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Monetary Policy Regimes and a Strategy for Rapid Economic Growth in Ghana

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Sigma One Corporation

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In fulfillment of the following milestones:

2.2 (Y3)	Senior Monetary Economist mobilized and performing in Ghana
3.3 (Y3)	Senior Monetary Economist mobilized and performing in Ghana

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Monetary Policy Regimes In Ghana

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MONETARY POLICY REGIMES IN GHANA

1.0 Introduction

When deficits persist, monetary policy can be ineffective in reducing the rate of inflation. Sargent and Wallace (1986) show that if the real rate of interest exceeds the economy's real growth rate, the demand for base money depends on the expected rate of inflation, and the monetary authority is limited to determining how to finance the deficits generated by the fiscal authority, the monetary authority faces an unpleasant choice. Low rates of base money growth today (implying that today's deficits are financed by issuing additional stocks of interest-bearing domestic debt) mean higher rates of money growth (and inflation) in the future to finance future deficits.

This occurs because eventually the real stock of interest-bearing debt either consumes all of the savings in the economy or reaches some threshhold value representing the maximum holdings of willingly-held debt by the private sector. At this point, the fiscal authority can raise taxes, reduce spending, or do both so as to generate surpluses and pay down the real stock of government debt. (A balanced budget would not suffice: since the real interest rate exceeds the rate of real economic growth, even rolling over an existing stock of debt would entail raising additional revenues merely to meet the real interest payments.) Failing that, the monetary authority has no choice but to issue base money to finance the deficit. As Sargent and Wallace point out, the larger the value at which the real debt stock is stabilized, either the tighter subsequent fiscal policy has to be or the greater future monetary expansion (and inflation) has to be. If the monetary authority chooses to avoid this outcome by financing more of today's deficits by issuing high-powered money, then the consequence is high inflation today rather than in the future[1].

The model in Sargent and Wallace applies to a closed economy so that the deficit is financed either by issuing non-interest bearing base money or domestic interest-bearing bonds. Krugman (1992) opens up the economy and shows what happens when the government runs persistent deficits and pegs the exchange rate. In Krugman's model, the deficit can be financed either by issuing high-powered money or by running down international reserves. He shows that a speculative attack on the currency, in which the private sector acquires all of the government's reserves by exchanging domestic currency for foreign currency, is not a matter of "if" but of "when". The timing of the attack and the resultant change in private sector wealth is merely a matter of the initial stock of reserves: the bigger the stock with which the government can defend the exchange rate, the greater the delay in the timing of the speculative attack, but the greater the increase in the private sector's net wealth after it makes the attack, acquires the government's reserves, and realizes the capital gain on its holdings of foreign assets after the assault-induced depreciation of the currency.

These two models capture salient features of how policymakers in Ghana have managed fiscal, monetary, and exchange rate policy since 1987. We use the insights from these models to

[1] Actually, Sargent and Wallace show that in a model in which the demand for base money depends on expected inflation, the monetary authority's choice of tighter money today not only means higher money growth rates and inflation in the future, but also higher inflation today.

illustrate the ultimate failure of monetary policy to stabilize the economy when the government persistently spends significantly more than it collects in taxes. We also focus on the serious macroeconomic instability of 2000 to see if a more desirable outcome would have obtained had the BoG not used the nominal exchange rate as an anchor during 1997-1999, but had instead followed an alternative strategy of maintaining purchasing power parity (PPP).

2.0 The Budgeting Process and Its Consequences in Ghana

The root cause of Ghana's macroeconomic instability and lack of international competitiveness is the Government's persistent spending in excess of its revenues. The public sector is, and has been, too big relative to the size of the economy: expenditures have averaged nearly 27% of GDP for the 1990-2000 period. The public sector consumes too many real resources and these resources are often extracted in ways that lead to serious distortions in the economy, e.g., the inflation tax and crowding out of private sector investment. Expenditure control and revenue enhancement measures are always prominent parts of the reform packages between the GoG and the multilateral institutions. And waivers of these conditionalities, particularly the expenditure control measures, continue to be granted year after year. The result has been string of broad public sector deficits that has averaged 6% of GDP during the 1990-2000 period (**Table 1**).

Table 1. Budget Deficits and Selected Indicators of Macroeconomic Instability

	Broad Budget Deficit (% of GDP)	Base Money Growth (% per year)	Inflation (% per year)	Nominal Interest Rate (% per year)	Real Interest Rate (% per year)	Exchange Rate Depreciation (% per year)
1990	2.1	16.5	37.3	23.1	-10.4	20.9
1991	1.4	-4.0	18.0	31.5	11.4	12.7
1992	8.7	32.2	10.1	20.4	9.4	18.8
1993	7.4	44.4	25.0	33.5	6.9	48.5
1994	3.8	35.4	24.9	29.8	3.9	47.4
1995	4.0	53.1	59.5	38.8	-12.9	25.5
1996	8.4	43.7	46.6	46.5	-0.1	36.4
1997	10.1	41.9	26.0	47.9	17.4	25.2
1998	8.1	24.6	16.4	37.6	18.3	12.9
1999	5.1	19.0	12.4	28.2	14.1	14.4
2000	7.4	14.5	25.2	39.3	11.3	101.0

Part of the problem is that revenue estimates consistently exceed outcomes. Estimated tax revenues have averaged about two percent of GDP above actual collections. The consistent overestimation of tax revenue is used to justify expenditure and deficit levels that are unrealistic. Government budgetary receipts from donor program and project grants and loans also show a persistent pattern of under performance. Net donor resources from grants and loans have averaged 4% to 5% of GDP in recent years; they also represent a very low cost source of financing government operations. In the last three years the shortfall in achieving the program levels of donor disbursements has averaged 2.8% of GDP and 10% of budgetary receipts. When combined with the persistent shortfall in tax collections, revenue budget estimates are typically 4-5 percent of GDP in excess of actual receipts.

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Another part of the problem is that there is little control over discretionary expenditures, and statutory expenditures (e.g., interest payments) are becoming a larger share of total spending. Thus, when these expenditures have consumed all of the tax revenues and donor inflows, any excess spending has to be financed by borrowing domestically (issuing T-bills) or by printing money. The GoG appears to follow a budgetary process described by Bruno (1989, p. 283): "First [the government] *decided what it needed to spend* and how much it could raise through taxes (and in the open economy—how much it could borrow abroad); then it sold as many bonds as it could at the existing real interest rate and financed the rest by printing money" [emphasis added].

This lack of fiscal discipline, when combined with the BoG's lack of independence and its consequent willingness to print money to help finance the government's deficits, pretty much destroys the ability of the BoG to meet its operating and intermediate targets, respectively targeted growth rates in high-powered money and in broad money (M2+). Since 1993, the BoG has met its monetary growth targets only in 1998 and 1999 (**Table 2**). The rest of the time it has missed by huge margins. As a result, the BoG has generally been very wide of the mark in hitting its inflation objectives (**Table 2**).

Table 2. Bank of Ghana Targets and Performance (%/year)

	1993	1994	1995	1996	1997	1998	1999	2000
M2 growth*								
Target	0	5	8	5	15	20	15	12
Revised target			14		25		17	
Actual	27	46	37	34	44	18	16	33**
Inflation								
Target	9	15	18	20	15	10	10	8
Revised target	20						12	
Actual	28	34	71	33	16	16	14	41

Source: Targets from Government of Ghana Budget Statements, various years. Actual values from BoG data.
*Beginning 1997, money supply is M2+ which includes foreign currency deposits.
**M2 growth from September 1999 to September 2000.

3.0 Identifying Shifts in Monetary Policy in Ghana

In this section we examine in more detail how the Bank of Ghana has reacted to the stream of large public sector deficits. We identified distinct monetary policy regimes by looking at two indicators of financial sector conditions over the 1987-2000 period (**Fig. 1**). The two indicators were the real interest rate and the return to holding 91-day GoG Treasury bills relative to holding 3-month U. S. Treasury bills. The real interest rate was calculated by removing inflation (measured by the year-on-year change in the CPI) from the nominal annual interest-equivalent rate on 91-day GoG Treasuries (see Appendix A). The nominal interest rates and inflation rates that were used to compute the real interest rate are depicted in **Fig. 2**. Positive real rates of interest are an incentive for individual and institutional savers to lend to the Government; negative real rates of interest mean that the Government is able to repay past borrowings with fewer real resources than the original borrowings could purchase.

