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Aid and the Dutch Disease: Macroeconomic Management When Everybody Loves You

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Summary. — Countries that undertake serious and sustained programs of stabilization and structural adjustment should expect to attract significant new inflows of capital from donor countries and international institutions. While apparently beneficial, those flows can work at crosspurpose with other goals of the policy reforms. In particular, abundant foreign exchange loans can force an appreciation of the real exchange rate (often through domestic inflation rather than a nominal appreciation). In addition, since the government is almost always the recipient of these loans, it can crowd out the private sector if it increases its aggregate demand for domestic goods and services. If the crowding out is accomplished by tight monetary policy, it will fall primarily on private investment rather than consumption.

This paper shows that both of these problems have surfaced in Ghana, a country that has become a favorite of donors after demonstrating a serious commitment to policies promoted by the World Bank and International Monetary Fund. The paper also suggests modifications in macroeconomic policy that would help lower inflation and boost private investment.

1. INTRODUCTION

Ghana's economic policy has quite deservedly received a great deal of attention recently. Throughout the 1960s and 1970s, Ghana developed one of the most controlled economies outside of Eastern Europe and suffered a prolonged decline in per capita GDP. In 1983, the combination of a severe drought and the forced repatriation of about one million Ghanaian workers from Nigeria brought the economy to a total collapse, and the authorities chose to redirect economic policy by embracing orthodox stabilization and structural adjustment policies suggested by the International Monetary Fund (IMF) and the World Bank. From 1983 to the present, the government has devalued the exchange rate substantially and persistently to encourage exporters, decontrolled prices, reduced its deficit substantially through a successful tax reform, and undertaken major liberalizations of imports and financial markets. (See, e.g., Alderman, 1991 or Rimmer, 1990 for more detailed descriptions of the reforms and their results.)

The results of these policy changes have been impressive in several dimensions (see Table 1). Growth of GDP and exports is strong despite adverse terms of trade changes; inflation has

fallen; the balance of payments is in surplus; and an economy that had basically ceased to function is now vibrant. Yet problems remain,¹ and this note addresses one of them. Recently, the Ghanaian economy has experienced difficulties which, on the surface, appear contradictory. Inflation remains in the 30% range despite tight credit policy and an apparent fiscal surplus. Private investment remains low despite fundamental promarket reforms. In fact, Ghanaians in general are not as enthusiastic about the Economic Recovery Program (ERP) as foreign observers are, despite the apparently excellent macroeconomic results. One culprit, I believe, is the large amount of capital that has flowed into Ghana since 1986 and the way that the government has managed those funds.

In addition to the attention and praise of economists, the ERP has attracted the attention and cash of the international donor community. As Table 2 shows, after seeing its development

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Table 1. *Some economic indicators for Ghana and sub-Saharan Africa*

	1960-70		1970-82		1984-88	
	Ghana	Low income SSA	Ghana	Low income SSA	Ghana	Low income SSA
Growth of GDP	2.2	4.0	0.0	1.8	5.7	2.5
Agriculture	—	—	0.0	1.6	3.4	2.3
Industry	—	—	-2.4	2.3	10.0	3.3
Manufacturing	—	—	-4.9	2.3	—	—
Services	—	—	1.5	4.3	7.1	2.6
Growth of per capita food production	0.3	1.0	-2.9	-1.2	4.2	-0.5
Growth of consumption and investment						
Public consumption	7.2	4.8	3.3	5.0	-0.1	-1.7*
Private consumption	1.7	3.6	-1.3	3.0	5.3	0.9*
Gross domestic investment	-3.1	5.2	-4.9	2.6	18.3	-0.1
Average annual inflation						
CPI	7.5	2.6	34.9	10.8	29.1	—
GDP deflator					34.4	50.4
Growth in merchandise trade accounts						
Exports	0.1	6.0	-5.3	-2.6	3.5	1.3
Imports	-1.5	6.2	-4.5	0.0	9.6	1.9
Government budget (percentage of GDP excluding grants)						
Expenditure	19.5	22.2	10.1	16.6	12.6	30.4
Current Revenue	15.1	17.0	8.9	10.0	12.1	18.0

Source: 1960-70, 1970-82: Table 6.1 of Younger (1989). All data for 1984 and 1985 are from Africa Economic and Financial Data (AFED) (World Bank/UNDP, 1989). 1986-88 data are from World Bank (1991a) and (1991b) except for government budget data which are from AEFD for 1986-87, and International Monetary Fund (1990). Private and public consumption figures were not available beyond 1985, averages are therefore not for the period indicated.

