of goods and services	2,880	1,434	1,135	710	2,070
Exports of goods and services	8,967	7,871	8,408	7,371	9,316
Imports of goods and services	-6,087	-6,437	-7,273	-6,661	-7,246
Gross domestic expenditure	18,829	18,769	18,955	18,120	18,143
GDP at constant prices	18,242	18,530	20,298	20,985	22,742
	(Annual percentage change)				
Consumption	4.6	9.1	3.6	-11.0	6.9
Public	9.4	13.5	5.9	-28.0	9.2
Private	-0.1	4.5	0.9	9.3	5.1
Total investment	166.4	-10.3	-2.3	4.6	-7.8
Gross fixed capital formation	-6.0	6.1	1.5	-8.1	0.3
Of which : general government	218.5	-10.3	-2.3	4.6	-7.8
Changes in stocks	-574.9	-24.3	-6.8	21.2	-15.7
Net exports of goods and services	48.0	-50.2	-20.9	-37.4	191.5
Exports of goods and services	7.8	-12.2	6.8	-12.3	26.4
Imports of goods and services	-4.5	5.8	13.0	-8.4	8.8
Gross domestic expenditure	48.2	-0.3	1.0	-4.4	0.1
GDP at constant prices	19.7	1.6	9.5	3.4	8.4

Source: Central Statistics Office.

1/ National accounts year beginning July 1.

Table 3. Botswana: GDP by Type of Economic Activity at Current Prices, 2000/01–2004/05 1/

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.
			(In millions of pula)		
Agriculture	755	792	871	952	1,034
Mining	16,236	15,013	14,704	15,079	18,527
Manufacturing	1,344	1,404	1,550	1,648	1,752
Water and electricity	689	750	927	1,059	1,169
Construction	1,563	1,738	1,976	2,103	2,242
Trade and hotels	3,193	3,651	4,969	4,894	5,083
Transport	1,058	1,151	1,288	1,399	1,609
Banking, insurance, and business services	3,202	3,644	4,096	4,525	5,123
General government	4,568	5,264	5,979	7,232	8,024
Social and personal services	1,107	1,249	1,394	1,595	1,692
Adjustments items	1,073	1,038	1,723	2,095	2,499
GDP at current prices	34,787	35,693	39,478	42,580	48,753
			(In percent of total GDP)		
Agriculture	2.6	2.5	2.4	2.2	2.1
Mining	35.2	35.2	34.4	35.4	38.0
Manufacturing	4.7	4.4	4.2	3.9	3.6
Water and electricity	2.4	2.3	2.5	2.5	2.4
Construction	5.5	5.4	5.4	4.9	4.6
Trade and hotels	11.2	11.4	11.4	11.5	10.4
Transport	3.7	3.6	3.5	3.3	3.3
Banking, insurance, and business services	11.2	11.4	11.2	10.6	10.5
General government	16.0	16.5	15.8	17.0	16.5
Social and personal services	3.9	3.9	3.8	3.7	3.5
Adjustments items	3.7	3.3	5.4	4.9	5.1
GDP at current prices	100.0	100.0	100.0	100.0	100.0

Source: Central Statistics Office.

1/ National accounts year beginning July 1.

Table 4. Botswana: GDP by Type of Economic Activity at Constant 1993/94 Prices, 2000/01–2004/05 1/

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.
			(In millions of pula)		
Agriculture	445	433	441	454	469
Mining	7,753	7,489	8,285	8,308	9,821
Manufacturing	681	682	703	709	691
Water and electricity	391	406	444	472	488
Construction	955	1,000	1,005	1,027	1,034
Trade and hotels	1,700	1,840	1,990	2,215	2,069
Transport	605	625	631	610	644
Banking, insurance, and business services	1,795	1,922	1,973	2,020	2,102
General government	2,641	2,861	3,267	3,434	3,558
Social and personal services	663	705	724	775	771
Adjustment items	614	567	833	963	1,095
GDP at constant prices	18,242	18,530	20,298	20,985	22,742
Of which : Non-mining private GDP	10,489	11,041	12,013	12,677	12,921
			(Annual percentage change)		
Agriculture	9.9	-2.6	1.9	2.8	3.3
Mining	17.6	-3.0	10.6	0.3	18.2
Manufacturing	-0.3	0.0	3.1	0.8	-2.6
Water and electricity	5.4	3.7	9.5	6.4	3.3
Construction	1.6	4.7	0.6	2.1	0.7
Trade and hotels	6.5	8.2	8.2	11.3	-6.6
Transport	5.0	0.3	0.9	-3.4	5.6
Banking, insurance, and business services	5.1	7.1	2.6	2.4	4.1
General government	6.7	8.3	3.7	5.1	3.6
Social and personal services	2.8	6.2	2.6	7.0	-0.5
Adjustment items	-9.9	-7.6	68.7	15.6	13.8
GDP at constant prices	8.6	2.1	7.8	3.4	8.4
Of which : Non-mining private GDP	4.1	5.1	6.4	5.5	1.9

Source: Central Statistics Office.

1/ National accounts year beginning July 1.

Table 5. Botswana: Beef Sales, 2000–2005 1/

	2000	2001	2002	2003	2004	2005
Boneless beef sales by category						
			(In thousands of tons)			
Gross sales	17	25	18	17	17	...
			(In millions of pula)			
Gross sales	278	427	279	260	284	310
Beef sales by country						
			(In thousands of tons)			
Total	17	25	16	17	17	...
United Kingdom	11	15	10	9	9	...
South Africa	3	6	3	5	3	...
Other	4	4	4	3	4	...
			(In millions of pula)			
Total	278	427	279	260	284	310
United Kingdom	138	253	162	134	152	115
South Africa	28	61	30	48	42	55
Other	112	113	87	78	90	140
Memorandum item:						
			(In thousands)			
Total cattle processed	185	120	144	135	...	...

Source: Ministry of Agriculture.

1/ Calendar year.

Table 6. Botswana: Mineral Production and Value, 2000–2005

	2000	2001	2002	2003	2004	2005
Diamonds						
Volume (in millions of carats)	25.0	26.0	28.4	30.4	31.0	31.8
Copper-nickel matte						
Value (in millions of pula)	801.0	901.0	428.0	1,052.3	1,223.0	1,675.8
Volume (in thousands of tons)	46.0	42.0	45.8	52.0	44.1	50.4
Unit value (in pula per ton)	17,413.0	21,451.6	9,337.0	20,242.4	27,706.2	33,259.0
Coal						
Value (in millions of pula) 1/	30.0	29.0	30.0	25.9	28.7	28.2
Volume (in thousands of tons)	947.0	930.0	953.0	822.8	911.0	894.7
Unit value (in pula per ton)	31.0	32.0	32.0	31.5	31.5	31.5
Soda ash						
Value (in millions of pula) 1/	122.0	186.0	210.0	173.8	218.4	218.4
Volume (in thousands of tons)	190.0	251.0	283.0	234.5	264.7	263.7
Unit value (in pula per ton)	639.0	741.0	741.0	741.0	825.0	828.1
Salt						
Value (in millions of pula) 1/	32.0	37.0	65.0	47.3	46.0	38.5
Volume (in thousands of tons)	185.0	179.0	315.0	229.4	216.7	181.4
Unit value (in pula per ton)	175.0	206.0	206.0	206.0	212.0	212.0

Source: Central Statistics Office and Department of Mines.

1/ Estimated value of production.

Table 7. Botswana: Agricultural Producer Prices, 1998/99–2004/05 1/
(Pula per ton)

	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Sorghum	486	574	548	1,200	1,200	1,200	1,150
White maize	466	644	508	933	933	950	720
Pulses	783	876	2,832	3,908	1,130	1,240	4,550
Sunflower seeds	625	728	713	1,531	1,531	810	1,160
Shelled groundnuts	1,356	1,491	1,642	2,366	1,002	1,370	1,760

Source: Botswana Agricultural Marketing Board.

1/ Crop year beginning April 1.

Table 8. Botswana: Formal Sector Employment, 2000/01–2004/05 1/
(Number of employees, unless otherwise indicated)

	2000/01	2001/02	2002/03	2003/04	2004/05 2/	2005/06 3/
Private and parastatal	180,100	182,193	169,519	174,483	178,854	177,352
Private	166,600	155,062	155,936	160,861	166,759	164,489
Parastatal	13,500	13,564	13,583	13,622	12,095	12,863
Agriculture	6,000	6,206	5,975	6,264	5,262	5,554
Mining and quarrying	8,300	6,962	7,508	7,968	9,705	9,270
Manufacturing	30,900	30,287	29,789	30,169	32,621	32,396
Electricity and water	2,900	2,752	3,064	2,825	2,515	2,430
Construction	28,500	28,785	28,895	29,750	25,347	24,364
Commerce	49,900	53,527	53,792	55,288	56,164	55,979
Transport and communications	10,100	9,854	10,136	10,277	12,700	12,608
Finance and business services	19,200	18,266	18,263	19,025	21,476	21,763
Community and personal services	4,300	5,249	5,327	5,796	5,177	5,137
Education	6,500	6,741	6,772	7,121	7,888	7,850
General government	106,400	105,156	109,380	110,900	117,533	121,364
Central government	85,400	83,077	86,958	87,700	94,753	96,702
Local government	21,000	22,079	22,422	23,200	22,780	24,662
Total	286,500	287,349	278,899	285,382	296,387	298,716

Sources: Central Statistics Office.

1/ Data for September of first year listed.
2/ The increase in central government employment reflects the absorption of community, junior, and secondary school staff, the salaries of which were already being paid by the central government.
3/ Data for March 2005.

Table 9. Botswana: Statutory Minimum Hourly Wage Rates, 2000–2006

	2000	2001	2002	2003	2004	2005	2006 May
				(In thebe) 1/			
Manufacturing, service, and repair trades	205	225	240	260	290	310	335
Building, construction, exploration, and quarrying	205	225	240	260	290	310	335
Hotel, catering, and entertainment	205	225	240	240	290	310	335
Garages, motor trade, and road transport	205	225	225	260	255	270	290
Wholesale distributive trade	205	225	240	260	290	310	335
Retail distributive trade	185	205	215	230	290	310	335
Retail and wholesale nightwatchmen	180	200	210	210	290	260	280
Other nightwatchmen	205	225	240	260	290	310	335
				(Annual growth rate, in percent)			
Manufacturing, service, and repair trades	7.9	9.8	6.7	8.3	11.5	6.9	8.1
Building, construction, exploration, and quarrying	7.9	9.8	6.7	8.3	11.5	6.9	8.1
Hotel, catering, and entertainment	7.9	9.8	6.7	0.0	20.8	6.9	8.1
Garages, motor trade, and road transport	7.9	9.8	0.0	15.6	-1.9	5.9	7.4
Wholesale distributive trade	13.9	9.8	6.7	8.3	11.5	6.9	8.1
Retail distributive trade	8.8	10.8	4.9	7.0	26.1	6.9	8.1
Retail and wholesale nightwatchmen	9.1	11.1	5.0	0.0	38.1	-10.3	7.7
Other nightwatchmen	7.9	9.8	6.7	8.3	11.5	6.9	8.1

Source: Central Statistics Office.