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Fig. 1. Real Interest Rates and Relative Returns to Cedi Assets, 1987-2000

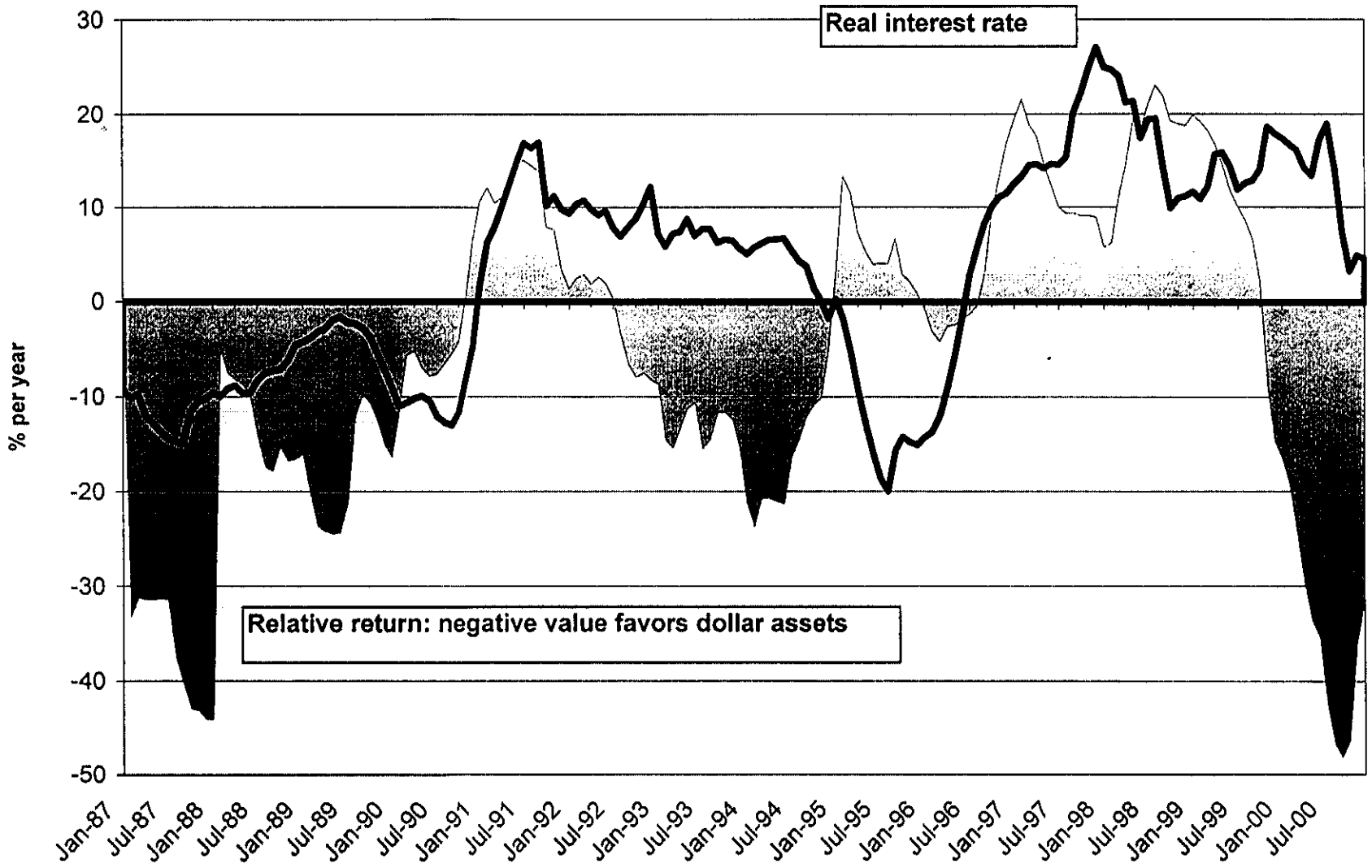
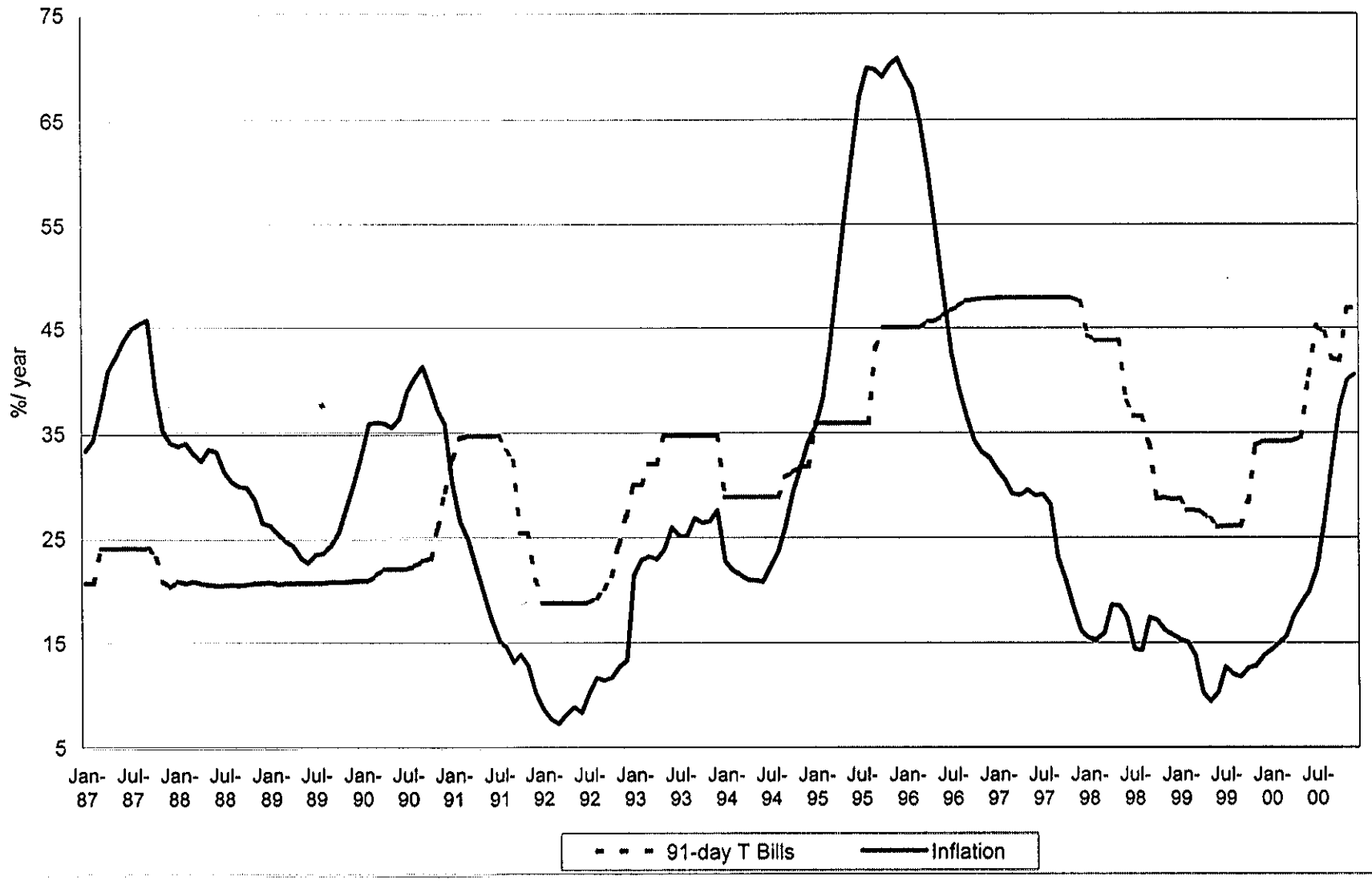


Fig. 2. Nominal Interest Rates and Inflation: 1987 - 2000



The relative return measure is just a rearrangement of the interest-rate parity (IRP) condition which states that if capital is allowed to move freely, the return to holding cedi-denominated interest-bearing assets (like GoG Treasuries), when adjusted for exchange rate changes, should equal the return to holding a dollar-denominated interest-bearing asset of the same maturity (see Appendix A). We calculate the difference between the (exchange adjusted) returns to cedi- and dollar-denominated assets and plot it in **Fig. 1**. Two of the key variables used to compute this measure, the nominal interest rate and the yearly rate of depreciation, are depicted in **Fig. 3**. A positive value means that the return to holding GoG T-bills is greater than the return to holding a U.S. T-bill. All else equal, in this case we would expect to see individuals and institutions shifting the composition of their financial wealth towards domestic T-bills.