*1984/85 only.

assistance dwindle in the early 1980s, Ghana experienced a sharp recovery after 1986 as donors climbed on board the ERP bandwagon to support what they correctly perceived to be an important about-face in Ghana's economic policy.² Thus, aid flows increased from about 3% of GDP before the ERP began to 7% of GDP in 1987, four years later. While this is exactly as it should be, the capital inflows are causing "Dutch Disease" problems for the macroeconomic management of the economy.

"Dutch Disease" refers to the problems that a booming export sector causes the rest of an economy.³ In Ghana's case, the boom sector is capital from aid (and perhaps repatriations). As this capital hits the economy, it is spent either on imports or domestic goods and services. (Aid usually cannot be used to acquire foreign assets, though some private inflows could be offset by private foreign asset purchases. See Younger (1991) for a fuller description of the foreign exchange markets and controls in Ghana.) If the

expenditure is on imports, then there is no direct effect on the money supply or aggregate demand in the economy: the balance of payments shows a capital account surplus and an off-setting current account deficit. But when the demand is for domestic goods and services, it creates problems for macroeconomic management. First, the increase in aggregate demand for Ghanaian goods will begin to drive prices up, and this helps to explain the persistence of inflation in Ghana. At the same time, foreign exchange must be changed to cedis to make local purchases, so the money base increases.

The Ghanaian authorities' response to these problems has been limited by Ghana's agreements with the international lending institutions. First, the government faces ceilings on growth in the money supply imposed by its agreement with the IMF, so it must contract domestic credit to offset the growth in foreign exchange reserves. As one can see from Table 3, the assets that correspond to both the money base (at the Bank

Table 2. *Ghana: Official development assistance (ODA) from all sources, net and disbursed*

	1981	1982	1983	1984	1985	1986	1987
Current US\$ Millions							
Sub-Saharan Africa	7,596	7,820	7,683	7,988	8,988	10,850	12,140
Excluding Nigeria	7,555	7,783	7,635	7,955	8,956	10,790	12,071
International Development Association (IDA) countries	6,527	6,662	6,619	6,779	7,962	9,556	10,593
Ghana	148	141	110	216	745	372	375
US\$ Per Capita							
Sub-Saharan Africa	20.2	20.2	19.3	19.4	21.2	24.8	26.9
Excluding Nigeria	26.3	26.3	25.0	25.3	27.7	32.3	35.0
IDA countries	26.1	25.9	25.0	24.8	28.4	33.0	35.5
Ghana	13.3	12.3	9.2	17.5	16.1	28.3	27.5
Share of Recipient's GDP — Percentage							
Sub-Saharan Africa	4	4	4	4	5	7	8
Excluding Nigeria	7	7	7	8	9	9	10
IDA countries	9	9	9	10	11	12	14
Ghana	3	3	3	5	5	7	7

Source: World Bank/UNDP (1989).

of Ghana) and the money supply are increasingly foreign assets. The government has contracted real domestic credit in two ways. It has run a modest fiscal surplus which it uses to buy up outstanding government debt to the banking sector. (As of 1989, the government is actually a creditor to that sector.) And it has imposed tight credit ceilings on commercial banks' loan portfolios, making credit to the private sector very scarce. This helps to explain the fact that private-sector investment in Ghana remains low despite the abundance of market-oriented reforms (see Table 3).⁴ While these policies have helped to lower money growth, the capital inflow has been too strong to sterilize completely, so that rapid M2 growth and inflation continue despite the tight credit (see Table 3).