1/ 100 thebe = 1 pula.

Table 10. Botswana: Average Monthly Cash Earnings by Sector, 1999–2003 1/

	1999	2000	2001	2002	2003
			(In pula)		
Citizens	1428	1546	1723	1973	2119
Private and parastatal	1,243	1605	1414	1560	1719
Agriculture	383	434	409	563	542
Mining and quarrying	2,249	3,010	2,423	3,206	3,362
Manufacturing	785	1096	835	849	944
Electricity and water	3,166	3,616	3,525	4,517	5,569
Construction	776	1006	917	997	1050
Commerce	953	1,001	1,179	989	1,253
Transport and communications	2,318	2,689	2,616	3,510	3,597
Finance and business services	1,979	2,164	2,251	3,056	3,080
Community and personal services	1,413	1,669	1,660	1,998	1,965
Education	2,261	3,069	2,775	2,895	2,830
Local government	1,496	1,732	1,948	1,866	2,502
Central government	1,733	2,001	2,232	2,804	2,781
Non-citizens	5260	5410	5907	6601	7387
Private and parastatal	5257	5424	5865	6655	7518
Local government	5091	4968	6018	7538	6888
Central government	5292	5391	6073	6342	6755
Total	1680	1742	1945	2217	2396
			(Annual percentage change)		
Citizens	14.1	8.3	11.4	14.5	7.4
Private and parastatal	16.5	29.1	-11.9	10.3	10.2
Agriculture	10.7	13.3	-5.8	37.7	-3.7
Mining and quarrying	15.3	33.8	-19.5	32.3	4.9
Manufacturing	24.2	39.6	-23.8	1.7	11.2
Electricity and water	55.0	14.2	-2.5	28.1	23.3
Construction	2.9	29.6	-8.8	8.7	5.3
Commerce	9.9	5.0	17.8	-16.2	26.7
Transport and communications	34.4	16.0	-2.7	34.2	2.5
Finance and business services	24.2	9.3	4.0	35.8	0.8
Community and personal services	13.1	18.1	-0.5	20.4	-1.6
Education	14.0	35.7	-9.6	4.3	-2.2
Local government	25.7	15.8	12.5	-4.2	34.1
Central government	10.7	15.5	11.5	25.6	-0.8
Non-citizens	13.7	2.9	9.2	11.7	11.9
Private and parastatal	7.2	3.2	8.1	13.5	13.0
Local government	29.6	-2.4	21.1	25.3	-8.6
Central government	46.1	1.9	12.7	4.4	6.5
Total	17.5	3.7	11.7	14.0	8.1

Source: Central Statistics Office.

1/ Based on the formal sector employment survey in March each year except for 1999, in which the survey was conducted in September.

Table 11. Botswana: Consumer Price Index of Tradables and Nontradables, 1999–2006

	All Items Index	Inflation (Percent change)	Non-Tradables Index	Inflation (Percent change)	Domestic Tradeables Index	Inflation (Percent change)	Imported Tradeables Index	Inflation (Percent change)	All Tradeables Index	Inflation (Percent change)
Weights	100.0		29.2		23.8		47.0		70.8	
1999 Dec	125.0	8.4	125.1	12.0	121.8	6.7	127.1	7.9	125.3	7.5
2000 Dec	135.6	8.5	136.4	9.0	129.5	6.3	138.2	8.7	135.3	8.0
2001 Dec	143.4	5.8	147.0	7.8	137.1	5.9	144.7	4.7	142.1	5.0
2002 Dec	158.6	10.6	161.4	9.8	158.0	15.2	156.5	8.2	157.2	10.6
2003 Dec	168.7	6.4	174.6	8.2	167.6	6.1	165.1	5.5	166.2	5.7
2004 Jan	169.3	6.2	176.4	8.0	168.1	5.4	165.2	5.5	166.4	5.5
Feb	171.0	6.3	177.1	8.0	169.5	5.5	167.7	5.9	168.6	5.8
Mar	172.7	6.9	179.1	8.5	170.9	5.7	169.3	6.6	170.1	6.3
Apr	174.5	6.6	179.4	8.0	173.2	5.8	171.7	6.2	172.5	6.0
May	177.0	7.4	186.4	11.9	174.3	5.6	172.4	5.8	173.3	5.7
Jun	178.2	6.7	186.5	7.7	175.3	5.9	174.3	6.5	174.9	6.3
Jul	178.1	6.8	186.9	7.8	174.7	5.6	174.1	6.6	174.6	6.3
Aug	178.7	6.7	188.4	8.7	175.0	4.8	174.4	6.5	174.9	6.0
Sep	179.7	7.0	189.3	9.0	176.2	4.9	175.4	7.0	176.0	6.3
Oct	180.9	7.7	191.7	10.4	176.5	5.1	176.3	7.6	176.7	6.7
Nov	181.3	7.6	191.9	10.0	176.6	5.4	177.0	7.4	177.1	6.7
Dec	181.9	7.8	192.4	10.2	177.1	5.6	177.6	7.6	177.6	6.9
2005 Jan	182.9	8.0	194.0	10.0	177.4	5.5	178.8	8.2	178.5	7.3
Feb	183.5	7.3	195.0	10.2	177.9	5.0	179.2	6.8	179.0	6.2
Mar	184.0	6.5	195.3	9.0	178.5	4.4	179.9	6.3	179.6	5.6
Apr	185.3	6.2	195.4	8.9	180.1	4.0	181.6	5.7	181.3	5.2
May	188.2	6.3	196.9	5.6	180.8	3.7	186.5	8.2	184.8	6.7
Jun	190.9	7.1	197.6	5.9	185.2	5.6	189.5	8.7	188.3	7.7
Jul	192.8	8.2	197.7	5.8	187.4	7.3	192.3	10.4	190.8	9.3
Aug	196.0	9.6	198.1	5.1	189.5	8.3	197.7	13.3	195.0	11.5
Sep	197.7	10.0	199.4	5.4	191.1	8.4	199.7	13.8	196.8	11.9
Oct	201.2	11.2	203.3	6.0	192.4	9.0	204.3	15.8	200.3	13.4
Nov	201.8	11.3	203.5	6.1	193.2	9.4	204.9	15.8	201.1	13.5
Dec	202.6	11.4	203.9	6.0	194.0	9.6	205.7	15.8	201.9	13.6
2006 Jan	206.1	12.7	210.7	8.7	197.6	11.4	207.4	16.0	204.3	14.5
Feb	207.5	13.1	213.0	9.2	200.0	12.4	208.0	16.1	205.5	14.9
Mar	209.3	13.8	213.2	9.2	203.8	14.2	209.7	16.6	208.0	15.8
Apr	211.6	14.2	215.5	10.3	206.3	14.5	212.0	16.7	210.3	16.0
May	213.6	13.5	215.5	9.5	208.4	15.3	214.9	15.2	212.9	15.2

Source: Central Statistics Office.

Table 12. Botswana: Cost of Living Index, 1999–2006
(Index; November 1996=100)

	Food	Alcohol and Tobacco	Clothing and Footwear	Housing	Fuel and Power	Furniture etc.	H/hold Operation	Health, Personal Care	Transport etc.	Leisure	Education	Other	All items Index	Annual inflation
Weights	25.5	13.5	5.8	12.2	2.6	5.1	3.9	5.7	19.7	1.6	3.8	0.6	100.0	%
1999 Dec.	122.1	134.9	117.4	122.1	134.9	117.4	126.0	118.5	123.7	129.2	116.8	123.2	109.8	8.4
2000 Dec.	127.1	146.9	120.6	145.5	145.2	134.4	141.9	120.7	142.2	111.3	143.2	134.5	135.6	8.5
2001 Dec.	132.3	158.9	125.7	158.7	149.5	136.7	153.2	123.8	149.0	116.0	147.6	139.3	143.4	5.8
2002 Dec	151.2	179.0	130.9	175.4	163.0	145.6	166.8	133.0	164.6	124.2	164.8	172.0	158.6	10.6
2003 Dec	160.1	188.2	135.8	194.7	159.8	150.7	174.2	142.1	170.2	126.7	177.7	179.1	168.7	6.4
2004 Jan	160.8	188.0	136.2	195.0	158.6	150.9	173.2	142.3	170.2	125.8	192.0	179.2	169.3	6.2
Feb	161.4	190.3	136.7	195.6	158.6	151.4	173.9	143.1	175.7	127.5	192.0	180.0	171.0	6.3
Mar	163.1	192.7	136.1	196.8	162.7	150.5	173.4	145.0	178.9	127.1	192.0	184.5	172.7	6.9
Apr	165.5	195.9	136.4	197.5	166.3	151.0	175.7	146.0	181.1	128.7	192.1	184.7	174.5	6.6
May	166.1	199.3	135.9	212.2	167.0	150.8	174.5	145.7	181.3	128.4	192.3	184.2	177.0	7.4
Jun	167.0	200.4	136.1	211.4	172.2	151.4	176.8	146.9	184.6	128.6	192.3	185.1	178.2	6.7
Jul	165.9	200.0	136.8	211.8	173.4	151.7	176.6	147.3	184.7	129.2	192.3	191.4	178.1	6.8
Aug	166.3	200.1	137.0	212.0	173.4	152.3	177.7	147.5	188.7	129.5	192.3	191.2	178.7	6.7
Sep	166.6	201.8	136.7	213.1	176.0	153.5	181.3	147.8	190.6	128.5	192.3	192.2	179.7	7.0
Oct	167.3	203.5	137.1	214.9	175.8	153.5	181.9	147.6	194.0	129.0	192.3	192.6	180.9	7.7
Nov	167.4	204.8	136.8	215.7	177.2	152.7	182.6	148.0	194.2	130.3	192.3	193.5	181.3	7.6
Dec	168.0	205.4	137.4	216.4	179.1	153.7	183.6	149.0	194.3	130.7	192.3	194.1	181.9	7.8
2005 Jan	168.4	206.1	137.6	217.1	179.0	154.1	184.3	149.3	196.1	132.2	203.2	193.8	182.9	8.0
Feb	168.0	208.1	138.7	217.3	179.5	153.9	184.4	149.5	196.1	133.2	211.1	193.6	183.5	7.3
Mar	168.0	210.5	138.9	217.7	179.9	154.2	185.9	149.7	196.1	133.5	211.1	193.9	184.0	6.5
Apr	169.6	214.2	140.3	218.8	181.0	154.5	186.0	150.1	196.2	134.7	211.1	198.3	185.3	6.2
May	169.0	216.2	140.4	219.2	186.9	156.2	186.7	150.8	209.0	134.7	214.1	198.9	188.2	6.3
Jun	172.3	224.7	138.5	220.8	189.6	157.7	191.7	151.9	209.4	133.3	214.1	204.3	190.9	7.1
Jul	175.2	229.4	137.5	221.9	195.6	157.7	196.4	152.6	209.5	134.7	214.1	205.4	192.8	8.2
Aug	177.1	233.8	138.8	222.9	207.7	159.6	196.9	153.5	218.4	135.5	214.1	202.1	196.0	9.6
Sep	179.1	236.3	139.9	224.0	219.4	161.4	199.5	153.8	218.6	136.6	214.1	203.2	197.7	10.0
Oct	180.6	238.6	139.9	224.4	225.8	163.1	201.2	155.4	233.4	136.8	214.1	203.6	201.2	11.2
Nov	182.1	239.0	139.2	225.2	225.7	164.3	202.4	155.0	233.8	136.1	214.1	204.3	201.8	11.3
Dec	182.8	240.1	140.0	226.0	226.9	166.4	203.4	155.0	233.4	137.1	214.1	204.0	202.6	11.4
2006 Jan	186.5	240.7	140.8	226.7	225.7	167.0	204.4	156.6	235.9	137.2	263.6	205.0	206.1	12.7
Feb	188.4	242.9	139.7	229.0	225.8	167.9	204.9	161.5	236.2	139.8	263.7	206.6	207.5	13.1
Mar	191.2	246.8	139.5	231.2	231.4	169.3	207.8	162.3	236.4	138.8	264.3	205.9	209.3	13.8
Apr	194.1	250.2	140.1	231.8	234.5	171.9	208.0	164.3	239.7	139.1	264.3	206.4	211.6	14.2
May	196.6	251.8	139.6	231.5	254.4	173.8	208.4	165.4	243.0	138.6	264.5	207.0	213.6	13.5