We divided the 1987-2000 period into subperiods according to when either the real interest rate or the relative return measure changed signs. We hypothesize that a change in sign signals a change in monetary policy because the indicators capture movements in three "prices" that the BoG either perceives itself to be responsible for or is widely perceived by others to be responsible for. These prices are the inflation rate (the change in the price of the goods and services consumed by the average household), the nominal interest rate on Treasury bills, and the exchange rate.

The BoG controls the inflation rate primarily by controlling growth in the money supply, which it does mainly by controlling the growth of high-powered money (currency in circulation plus banking system deposits at the BoG). Numerous researchers have documented the significant direct relationship between growth in the money supply and the rate of inflation in Ghana and the direct relationship between the money supply and high-powered money. (Bawumia, Salkin, CEPA, Youngblood). The implementation of BoG monetary policy is based on this relationship (Research Department, BoG, 1996).

The nominal interest rate on Treasuries is set at the weekly auction conducted by the Bank of Ghana. Despite frequent references to market-determined interest rates are, they are not (Gockel, 2000). And since the phase out of BoG bills in the late 1990's, the BoG sets the interest rate in collaboration with the GoG, with the overriding consideration being what the government can afford to pay (Youngblood, 2000).

The BoG intervenes, sometimes extensively, in the foreign exchange market to control the rate of depreciation of the cedi. A sale of foreign exchange has the same effect on high-powered money as an open market sale of government securities. Individuals and companies pay for the foreign exchange by drawing down their cedi deposits at banks or by reducing their cedi cash holdings; this reduces bank reserves in the former case or reduces currency in circulation in the latter case. If banks buy foreign exchange from the BoG, their accounts at the BoG are debited and this reduces the supply of high-powered money.

This type of BoG intervention in the foreign exchange market, unless it is sterilized[2], not only reduces high-powered money, but also moderates the rate of depreciation of the cedi against foreign currencies. Maintaining a stable value of the exchange rate is one of the BoG's legislated objectives. The exchange rate is a highly visible sign of the stability (or lack thereof)

[2] The sale of foreign exchange is offset by a matching open market purchase of government securities. One asset (foreign exchange) is exchanged for another (T-bills) and there is no change in high-powered money.

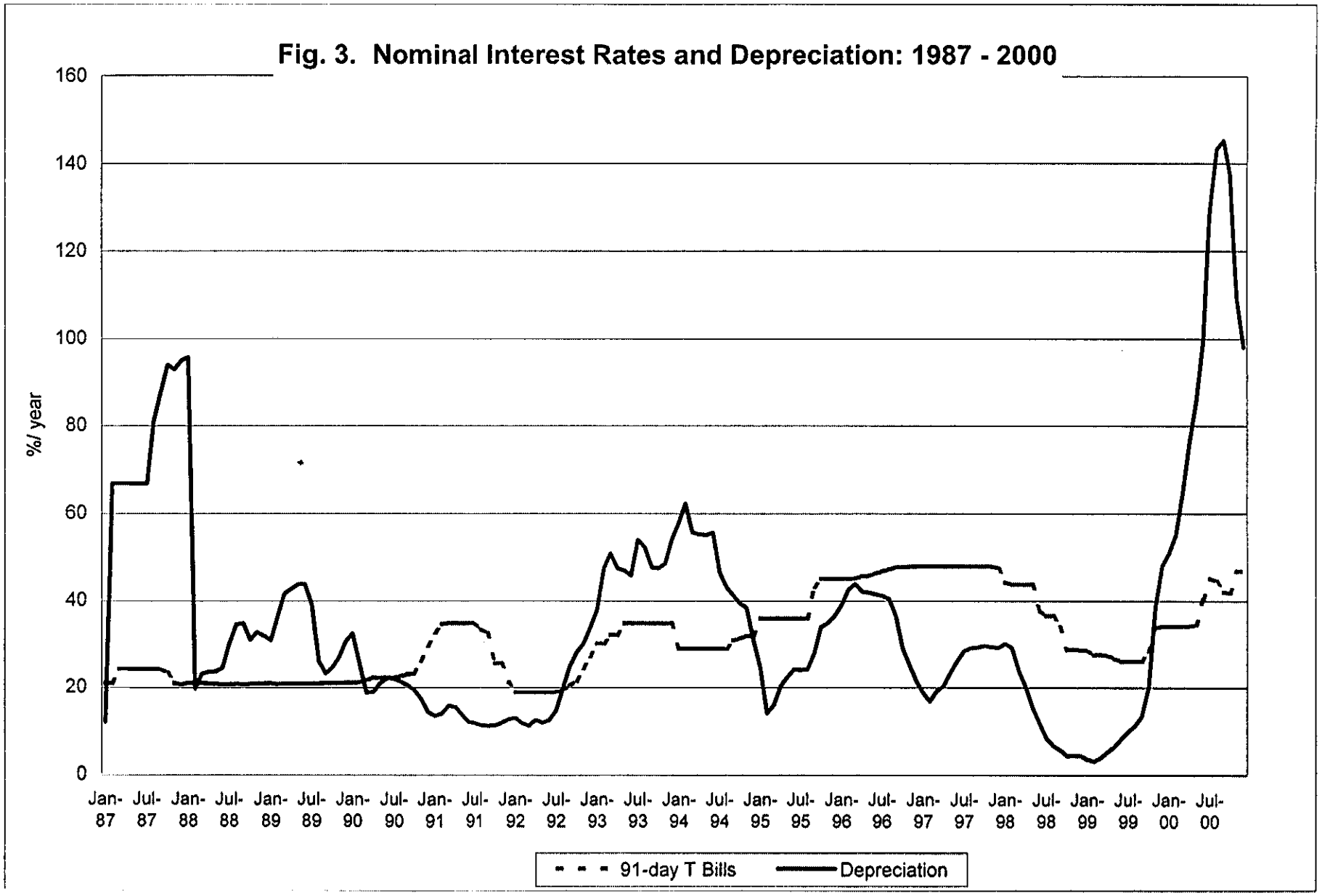


Fig. 3. Nominal Interest Rates and Depreciation: 1987 - 2000
%/ year
160
140
120
100
80
60
40
20
0
Jan-87
Jul-87
Jan-88
Jul-88
Jan-89
Jul-89
Jan-90
Jul-90
Jan-91
Jul-91
Jan-92
Jul-92
Jan-93
Jul-93
Jan-94
Jul-94
Jan-95
Jul-95
Jan-96
Jul-96
Jan-97
Jul-97
Jan-98
Jul-98
Jan-99
Jul-99
Jan-00
Jul-00
91-day T Bills
Depreciation

of the economy. The BoG has tended to use the exchange rate as a nominal anchor for the economy: a stable nominal exchange rate is viewed by Government as a tangible sign that the authorities have inflation under control.

Of these three prices, the BoG probably has the least direct control over the inflation rate. The link between money growth and inflation is strong, but it operates with a lag and the ultimate effect on the price level of a given injection of high-powered money is not exact. The BoG and the GoG can set the nominal (*not* the real) interest rate at any specific value they wish. Thus, when we observe a negative real interest rate, we know that the BoG has chosen not to raise nominal rates to offset the effects of inflation. Given sufficient foreign exchange reserves and its ability to jawbone, the BoG can also some control over the nominal exchange rate in the short run. However, even though the BoG can peg the nominal exchange rate, it cannot peg the real exchange rate, and hence, the relative returns between foreign and domestic interest-bearing assets. When a sudden bout of depreciation penalizes holders of GoG bills, this signals that the BoG has lost its ability to intervene in the foreign exchange market.

