

Global Financial Crisis & Recession: impact on Africa and development prospects

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I. Background and motivation

What began as the subprime mortgage turbulence in the U.S. in 2007 turned into a world financial crisis and economic recession in developed economies in 2008 before unfolding as a development crisis in Africa in 2009. These three facets of the current global financial and economic turmoil are symptomatic of certain underlying *globoeconomic* anachronisms that have marked the world economy in recent years. Such anachronisms include particular contributing causes of the ongoing global financial crisis, notably global macroeconomic imbalances (e.g., the savings glut hypothesis), securitization, leverage, *financialization* (an imbalance between finance and the real economy and search for yield), and financial innovations. Viewed simplistically, the current crisis in global financial markets is merely the manifestation of the *financialization* of the global economy and the collapse of two intertwined bubbles—credit and housing.

It is also worth noting that global macroeconomic imbalances occur when some countries (e.g., the United States) run large current account (essentially trade) deficits while others (e.g., China) maintain large surpluses. By weakening financial stability and sustainability, these imbalances set the context for the rise of bubbles in housing and commodities that culminate in systemic and global financial meltdown. Nonetheless, despite such a meltdown in the global financial configuration, it is important to observe that it is within this configuration that economic growth performance in sub-Saharan Africa (thereafter, Africa) has occurred over the last decade. Obviously, African economies have implicitly participated and benefited from key features of the global imbalances, including high global liquidity, U.S. frugality, and China's excess foreign reserve and hunger for raw materials, which has led to soaring commodity prices. The ongoing crisis, however, resulted from the reversal of the positive effects that the above imbalances created for Africa.

The unwinding of global imbalances—in particular, the possibility of a disorderly adjustment—has for some time been regarded as a key global financial stability risk. Initially, it was hoped that African economies, immune as they were from the direct fallout of the subprime meltdown, would sail through the crisis. However, as the world economy continues to face a severe and synchronized downturn, Africa is being severely hit and its economic and development prospects remain fraught with uncertainty. Without the estimated 7% growth rates needed to halve

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the number of people in Africa living on less than one dollar a day, the eight Millennium Development Goals (MDGs) will become a mere mirage.

In addition, the unprecedented nature of the crisis has been confounding forecasters, resulting in continuous and large downward revisions of growth forecasts during the past few months. Forecasts for African countries specifically have come tumbling down: in contrast to the International Monetary Fund's (IMF) October 2008 forecast of a 5.2% increase, economic activities in sub-Saharan Africa are now projected to grow only 1.7%, with an even worse performance forecast for 2010 (IMF, 2009a).

Past crises, especially the aftermath of the 1970s oil shock, clearly illustrate that the full effects of soaring interest rates and growing debt services on African economies could not be fully anticipated because they were not linked to policies implemented in the U.S. as responses to oil shocks and inflationary pressure—for example, a drastic contraction of money supply and higher interest rates. Hence, ignoring the possible unintended costs of the above U.S. economic and monetary policies to fragile African economies led to overoptimistic projections based on which ill-conceived policies were implemented. In fact, African growth projections after major crises have repeatedly tended to forecast overoptimistic figures, even though actual outcomes have always been terribly disappointing. For instance, Easterly (2001) observes that the 1983 World Development Reports projected a central case of 3.3% per capita growth for developing countries from 1982 to 1995 with the most pessimistic case being a rate of 2.7%.

Taking into account the possibility of such unintended consequences, this paper provides an early assessment of the global financial crisis and its effects on Africa's economic and developmental prospects. Specifically, it aims to (1) investigate the impact of the global financial crisis on African economies, (2) explore the likely unintended consequences on Africa of recovery packages and current account-rebalancing measures by industrialized countries, and (3) provide a set of options and policy recommendations to both African policymakers and international donors. Its primary focus is on a sample of countries that includes Botswana, Cameroon, the Ivory Coast, the Democratic Republic of the Congo (DRC), Ghana, Kenya, Mauritius, Nigeria, Senegal, South Africa, Tanzania, and Zambia.