Source: Central Statistics Office.

Table 13. Botswana: Liquid Fuel Import and Retail Prices, 2002–2006
(In pula, unless otherwise indicated; end of period)

	2002	2003	2004	2005	2006 May
	(In pula per liter)				
Gasoline					
Import price 1/	1.48	1.49	1.98	2.68	3.51
Retail price	2.33	2.33	2.97	4.02	4.16
Kerosene					
Import price 1/	1.58	1.40	2.04	3.10	3.59
Retail price	1.96	1.91	2.34	3.20	4.08
Diesel					
Import price 1/	1.56	1.33	1.93	2.91	3.74
Retail price	2.15	2.18	2.74	3.94	4.41
Memorandum items:					
Gasoline retail price in U.S. dollar	0.43	0.52	0.69	0.73	0.72
U.S. dollars per pula (end of period)	0.18	0.23	0.23	0.18	0.17

Source: Ministry of Minerals, Energy and Water Resources.

1/ Import Parity Gaborone.

Table 14. Botswana: Central Government Operations, 2000/01–2006/07 1/

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.	2005/06 Prel.	2006/07 Bud.
	(In millions of pula)						
Total revenue and grants	14,050	12,601	14,240	16,119	17,819	22,535	24,105
Total revenue	13,986	12,542	14,155	16,057	17,472	22,244	23,742
Tax revenue	12,078	10,582	12,259	14,146	16,245	20,124	21,916
Mineral revenue	8,368	6,996	7,503	8,163	8,682	11,045	11,389
Trade and excise taxes 2/	2,188	1,732	1,569	2,246	3,226	3,930	5,300
General sales tax	524	520	1,255	1,573	2,116	1,978	2,118
Other	998	1,334	1,933	2,165	2,221	3,170	3,109
Nontax revenue	1,908	1,960	1,896	1,911	1,226	2,121	1,826
Interest	205	189	227	208	-97	78	36
Property income	1,195	1,170	1,064	969	433	913	704
Other	508	601	605	733	891	1,130	1,086
Grants	65	59	84	61	348	290	363
Total expenditure and lending	11,536	13,671	15,710	16,275	17,383	17,881	23,223
Current expenditure	8,383	9,935	11,581	12,934	13,765	14,086	17,234
Wages and salaries	2,743	3,446	3,947	4,142	5,129	5,248	5,998
Interest	83	94	81	193	315	317	278
Other	5,557	6,394	7,553	8,600	8,322	8,520	10,959
Capital expenditure	3,135	3,698	4,200	4,256	3,910	3,851	6,035
Net lending	19	38	-71	-916	-293	-56	-47
Primary balance (deficit -)	2,597	-975	-1,389	36	751	4,971	1,160
Overall balance (deficit -)	2,514	-1,069	-1,471	-157	437	4,654	882
	(In percent of GDP)						
Total revenue and grants	42.4	35.5	37.0	38.6	37.7	41.2	39.5
Total revenue	42.2	35.4	36.7	38.4	37.0	40.7	38.9
Tax revenue	36.4	29.8	31.8	33.8	34.4	36.8	35.9
Mineral revenue	25.2	19.7	19.5	19.5	18.4	20.2	18.7
Trade and excise taxes 2/	6.6	4.9	4.1	5.4	6.8	7.2	8.7
General sales tax	1.6	1.5	3.3	3.8	4.5	3.6	3.5
Other	3.0	3.8	5.0	5.2	4.7	5.8	5.1
Nontax revenue	5.8	5.5	4.9	4.6	2.6	3.9	3.0
Interest	0.6	0.5	0.6	0.5	-0.2	0.1	0.1
Property income	3.6	3.3	2.8	2.3	0.9	1.7	1.2
Other	1.5	1.7	1.6	1.8	1.9	2.1	1.8
Grants	0.2	0.2	0.2	0.1	0.7	0.5	0.6
Total expenditure and lending	34.8	38.5	40.8	38.9	36.8	32.7	38.1
Current expenditure	25.3	28.0	30.1	30.9	29.2	25.7	28.3
Wages and salaries	8.3	9.7	10.2	9.9	10.9	9.6	9.8
Interest	0.3	0.3	0.2	0.5	0.7	0.6	0.5
Other	16.8	18.0	19.6	20.6	17.6	15.6	18.0
Capital expenditure	9.5	10.4	10.9	10.2	8.3	7.0	9.9
Net lending	0.1	0.1	-0.2	-2.2	-0.6	-0.1	-0.1
Primary balance (deficit -)	7.8	-2.7	-3.6	0.1	1.6	9.1	1.9
Overall balance (deficit -)	7.6	-3.0	-3.8	-0.4	0.9	8.5	1.4
Memorandum item:							
GDP (fiscal year; in millions of pula)	33,152	35,467	38,532	41,805	47,210	54,713	60,978

Sources: Ministry of Finance and Development Planning; and IMF staff estimates.

1/ Fiscal year beginning April 1.
2/ Trade and excise taxes are received from the revenue pool of the Southern African Customs Union.

Table 15. Botswana: Components of Central Government Revenue, 2000/01–2006/07 1/
(In millions of pula)

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.	2005/06 Prel.	2006/07 Bud.
Tax revenue	12,078	10,582	12,259	14,146	16,245	20,124	21,916
Mineral revenue	8,368	6,996	7,503	8,163	8,682	11,045	11,389
Trade and excise taxes 2/	2,188	1,732	1,569	2,246	3,227	3,930	5,300
General sales tax	524	520	1,255	1,573	2,116	1,978	2,118
Nonmineral income tax	925	1,249	1,840	2,079	2,082	2,994	2,920
Export duties	0	0	0	0	0	0	0
Taxes on property	16	16	18	12	13	13	36
Motor vehicle tax	40	51	55	62	105	127	124
Business and professional licenses	14	16	18	9	17	19	16
Airport tax	2	3	2	3	3	18	13
Nontax revenue	1,908	1,960	1,896	1,911	1,226	2,121	1,826
Interest	205	189	227	208	-97	78	36
Property income	1,195	1,170	1,064	969	433	912	704
Fees, charges, and reimbursements	508	601	605	733	891	1,130	1,086
Grants	65	59	84	61	348	290	363
Recurrent	...	...	0	0	0	0	0
Development	65	59	84	61	348	290	363
Total revenue and grants	14,050	12,601	14,240	16,118	17,819	22,535	24,105
				(In percent of GDP)			
Tax revenue	36.4	29.8	31.8	33.8	34.4	36.8	35.9
Mineral revenue	25.2	19.7	19.5	19.5	18.4	20.2	18.7
Trade and excise taxes 2/	6.6	4.9	4.1	5.4	6.8	7.2	8.7
General sales tax	1.6	1.5	3.3	3.8	4.5	3.6	3.5
Nonmineral income tax	2.8	3.5	4.8	5.0	4.4	5.5	4.8
Export duties	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Taxes on property	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Motor vehicle tax	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Business and professional licenses	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Airport tax	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nontax revenue	5.8	5.5	4.9	4.6	2.6	3.9	3.0
Interest	0.6	0.5	0.6	0.5	-0.2	0.1	0.1
Property income	3.6	3.3	2.8	2.3	0.9	1.7	1.2
Fees, charges, and reimbursements	1.5	1.7	1.6	1.8	1.9	2.1	1.8
Grants	0.2	0.2	0.2	0.1	0.7	0.5	0.6
Recurrent	...	...	0.0	0.0	0.0	0.0	0.0
Development	0.2	0.2	0.2	0.1	0.7	0.5	0.6
Total revenue and grants	42.4	35.5	37.0	38.6	37.7	41.2	39.5
Memorandum item:							
GDP (fiscal year; in millions of pula)	33,152	35,467	38,532	41,805	47,210	54,713	60,978

Source: Ministry of Finance and Development Planning; and IMF staff estimates.

1/ Fiscal year beginning April 1.
2/ Trade and excise taxes are received from the revenue pool of the Southern African Customs Union.