4.0 Anatomy of Two Speculative Attacks

4.1 Build-up to the 1992/93 Attack

In the late 1980's through 1990, Ghana was attempting to remove the causes of financial repression. It did away with the credit ceilings and targets that attempted to direct bank lending towards certain sectors of the economy, but had the perverse effects of promoting financial disintermediation and reducing the overall supply of credit to the private sector (Gockel, 2000). It also introduced various maturities of BoG and Treasury securities as the basis for a new system of monetary control. It undertook the recapitalization and restructuring of the financial system to repair the damage caused by years of financial repression. This was also a period of foreign exchange market and trade policy liberalization, characterized by a shift from fixed exchange rates to a crawling peg and finally to a managed float; by the legalization of foreign exchange bureaus and a broadening of the transactions permitted in them; and by the abolition of all import licensing requirements.

As a result of these changes, over the period 1987-1990, the cedi depreciated in real terms by 1% per month and on a nominal basis by nearly 3% per month (see **Table 3**). Financial market signals still favored holding dollar assets (the deviation from IRP averaged nearly 18% per year), because nominal interest rates did not compensate for the depreciation in the nominal exchange rate. Nevertheless, the relative return to holding cedi assets improved throughout this period (see **Fig. 1**).

Despite the introduction of BoG and GoG securities for monetary control purposes, throughout much of this period, nominal interest rates were not actively used as either an instrument or an operating target of monetary policy. As a result, real interest rates were a *negative* 9% on average. Instead, an important instrument of monetary policy was reserve requirements. Primary and secondary reserves (respectively, deposits at the BoG and approved securities that banks are required to hold as a percentage of their deposit liabilities) were roughly 30% in 1987 but were raised periodically to 42% by the end of 1990. Over this time, primary reserve requirements were lowered and secondary requirements were raised, perhaps to provide sufficient incentives for banks to hold government paper that carried a negative real return.

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Table 3. Selected Characteristics of Different Monetary Policy Regimes*

	1987-1990	1991 - mid 1992	mid 1992 - 1994	1995 - mid 1996	mid-1996 - 1999	2000
Monthly base money growth	2.2	0.7	4.1	2.0	2.3	1.2
Average monthly inflation	2.3	1.0	1.9	4.1	1.3	2.9
Nominal T-bill rate (% per year)	21.9	27.3	29.4	41.1	39.4	39.3
Beginning of period	20.8	32.7	18.9	36.0	46.3	34.2
End of period	29.5	18.9	31.9	46.3	34.2	46.9
Real interest rate (% per year)	-8.5	10.8	6.3	-11.1	15.0	12.4
Beginning of period	-9.5	1.8	9.7	0.3	-1.5	17.4
End of period	-4.7	9.7	-1.7	-1.5	17.9	4.5
Change in real domestic debt	-0.9	3.0	2.5	-0.8	1.5	-1.5
Nominal depreciation	2.9	1.0	3.2	2.6	1.8	5.9
Real depreciation	1.0	0.3	1.4	-1.1	0.7	3.2
Deviation from IRP (- favors $ assets)	-17.9	8.2	-12.4	2.8	11.7	-34.2

*All numbers are in percent per month unless otherwise noted.

Another striking feature of this period is the strong downward trend in base money growth (measured on a year-on-year basis and plotted in **Fig. 4**). Annual growth in high-powered money decreased from around 60% at the beginning of 1987 to zero by the end of 1990. This was possible because the government was relatively disciplined over this period: the conventional broad budget deficit averaged only 1% of GDP.

Towards the end of 1990 for a period lasting until the middle of 1991, nominal interest rates were raised sharply from 23% to 35%. This was sufficient to make real interest rates highly positive. As inflation declined steadily during 1991, nominal interest rates were lowered, but real interest rates still remained positive. This provided a powerful incentive for banks, institutions, and individuals to willinngly hold securities issued by the BoG and the GoG. As a result, the real stock of domestic debt grew rapidly. For example, domestic debt as a percent of GDP hovered around 3% from 1987-1990 when real interest rates were negative. However, from 1991-1994 when the real interest rate averaged 8%, real domestic debt stocks grew at an average of 3% per month. Thus, by the end of 1994, the stock of real domestic debt stood at nearly 11% of GDP. At the same time, growth in the real economy was averaging 4.7% per year. The lesson from Sargent and Wallace (1986) is that this situation is not sustainable: people realize that the government will ultimately have to print money in order to service its interest-bearing debt.

Another set of circumstances sharply increased the likelihood of this outcome: Ghana's transition to democratic rule, with elections scheduled for November 1992, and the desire of the ruling PNDC party to be legitimized in this election. The government promised and delivered a retroactive 35% wage increase to government workers in the last quarter of 1992 that was paid for by borrowing from the BoG. This injection of liquidity resulted in a 90% increase in the stock of high-powered money over its level at the end of 1991. As a result of these fiscal excesses and the BoG's accommodating behavior, the average monthly growth in the monetary base jumped to more than 4% beginning in mid-1992 and persisted for two-and-a-half years. This compares with an average growth rate of less than 1% per month in the 18 months from 1991 to mid-1992 (**Table 3**).

To counteract its massive injection of high-powered money, the BoG issued BoG securities, increased reserve requirements rom 42% to 57% (of which the secondary reserve requirement was 47%), and, most importantly, intervened extensively in the foreign exchange market by selling foreign currencies. These circumstances set the stage for a speculative attack on the cedi. The government was running very large deficits, the BoG was financing the deficit by printing money, and simultaneously trying to mop up the money it created by selling its limited stocks of foreign exchange. From mid-1992 through the first quarter of 1994, the nominal exchange rate depreciated by 127%. The attack shows up in **Fig. 1** as a switch in the relative return measure from favoring cedi-denominated assets to favoring dollar-denominated assets.

4.2 The Fight Against Inflation

One pernicious effect of the BoG's injection of high-powered money and the speculative assault on the cedi was a prolonged period of high inflation averaging over 4% per month for an 18 month period (1995-mid-1996). At its height during 1995, inflation exceeded 70% per year measured on a year-on-year basis (**Fig. 2**). Despite increasing the nominal interest rate from 36% to 46% per year (**Fig. 2**), real interest rates turned sharply negative during this period,

Fig. 4. Base Money Growth (smoothed): 1987 - 2000

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averaging a negative 11%. This discouraged holding domestic debt instruments and the real stock of domestic debt declined at an average monthly rate of nearly 1% (see **Table 3**).

The stock of high-powered money and inflationary expectations received an added boost in the last quarter of 1994 when the Ghana National Petroleum Corporation (GNPC) borrowed heavily from the BoG. This resulted in another huge spike in the growth of high-powered money (**Fig. 4**) to annual rates in excess of 70%. In an attempt to mop up the excess liquidity created by the BoG's willingness to finance public sector deficits by printing money, the BoG issued billions of cedis worth of BoG securities in 1994 and 1995. It also kept reserve requirements high—total reserves were 57%, of which secondary reserves were 52%.

4.3 Build-up to the 1999/2000 Speculative Attack

As inflation steadily declined from 70% at the beginning of 1996 to around 10% in 1999, real interest rates became highly positive once again (**Fig. 1**). They averaged 15% per year over this period, during which time the real economy grew at 4.5% per year. In late 1997, with inflation seemingly under control, the BoG adopted the policy of using the nominal exchange rate as an anchor for the economy. This entailed using its monetary policy instruments to fix the nominal value of the exchange rate, thereby symbolizing the government's commitment to macroeconomic stability and also helping to lower inflationary expectations.[3] As a result, the nominal rate of depreciation slowed dramatically—during 1998 the nominal exchange rate depreciated by only 3%.

This combination of incentives (very high real interest rates and very low rates of nominal depreciation) created powerful incentives for wealth to be held in domestic interest-bearing assets, which carried an average premium of nearly 12% per year above dollar-denominated interest-bearing instruments. As a result, real debt stocks grew at 1.5% per month from mid-1996 through 1999. As a percent of GDP, domestic debt swelled from 10% in 1996 to 16% in 1999.