In exploring the above, the analysis addresses the following fundamental questions: What are the channels through which external financial and economic shocks are likely to affect African economies? What will the seemingly inevitable correction of international imbalances entail for Africa and its developmental prospects, or more specifically, how much of the ongoing financial deleveraging and current account correction will impact African development? What are the lessons to be learned and the policy implications to be drawn?

Since the recession is still unfolding in Africa, any assessment of the impact of the global financial crisis must at best be tentative. Hence, the analysis seeks to answer these questions by examining the potentially harmful effects on African developmental performance of the adjustment costs of recovery measures adopted by developed countries after major World War II economic downturns, particularly those in the 1970s and 1980s in the aftermath of the 1973 oil shock. These downturns in 1973–75 and 1981–82 resulted in economic setbacks that annihilated the progress of the 1960s and produced a social devastation that lasted for two decades. Moreover, although the two downturns were followed by rapid average economic growth rates, Africa remained mired in

prolonged economic distress. Hence, there is no reason to expect, a priori, that this time will be any different. Rather, rebalancing or correcting the current world account imbalances will result in some countries overshooting and others failing to adjust sufficiently, as was the case for Africa in the 1970s and 1980s.

This investigation therefore assumes that current account corrections by developed economies may have unintended effects on Africa's fragile economic growth. This assumption in turn implies the major premise of the paper: the highest risk for Africa's economic growth and developmental prospects lies in the unintended effects (perceived as external macroeconomic shocks) of global imbalance correction rather than from the impact of the global financial crisis and recession per se.

The rest of the paper is structured as follows. Section II gives an overview of the global macroeconomic imbalance as a major structural cause of the current global meltdown, and then discusses its triggering factors and the benefits that Africa has derived from it. Section III assesses the impact of the crisis on selected countries based on the scarce evidence that is emerging. Section IV examines the empirics of crisis transmission between African economies and their major financial and economic external partners. Section V then reviews Africa's economic and developmental prospects in light of post past-crisis performance and speculates on the likely unintended effects (on Africa) of global rebalancing. Section VI concludes the paper with thoughts on policy responses to cope with the impact of the development crisis, including critical interventions by donor countries.

II. Genesis of the global financial crisis and Africa

Although the underlying causes of the ongoing global financial crisis are many, four are highly relevant for Africa: the wave of financial liberalization, global imbalances (e.g., the savings glut hypothesis), U.S. consumption patterns, and *financialization*.

Box. 1. Financialization of the Global Economy

With investment in new productive capacity (e.g., factories and employment) increasingly unprofitable, a rapidly rising share of surplus capital is starting to seek profits not in the real economy but in financial speculation—a process sometimes referred to as the financialization of the global economy. This process involves a frenetic increase in the trading of currencies, equities, bonds, debt securities, financial derivatives, and other complex synthetic financial instruments, taking advantage of even the slightest differentials and momentary changes in bond prices, interest rates, and currency exchange rates in different markets around the world. In 1980, the value of the world's financial stock was roughly equal to the world GDP, itself bloated. By 1993, it was double that size, and by the end of 2005, it had risen to 316%—more than three times the world GDP (Quintos, 2008). In all, 44% of all corporate profits in the U.S. come from the financial sector compared to only 10% from the manufacturing sector (Kevin Phillips, 2008).

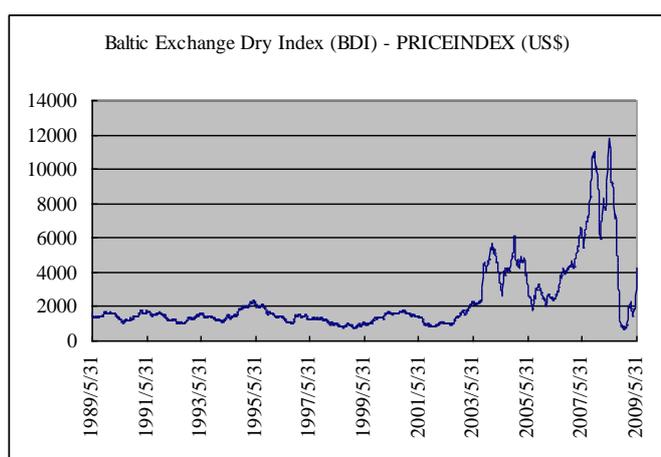
This latter is particularly important because without looking into the history of the rise and proliferation of *financialization*, it is hard to comprehend the crisis and its implications for African development. In financialization, profits do not come from investment in production that increases value. Rather, when the main economic activity becomes financial transactions rather than that which creates new wealth, the preference is for the kind of short-term returns that Africa's developing countries cannot provide, which diverts potentially long-term development resources. Indeed, the earlier crisis of profitability in the 1970s resulted primarily from the worldwide intensification of competitive pressures on business enterprises in general—and