Table 16. Botswana: Economic Classification of Central Government Expenditure, 2000/01–2006/07 1/

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.	2005/06 Prel.	2006/07 Bud.
			(In millions of pula)				
Total expenditure and net lending	11,536	13,671	15,710	16,275	17,383	17,881	23,223
Current expenditure	8,383	9,935	11,581	12,934	13,765	14,086	17,234
Expenditure on goods and services	8,300	9,841	11,500	12,742	13,451	13,768	16,957
Wages and salaries	2,743	3,446	3,947	4,142	5,129	5,248	5,998
Other purchases of goods and services 2/	5,557	6,394	7,553	8,600	8,322	8,520	10,959
Interest payments	83	94	81	193	315	317	278
Capital expenditure	3,135	3,698	4,200	4,256	3,910	3,851	6,035
Net lending	19	38	-71	-916	-293	-56	-47
Gross lending	120	150	40	0	0	0	0
Repayment	-101	-112	-121	-916	-293	-124	-47
			(In percent of GDP)				
Total expenditure and net lending	34.8	38.5	40.8	38.9	36.8	32.7	38.1
Current expenditure	25.3	28.0	30.1	30.9	29.2	25.7	28.3
Expenditure on goods and services	25.0	27.7	29.8	30.5	28.5	25.2	27.8
Wages and salaries	8.3	9.7	10.2	9.9	10.9	9.6	9.8
Other purchases of goods and services 2/	16.8	18.0	19.6	20.6	17.6	15.6	18.0
Interest payments	0.3	0.3	0.2	0.5	0.7	0.6	0.5
Capital expenditure	9.5	10.4	10.9	10.2	8.3	7.0	9.9
Net lending	0.1	0.1	-0.2	-2.2	-0.6	-0.1	-0.1
Gross lending	0.4	0.4	0.1	0.0	0.0	0.0	0.0
Repayment	-0.3	-0.3	-0.3	-2.2	-0.6	-0.2	-0.1
Memorandum item:							
GDP (fiscal year; in millions of pula)	33,152	35,467	38,532	41,805	47,210	54,713	60,978

Sources: Ministry of Finance and Development Planning; and IMF staff estimates.

1/ Fiscal year beginning April 1.
2/ Includes transfers.

Table 17. Botswana: Functional Classification of Central Government Expenditure, 2000/01–2006/07 1/

	2000/01	2001/02	2002/03	2003/04 Rev.	2004/05 Rev.	2005/06 Prel.	2006/07 Bud.
				(In millions of pula)			
General public services	2,298	2,400	2,968	3,480	3,213	4,017	4,731
General administration	1,612	1,771	2,195	2,672	2,292	3,087	3,574
Public order and safety	686	629	773	809	921	930	1,157
Defense	998	1,305	1,451	1,503	1,464	1,556	1,686
Social services	5,033	5,876	6,889	7,556	7,978	9,662	10,976
Education	2,872	3,409	3,597	3,932	4,190	4,927	5,748
Health	630	803	1,103	1,634	2,076	2,494	2,536
Food and social welfare programs	424	463	350	384	116	215	164
Housing and urban and regional development	762	827	1,218	1,045	993	1,342	1,673
Other community and social services	345	373	621	561	603	685	855
Economic services	2,107	2,751	3,134	2,780	2,924	3,190	3,524
Agriculture, forestry, and fishing	482	570	688	642	540	672	674
Mining	75	394	101	92	116	135	169
Electricity and water supply	576	668	994	883	1,035	1,111	1,151
Roads, other transport, and communications	580	695	742	511	524	547	726
Commerce, industry, and other	330	424	609	652	708	725	804
Unallocated expenditure and adjustments	19	36	-373	-916	-293	-2,365	188
Total	11,536	13,671	15,710	16,275	17,383	17,881	23,223
				(In percent of GDP)			
General public services	6.9	6.8	7.7	8.3	6.8	7.3	7.8
General administration	4.9	5.0	5.7	6.4	4.9	5.6	5.9
Public order and safety	2.1	1.8	2.0	1.9	2.0	1.7	1.9
Defense	3.0	3.7	3.8	3.6	3.1	2.8	2.8
Social services	15.2	16.6	17.9	18.1	16.9	17.7	18.0
Education	8.7	9.6	9.3	9.4	8.9	9.0	9.4
Health	1.9	2.3	2.9	3.9	4.4	4.6	4.2
Food and social welfare programs	1.3	1.3	0.9	0.9	0.2	0.4	0.3
Housing and urban and regional development	2.3	2.3	3.2	2.5	2.1	2.5	2.7
Other community and social services	1.0	1.1	1.6	1.3	1.3	1.3	1.4
Economic services	6.4	7.8	8.1	6.7	6.2	5.8	5.8
Agriculture, forestry, and fishing	1.5	1.6	1.8	1.5	1.1	1.2	1.1
Mining	0.2	1.1	0.3	0.2	0.2	0.2	0.3
Electricity and water supply	1.7	1.9	2.6	2.1	2.2	2.0	1.9
Roads, other transport, and communications	1.8	2.0	1.9	1.2	1.1	1.0	1.2
Commerce, industry, and other	1.0	1.2	1.6	1.6	1.5	1.3	1.3
Unallocated expenditure and adjustments	0.1	0.1	-1.0	-2.2	-0.6	-4.3	0.3
Total	34.8	38.5	40.8	38.9	36.8	32.7	38.1
Memorandum item:							
GDP (fiscal year; in millions of pula)	33,152	35,467	38,532	41,805	47,210	54,713	60,978

Source: Ministry of Finance and Development Planning; and IMF staff estimates.

1/ Fiscal year beginning April 1.

Table 18. Botswana: Summary of Operations of Nonfinancial Public Enterprises, 2000–2005 1/

	2000	2001	2002	2003	2004	2005
	(In millions of pula)					
Operating revenue	2,082	2,300	2,342	2,579	2,271	1,702
Subsidies and transfers						
Net profit/loss	305	386	272	317	607	377
Long-term debt outstanding	2,036	2,102	2,013	1,833	1,800	920
Equity	4,599	4,991	5,321	5,592	5,821	3,837
Capital employed	5,853	7,449	7,783	7,944	8,604	4,679
Fixed assets	4,776	5,921	6,087	6,391	6,354	4,050
	(In percent, period average, unless otherwise indicated)					
Return on capital employed	3.3	12.8	3.1	-6.9	5.7	10.1
Return on equity	3.5	14.1	3.8	-8.6	10.7	12.7
Net profit-to-sales ratio	17.6	23.6	11.8	7.6	21.5	57.1
Debt-to-equity ratio	0.4	0.4	0.4	0.4	0.5	0.4
Memorandum item:						
Operating revenue (in percent of GDP)	8.3	6.6	6.6	6.5	5.3	3.5

Source: Bank of Botswana.

1/ Includes the Botswana Agricultural Marketing Board, the Botswana Livestock Development Corporation, the Botswana Housing Corporation, the Botswana Meat Commission, the Botswana Power Corporation, the Botswana Telecommunications Corporation, and the Botswana Water Utilities Corporation.

Table 19. Botswana: Monetary Survey, 2003–2006

	2003	2004	2005				2006
			Mar	Jun	Sep	Dec	Mar
			(In millions of pula; end of period)				
Net foreign assets	25,238	25,519	29,160	33,510	34,883	35,916	36,785
Bank of Botswana	23,887	24,368	27,612	32,285	33,681	34,751	36,709
Commercial banks	1,351	1,152	1,548	1,224	1,202	1,166	76
Net domestic assets	-14,261	-12,788	-15,910	-20,405	-20,349	-21,956	-17,975
Net domestic credit	-3,460	-1,264	-2,289	-2,179	-3,655	-3,556	-4,505
Net claims on the government	-10,662	-9,705	-10,731	-10,874	-12,621	-12,613	-13,839
Bank of Botswana	-10,514	-9,272	-10,279	-10,489	-12,307	-12,448	-13,666
Commercial banks	-148	-433	-452	-385	-314	-165	-174
Claims on nongovernment	7,202	8,441	8,442	8,695	8,967	9,057	9,334
Claims on parastatals	381	433	392	365	386	318	286
Claims on the private sector	6,821	8,007	8,050	8,330	8,581	8,739	9,048
Other items (net)	-10,801	-11,524	-13,621	-18,226	-16,694	-18,400	-13,469
Of which							
Valuation adjustment 1/	-8,131	869	...	...	...	-6,939	...
Money plus quasi-money (M2)	10,977	12,731	13,250	13,105	14,534	13,960	18,811
Money (M1)	2,822	3,626	3,550	3,878	4,390	3,842	3,744
Quasi money 2/	8,155	9,105	9,700	9,227	10,144	10,118	15,067
Memorandum items:							
Broad money (M3)	17,428	19,395	20,905	21,356	22,047	22,346	22,358
Of which							
Bank of Botswana certificates 3/	6,451	6,664	7,655	8,251	7,513	8,387	3,547
Broad money (M4)	18,946	20,802	22,597	23,113	24,523	25,279	24,886
Of which							
Foreign currency accounts	1,518	1,406	1,692	1,757	2,476	2,932	2,528
			(Twelve-month percentage change)				
Net foreign assets 4/	-19.2	1.1	5.4	29.4	29.8	40.7	26.1
Net domestic assets	34.4	10.3	1.8	-53.5	-41.1	-71.7	-13.0
Net domestic credit	64.9	63.5	51.9	13.4	-41.9	-181.3	-96.8
Of which							
Claims on the government (net)	35.3	9.0	11.6	-5.8	-16.8	-30.0	-29.0
Claims on the private sector	10.7	17.4	15.1	12.5	9.7	9.1	12.4
Money plus quasi-money (M2)	15.5	16.0	15.5	4.0	16.6	9.7	42.0
Money (M1)	11.8	28.5	16.8	10.1	29.5	6.0	5.4
Broad money (M3)	13.2	11.3	18.5	10.9	14.2	15.2	6.9
Broad money (M4)	11.9	9.8	18.5	10.5	17.5	21.5	10.1

Source: Bank of Botswana.

1/ Equivalent to the revaluation profit (loss) for the year reported on the books of the Bank of Botswana.
2/ Includes private deposits at the Bank of Botswana but excludes holdings of Bank of Botswana certificates.
3/ Excludes the Bank of Botswana Certificates held by commercial banks on their own accounts.
4/ Excludes the effect of foreign assets valuation adjustments.

Table 20. Botswana: Summary Accounts of Bank of Botswana, 2003–2006
(In millions of pula; end of period)

	2003	2004	2005				2006
			Mar	Jun	Sep	Dec	Mar
Foreign assets	23,887	24,368	27,612	32,285	33,681	34,751	36,709
Pula fund	19,246	20,013	21,750	25,942	26,200	24,867	25,660
Liquidity portfolio	4,055	3,827	5,315	5,620	6,941	9,404	10,536
Matched assets/liability portfolio	166	163	167	298	146	141	174
Fund accounts	421	365	381	425	394	339	339
Holding of SDRs	221	229	242	280	278	280	283
Reserve position	197	134	137	145	116	58	56
Valuation Adjustment	3	2	2	0	0	0	0
Loans and advances to financial institutions	0	0	0	0	0	0	0
Fixed assets	127	130	132	134	134	128	128
Other assets	-5	-5	-5	1	0	1	1
Assets = liabilities	24,009	24,493	27,739	32,420	33,815	34,879	36,838
Reserve money	1,338	1,262	1,739	1,334	1,523	1,388	1,611
Currency in circulation	818	911	865	874	928	935	851
Currency outside banks	533	637	634	688	730	632	669
Pula currency in banks	285	274	231	185	199	303	182
Bankers' deposits	520	351	874	460	595	453	761
Private sector time deposits	231	852	727	286	535	526	635
Bank of Botswana certificates outstanding	8,739	9,649	10,532	12,195	11,480	12,416	13,176
Bankers	6,583	6,453	7,660	8,008	8,595	8,541	10,172
Others	2,780	3,023	3,317	3,416	3,378	3,742	1,657
Government deposits	10,514	9,272	10,279	10,489	12,307	12,448	13,666
Capital and reserves	2,730	3,026	4,073	7,683	7,495	7,168	7,243
Paid-up capital	25	25	25	25	25	25	25
General reserve	1,600	1,600	1,600	1,600	1,600	1,600	1,600
Revaluation reserve	1,105	1,401	2,448	6,058	5,870	5,543	5,618
Other liabilities	457	432	389	433	475	933	508

Source: Bank of Botswana.