In order for the nominal exchange rate anchor to work, the government should have been running a very restrained fiscal policy. Instead, 1996, 1997, and 1998 were years in which the government was especially profligate in its spending: the broad budget deficit averaged nearly 9% of GDP over this period. Thus, the government is running huge deficits that have to be financed somehow, it is attempting to service its domestic debt at real rates that far exceed the economy's growth rate, and the BoG is running down its stock of scarce foreign exchange reserves to maintain the nominal anchor.

Furthermore, sales of foreign exchange were being used as a type of open market operation to control the growth of base money. Previously, the BoG had been issuing BoG securities to slow the growth of base money. From 1996-1998 BoG securities were retired[4] and Treasury bills, issued by the Government, were supposed to take the place of BoG bills in open market operations. This actually weakened the BoG's ability to conduct monetary policy through open

[3] The decision to adopt the exchange rate as the nominal anchor came after the Inflation Management Roundtable in May 1996 which was attended by Michael Bruno. Bruno (1989, 1991) helped in the design of a similar strategy to reduce inflation in Israel.

[4] At the end of 1996 BoG securities totalled C518 billion; by the end of 1998, they totalled C1 billion.

market operations. Under the new system of monetary control, the BoG's open market operation needs are secondary to financing the GoG's public sector borrowing requirement (PSBR). The government has first claim on the proceeds, which it uses to meet its PSBR. Residual proceeds are used to drain reserves from the banking system in order to meet the BoG's reserve money target (Youngblood 2000).

The foregoing conditions laid the foundation for another speculative attack on the currency. The attack was touched off by a sharp downturn in the terms of trade. In the second quarter of 1999 the price of cocoa fell sharply and the price of petroleum rose significantly. These events continued in the third and fourth quarters of 1999. With an important source of the BoG's supply of foreign exchange threatened, individuals and institutions recognized the unsustainability of the situation and tried to switch out of domestic assets into the safe haven offered by dollars. The cedi depreciated sharply (**Fig. 3**). From June 1999 to June 2000, the cedi depreciated 100%; by the end of the year, the cumulative depreciation reached 174%.

The authorities raised the nominal interest rate 20 percentage points, from 26% to 46%, in an attempt to stem the depreciation. The attack also boosted the inflation rate to 41% at the end of 2000 through its effect on the prices of tradable goods in the CPI.

5.0 Consistency of Monetary and Fiscal Policies

In this section we assess the degree to which Ghana's monetary and fiscal policies are consistent, that is, whether they have worked together to produce a desirable outcome. To do this we need an accurate picture of the true size of the public sector and how public sector activities are financed. Many public sector activities in Ghana are outside the purview of the central government, namely, those undertaken by the large number of state-owned enterprises. In addition, the Bank of Ghana performs quasi-fiscal functions; for example, the government's financial dealings with the IMF are recorded on the books of the Bank of Ghana. For these reasons, we are interested in the consolidated public sector, which in principle includes the accounts of the central government, the state-owned enterprises, and the Bank of Ghana, as well as other instances of the state which require financing.

We analyze the consolidated public sector by constructing its financing constraint. Because Ghana has experienced high and variable rates of inflation and nominal exchange rate depreciation over the years, looking only at nominal values of items in the budget would obscure critical distinctions between the uses of funds (expenditures) and the sources of funds (financing). Accordingly, we correct all variables in the financing constraint for the effects of inflation and real exchange rate changes. This properly accounts for the inflation-induced amortization of debt and the capital gains and losses caused by real exchange rate changes as financing items rather than as expenditure items.

Furthermore, all variables in the constraint are reported as shares of GDP. This gives a more accurate picture of the financing burden that public sector activities place on the economy. By expressing the financing requirements and means as GDP shares, we can assess the increase or decrease in the financing burden relative to real growth. The three sources of financing (inflationary taxation of the monetary base, domestic debt, and external debt) can thus grow at the real rate of growth of the economy without increasing the financing burden as a share of GDP. In this formulation we abstract from the normative question regarding the appropriate size

of the public sector and its consolidated financing requirement. Our application of this framework is based on the work of Anand and van Wijnbergen (1989), Catsambas and Pigato (1989), and Riesen (1989).

The financing constraint of the consolidated public sector expressed as shares of GDP is depicted as:

$$\delta + (r - q)\,\beta + (r^* + e\hat{} - q)\,\phi = (q - \theta + \pi)\,\mu + \Delta\beta + \Delta\phi$$

The left-hand side of the constraint adds the three broad types of spending by the public sector:

- the real primary deficit, δ, which includes all expenditures, except interest payments, net of revenues;
- real interest expenditures on the domestic debt net of real economic growth, $(r - q)\,\beta$;
- real interest expenditures on the external debt adjusted for real exchange rate changes and net of real economic growth, $(r^* + e\hat{} - q)\,\phi$.

The right-hand side of the constraint adds up the sources of financing:

- inflationary finance based on real holdings of high-powered money, $(q - \theta + \pi)\mu$;
- domestic borrowing measured as changes in the real stock of domestic debt, $\Delta\beta$; and
- international borrowing, $\Delta\phi$.

5.1 Spending

The spending side of the financing constraint comprises the primary deficit and interest expenditures on domestic and international debt. The primary deficit, δ, in principle captures the non-interest expenditures of the public sector net of tax and non-tax revenues. We include total revenue from all sources, including program and project grants and divestiture receipts. Expenditures include all statutory payments except for principal and interest payments on the external and domestic debt and *all* discretionary expenditures, including personal emoluments, administration and service, domestic- and foreign-financed investments, and arrears clearance. Subtracting revenues from expenditures yields what we call the broad primary balance.[5]

Real interest expenditures on the domestic debt are $(r - q)\,\beta$, where r is the real interest rate, q is real GDP growth and β is the real stock of domestic debt as a share of GDP. This shows that real economic growth reduces the real resources needed to meet interest payments. If real interest rates are equal to the rate of growth, no additional real spending burden is imposed on the private sector by the consolidated public sector.

[5] This concept of the primary deficit differs significantly from that used by the central government in its budget statements and reported in IMF publications. In their calculations, revenues exclude both grants and divestiture receipts, and expenditures exclude not only principal and interest payments on the external and domestic debt (as we do), but also foreign capital expenditures and arrears clearance. The GoG/IMF calculation is called the domestic primary balance. Since the excluded expenditure items are usually much larger than the excluded revenue items, the domestic primary balance often shows a surplus, whereas the broad primary balance we calculate either shows a deficit or a much smaller surplus. The broad primary balance is a more complete measure of the financing burden that the economy must support.

For the consolidated public sector, external liabilities include the public and publicly guaranteed external debt taken on by the central government, the SOE's, and the Bank of Ghana.[6] The foreign assets held by the Bank of Ghana were subtracted from this amount to arrive at the net indebtedness of the consolidated public sector to the outside world. The transfer of real resources embodied in interest payments to external creditors is given by the term $(r^* + \hat{e} - q)\,\phi$, where r^* is the real international interest rate, $\hat{e}$ is the deviation of the real exchange rate from purchasing power parity, and ϕ is the real stock of external debt as a share of GDP. The real resources needed to meet these interest obligations depend critically on changes in the real exchange rate, since payments must be made in dollars. These dollars ultimately come from converting domestic resources at the real exchange rate. Even if the government books an external interest payment at an exchange rate more favorable than the equilibrium exchange rate or makes the payment from the proceeds of a new loan, the dollars paid out still carry an opportunity cost equal to the real exchange rate. The deviation of the real exchange rate from purchasing power parity is therefore added to the real international interest rate. The real resources required for interest payments on the external debt are offset by economic growth, as was the case with domestic interest payments.

5.2 Financing

The financing alternatives available to the consolidated public sector are money creation, domestic borrowing, and international borrowing. The tax base for money creation is the real monetary base as a percent of GDP, μ. The public sector captures revenues by taxing this base through inflation, π, if holders of the monetary base attempt to keep their real holdings of money constant. To the extent that inflation induces flight from the domestic currency, the yield of the inflation tax will be lower. The public sector also captures seignorage revenues, $(q - \theta)\mu$, that are generated as the net demand for base money rises with increases in real GDP.