2. POLICY OPTIONS

Could the government and its international creditors agree on policies that would better handle this strong capital inflow? I believe so, along two dimensions: inflation could be reduced significantly and credit to the private sector could be freed up. To understand how, let me begin with the nature of the shock. The literature on

the macroeconomic consequences of boom sectors notes that the appropriate government response depends on whether the shock is temporary, such as a weather-induced terms of trade change, or permanent, such as a discovery of mineral resources.⁵ For temporary shocks, basic life-cycle consumption theory suggests that people would prefer to spread the benefits of the shock over time, so that a large part of the windfall revenue should be saved, and there is little need for large changes in relative prices. In particular, there is no reason to allow the real exchange rate to appreciate, especially since it would have to depreciate once the temporary flow of foreign exchange subsided. For permanent changes, on the other hand, expenditure patterns and relative prices should change to reflect change in the underlying structure of the economy. In the case of a permanent increase in foreign exchange revenue, the equilibrium real exchange rate must appreciate to reflect relative abundance of foreign exchange.⁶

In Ghana, the increase in aid flows is probably permanent (or at least likely to endure for a considerable time). As one can see from Table 2, despite the large increases in aid during the last few years, Ghana now receives only an average amount of development assistance compared

Table 3. Ghana: Monetary indicators and investment

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Velocity												
GDP/M2	5.26	3.85	4.93	5.33	5.05	7.57	7.67	6.10	5.92	5.64	5.59	6.11
GDP/M1	7.14	5.26	6.88	7.16	7.03	9.80	9.88	7.81	7.77	7.85	7.61	
Public's currency/deposits							83.5%	84.2%	75.1%	73.0%	74.2%	
Reserve ratios*												
Minimum required cash ratio			38.0%	30.8%	31.9%	24.1%	10.0%	13.4%	8.1%	21.7%	19.0%	22.4%
Actual ratio			47.9%	40.4%	33.8%	29.0%	26.3%	24.6%	25.2%	25.3%	25.1%	27.5%
Minimum required secondary			25.0%	25.0%	25.0%	28.0%	35.0%	26.6%	15.0%	6.7%	10.0%	15.0%
Actual ratio			29.7%	32.6%	40.0%	44.2%	31.5%	29.9%	22.4%	15.0%	14.6%	17.1%
Growth in money												
M1								60.4%	49.8%	44.4%	46.3%	
M2								59.5%	53.7%	53.0%	43.0%	22.9%
Proportion of growth in M2 coming from:												
Change in net foreign assets								-23.5%	30.8%	77.7%	80.2%	59.1%
Change in private and SOE credit								58.4%	55.5%	28.0%	22.9%	58.6%
Change in net other assets								66.9%	13.8%	-5.7%	-3.1%	-17.7%
Net foreign assets/total assets												
Bank of Ghana							1.7%	-2.9%	21.4%	59.0%	83.2%	
Monetary survey							-3.9%	-11.3%	2.5%	26.5%	41.8%	44.9%
Domestic Credit/GDP												
Private sector							4.6%	6.2%	7.3%	6.5%	5.5%	6.6%**
State enterprises							0.5%	1.4%	1.0%	1.2%	1.0%	
Central government (net)							8.9%	7.9%	5.8%	3.0%	1.0%	-0.7%
Cocoa financing							1.3%	3.9%	3.3%	2.2%	2.0%	1.8%
Money and inflation												
Growth in M2				56.8%	25.6%	42.0%	45.9%	59.5%	53.7%	53.0%	43.0%	22.9%
CPI inflation				116.7%	22.2%	122.0%	39.6%	10.4%	24.7%	39.7%	31.4%	25.2%
Growth in nominal GDP				69.5%	19.0%	112.9%	47.0%	26.9%	49.1%	45.9%	41.8%	34.3%
Gross fixed investment												
Investment/GDP			0.061	0.047	0.035	0.038	0.069	0.095	0.096	0.133	0.140	
Public			0.039	0.018	0.014	0.009	0.015	0.042	0.073	0.079	0.080	
Private			0.022	0.029	0.022	0.029	0.053	0.054	0.023	0.054	0.061	

Source: Government of Ghana (various years), World Bank (1989), author's calculations

*These are weighted averages of primary and secondary banks' reserve ratios.