Table 21. Botswana: Summary Accounts of Commercial Banks, 2003–2006
(In millions of pula; end of period)

	2003	2004	2005				2006
			Mar	Jun	Sep	Dec	Mar
Commercial bank reserves	397	470	837	325	818	383	350
Cash	285	274	231	185	199	303	182
Balances at Bank of Botswana	111	196	606	140	619	80	168
Foreign assets	1,772	1,485	1,943	1,969	2,875	2,843	2,092
Claims on monetary authorities	2,229	2,749	2,785	3,916	3,913	4,216	9,614
Credit to domestic economy	7,202	8,441	8,442	8,695	8,967	9,057	9,334
Claims on local governments	0	0	0	0	0	0	0
Claims on parastatals	381	433	392	365	386	318	286
Claims on private sector	6,821	8,007	8,050	8,330	8,581	8,739	9,048
Of which							
Claims on households	3,910	4,948	4,967	5,073	5,214	5,320	5,453
Other assets	1,568	1,903	1,767	1,770	1,880	1,468	2,549
Fixed assets	205	205	202	218	196	198	190
Others 1/	1,363	1,697	1,564	1,552	1,684	1,270	2,359
Assets = liabilities	13,168	15,048	15,773	16,675	18,452	17,967	23,940
Demand deposits of the public	2,290	2,989	2,917	3,189	3,661	3,210	3,075
Time and savings deposits	7,924	8,253	8,973	8,941	9,609	9,592	14,432
Liabilities to other banks	421	333	395	744	1,673	1,677	2,016
Liabilities to Bank of Botswana	1	4	3	18	0	105	5
Government deposits	148	433	452	385	314	165	174
Capital and reserves	1,346	1,395	1,492	1,577	1,516	1,471	1,638
Other liabilities	1,038	1,640	1,542	1,821	1,680	1,746	2,601

Source: Bank of Botswana.

1/ Comprises other investments: balances due from domestic banks, bills purchased and discounted, Bank of Botswana Certificates, and other unclassified assets.

Table 22. Botswana: Selected Financial Ratios and Aggregates of Commercial Banks, 2001–2006
(In millions of pula, unless otherwise indicated; end of period)

	2001	2002	2003	2004	2005	2006		
						Jan	Feb	Mar
Liquid assets 1/								
Required	676	812	899	1,006	1,108	984	996	1,094
Actual	2,613	2,188	2,547	3,237	4,768	6,061	5,667	10,530
Excess	1,937	1,376	1,649	2,231	3,660	5,077	4,671	9,436
Ratio of actual to required	3.9	2.7	2.8	3.2	4.3	6.2	5.7	9.6
Primary reserves 2/								
Required	220	264	292	327	360	320	498	547
Actual	263	286	403	523	440	507	577	715
Excess	43	22	111	196	80	187	79	168
Ratio of actual to required	1.2	1.1	1.4	1.6	1.2	1.6	1.2	1.3
Deposit liabilities	9,233	8,983	10,574	11,876	13,227	13,606	13,931	18,128
Credit	5,462	6,628	7,289	8,460	9,080	9,105	9,183	9,367
Ratio of credit to deposit liabilities	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.5

Source: Bank of Botswana.

1/ Required liquid assets are 10 percent of commercial banks' daily average deposit balances. Eligible liquid assets include cash, current account balance with the Bank of Botswana (BoB) in excess of the primary required reserve, balances due from domestic banks, foreign notes and coins, BoB certificates, and private sector bills eligible for discount at the BoB.

2/ Primary required reserves, consisting of current account balances with the BoB, are 3.25 percent of average daily deposit balances.

Table 23. Botswana: Selected Interest Rates, 2001–2006
(In percent; end of period)

	2001	2002	2003	2004	2005	2006 Mar
Bank of Botswana						
Lending rate (bank rate)	14.3	15.3	14.3	14.3	14.5	15.0
Public Debt Service Fund 1/						
Financial parastatals	13.8	13.8	13.8	...	...	...
Nonfinancial parastatals	16.3	16.3	16.3	...	...	...
Commercial banks						
Deposit rates						
Savings accounts	8.4	8.4	7.7	7.5	6.6	6.8
Call deposits	9.5	10.0	9.6	9.1	8.6	8.6
31 days' notice	9.3	10.0	9.6	9.3	8.6	8.7
88 days' notice	9.8	10.2	9.5	9.9	9.3	8.7
Fixed deposits						
6 months	10.4	10.8	10.5	10.2	9.7	9.5
12 months	10.6	11.0	10.3	10.5	10.1	9.5
Prime lending rate	15.8	16.8	15.8	15.8	16.0	16.5
Botswana Building Society						
Deposit rates						
Indefinite period paid-up shares	10.0	10.0	12.0	10.5	10.5	10.5
Subscription shares	8.5	8.5	8.5	8.5	7.5	7.5
Fixed-time deposits						
Ordinary savings accounts	2.5	2.5	3.0	3.0	3.5	3.5
Special savings accounts	7.5	7.5	10.0	8.6	10.0	10.0
Lending rates						
Mortgage loans 2/	14.5	14.5	15.0	15.5	16.0	16.0
Short-term loans 3/	17.0	17.0	17.0	17.0	17.5	17.5
Botswana Savings Bank						
Ordinary savings accounts	3.5	3.5	4.0	4.0	4.0	4.0
Special savings accounts	7.5	7.5	8.0	8.0	8.0	8.0

Source: Bank of Botswana.

1/ In 1991, a two-tier rate structure was introduced, with the lower rate applying to financial parastatals and the higher rate to nonfinancial parastatals.
2/ Loans over P 50,000 are charged an additional percentage point.
3/ Interest rates on short-term loans vary according to the security offered by the borrower.

Table 24. Botswana: Distribution of Commercial Bank Credit by Economic Activity, 2001–2006

	2001	2002	2003	2004	2005	2006 Mar
	(In millions of pula; end of period)					
Agriculture	51	44	54	120	129	102
Mining	39	128	116	40	19	55
Manufacturing	264	330	389	356	334	348
Construction	131	209	222	241	192	210
Electricity and water	42	56	51	86	72	67
Transport and communications	181	118	123	288	297	303
Trade	390	579	849	448	517	483
Business services	801	984	982	1,265	1,509	1,609
Finance	37	25	26	24	53	101
Other business	98	133	187	273	299	318
Financial parastatals	480	462	381	433	318	286
Local government	1	0	0	0	0	0
Central government	0	0	0	0	0	0
Households	2,948	3,561	3,910	4,866	5,312	5,453
Total	5,462	6,628	7,289	8,441	9,049	9,367
			(In percent of total)			
Agriculture	0.9	0.7	0.7	1.4	1.4	1.1
Mining	0.7	1.9	1.6	0.5	0.2	0.6
Manufacturing	4.8	5.0	5.3	4.2	3.7	3.7
Construction	2.4	3.2	3.0	2.9	2.1	2.2
Electricity and water	0.8	0.8	0.7	1.0	0.8	0.7
Transport and communications	3.3	1.8	1.7	3.4	3.3	3.2
Trade	7.1	8.7	11.6	5.3	5.7	5.2
Business services	14.7	14.9	13.5	15.0	16.7	17.2
Finance	0.7	0.4	0.4	0.3	0.6	1.1
Other business	1.8	2.0	2.6	3.2	3.3	3.4
Financial parastatals	8.8	7.0	5.2	5.1	3.5	3.1
Local government	0.0	0.0	0.0	0.0	0.0	0.0
Central government	0.0	0.0	0.0	0.0	0.0	0.0
Households	54.0	53.7	53.6	57.7	58.7	58.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bank of Botswana.

Table 25. Botswana: Sources of Commercial Bank Deposits, 2000–2006

	2000	2001	2002	2003	2004	2005	2006 Mar
	(In millions of pula; end of period)						
Government	470	669	602	1,098	1,063	465	513
Central	106	61	58	148	433	165	174
Local	364	609	544	950	630	299	338
Parastatals	617	823	780	969	1,166	485	1,461
Private enterprises	3,425	5,571	5,109	5,249	7,147	8,206	12,043
Households	2,401	2,171	2,492	3,259	2,500	4,082	4,112
Total	6,912	9,233	8,983	10,574	11,876	13,238	18,128
	(In percent of total)						
Government	6.8	7.2	6.7	10.4	8.9	3.5	2.8
Central	1.5	0.7	0.6	1.4	3.6	1.2	1.0
Local	5.3	6.6	6.1	9.0	5.3	2.3	1.9
Parastatals	8.9	8.9	8.7	9.2	9.8	3.7	8.1
Private enterprises	49.5	60.3	56.9	49.6	60.2	62.0	66.4
Households	34.7	23.5	27.7	30.8	21.1	30.8	22.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Bank of Botswana.

Table 26. Botswana: Auctions of Bank of Botswana Certificates, 2004–06 1/

	Allotted (Millions of pula)		Reserved for Bank of Botswana (Millions of pula)		Stop-Out Price 2/ (In pula)		Effective Interest Rate (In percent)	
	14-days	91-days	14-days	91-days	14-days	91-days	14-days	91-days
2004								
January		3,655		...		96.985-97.010		12.95-13.06
February		2,508		326		97.010-97.040		12.81-12.95
March		3,229		...		96.990-97.015		12.92-13.04
April		3,216		623		97.000-97.025		12.88-12.99
May		2,710		649		96.990-97.000		12.99-13.04
June		3,152		...		96.990-97.000		12.99-13.04
July		3,357		...		97.0		13.0
August		3,679		...		97.0		13.0
September		2,266		...		97.0		13.0
October		3,500		...		97.000-97.005		12.97-12.99
November	797	2,900	...	695	100	97.010-97.015	12.0	12.92-12.95
December	2,133	1,900	...	1,067	100	97.015-99.100	12.0	12.53-12.92
2005								
January	2,713	3,300	...	1,787	99.6	97.100-97.130	12.0	12.39-12.53
February	3,409	3,314	...	908	100	97.135-97.175	12.0	12.18-12.37
March	6,234	841	...	1,524	100	97.2	12.0	12.2
April	6,808	1,200	..	4,392	99.565-99.575	97.2	11.74-12.04	12.1
May	15,842	2,200	...	2,058	100	97.3	11.7	11.7
June	13,487	2,000	...	1,513	100	97.3	11.7	11.7
July	14,160	1,000	1,513	...	100	97.3	11.7	11.6
August	18,034	1,321	1,266	79	99.575-99.566	97.3	11.74-12.01	11.6
September	16,701	1,239	599	1,761	100	97.2	12.0	12.0
October	17,124	1,001	275	999	99.557-99.566	97.2	12.01-12.27	12.1
November	23,694	1,272	606	528	100	97.1	12.3	12.4
December	16,994	2,100	1,006	...	100	97.1	12.3	12.4
2006								
January	17,575	2,169	2,225	331	100	97.1	12.3	12.4
February	12,196	2,202	1,404	...	99.540-99.557	97.2	12.27-12.77	12.28-12.78
March	15,100	1,309	899	691	99.5	97.1	12.8	12.7
April	13,745	1,931	1,655	69	99.5	97.1	12.8	12.8

1/ In any month with more than one auction, the stop-out price and interest rates are arithmetic averages.