Domestic borrowing is measured as the change in the real stock of domestic debt instruments held by the private sector. International borrowing by the consolidated public sector is measured as the change in the real stock of external debt as a share of GDP. The gross external liabilities of the central government and the Bank of Ghana are measured by the stocks of short-, medium-, and long-term debt held or guaranteed by the public sector, including borrowings from the IMF, partially offset by the foreign assets of the BoG.[7]

4.3 Imposing Equality in the Financing Constraint

We calculated each item in the financing constraint separately. This gave us a spending total (the sum of the items on the left-hand side of the equation) and a financing total (the sum of the items on the right-hand side). For every year except 1996, the financing total reflected either a bigger deficit or a smaller surplus than the spending total. The main reason for this was that the broad primary deficit was based only on the fiscal stance of the central government—it did not capture all of the net spending of the large state-owned enterprise sector. Thus, using only the

[6] The government's obligations to the IMF are kept on the books of the Bank of Ghana.

[7] Hence, this measure will differ from the commonly reported external debt statistics for Ghana by the amount of foreign assets held by the BoG.

net spending reported by the central government significantly understates the true fiscal stance of the country.

We enforced equality in the financing constraint by redefining the broad primary deficit to be the financing total net of interest expenditures on domestic and external debt. This reflects the notion that if we observe financing, then there must be an underlying expenditure, whether or not it was reported in the official budget statistics. By calculating the primary deficit in this way (which we term the inclusive primary balance), we capture hidden expenditures that originate in the state-owned enterprise sector and from the quasi-fiscal activities of the Bank of Ghana.

This gives us a more accurate picture of the true net spending of the consolidated public sector. This presentation of the financing constraint also provides a consistent framework within which we can see how the operational deficit (the primary deficit plus all interest expenditures) have been financed over time.

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APPENDIX A

THE REAL INTEREST RATE AND THE INTEREST RATE PARITY CONDITION

The real interest rate was calculated from the Fisher condition relating nominal and real interest rates and expected inflation:

$1 + i = (1 + r)(1 + \pi)$, where

i = nominal interest rate,
r = real interest rate, and
π = inflation rate.

We solve for the real interest rate, obtaining as an intermediate step:

$1 + r = (1 + i)/(1 + \pi)$

Subtracting 1 from both sides and applying a common denominator of $1 + \pi$ to the right-hand side yields:

$r = (i - \pi)/(1 + \pi)$.

We use this measure of the real interest rate because in economies with high nominal interest rates and high inflation, it is more accurate than the usual approximation of the real interest rate given by $i - \pi$.

The nominal interest rate used was the annualized interest-equivalent rate on 90-day Treasury bills. (The interest-equivalent rate is calculated from the discount rate.) The discount rates used in the calculations were monthly averages of weekly data published by the Bank of Ghana. The inflation rate is the year-on-year change in the monthly CPI.

The third slide (Incentives for Bank Financing of Government Borrowing) is the same as the first slide, except that it uses another measure of the incentive to banks to lend to the government. This measure is based on the interest rate parity (IRP) condition that equilibrates nominal interest rates between two countries, adjusted for exchange rate movements, when there is perfect capital mobility and the two assets on which interest is paid are perfect substitutes:

$(1 + i) = (1 + i^*)(1 + \rho)$, where

i and i^* are defined as above and ρ is the percentage change in the nominal exchange rate (measured in cedis per US dollar). A positive value for ρ implies nominal exchange rate depreciation and a negative value implies nominal exchange rate appreciation.

The above IRP condition can be rewritten as

$(1 + i)/(1 + \rho) = 1 + i^*$, or subtracting 1 from both sides and applying a common denominator of $1 + \rho$,

$(i - \rho)/(1 + \rho) = i^*$.

This condition implies that if the nominal interest rate on 90-day Treasury bills is higher than the nominal interest rate on 90-day Treasury bills in the US, the nominal exchange rate (measured in cedis per dollar) will be expected to depreciate sufficiently to make the expected return on these two instruments identical. This condition strictly applies only when capital is freely mobile and US and Ghanaian Treasury bills are perfect substitutes.

This is obviously not the case—Government of Ghana Treasury bills are riskier than US Treasury bills and capital cannot move freely between the two countries. Nevertheless, we can compute the difference between the expected returns on the two securities (measured in a common currency) and draw certain conclusions from this difference:

	> 0	return on Ghana T-bills is greater than return on US T-bills
$(i - \rho)/(1 + \rho) - i^*$	$= 0$	returns on Ghana and US T-bills are identical
	< 0	return on US T-bills is greater than return on Ghana T-bills

This is the arbitrage gain that is plotted in the third slide.

Because US and Ghana T-bills do not have identical risk and liquidity characteristics we would expect to see a persistent positive difference that reflects the risk and liquidity premia inherent in Ghanaian securities. The presence of very large positive differences in favor of Ghana could indicate either the potential to make abnormally large profits by purchasing GoG T-bills or signal an expectation of further depreciation of the cedi. If these large positive differences persist, then we would conclude that the former possibility is more likely.

Large negative returns, i.e., when the relative return for US T-bills exceeds that for GoG T-bills, are an indicator of financial repression augmented by hindrances to the free flow of capital into and out of Ghana.

Strategy for Rapid Economic Growth In Ghana

Sigma One Corporation

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Strategy for Rapid Economic Growth in Ghana

Preamble

Ghana is currently suffering one of many periodic economic crises which have characterized its modern economic history. This brief presents a recommended strategy for rapid and sustained economic growth. The strategy is not a strategy for coping with the symptoms of the current crisis–rapid devaluation of the currency, accelerating inflation, financial disarray and the threat of insolvency of its financial institutions, among other symptoms. The current crisis is merely a symptom of the domestic policy framework that has retarded Ghana's economic growth and development. In this context, crises are the consequences of the policy regime, and the management of each crisis lays the foundations for the next crisis. This is the principal reason why the Ghanaian economy fails to thrive. This strategy seeks to place Ghana on a path of long-run and sustained growth.

The fundamental reasons for economic stagnation and for Ghana's susceptibility to crises is that the State has attempted to accomplish more than it is able to accomplish given the limited resources which it can command in an economy at Ghana's stage of development and given the limitations of its administrative apparatus. The State has reached beyond its means and capabilities throughout Ghana's post-colonial history, and the only differences in the performance of the various governments have been in the explicit policy means that were used to express the presence of the State in the economic affairs of the Nation.

A strategy for rapid and sustained growth must first and foremost rely on the skills and creativity of the nation's people and their ability to respond to opportunities in an environment of good governance, political stability and economic transparency. This strategy deals with the fundamentals of creating an environment of economic transparency in which the efforts and entrepreneurial talents of Ghanaians can express themselves free from over-regulation and onerous administrative hassles. The environment of good governance and political stability is taken as a given, but in the development of the economic recommendations contained in this strategy, there has been due consideration to the bi-directional nature of the relationship between economic aspects and the governance and political aspects.

The fundamentals of the strategy are centered on an economic role for the State that is consistent with the realities of Ghana's current place in the world economy, the nation's resource base, and the need to create a framework in which Ghanaians and their enterprises can become increasingly competitive in domestic and global markets. Given this context, the State must not only have limited economic objectives and that these be focused on its normative and regulatory functions, but it must also generate positive savings to restore solvency to the financial system and to restore credibility to its economic role, as well as to the economy as a whole. The strategy is focused on wealth creation and the eradication of poverty through the performance of markets, which must be allowed to perform their resource allocation functions. This not withstanding, the State's legitimate role in the distribution of social services is recognized and respected. In fact with rapid growth the State would obtain more resources with which to perform its social welfare functions more effectively.

Elements of the Growth Strategy

The strategy for growth has three fundamental pillars; two are directed at generating the necessary domestic savings and investment without which Ghana cannot grow and the third is directed at creating a policy environment in which Ghanaian skills, talent and enterprises can thrive in a globally competitive economy. The three pillars are fundamental in that all three are required; without their reinforcing and mutual support the economic structure would collapse. The three pillars are:

1. Generate sustainable, predictable and credible ***public sector savings through effective control of fiscal excesses*** in government, its institutions and its enterprises.

2. Create a functional financial sector in which market forces serve to ***mobilize private domestic savings to domestic productive investments***, and to attract international investments into Ghana.