**Data for the private sector and state enterprises are combined for 1989.

Table 4. *Ghana: Balance of payments, 1980-89*

Item	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Current account	28	-421	-74	-158	-111	-157	-85	-102	-104	-97
Of which:										
Exports (f.o.b.)	1,104	711	641	439	567	632	749	824	881	808
Imports (c.i.f.)	-972	-1,021	-631	-539	-681	-729	-805	-1,025	-1,088	-1,102
Interest payments	-82	-82	-84	-82	-79	-103	-101	-122	-127	-110
Official transfers	83	87	84	72	103	105	118	122	174	214
Private transfers	-3	-4	-1	17	73	32	72	202	172	202
Capital account & E.O.	-16	171	101	-85	148	41	28	240	229	224
Of which:										
Private capital	0	-13	-5	12	4	6	7	2	4	12
Official capital	83	91	113	28	173	32	123	218	187	192
Official settlements	-12	250	-27	243	-37	116	57	-139	-125	-128
IMF	31	-12	-5	259	214	122	16	-25	-46	4
Other	-43	262	-22	-16	-251	-6	41	-114	-79	-132

Sources: Government of Ghana (various years); IMF (1989); World Bank (1989).

with other countries in Africa. This would lead one to believe that foreign aid flows will not decline in the future, i.e., that the shock is permanent, and that the correct policy is to absorb the shock with increased imports. In an economy with free trade, this would require an appreciation of the real exchange rate. To the extent that import or foreign exchange controls exist, however, the government can maintain the real official exchange rate and remove the controls, thus promoting greater import demand through liberalization rather than a real appreciation. This has, in fact, been the policy in Ghana during the last four years: the real exchange rate has remained virtually constant (see Table 5) since 1986 while import controls have been removed gradually. But the persistence of inflation in Ghana despite the fact that domestic credit is very tight indicates that either the import controls were not removed swiftly enough (given the official exchange rate) or that the official exchange rate has been devalued too rapidly (given the trade regime). There is an excess supply of foreign exchange which is being monetized. To date, the authorities have prevented the real official exchange rate from appreciating by continuing to devalue the nominal rate more or less in step with inflation. But as Adams and Gros (1986) point out, attempting to fix the real exchange rate in this way leaves the economy without a nominal anchor if there are real shocks (such as an increased flow of foreign exchange from aid).⁷ Refusing to recognize this could lead

to persistent inflation even in the presence of tight domestic credit.

Because the import liberalization is nearly complete in Ghana, the real official exchange rate must appreciate in response to further increases in net capital flows, and it is better to do this with a nominal appreciation than domestic inflation. Many international economists working in Africa have come to believe that there is only one good way for the exchange rate to go (depreciation), and usually they are right, since the official exchange rate is in fact not anywhere near the free-trade equilibrium price of foreign exchange. But the situation in Ghana is now different and should be treated as such.⁸

A legitimate rejoinder to this proposal is that the government's reserve position remains weak and should be bolstered. This would imply a temporary period in which the government would save rather than consume its extra revenue, using the proceeds to accumulate foreign exchange (There is no sense in absorbing a permanent increase in foreign exchange flows by permanently accumulating reserves.) This, in turn, implies that the equilibrium exchange rate would not necessarily appreciate during the period in which reserves are accumulated. I will address this issue below when I discuss appropriate savings strategies for temporary windfalls.

If the government suspects that some of the capital inflows are in fact temporary,¹⁰ the government should try to ensure that they are saved rather than consumed. Operationally, this is made easier by the fact that the recipient of a large part of the capital inflow is the government itself. Thus, the authorities do not have to worry about inducing private agents to accumulate assets, which could be difficult to do given the rudimentary state of capital markets in Ghana, and the fact that there are good reasons not to allow capital account convertibility without deep domestic financial markets.

The decision for temporary windfalls, then, is where best to invest: in foreign assets, domestic public assets, or domestic private assets. In many respects, the first option is the easiest and most practical. It not only saves the temporary income, it does so in a way that automatically sterilizes the impact on aggregate demand: the capital account credit is offset directly by a debit (accumulation of foreign assets), and no demand falls on domestic goods. Further, to the extent that the government's reserve position was weak before the shock, it provides a convenient opportunity to replenish foreign exchange stocks.

