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The Tricky Exchange Rate Question: Over-Valued or Not? The Real Exchange Rate, Dutch Disease, and Overvaluation, with a Country Example

Introduction. The exchange rate is the single most important price in virtually any economy. When it correctly values or at least does not "obviously" over or under value the national currency, there is generally no balance of payments problem, and one hears little talk of the exchange rate. But when it is at the "wrong level" given prices at home and abroad, serious problems with the country's balance of international payments tend to emerge. The problems persist, and people start talking and writing about the exchange rate as being over- or undervalued. An overvalued exchange rate overprices the domestic currency and under-prices foreign currency and the goods and services it buys to residents and foreigners. The mispricing makes it difficult for the country's businesses to export and compete with imports, leading to excessive reliance on foreign borrowing and inflationary increases in money supply to make the government's accounts balance out.

The Policy Problem. When either a country's balance of international payments (sum of its residents' international payments to nonresidents minus their international receipts from nonresidents) or its balance on goods, services and income is chronically in deficit, there is reason to think that the country's currency is overvalued, that its exchange rate is too high (too many foreign currency units per local currency unit). Its exchange rate needs to fall (depreciate) to a level which reduces imbalances between the yearly flows of payments and receipts to a more sustainable level.

As Sebastian Edwards [1988] has shown, at any point of time—and for prolonged periods of time—the equilibrium exchange rate, at which there would be a satisfactory and sustainable balance between the sum of country's international payments and the sum of its international receipts, may differ significantly from the actual exchange rate. Edwards explains this failure of the actual exchange rate to catch up with the equilibrium exchange rate as stemming from overly easy or overly tight domestic monetary and fiscal policy—a monetary and fiscal policy combination inconsistent with achievement of an equilibrium real exchange rate. When such a balance is reached, the monetary authorities do not have to draw down unduly on the country's international reserves or resort to large amounts of "exceptional financing" (e.g. via debt rescheduling of debt rollovers), or to high tariffs and other protectionist devices to reduce import demand, to bridge a large gap between what the country earns in foreign trade and finance and what it spends in these activities.

A Country Example. An example of a currency which is said to be chronically overvalued, and apparently continues to be overvalued in spite of almost continuous depreciation in both nominal and real terms for decades, is the national currency of Nigeria, the Naira. Gillis, et al., in their excellent textbook on economic development, cite the Naira in the petroleum boom period from 1973-74 to 1979-80 as an example of extreme "Dutch Disease," a phenomenon so named because of the Dutch experience of the 1970s. See Gillis et al. (1992). More recently Chief Economic Advisor to USAID, Professor Arnold Harberger has analyzed the Dutch disease problem in two papers for USAID (2006). These two papers, and others, are accessible at http://inside.usaid.gov/eg/reports/economic_policy.htm .

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Discovery of offshore petroleum and natural gas in the North Sea led to natural gas exports that produced a real appreciation of the Netherland's currency, making it difficult for many Dutch producers and exporters of non-oil goods and services to stay in business. The development of a strongly appreciated real exchange rate due to a large increase in natural resource exports came to be called "Dutch disease." The phenomenon is due to a shift in the fundamentals determining the equilibrium exchange rate.

Maintenance of the exchange rate at such a level once the fundamentals have swung in the opposite direction as, for example, when the world price of the natural resource product has fallen, is "over-valuation." This is what happened to Nigeria in the 1970s and 1980s when oil prices subsided in real terms after having peaked in 1974 and 1979, respectively. It is important to distinguish between the two conditions. Both can be harmful. Nigeria has periodically experienced both. Dutch disease may lead to adjustment problems but not necessarily to low economic growth. Some authors have pointed to chronic exchange rate overvaluation as explaining its poor economic growth over the years. However, depending on the ever changing state of "fundamentals," the Naira may have been occasionally slightly undervalued. See the USAID-funded ICEG study by Bevan, Collier and Guinning (1992) with introduction by Harberger. Overvaluation can also be caused by large foreign aid inflows, but in Nigeria's case this has probably not been a factor.

The Political Economy Problem. Depreciation of the currency and relaxation of import and foreign exchange quantitative controls as well as reduction of import tariffs which can be expected, "other things equal," to lead to further depreciation of the national currency, are typically resisted tenaciously by well-heeled interest groups that benefit from overvaluation and typically have more influence than others. Sometimes those in favor of exchange rate undervaluation do make themselves heard. Exporters and producers of import substitutes can be expected to call for depreciation as a way of making their production more competitive on national and world markets. Nigeria affords an example of the tenacity with which interest groups that believe their members will be hurt by depreciation of the national currency oppose it. Opposition to depreciation was chronicled in a Nigerian newspaper, *This Day*, (issue of February 22, 2003): "Organised labour led by the Nigerian Labour Congress (NLC) have taken a critical look at the state of the nation's economy, and concluded that {the} President['s] four-year economic agenda has failed the nation woefully…Particularly worrisome to [the] … congress is the attitude of the government to the value of [the] naira. Labour said … administration has finally thrown overboard any semblance of control of exchange rate, while allowing industries and business concerns to pay more [for] imported input[s]." Despite such strongly voiced opposition, anti-depreciation forces seem to have fought a losing battle, as depreciation in both nominal and real terms continued during this period.