3. Create an economic environment in which ***Ghanaian workers and enterprises are allowed to be competitive*** and to capture the legitimate returns to their efforts and risk taking

The three pillars require that the State operate within its financial means and that it concentrate on legitimate public and social functions without crowding out the private sector through excessive participation and involvement in financial, labor and product markets. The three pillars require that all agents in the private sector assume greater responsibility for their own affairs and that they bear the consequences of their choices, regardless of outcome. ***To achieve rapid growth Ghana requires an effective partnership between the State and all segments of the private sector to establish an appropriate division of effort between truly public and exclusively private spheres of economic action.***

Savings and Investment

Investment means foregoing consumption today to generate improved well being in the future, i.e. growth. ***Domestic savings are the sine qua non for growth***, because they signal to all economic agents, national and international, that the citizens of the nation have faith in its economic future. Furthermore, growth that is fueled by domestic savings is retained as a source of future growth, whereas growth fueled by foreign savings must of necessity be shared with the international investors. This is not to say that international investment is not important for growth; it is, and international investment that complements domestic investment is more likely to reflect national values and priorities. Higher levels of domestic savings also help attract higher levels of international investment. Growth that is primarily fueled by sovereign indebtedness and donor assistance risks relinquishing national sovereignty to the international creditors and donors.

In Ghana the domestic savings rate has been too low in comparison to high growth economies that were at Ghana's stage of development when Ghana achieved independence. In the early stages of independence halting growth was obtained from a depletion of prior savings, and in recent years the meager growth under the Economic Recovery Program has relied almost exclusively on donor credits and aid. Today, approximately half of the savings that are generated within Ghana are diverted to meet the consumption of the State, and much of the rest has been dissipated by uncertainty and risks and by a general lack of competitiveness throughout the economy. Uncertainty in Ghana originates primarily from economic policies related to meeting the financing requirements of persistent deficits of the State, its institutions and its enterprises. Uncertainty not only dissipates the productivity of the savings and investment levels that are achieved (including donor aid), but uncertainty also causes Ghanaians to discount the future and to save less than they would in a more certain and more productive environment. The growth strategy must face this issue squarely–for Ghana to grow, the State must generate substantial savings and the financial sector must mobilize increasing levels of domestic savings and place them in productive investments. These two pillars of the strategy would accomplish several important outcomes simultaneously:

- Restore faith in the solvency of the financial sector
- Signal to Ghanaians and the rest of the world that the State is truly committed to growth and to Ghana's future
- Allow domestic savings to be allocated to their most productive uses by the entrepreneurial actions of Ghanaians and their private international partners
- Provide stability and predictability in the key macroeconomic signals that affect savings and investment decisions and in sectoral and enterprise level investment decisions
- Provide incentives and resources for Ghanaians to invest in their human capital
- Meet the State's contractual obligations to its domestic and international creditors
- Reduce the debt service burden of the State, so that government revenues may be used for needed social services and legitimate public investments

The core of the strategy is simple. The public sector must generate credible, predictable and genuine positive surpluses in its non-debt related budget. These surpluses must be legitimate in that they are generated by an excess of recurrent revenues over all expenses, and not by financing or accounting artifacts that shift expenses and liabilities among the various instances of the State–government, institutions and enterprises. These surpluses must be programmed in the planning of the budget and realized in the execution of the budget in each accounting period. Within each period revenues and expenses must be closely monitored to insure that the projected

surpluses are realized at the conclusion of each exercise. The government must commit itself to this, and it must implement the administrative apparatus to insure that it meets its commitments without exception and without excuses. Absent this, the government will lack credibility, the needed private savings will not be forthcoming, and the economy will revert to a pattern of instability punctuated by recurrent crises.

It will not be easy for the government to achieve these consistent fiscal surpluses without the support of its constituencies, labor unions and civil service workers, enterprise owners, and the rural elites. These three constituencies have been nurtured by public actions that made fiscal excesses almost a necessity. Labor unions and civil service workers are the most important constituency, because the State is dominant in the formal labor market and the public sector wage bill is a major fiscal burden and an impediment to competitiveness. Formal sector enterprises are dependent on government largesse through a myriad of interventions that have direct and indirect effects on public finances and government operations. The enterprise owners are a constituency that must be involved in promoting growth under the proposed strategy. This group expresses its political power in several ways, including using their workers as a political weapon. Finally, in the last eight years expenditures on infrastructure investments have burgeoned and this has created a constituency of rural elites that benefit directly from the investment projects and indirectly through the capitalization of inflation and the benefits of the projects into the value of land. They too must be enlisted to support the new strategy for growth.

In the near term there are only two elements in the government budget where savings can be achieved–the public sector wage bill (5-6% of GDP on average during the last ten years) and the investment budget (more than 10% of GDP on average in last ten years). While revenues can be enhanced through accelerated divestitures of state-owned enterprises, through privatization of public services, and through improvements in tax collections, these are either unpredictable and occasional (divestitures and privatization) or marginal (improved tax collections). Such revenue enhancement must be sought, but the crux of the matter is to rein in expenditures by dealing with the wage bill and the investment expenditures. This is where the difficult choices must be made.

Strategy for Reducing the Public Sector Wage Bill

The public sector is the wage setter in the formal sectors of the economy. It employs more than half of the nation's formal sector workers, although formal sector employment absorbs only about 15% of the labor force. The formal sector workers (public and private) are the largest, if not the politically strongest, constituency of the government and of its policy regime. The workers are organized through the unions and have been an important base of political power since they were the pillars of the struggle for liberation from the colonial power.

The formal sector workers represent only about 15 percent of the labor force, and although some are well situated economically, many are vulnerable either because of their dependence on public employment and the accompanying emoluments or because their continued employment in the private sector is keyed to the transfers of resources on which their employers depend. Formal

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employment has been sustained through State action throughout the many crises that Ghana ha experienced since independence. The labor force is older and less resilient than the labor force in the informal sectors. A major disruption of employment in the formal sector would generate severe social and humanitarian dislocations, because formal sector workers are less adept at dealing with shocks than are their brethren in the informal sectors. Yet for the country to grow and for the population to become less vulnerable to economic disarray, the public sector wage bill must be reduced as a share of the budget and a share of national output.

The strategy for reducing the wage bill must include the following elements:

1. Delink public wages from inflation and avoid real wage increases until inflation is consistently at single digits on an annual average. This would allow inflation to reduce the wage bill as a share of the budget and GDP.

2. Guarantee to civil service workers that there will be no retrenchment of workers and that only attrition will be used to reduce the number of the government employees. Continued government employment can serve as a "social safety net" until growth creates better opportunities for government workers in other activities or when they reach retirement age.

3. Consolidate support for macroeconomic reforms among the leaders in the unions particularly public sector unions. This can be achieved in many ways:

    - Insure participation and enfranchisement for union members and leaders in public fora in which the economic policies are openly debated and evaluated.

    - Harness the existing tri-partite consultative process for the labor market (unions, employers and government) to support economic reforms, particularly fiscal discipline.

    - Promote the concept that deficits mean inflation and that inflation erodes wages and stifles the creation of employment opportunities. With inflation the workers always lose, but the rich can often gain.

    - Assure workers that their pension savings in the Social Security and National Insurance Trust (SSNIT) will be safeguarded, because SSNIT will be reformed to concentrate on its responsibilities to the workers and that the workers' savings will not be used to fund the excesses of government. Increase the representation of unions on the Board of SSNIT and reduce the participation of government officials. Promote credibility of the strategy by paying all SSNIT arrears owed by government and SOE's, and place all SOE and government loans from SSNIT on a performing basis with cash payments of arrears and delinquencies.

- Continue work in the tri-partite consultative forum toward greater labor market flexibility so that economic growth can generate more jobs (and union members) in the private formal sector and provide alternative employment opportunities to government workers that opt to depart voluntarily.

Strategy for Controlling Excessive Spending on Infrastructure

Urban and rural construction projects appear to be out of control. This has caused the government's investment budget to mushroom since 1992. Expenditures on infrastructure and construction projects are reaching levels where they exceed the combined expenditures on wages and debt service payments. While Ghana needs investment in public infrastructure to support private sector-led growth, the financing of such projects has been a major cause of the financial disarray and of the growing domestic and international indebtedness. The investment budget must be brought into line with what can be reasonably financed domestically. Otherwise the productivity of the infrastructure investments will be nullified by the economic instability that the financing of excessive infrastructure investments helps engenders.