In some cases, however, accumulating foreign assets may be either difficult or undesirable. Since the capital inflows that are the source of

Table 5. Ghana: Real effective exchange rate, 1980-90

Year	CPI/(e*FCPI) 1980 = 100
1980	100.0
1981	226.0
1982	286.5
1983	468.4
1984	69.9
1985	51.1
1986	30.5
1987	27.9
1988	27.2
1989	27.2
1990	28.2

Source: World Bank Staff estimates (personal communication)

"e" is the average trade-weighted exchange rate for the year. FCPI is a comparably weighted index of trading partners' consumer price indices (annual average). CPI is the Ghanaian consumer price index (annual average).

Ghana's boom are largely supplied by donor governments and institutions, the government might not be able to use them to acquire foreign assets.¹¹ In Ghana's case, however, the government receives considerable foreign exchange from other sources (e.g., cocoa sales) which it could use for saving. Nevertheless, the advantages of foreign reserve accumulation may be outweighed by domestic investment opportunities with higher rates of return than those offered on foreign assets. If these investments are logical public sector investments (e.g., infrastructure, education) then it is perfectly reasonable for the government to use its windfall to finance them. If, on the other hand, they are private investments in productive enterprises, then the public sector should channel the funds through the financial system to private borrowers. In either case, the real exchange rate will appreciate to the extent that the investment demand is for domestic goods and services, and policy makers must accept this. As I argued earlier, a nominal appreciation (or a slower rate of depreciation) would be more desirable than domestic inflation.

In Ghana, the government's response to aid inflows has been a combination of foreign exchange accumulation (both building reserves and eliminating arrears), credit to the banking system, and increased public spending, especially on development projects. These are exactly the policies I have outlined, so the only room for discussion is in the distribution among the three, and how much of public investment spending is really investment (as opposed to consumption). While I feel there is room for improvement on both counts, it is difficult to document the latter, so I will only address the question of the distribution of the windfall gains within the Ghanaian economy.

Consider Table 6, which shows the government finance statistics for Ghana as they are usually reported, exclusive of grants and loans that are tied to particular projects,¹² along with accounts that include them. It is easy to see that Ghana's remarkable changes in fiscal policy are a little less so when the aid inflows are included. Rather than a small surplus, the government shows a persistent medium-sized deficit. The way to look at this in light of the earlier discussion is to note that of the 5-6% of GDP that is regularly flowing into the central government's coffers from aid, less than 1% is being channeled to the financial sector via repurchase of debt or bank deposits. The rest goes to government spending. Regardless of whether the aid flows are temporary or permanent, this distribution can be questioned. A standard result of the Dutch Disease literature is that, while the boom sector gains

from its good fortune, other sectors may suffer as the newly rich crowd them out. In Ghana, the government is the recipient of the boom revenues, and it has crowded out the private sector through continued inflation and through use of a monetary policy that severely restricts domestic credit and thus investment. Yet if the Ghanaian economy is to continue to grow under its own steam, it must have more private investment. While the fiscal reforms in Ghana have been impressive and many of the government's investments in infrastructure have been essential to economic recovery, the government is still far from a lean and efficient provider of public services. The strong inflow of aid money has allowed the government to relax its guard by permitting a significant amount of expenditure to occur off the budget (as normally accounted for) and making it appear that the government has achieved a fiscal position that is more restrained than it actually is.

This is not to belittle the efforts and accomplishments of the Ghanaian government in the last eight years. The authorities have made politically difficult policy decisions including sharp reductions in central government subventions to state-owned enterprises, the dismissal of tens of thousands of public sector employees, and a major tax reform that raised revenues by nearly 10% of GDP. But having addressed tough problems in the past does not mean that no more await attention. Further tightening of fiscal policy and changes in the management of foreign aid flows are high on the list.

Even though the size of the government has grown in recent years, and even though there are surely some expenditures in the Ghanaian budget that are ill-advised, one would be hard pressed to argue that the overall level of central government expenditures is too high: even including foreign-financed projects, government spending remains below 20% of GDP. Rather, it is the way in which the government holds the private sector to 80 percent of aggregate demand that is causing problems. When the government accepts foreign aid to finance local expenditures, it forces the money base to increase as dollars are converted into cedis. Trying to hold inflation down by restricting money growth, the government has pursued a tight domestic credit policy. Thus, the increased size of the government has come largely at the expense of private investment.¹³ Yet this is exactly the part of GDP that Ghana needs to provide self-sustaining growth in the future.