In Conclusion. What can be said about the view voiced in the article quoted above? Was the Naira at the time overvalued? The overall trend for most of the last two decades, has been depreciation interspersed with occasional, less than offsetting, interludes of appreciation of the Naira. The real exchange rate index plunged by about 70 percent, from 155.8 to 79.0 with the nominal devaluation from 21.9 Naira per US dollar to 92.3 Naira per US dollar at the very end of 1998 (see table at end of this briefing), moved up some but closed lower in 2004 though nominal depreciation was at a moderate pace from 1999 through 2004 (again, see table at end of this briefing) Perhaps political opposition has succeeded, however, in keeping depreciation less than it might have been. Data on movements of the nominal and real exchange rate of the Nigerian currency from 1996 to 2004, balance of payments, and national income developments are attached for readers who may be interested.

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TABLE: EXCHANGE RATE , BALANCE OF PAYMENTS AND RELATED DATA

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Principal Exchange rate, Naira per $ (rise indicates nominal depreciation)	21.9	21.9	21.9	92.3	101.7	111.2	120. 6	129.2	132.9
Principal rate index of dollar price of Naira (1995=100); (rise indicates nominal appreciation)	100.0	100.0	100.0	24.1	21.5	19.7	17.6	17.2	16.7
Multicurrency REER Index (1995=100); (rise indicates real appreciation)	123.7	142.0	155.8	79.0	80.9	89.8	90.3	78.0	79.6
Balance of Payments data			**I n**	**Millions**	**of US**	**Dollars**			
Current account balance	+3507	+552	-4244	+ 506	+7429	+2478	+1083	+9504	+12284
Capital account balance	-68	-49	-54	-48	----				
Financial account bal.	-4155	-425	1502	- 4002	-6219	-3035	-8554	-11799	+4874
Overall balance of Payments deficit (-)	-761	+15	-2873	-3538	-3089	+223	-4689	-1260	+8491
Financing of BP deficit by									
Reserves reduction (+)	-2632	- 3507	+ 481	+1650	-4459	-509	+2744	+ 214	-9531
Exceptional Financing	+3395	+3491	+2392	+1887	+1369	+289	+1945	+1047	+1040
International Reserves excl gold(millions of U.S. dollars)	4076	7582	7101	5450	9911	10457	7331	7128	16956
GDP, Prices									
GDP at current prices (billions of Naira)	2824	2940	2881	3321	4981	4864	5603	7191	8553
GDP Volume index (1995=100; then 2000=100)	103.9	107.2	93.8 109.7	112.8	100.0 117.1	104.2 122.0	108.5	112.6	n.a.
Nigeria consumer price index (1995 = 100	129.3	139.8	154.3	87.3 161.7	100.0 185.2	113.0 209.2	127.5 236.1	112.6 259.2	145.4 ++ 336.2
Nigeria CPI inflation rate (percent Change over previous year	29.3	8.2	10.3	4.8	14.5	13.0	12.9	8.7	
US CPI (1995=100)	102.9	105.3	107.0	109.3	113.0	116..2	118.0	120.3	123.6
Price of oil U.S $ per barrel Year	20.37 1996	19.27 1997	13.07 1998	17.98 1999	28,24 2000	24.33 2001	24.95 2002	28.89 2003	37.76 2004

Data from IMF, *International Financial Statistics*, January 2006 and earlier issues. A negative sign on any line indicates an excess of payments from residents to nonresidents over receipts by residents from nonresidents on that line item. The main reason for the persistent deficit on financial account is presumably Nigerian borrowers' recurrent need to repay principal owed on external loans and debt securities sold to non-residents in earlier periods at which point they contributed positively to the capital account balance. Exceptional Financing is defined by the IMF in IFS as including any transactions undertaken by the authorities to finance the "overall balance," as an alternative to, or in conjunction with, the use of reserve assets and the use of Fund credit and loans from the Fund. The Nigerian authorities have frequently used external finance, which can include debt rescheduling, to settle the overall deficit, when there is one, which there has been in seven of the last nine years ending in 2004 There is a break in the Nigerian CPI series 2004, probably due to use of new weights in the consumer basket.