2/ The stop-out price is the price below which no bid for Bank of Botswana Certificates will be entertained by the Bank of Botswana.

Table 27. Botswana: Value of Outstanding Bank of Botswana Certificates, 2004–06 1/

(In millions of pula; end of period)

	Commercial Banks	Other Financial Institutions	Other Private Sector	Total
2004				
January	6,537	1,822	889	9,248
February	5,800	1,996	983	8,778
March	5,918	1,763	892	8,573
April	5,992	1,659	1,461	9,112
May	6,995	1,511	1,412	9,918
June	6,005	1,422	1,757	9,184
July	6,228	1,225	1,788	9,241
August	6,543	1,116	1,795	9,455
September	6,543	875	1,790	9,208
October	6,541	972	1,852	9,365
November	6,453	975	2,093	9,522
December	6,626	1,008	2,015	9,649
2005				
January	7,054	1,099	1,928	10,081
February	7,660	1,292	2,048	10,999
March	7,215	1,275	2,042	10,532
April	8,495	956	1,440	10,890
May	8,008	1,113	2,081	11,203
June	8,780	1,312	2,104	12,195
July	8,811	1,350	2,176	12,337
August	8,595	1,208	2,600	12,403
September	8,102	1,266	2,112	11,480
October	8,321	1,319	2,713	12,353
November	8,541	1,477	2,654	12,672
December	8,674	1,409	2,334	12,416
2006				
January	10,782	616	1,838	13,236
February	10,172	636	2,023	12,831
March	11,519	723	935	13,176

Sources: Bank of Botswana.

1/ Total market value, excluding interest.

Table 28. Botswana: Financial System Structure, 2004

	Assets (In billions of pula)	Percent of total assets	Percent of GDP
Total onshore financial system	39.0	100.0	92.6
Banks - onshore	15.6	40.0	37.0
Domestic commercial banks	...	...	...
Foreign commercial banks	14.8	38.1	35.3
State-owned commercial banks	...	...	...
Merchant banks	0.7	1.9	1.8
Institutional Investors	10.0	25.7	23.8
Insurance companies 1/	0.6	1.6	1.5
Pension funds 2/	6.8	17.4	16.1
Collective investment undertaking (CIU)	2.6	6.8	6.3
Other nonbank	13.4	34.3	31.7
Botswana Development Corporation	1.2	3.0	2.8
National Development Bank	0.5	1.4	1.3
Botswana Savings Bank	0.2	0.6	0.5
Botswana Building Society	0.6	1.5	1.4
Leasing companies	...	...	...
Securities firms	10.9	27.9	25.8
Total offshore financial system	3.4	100.0	8.1
Banks - offshore	0.0	0.7	0.1
Insurance companies - offshore	...	...	...
Other offshore NBFIs	3.4	99.2	8.1
Total financial system	42.4		100.7

Source: Botswana authorities.

1/ Data refers to end-2003.
2/ Refers to funds invested domestically which are 43 percent of total pension funds.

Table 29. Botswana: Balance of Payments, 2000–2005 1/
(In millions of U.S. dollars, unless otherwise indicated)

	2000	2001	2002	2003	2004 Rev.	2005 Prel.
Current account balance	547	600	197	464	291	1,565
Trade balance	904	713	710	900	840	1,769
Exports, f.o.b.	2,682	2,325	2,353	3,035	3,734	4,559
Of which						
Diamonds	2,240	1,936	1,978	2,374	2,827	3,284
Imports, f.o.b	-1,778	-1,611	-1,643	-2,135	-2,893	-2,791
Of which						
Food, beverages, and tobacco	-294	-254	-329	-412	-474	-440
Chemical and rubber products	-203	-187	-217	-290	-386	-381
Fuel	-103	-122	-122	-167	-384	-426
Metal and metal products	-151	-140	-161	-187	-271	-243
Machinery and electrical equipment	-463	-357	-375	-448	-567	-523
Services	-223	-174	-29	-9	-44	-8
Transportation	-174	-155	-167	-180	-210	-236
Travel	25	26	136	228	276	276
Other services	-73	-45	3	-57	-110	-49
Income	-352	-138	-700	-718	-1,037	-724
Compensation of employees	-37	-37	-39	-55	-60	-60
Investment income	-315	-101	-662	-663	-977	-664
Of which						
Earnings on reserves	282	285	265	246	240	255
Current transfers	218	198	217	291	532	529
Capital and financial account	-164	-506	-202	-358	-303	-139
Capital account	38	6	16	23	32	31
Financial account	-202	-512	-218	-380	-335	-170
Direct investment	55	-351	362	213	434	285
Portfolio investment	-43	-63	-414	-522	-472	-369
Other investment	-214	-99	-165	-70	-297	-86
Of which						
Net government long-term borrowing	-32	-17	-23	-22	-25	-10
Other net private long-term borrowing	2	2	2	3	4	5
Short-term borrowing	46	76	71	93	63	59
Net errors and omissions 2/	-293	-516	-419	-241	338	-816
Reserve assets (increase -) 2/	-89	421	424	135	-327	-610
Memorandum items:						
Current account balance (in percent of GDP)	8.8	9.9	3.3	5.6	3.0	15.4
Trade balance (in percent of GDP)	14.6	11.8	11.9	10.8	8.5	17.3
End-of-year gross official reserves	6,319	5,897	5,474	5,339	5,665	6,276
(in months of imports of goods and services)	32.6	33.0	30.3	23.0	18.4	20.8
Exchange rates						
U.S. dollars per pula (period average)	0.20	0.17	0.16	0.20	0.22	0.19
U.S. dollars per pula (end of period)	0.19	0.14	0.18	0.23	0.23	0.18

Sources: Botswana authorities; and IMF staff estimates.

1/ Based on pula-denominated estimates converted at period-average exchange rate.
2/ Includes valuation adjustment.

Table 30. Botswana: Value of Principal Exports and Imports, 2000–2005

	2000	2001	2002	2003	2004 Rev.	2005 Prel.
	(In millions of U.S. dollars)					
Diamonds	2,240	1,936	1,978	2,374	2,827	3,284
Nondiamond	442	389	376	662	907	1276
Meat	55	73	44	53	61	60
Copper nickel	108	70	76	141	163	445
Textiles	48	33	29	46	121	216
Soda ash	41	36	42	47	54	64
Other	191	176	183	375	508	491
Total exports, f.o.b.	2,682	2,325	2,353	3,035	3,734	4,559
Food, beverages, and tobacco	294	254	329	412	474	440
Wood and paper products	161	160	146	213	315	263
Textile and footwear	121	85	93	118	158	150
Chemical and rubber products	203	187	217	290	386	381
Fuel	103	122	122	167	384	426
Metal and metal products	151	140	161	187	271	243
Machinery and electrical equipment	463	357	375	448	567	523
Vehicle and transport equipment	258	221	321	299	467	400
Other goods	332	289	272	324	378	383
Total imports, c.i.f.	2,085	1,815	2,035	2,457	3,398	3,208
	(In percent of total)					
Diamonds	83.5	83.3	84.0	78.2	75.7	72.0
Nondiamond	16.5	16.7	16.0	21.8	24.3	28.0
Meat	2.0	3.2	1.9	1.7	1.6	1.3
Copper nickel	4.0	3.0	3.3	4.6	4.4	9.8
Textiles	1.8	1.4	1.2	1.5	3.2	4.7
Soda ash	1.5	1.5	1.8	1.5	1.4	1.4
Other	7.1	7.6	7.8	12.4	13.6	10.8
Total exports, f.o.b.	100.0	100.0	100.0	100.0	100.0	100.0
Food, beverages, and tobacco	14.1	14.0	16.2	16.8	13.9	13.7
Wood and paper products	7.7	8.8	7.2	8.7	9.3	8.2
Textile and footwear	5.8	4.7	4.6	4.8	4.6	4.7
Chemical and rubber products	9.7	10.3	10.6	11.8	11.4	11.9
Fuel	4.9	6.7	6.0	6.8	11.3	13.3
Metal and metal products	7.2	7.7	7.9	7.6	8.0	7.6
Machinery and electrical equipment	22.2	19.7	18.4	18.2	16.7	16.3
Vehicle and transport equipment	12.4	12.2	15.8	12.2	13.7	12.5
Other goods	15.9	15.9	13.4	13.2	11.1	11.9
Total imports, c.i.f.	100.0	100.0	100.0	100.0	100.0	100.0

Source: Botswana authorities; and IMF staff estimates.

Table 31. Botswana: External Trade Indices, 2000/01–2004/05 1/

	2000/01	2001/02	2002/03	2003/04	2004/05
Values (in millions of pula)					
Exports of goods	15,983	13,844	15,797	14,182	19,557
Exports of services	1,843	2,555	3,385	3,694	4,709
Total exports (goods and services)	17,826	16,399	19,182	17,875	24,266
Imports of goods	-8,965	-10,038	-12,780	-12,112	-14,225
Imports of services	-1,841	-2,006	-2,129	-2,512	-2,879
Total imports (goods and services)	-10,806	-12,044	-14,909	-14,624	-17,105
Volume (1993/94 prices, millions of pula)					
Exports of goods	7,918	6,494	6,747	5,674	7,295
Exports of services	1,049	1,378	1,661	1,697	2,021
Total exports (goods and services)	8,967	7,871	8,408	7,371	9,316
Imports of goods	-5,048	-5,345	-6,224	-5,505	-6,035
Imports of services	-1,039	-1,092	-1,049	-1,156	-1,210
Total imports (goods and services)	-6,087	-6,437	-7,273	-6,661	-7,246
Price indices (1993/94=100)					
Exports of goods	201.9	213.2	234.1	249.9	269.2
Exports of services	175.7	185.4	203.8	217.6	234.4
Total exports (goods and services)	198.8	208.3	228.1	242.5	260.7
Imports of goods	177.6	187.8	205.3	220.0	237.1
Imports of services	177.2	183.7	202.9	217.3	236.9
Total imports (goods and services)	177.5	187.1	205.0	219.5	236.9

Source: National accounts data.