To rectify this situation, the government should try to change the way that it "crowds out" the private sector: it should look for ways to raise

Table 6. *Ghana: Government finances, with and without aid-financed projects, 1982-89*

	1982	1983	1984	1985	1986	1987	1988	1989
Surplus/GDP								
Standard definition*	-0.046	-0.027	-0.018	-0.022	0.001	0.005	0.004	0.007
With projects†				-0.030	-0.033	-0.024	-0.028	-0.024
Less grant and project revenue‡				-0.041	-0.055	-0.051	-0.053	-0.054
Revenue/GDP								
Standard definition*	0.061	0.056	0.084	0.118	0.142	0.149	0.146	0.151
With projects†				0.124	0.159	0.167	0.160	0.167
Less grant and project revenue‡				0.113	0.136	0.141	0.135	0.136
Current expenditure/GDP§	0.093	0.074	0.086	0.112	0.119	0.112	0.108	0.111
Capital expenditure/GDP¶								
Standard definition	0.014	0.009	0.015	0.027	0.024	0.032	0.034	0.032
With projects				0.042	0.073	0.079	0.080	0.079

§Includes Special Efficiency.

¶Includes Net Lending.

*This definition excludes expenditures and revenues associated with all aid-financed projects but includes grants not tied to projects as revenue.

†This definition includes all aid-financed project spending as expenditure and all grants (project and non-project) as revenue.

‡This definition includes all aid-financed projects as expenditure but no grants as revenue.

Source: 1982-84: Government of Ghana (various years)

1985-89: World Bank (1991a)

revenue through more incentive-neutral taxes (such as an income tax or a value-added tax), thus constraining private sector expenditures in general rather than just limiting investment through tight credit. This means that in practice, rather than aiming for a balanced budget exclusive of project aid, it would make more sense to balance the budget inclusive of that aid, making up the difference with increased taxes. This would imply that the government would channel larger amounts of funds — say 3–5% of GDP — to the financial system. This move toward tighter fiscal policy together with looser monetary policy would promote more private investment.¹⁴

3. CONCLUSION

It is no secret that the strong increase in donors' development assistance to Ghana is meant to show support for the fiscal responsibility and market-oriented reforms of the ERP. Yet the aid flowing toward Ghana has worked at crosspurposes with some of the reforms in recent years by driving up aggregate demand and by making foreign exchange relatively abundant.

The Ghanaian authorities' attempts to counter the increased aggregate demand by tight monetary policy have made credit extremely scarce, thus crowding out private investment. Attempts to maintain the real exchange rate in the face of strong capital inflows have kept inflation high.

This analysis might lead one to conclude that aid is in fact bad for Ghana, but that would be wrong. As long as the flow is steady and reasonably predictable, there is no reason not to take advantage of concessional aid.¹⁵ But there is every reason to consider the implications for relative prices and the distribution of aggregate demand. Since donors almost always give aid to governments, an increased flow of aid implies that the government's share of GDP will rise, crowding out other expenditures, unless fiscal targets are adjusted accordingly. For a country that has made a great effort to move from deficits of 10–15% of GDP (before considering projects) to zero, it might seem odd, even compulsive, to say "OK, now aim for a 4% surplus (before projects)." But that is exactly what Ghana must do if it wants to shift the engine of growth from public sector recovery projects to new productive investments in the private sector.

NOTES

1. While I use the present tense in this paper, I should note that the information and circumstances I refer to extend to mid-1990 only. It is entirely possible that the authorities will have addressed and solved some of the problems I discuss here by the time this paper is circulated. But this does not lessen the usefulness of the Ghanaian example for policy makers in other countries.

2. There may have been large private capital inflows as well, but it is difficult to tell. The balance of payments data show a large and sustained increase in private unrequited transfers — either remittances or returning capital flight — beginning in 1987. Unfortunately, this may be due to an accounting change. When the government began to issue unrestricted import licenses for importers who provide their own foreign exchange, the ministries recorded a large increase in imports and assumed that they were financed from remittances. As a result, measured remittances increase significantly in the balance of payments accounts, along with imports, beginning in 1987. But these imports could have been coming into the country illegally before the policy change, so it is difficult to judge the amount of the recorded remittances that one should regard as new flows.