The following steps are a strategy for reining in what appears to be an uncontrollable process:

1. Halt all uninitiated construction projects immediately, regardless of their source of finance.

2. Prioritize all ongoing projects and selected new projects within each district according to their developmental priority, not their political priority.

3. Determine the "true" domestic financing needs for each project regardless of whether it is sponsored by a donor or international creditor.

4. Establish a firm limit on the amount of domestic spending that is available for infrastructure after meeting the previously established target set for the "Public Sector Savings Requirement" in the annual budget.

5. Allocate the available national investment budget proportionately across regions to the projects with the highest priority and cancel or postpone all others.

6. Establish a quarterly monitoring process to insure no overruns or unauthorized expenditure on each project; establish a severe and binding sanctions process for officials that allow overruns or unauthorized expenditures.

This process too will require a profound and serious consultation with all of the interested parties, including the traditional leadership in the regions, the construction companies and the donors who are sponsoring some of these projects. The government financial authorities must recognize that

while some of these donor projects may appear as grants of scarce foreign currency, they are ultimately mortgaging Ghana's future. Ironically, the donor funded investment projects are made more attractive to government officials by the artificial scarcity of foreign exchange that results from official interventions in all markets that impede Ghana's international competitiveness.

Strategy for Mobilizing Domestic Saving

Ghana's financial sector is in great disarray, because it has been used to finance fiscal excesses and conditions in the financial sector reflect a major share of the State's participation in the economy. More than half of the resources of the financial sector have being used to finance the deficits of the State, its institutions and its enterprises (approximately 10% of GDP). The banking system suffers from an overexposure to foreign currency liabilities which were induced by the central bank's policies to repress inflation and devaluations below their "true" levels (approximately 3% of GDP). The system is severely over exposed to non-performing and forced loans to SOE's (as much as 5% of GDP) . It also suffers from severe overexposure to distressed private domestic firms; some of the imprudent loans and advances to such private firms are the result of official pressures to sustain what would otherwise be insolvent enterprises[1]. The Bank of Ghana (BOG) is essentially insolvent by strict economic standards, because it bears the burden of prior government indebtedness and the costs of ineffective financial tactics to repress inflation and currency depreciation. Significantly, poor people and others who must use the domestic currency are taxed by inflation to the tune of two per cent of GDP, annually. All these resources that are being extracted from the economy through the financial sector for use by the State's apparatus amount to more than a fifth of the economy's output and exceed the national rate of private savings. The meager growth that Ghana has experienced has been fueled by population growth and by donor aid, because the State has essentially crowded out all private investment.

The Social Security and National Insurance Trust (SSNIT) is a classic example of the misuse of scarce domestic savings to support the role of the State in the economy. SSNIT is the government's pension fund for formal sector employees to which 17.5% of the formal sectors' wages is to be contributed for the purpose of funding the pensions of future retirees. As such it represents the largest single pool of domestic savings. It is supposed to harvest approximately 2% of GDP annually in savings. The Trust has many problems; most emanate from its relationship with the State's apparatus. It has many non-performing loans and low return equity investments in insolvent or distressed SOE's. It is used to fund social infrastructure which should be funded through the government's budget. Through cronyism, it is used to fund pet projects of friends of the State. The government and the SOE's are delinquent in their payroll contributions, and with frequency cover such arrears by forcing the Trust to take up equity in State owned enterprises. As a result the Trust suffers from liquidity problems and has a negative rate of return on its investments. The savings of the formal sector workers are being dissipated by the role of the State in SSNIT and in the financial

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[1] Ostensibly, the reason for assisting such firms is to prevent the loss of jobs in these enterprises. The sad reality is that such actions condemn workers to remain in low productivity and low paying jobs, and, thus, rob the nation of competitiveness and growth potential.

sector and by the State's pervasive role throughout the economy. This aspect of financial disarray generates another unfortunate consequence for competitiveness and growth; the dissipation of the economic value of the pension fund causes workers to be frozen into low productivity jobs in the protected formal sector.

In the face of such disarray it is imperative that the financial sector be placed on a sound footing with its principal function focused on mobilizing savings to productive private investments. This cannot be accomplished without fiscal discipline, because the disarray is caused by the need to finance the State's excesses and not by the basic structure or regulations that govern the sector.

The following are the financial elements of this strategy:

1. Signal to the workers and the nation that the government is serious about eradicating the financial disarray by announcing that SSNIT's mandate is exclusively to maximize the benefits to the workers whose savings it manages and not to bailout government's financial excesses, nor to invest in public goods or services or in pet projects of officials.

2. Assure the nation that the government and the Bank of Ghana will meet all its contractual obligations to their creditors, to the banking system and to depositors.

3. Enforce prudent financial supervision standards and regulations, and require banks and non-bank financial institutions to make appropriate provisions for non-performing loans and advances.

4. Require the owners of banks and non-bank financial institutions to re-capitalize any institution that fails to meet capital adequacy ratios after making appropriate provision for delinquent and non performing accounts. This may require some owners to sell their distressed institutions or to take on new equity partners. These requirements should be binding on the institutions with State ownership, and on the State as an owner.

5. Require the government to bear the true costs of past excesses by recapitalizing the BOG with a true asset in exchange for the Revaluation Account stocks and bonds. The new asset should have its capital value indexed to annual inflation and its annual interest coupon tied to LIBOR or a similar international reference. This will force the government to begin to bear the costs of its policies.

6. Separate monetary management from public finance functions at the BOG and require the BOG to administer the treasury-bill and other public debt auctions in a manner that reveals the markets expectations for future inflation, country risk and the real interest rate.

7. Re-define the BOG mandate to eliminate development objectives and exchange rate management to enable it to concentrate on monetary policy and the supervision of the financial system.

8. Establish a system for monitoring foreign exchange flows through the financial system to prevent money laundering and to avoid surges of "hot money", but remove exchange rate targeting as a function of the BOG.

The above elements of the strategy can be executed within the existing legal and institutional framework. What is needed is a sustained and credible commitment to implement each element rigorously. The strategy will not succeed without fiscal discipline or without increased flexibility in the trade regime and the labor market, both are required to promote economy-wide competitiveness and to create the environment for sustained growth.

Strategy for Economy-wide Competitiveness

Ghanaian workers and enterprises must be allowed to become competitive in domestic and international markets. To date competitiveness has been impeded by the overbearing presence of the State in labor, financial and product markets. Flexibility in labor and product markets is important in its own right as a vital component of growth, and flexibility and competitiveness in factor and product markets is also critical for the success of the new fiscal and financial strategy. Without competitiveness in factor and product markets there will continue to be few viable investments in the private sector, and the government will continue as the employer of first resort in the formal sector. Without international competitiveness the reforms of the financial sector could make the economy susceptible to surges of portfolio capital and hot money and unattractive to foreign direct investment. Much can be done to achieve competitiveness through administrative edict by eliminating hassles and over regulations which were needed to manage the scarcities induced by the interventions of the State in all markets.

In addition to a new attitude of partnership between the private sector and government in which each plays its legitimate role, there are a number of specific policy reforms which can add flexibility to the markets and help signal the governments commitment to a new strategy:

1. The government must signal its commitment to the free movement of goods and factors of production by simplifying the administration of trade within the country and across its borders.

2. A simple system of lower and more uniform tariffs without exemptions and exonerations must be set in place. This will create the basis for simplifying the administration of customs and the collection of customs revenues. Paradoxically, revenues usually rise when tariffs are made lower and easy to administer, because it is cheaper to pay the tariff than to avoid it.

3. A system of simple lower and uniform tariffs that are expeditiously administered will help attract direct foreign investment and will place all Ghanaian enterprise on an equal footing and help remove severe intersectoral distortions that currently punish the rural sector.

4. Continue to extend the coverage of VAT throughout the economy as part of a system of neutral economic incentives.

5. Continue to promote and institutionalize labor market flexibility to expand formal sector employment in new and growing private sector enterprises and to help alleviate the impact of fiscal austerity on the families of public sector workers.