1/ Year beginning July 1.

Table 32. Botswana: Direction of Trade, 2000–2005

	2000	2001	2002	2003	2004	2005
			(In millions of pula)			
Exports, f.o.b.	14,260	14,659	16,109	13,908	16,490	22,459
Southern African Customs Union (SACU)	984	948	1,249	1,221	1,587	2,032
Zimbabwe	556	382	398	407	614	914
Other Africa	131	111	88	45	40	105
United Kingdom	9,913	12,584	12,835	10,791	12,267	17,011
Other Europe	2,488	463	382	244	302	288
United States	86	37	107	61	264	498
All other	102	134	1,050	1,139	1,416	1,610
Imports, c.i.f.	10,230	10,564	15,309	12,118	15,787	16,592
SACU	7,867	8,201	12,454	10,492	13,171	14,125
Zimbabwe	369	335	218	177	241	246
Other Africa	35	35	148	48	43	187
United Kingdom	442	468	477	303	483	222
Other Europe	900	833	1,124	627	890	863
Korea, Republic of	22	22	12	27	21	29
United States	174	190	191	84	201	202
All other	421	480	686	376	736	717
			(In percent of total)			
Exports, f.o.b.	100.0	100.0	100.0	100.0	100.0	100.0
SACU	6.9	6.5	7.8	8.8	9.6	9.0
Zimbabwe	3.9	2.6	2.5	2.9	3.7	4.1
Other Africa	0.9	0.8	0.5	0.3	0.2	0.5
United Kingdom	69.5	85.8	79.7	77.6	74.4	75.7
Other Europe	17.4	3.2	2.4	1.8	1.8	1.3
United States	0.6	0.3	0.7	0.4	1.6	2.2
All other	0.7	0.9	6.5	8.2	8.6	7.2
Imports, c.i.f.	100.0	100.0	100.0	100.0	100.0	100.0
SACU	76.9	77.6	81.4	86.6	83.4	85.1
Zimbabwe	3.6	3.2	1.4	1.5	1.5	1.5
Other Africa	0.3	0.3	1.0	0.4	0.3	1.1
United Kingdom	4.3	4.4	3.1	2.5	3.1	1.3
Other Europe	8.8	7.9	7.3	5.2	5.6	5.2
Korea, Republic of	0.2	0.2	0.1	0.2	0.1	0.2
United States	1.7	1.8	1.2	0.7	1.3	1.2
All other	4.1	4.5	4.5	3.1	4.7	4.3

Source: Customs and Excise Department.

Table 33. Botswana: Public Sector External Debt, 2001–2006 1/

	2001	2002	2003	2004	2005	2006 Rev.
	(In millions of U.S. dollars; end of period)					
Total external public debt 2/	347.4	533.6	494.0	464.7	397.1	389.2
Bilateral loans	112.2	166.0	138.1	132.9	108.9	106.9
United States	15.5	26.2	19.4	16.5	15.4	15.2
United Kingdom	0.0	0.0	0.0	0.0	0.0	0.0
China	20.8	34.7	31.2	30.2	24.6	24.1
Belgium	0.7	1.0	1.1	1.0	0.9	0.9
Kuwait	7.5	15.7	13.0	11.2	10.1	9.8
Germany	0.0	0.0	0.0	0.0	0.0	0.0
Nigeria	0.0	0.0	0.0	0.0	0.0	0.0
Japan	66.7	87.9	73.3	74.0	57.9	56.9
Saudi Arabia	0.9	0.5	0.0	0.0	0.0	0.0
Multilateral loans	220.9	347.6	343.5	321.8	278.6	273.1
African Development Bank/Fund 3/	124.6	175.5	190.7	182.3	153.4	153.1
Arab Bank for Economic Development in Africa	13.7	28.3	23.2	18.9	18.2	17.8
European Economic Community	0.0	0.0	0.0	0.0	0.0	0.0
European Investment Bank	48.9	84.8	87.1	84.7	74.3	71.1
International Bank for Reconstruction and Development	13.5	15.6	6.7	4.2	4.9	4.4
International Development Association	6.6	14.2	9.4	8.2	7.2	6.9
International Fund for Agriculture Development	0.0	0.0	0.0	0.0	0.0	0.0
Nordic Development Fund	0.0	0.0	0.0	0.0	0.0	0.0
Nordic Investment Bank	10.2	24.5	23.5	21.3	18.4	18.0
Organization of Petroleum Exporting Countries	3.4	4.7	3.0	2.1	2.2	1.8
UN Capital Development Fund	0.0	0.0	0.0	0.0	0.0	0.0
Commercial banks	0.0	0.0	0.0	0.0	0.0	0.0
Export credits	14.3	20.0	12.5	10.0	9.6	9.2
Memorandum items:						
			(In percent)			
Total external public debt						
(in percent of GDP)	8.0	8.5	5.7	4.5	4.0	3.7
(in percent of exports of goods and services)	15.6	16.3	12.3	9.8	7.6	7.2

Sources: Ministry of Finance and Development Planning; and IMF staff estimates.

1/ End of March.
2/ Disbursed government and government-guaranteed outstanding debt, with original maturity of one year and more.
3/ African Development Bank/Fund for 2000.

Table 34. Botswana: External Debt-Service Payments and Disbursements, 2000–2005 1/

	2000	2001	2002	2003	2004	2005 Est.
	(In millions of U.S. dollars)					
Central government						
Disbursed outstanding debt	498.1	451.2	431.6	425.3	427.9	397.7
Disbursements	22.2	7.3	12.9	5.1	13.2	5.1
Principal repayments	33.3	41.5	48.5	49.7	37.5	32.5
Interest payments	31.8	17.9	20.2	17.4	41.5	23.9
Other charges	0.0	0.0	0.0	0.0	0.0	1.0
Total debt service	65.1	59.4	68.7	67.1	78.9	56.4
Public corporations						
Disbursed outstanding debt	23.9	19.6	15.3	17.2	13.5	12.5
Disbursements	1.0	0.8	0.0	0.0	0.0	0.0
Principal repayments	5.0	4.9	5.5	4.8	4.3	3.7
Interest payments	2.9	2.4	2.8	2.4	1.9	1.1
Other charges	0.0	0.0	0.0	0.0	0.0	1.0
Total debt service	7.8	7.3	8.3	7.2	6.2	4.8
Public and publicly guaranteed						
Disbursed outstanding debt	522.1	570.8	447.0	442.6	441.3	410.1
Disbursements	23.1	8.1	12.9	5.1	13.2	5.1
Principal repayments	38.2	46.4	54.0	54.5	41.8	36.3
Interest payments	34.7	20.2	23.0	19.8	43.4	25.0
Other charges	0.0	0.0	0.0	0.0	0.0	1.0
Total debt service	73.0	66.6	77.0	74.3	85.1	61.3
Memorandum items:						
	(In percent of exports of goods and services)					
Debt-service ratios	2.4	2.5	2.7	2.0	1.9	1.1
Central government	2.2	2.2	2.4	1.8	1.8	1.0
Public corporations	0.3	0.3	0.3	0.2	0.1	0.1

Sources: Ministry of Finance and Development Planning; and IMF staff estimates.

1/ End of March.

Table 35. Botswana: Outstanding of Government Bonds, 2004–2006 1/
(In millions of pula)

	Maturity (year)	Date of maturity	Outstanding at end-March 2004	2005	2006
BW001	2	Jun 1, 2005	750	750	
BW002	5	Mar 1, 2008	850	850	850
BW003	12	Oct 31, 2015	900	900	900
Total			2,500	2,500	1,750

Source: Ministry of Finance and Development Planning.
1/ Three government bonds with maturities of 2, 5, and 12 years were auctioned for the period March to November 2003.

Table 36. Botswana: Average Terms of New Public Sector External Borrowing, 1999–2005

	1999	2000	2001	2002	2003	2004	2005
Interest rate (in percent a year)	2.3	2.3	...	...	...	...	...
Maturity (in years)	14.5	14.5	...	...	...	...	...
Grace period (in years)	4.7	4.7	...	...	...	...	...
Grant element (in percent)	40.7	40.7	...	...	...	...	...

Source: Ministry of Finance and Development Planning.

Table 37. Botswana: Developments in the Exchange Rate, 1990–2006
(Index, 2000=100, unless otherwise indicated; period average)

	Effective Exchange Rate		Bilateral Exchange Rates 1/		
	Real	Nominal	South African rand	U.S. dollar	SDR
1990	86.7	106.5	1.37	0.53	0.38
1991	91.3	109.9	1.32	0.48	0.34
1992	96.7	114.0	1.36	0.44	0.32
1993	102.8	117.1	1.33	0.39	0.28
1994	101.7	113.5	1.30	0.37	0.25
1995	98.2	108.4	1.29	0.35	0.24
1996	95.4	103.7	1.29	0.30	0.21
1997	93.6	100.1	1.26	0.27	0.20
1998	93.5	99.2	1.31	0.24	0.18
1999	95.5	98.6	1.32	0.22	0.16
2000	100.0	100.0	1.36	0.20	0.15
2001	103.8	102.7	1.47	0.17	0.14
2002	109.3	108.5	1.66	0.16	0.12
2003	115.0	112.4	1.53	0.20	0.15
2004 Jan	115.6	112.1	1.51	0.22	0.15
Feb	108.7	105.1	1.41	0.21	0.14
Mar	113.0	108.5	1.37	0.21	0.14
Apr	106.5	101.7	1.37	0.21	0.14
May	114.7	109.0	1.38	0.20	0.14
Jun	109.7	104.5	1.36	0.21	0.15
Jul	108.5	103.4	1.34	0.22	0.15
Aug	110.4	105.2	1.36	0.21	0.15
Sep	110.0	104.1	1.37	0.21	0.14
Oct	107.8	101.9	1.36	0.21	0.15
Nov	107.9	102.1	1.34	0.22	0.15
Dec	109.7	103.3	1.33	0.23	0.15
2005 Jan	112.0	104.9	1.34	0.22	0.15
Feb	109.2	102.4	1.34	0.22	0.15
Mar	114.8	107.8	1.34	0.22	0.15
Apr	111.9	105.1	1.35	0.22	0.15
May	112.3	104.9	1.34	0.21	0.14
Jun	101.4	94.1	1.22	0.18	0.12
Jul	102.5	95.0	1.21	0.18	0.12
Aug	103.1	94.7	1.19	0.18	0.13
Sep	102.9	94.3	1.18	0.19	0.13
Oct	105.6	95.5	1.18	0.18	0.12
Nov	105.4	95.2	1.18	0.18	0.12
Dec	104.9	94.5	1.15	0.18	0.13
2006 Jan	110.4	94.9	1.14	0.19	0.13
Feb	109.6	94.3	1.13	0.19	0.13
Mar	109.7	93.8	1.13	0.18	0.13
Apr	109.3	93.2	1.12	0.18	0.13
May	...	...	1.14	0.18	0.12

Sources: *IMF Effective Exchange Rate Facility Database*; and Botswana authorities.