3. See Cordón and Neary (1982) for an explanation of the Dutch Disease, and Cuddington (1989) or Hill and Mokgethi (1989) for discussions of the macroeconomic consequences of temporary boom sectors.

4. The credit ceilings also help to explain the lethargic response of the banking sector to financial liberalization. See Younger (1991) for a detailed analysis.

5. The phrase "Dutch Disease" originates from the discussion of the discovery of large natural gas deposits in the Netherlands.

6. On the chance that this paragraph might be misinterpreted, let me distinguish between situations in which the exchange rate is not a market-clearing price and those in which it is. In most African economies, including Ghana prior to the last two or three years, the exchange rate is badly overvalued and quantitative controls on imports actually "clear" the market. In these circumstances, the scarcity value of foreign exchange to importers is higher than the official exchange rate; it includes both the official price of foreign exchange and the rent associated with import controls. As a result, devaluing the official exchange rate will not affect the scarcity value of foreign exchange to importers (which is determined by the import controls) and may be a perfectly logical component of a gradual adjustment program designed to let the official exchange rate "catch up" to accumulated inflation, despite extraordinary inflows of foreign exchange. Thus, the advice to devalue remains correct in most African countries even when greater capital inflows can be expected.

On the other hand, if the official exchange rate does

clear the market for foreign exchange (because trade is largely unrestricted), it must appreciate in the face of strong capital inflows if inflation is to be avoided. Given the extraordinary liberalization of imports and foreign exchange rules that have taken place in Ghana, I believe that this more closely resembles its current situation.

7. The increased inflow of reserves will increase the money supply if it is not used up on net imports (which will not occur unless there is a real appreciation or increased government savings of foreign assets, as I discuss below). This will drive domestic prices up, and the government then follows with a nominal devaluation to keep the real exchange rate constant. Reserves continue to flow in, prices continue to rise, etc., with nothing to brake the process. Even if domestic credit is contracted to keep the money supply constant, it cannot go below zero, at which point the foreign exchange inflow will begin to cause the money supply to increase.

8. Several people, including a referee of this journal, have noted that Ghana could effect a substantial real appreciation simply by holding the nominal exchange rate fixed, since inflation is still running at 20–30% per year. In theory, if the foreign exchange inflows were the only cause of domestic inflation, a nominal appreciation (and the accompanying balancing of foreign exchange reserve flows) would bring inflation to zero. Yet there are certainly other factors to keep prices rising in Ghana, at least in the short run, including momentum and certain problems with fiscal policy that I discuss below, so actually allowing a nominal appreciation probably goes too far.

9. Note that simply accumulating reserves at the central bank may be inadequate policy. If the government itself is not saving — if it is not running a surplus — then the reserve accumulation is accomplished by squeezing the savings out of the private sector. This is occurring in Ghana, mostly through high inflation and heavy taxation of financial intermediation.

10. This would be the case if my presumption about

the permanence of aid flows is wrong. Also, to the extent that private capital flows exist and are the repatriation of flight capital, they will necessarily decline in the future.

11. If a foreign government makes a soft loan for road construction, for example, it might not be thrilled to know that, in deference to sound macro policy, the government invested the resources in US Treasury bonds instead! While there ought to be room to negotiate the timing of the expenditures associated with committed aid funds, many donor government aid agencies will not commit themselves now to future disbursements (which is exactly what the Ghanaians need to smooth out a temporary capital inflow). What's more, donors might be less inclined to continue contributing to Ghana if they knew that the country had accumulated large foreign exchange reserves. This puts the Ghanaian government in a difficult position: it would be foolish to refuse free or soft money, even if the commitment is temporary, but the inflows cause the macro problems that we have witnessed if they are not managed well.

12. Those same grants and loans are a large part of the boom in foreign capital inflows that I have been discussing.

13. At a recent World Bank conference on the macroeconomics of public sector deficits, Islam and Wetzel (1991) found that government spending crowds out investment (but not consumption) in Ghana. Easterly and Schmidt-Hebbel (1991) report crowding out of investment in many developing countries in their summary of the conference results.

14. It would also help get the government's program for financial liberalization off the ground (see Younger, 1991).

15. Even unpredictable aid can be helpful if the government can strike the correct balance between saving and consumption that avoids boom and bust cycles driven by foreign capital flows.

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