1/ Foreign currency per Botswana pula. Increase in value indicates an appreciation of the pula, 1990–2004.

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
1. Taxes on Income and Profits			
1.1 Company tax	A tax on company profits earned in Botswana during the tax year (July 1–June 30). Profits of the Botswana Meat Commission are determined according to a special formula equivalent to a turnover tax. There is a 15 percent withholding tax on dividends. Since the introduction of a two-tier system of company tax in 1990/91, distributions to resident and nonresident shareholders are treated alike. The net dividend is tax exempt in the hands of the shareholders. To avoid multiple deduction of tax on dividends, with effect from July 1, 2003, dividends paid by an investment company, a unit trust or collective investment undertaking that has already paid the 15 percent withholding tax, are not subject to further withholding of tax. Income accruing to resident companies from abroad is deemed to accrue from a source in Botswana.	Except for farming, mining, and prospecting, losses can be carried forward for five tax years. The cost of buildings can be written off on a straight-line basis over 40 years. However, for industrial buildings, there is an initial allowance of 25 percent and the remaining 75 percent can be written off on a straight-line basis over 30 years. Accelerated allowances are available for capital expenditures in farming and mining enterprises. For plant and machinery, expenditure can be written off on a straight-line basis over periods varying from 4 to 10 years.	Since 1990/91, a two-tier system operates in respect of resident companies, consisting of a basic tax rate and an additional company tax (ACT) against which the 15 percent withholding tax (WHT) on dividends is set off. Where ACT for a tax year exceeds the WHT, the excess is payable in that tax year but can be carried forward to the next year as a setoff against the WHT. The rate of tax on nonresident companies is 25 percent. Manufacturing companies qualify for a basic company tax rate of 5 percent and an additional tax rate of 10 percent. Non-manufacturing firms pay a basic company tax rate of 15 percent and an additional tax rate of 10 percent.

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
			Companies in Botswana's International Financial Services Centre also have a preferential 15 percent rate of tax. There are special tax and royalty arrangements for mining companies. Mining companies are taxed in terms of arrangements set out in the 12th Schedule of the Income Tax Act, whereby the tax rate rises as profitability rises but it shall not be less that the normal tax rate (25 percent) for resident companies. Mining agreements concluded before July 1999 are not affected unless a company concerned opts for the formula specified in the 12th Schedule. Diamond mining companies are allowed to negotiate terms of taxation under the Schedule. A 3 percent withholding tax applies on the gross amount of payments made to construction companies, but there is an exemption for payments to small contractors and construction contracts valued at less than P 2 million.
1.2. Withholding tax on certain income of nonresident individuals and companies	Interest, royalties, management fees, consultancy fees, and entertainers' fees are subject to withholding tax.	Exemption or a lower rate is available under Double Taxation Avoidance Agreements.	A 15 percent rate of withholding tax is applicable for payments other than in respect of entertainment fees for which a rate of 10 percent applies. These rates apply to the gross payment and are a final tax on the nonresidents concerned.

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
1.3. Capital gains	A tax on realization on or after July 1, 1982 of gains on business assets; on shares in, or debentures of, a company; and on residential property.	Gains on a principal private residence owned by an individual, and shares and debentures of a public company. For immovable property acquired before July 1, 1982, the cost of acquisition is inflated by 10 percent p.a. for the period from date of acquisition to July 1, 1982, but a resulting loss is not allowed. In the case of immovable property, the cost of acquisition is inflated by the difference between the national cost of living index at the time of acquisition, or July 1982, whichever is later, and the national cost of living index for the month in which disposal took place. In the case of movable property, 25 percent of the net gain is deducted. Disposal value on transfer of property in the course of a merger or reconstruction of resident companies is taken to be the cost price, if the beneficial ownership and interest of shareholders remain unchanged as a result of the merger or reconstruction. Similarly, the disposal value of property in the case of transfer on account of merging or reconstruction of resident companies with the sole object of listing in the Botswana Stock Exchange is also taken to be the cost price of the property.	For companies, chargeable gains are included in taxable income. For any other person, the net gain is not included with income from other sources. Instead it is taxed under a separate table, which has a zero-rate band of P 12,500; for amounts over P 100,000, a rate of 25 percent applies.

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
1.4. Personal income tax	A tax on income from domestic sources received by residents and nonresidents. There is a pay-as-you-earn (PAYE) system for employment income, and employees with no other source of income need not file tax returns. Non-cash benefits related to employment are also subject to PAYE (see description of company income tax, above, for other withholding taxes applicable to individuals). Husband and wife are taxed as separate individuals. Income from investment or business outside Botswana is deemed to have accrued from a source in Botswana. However, foreign investment income of residents who are not citizens is excluded.	Losses from one source cannot be set off against other income, except that, on election, a farmer (but not a farming company) may offset farming losses against other income in the same tax year. Losses can be carried forward for setoff against future farming profits. Both corporate and non-corporate taxpayers can carry back farming losses to the preceding two years. Farmers can get immediate deduction for the cost of capital works. They may also elect to average income over a three-year period. Resident individuals are entitled to an allowance for contributions to approved pension funds or to approved retirement annuity funds or schemes, not exceeding 15 percent of earned income. This is the only allowance for personal expenditure. Donations exceeding P 1,000 by any person to an approved educational institution or sports body is also deductible, subject to maximum of 20 percent of aggregate chargeable income in a tax year.	The tax table for resident individuals has a zero rate on income up to P 25,000; thereafter, the rates increase from 5 percent to a top rate of 25 percent on income above P 100,000. For nonresident individuals, the tax table has an initial rate of 5 percent on income up to P 43,750, rising to a top rate of 25 percent on income above P 100,000.This also applies to trusts and deceased estates. The investment income of unapproved pension funds is taxed at 7.5 percent.
3. Taxes on Property			
3.1. Local rates	A tax on the market value of properties in urban centers.	Government buildings used for nonprofit public services, and buildings used for religious or cultural activities.	The tax is determined per town and is different for unimproved real property.

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
3.2. Capital transfers	A tax on the value of gifts or inheritance in any year, assessed on the recipient.	Gifts or inheritances between spouses; gifts received in any year not exceeding P 5,000; household chattels of deceased persons not exceeding P 15,000; and livestock included in income for income tax purposes. Donations for purpose of education and maintenance of a child below 21 years of age; basic exemption of P 100,000 from the total value of property being transferred on death (if there is more than one beneficiary, exemption is in proportion to the share of the beneficiary and aggregate exemption shall not exceed P 100,000).	The tax rate rises from 2 percent on the first P 100,000 of taxable value received by an individual to a maximum of 5 percent on taxable values in excess of P 500,000. A 12.5 percent rate applies to both resident and nonresident companies.
3.3. Transfer duty	A tax on the transfer of real property, payable by the purchaser.	Value up to P 200,000 exempt for citizens, including any company in which citizens own more than one-half of the shares.	Rate for citizens is 5 percent of the value over P 200,000 whether the property is agricultural land or nonagricultural property. Non-citizens pay 30 percent on agricultural land and 5 percent on other property. Where the transfer is subject to value-added tax (VAT), the 5 percent duty is waived and in the case of transfer of agricultural land to a non-citizen 10 percentage points of the transfer duty are waived.

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
4. Taxes on Goods and Services			
4.1. Value-added tax (VAT)	Tax is levied on goods and services, both imported and locally produced. Persons with annual turnover exceeding P 250,000 are required to register for VAT. Voluntary registration by persons with a turnover below P 250,000 may be allowed. Auctioneers are required to register regardless of their turnover level.	Education services, public medical services, prescription drugs, rental of residential accommodation, imports by a registered person operate a VAT manufacturing warehouse or an enterprise in the International Financial Services Centre, and imports, which are allowed privileges in terms of the Customs and Excise Duty Act.	There is an ad valorem rate of 10 percent, which is applicable to all standard-rated supplies. Zero-rated goods and services are specified in Schedule 1 of the VAT Act. The main zero-rated supplies are maize and sorghum meal, petrol, diesel, paraffin, and exports.
4.2. Selective excise duties	Specified duties are payable by the importer or manufacturer of selected items, such as alcoholic and nonalcoholic beverages, tobacco, fuels and motor vehicles.	Exported goods.	Rates are those set by the Southern African Customs Union (SACU), with proceeds pooled under the SACU Agreement. Rates vary and are both ad valorem and specific.

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
4.3. Motor vehicle licences fees	Specific rates apply that vary according to type or weight, or both, of vehicle.	Public transport vehicles pay lower annual license fees, based on passenger capacity.	Annual vehicle license fees: Motorcycles: P65 (P80 with sidecar) Motor vehicles: P80 to P2250, according to weight. Trailers: P40 to P1495, according to weight. All tractors: P 100. Renewal of domestic passenger operators' licences: P100 – P210. The following fees are payable according to weight of vehicles: • Domestic permits: P105 – P1470; • Botswana operations single trip road user's charges: P40 – P530 • Cross border permits: P400 – P5300 quarterly or P1200 – P16500 annually; • Transit operations: P500 – P6600 quarterly or P1500 – P19800 annually: • COMESA passenger vehicle permit: P120 – P1300 single trip or P1200 – P13000 annually; • COMESA cross border goods permit: P150 – P1690 per single trip; and • COMESA goods permit: P1650 – P15150.
5. Taxes on Goods and Services			

Table 38. Botswana: Summary of the Tax System, 2006

Tax	Nature of Tax	Exemptions and Deductions	Rates
5.1. Customs Duties	A tax on all goods imported into Botswana from outside the SACU area. A three-column tariff schedule based on the Harmonized Commodity Description and Coding System, with general and preferential rates, is used. Preferential treatment is given to goods from the European Union and Southern African Development Community (SADC) countries. The taxes go into the SACU revenue pool. Botswana's share is calculated according to a fixed formula.	There are free trade agreements with Malawi and Zimbabwe.	Both specific and ad valorem rates are used. Ad valorem rates charged on the import value of the goods, and vary from 0 percent to 40 percent. The rates of duties increase with the degree of manufacturing. The highest rates are on motor vehicles (34 percent) and clothing (40 percent). Duties collected by the SACU countries are paid into the SACU revenue pool. In terms of the new Revenue Sharing Formula which was used for the first time in 2004, the shares are distributed from three components of the Common Revenue Pool namely, the Customs Component which depends on a member's intra-SACU imports, the Excise Component, dependent on a member's GDP and the Development Component dependent on a member's GDP per capita.
5.2. Export taxes	A tax on exported livestock and livestock products, and on game products.	None.	Low specific rates.