industrial firms in particular—that ensued from the great expansion of world trade and production in the 1950s and 1960s (Arrighi, 2002).

Although such triggers are less relevant in the case of Africa, they, together with recovery measures, are still part of the global recession story. Specifically, these crisis triggers can be traced back to successive tax reforms in the 1990s that allowed deduction of interest expenses on mortgages for a primary residence and provided for variable interest rates. Subsequently, to avoid deeper economic recessions in the U.S. following the bursting of the dot.com bubble in 2000, the U.S. government provided a set of incentives to encourage rapid expansion of housing credit, which led to soaring property prices and the boom period that followed. This housing bubble was sustained by financially sophisticated innovations in which mortgages were engineered into complex securities like collateralized debt obligations (CDOs) and credit default swaps (CDSs), as well as tricky management practices. In 2006, this boom period began losing momentum, and central banks changed the direction of monetary policy to stop inflation increases. From 2006 onward, rising interest rates (adjustable-rate mortgages), rising oil prices, and inflation fears impacted the default rate in the U.S. subprime mortgage markets until ultimately the crisis spread throughout world financial markets, worsening investor confidence and leading to the fall of major financial institutions (e.g., Lehman Brothers’ bankruptcy in September 2008). Thereafter, this domino effect weakened the financial balance sheets of banks and other overseas holders of these investments, affecting not only the banking sector but also stock markets all over the world.

As a result, even as multinational firms continue to invest in new technologies in their drive to extract ever greater profit; growth rates, national productivity rates, capital stock formation, and net profit rates have been on the decline since the 1970s. For example, average net profit rates in the G7 countries fell from 17.6% in the 1950–70 period to 13.3% in 1970–93 (Brenner, 2002). Moreover, as financial instruments and stock markets became less attractive to financial investors, speculative capital has shifted more into commodities trading such as oil, minerals, and agricultural commodities; which led to the 2004–08 commodity price booms (see Figure 01).

Figure 01. Baltic exchange dry index (BDI)



Source: Thomson Reuters Datastream

In September 2008, the Baltic Exchange Dry Index, a proxy for international commodity-shipping rates and international manufacturing, went through a free fall from which it did not begin to slightly recover until March 2009. In part, this dramatic decline in BDI reflected the inability of shippers to get banks to accept letters of

credit from other banks. The accompanying sharp decline in commodity prices, which followed the 2004-08 price boom, has been disastrous for Africa. Admittedly, since the November 2008 decline, gold prices have remained relatively firm at around USD 712 (down from around USD 1,000 per ounce in March 2008), reaching a price of USD 920 per ounce in April 2009. Other commodities, however, have not fared so well. For example, from a high of USD 2,250 per ounce in March 2008, platinum prices declined to USD 771 per ounce, before recovering to current levels of around USD 1,130 per ounce. Likewise, aluminum prices reached levels in excess of USD3,300 per ton in July 2008, but by February 2009 the price had declined to below USD1,300 per ton and is currently around USD 1,540 per ton (Bloomberg, 2009). Similar trends are evident in the behavior of other commodity prices. Oil price developments, of course, have benefited importer countries: having reached levels of almost USD 150 per barrel in July 2008, international oil prices declined to below USD 35 per barrel and are now at around USD 57 per barrel. Commodity prices in general are likely to remain subdued in line with global growth.

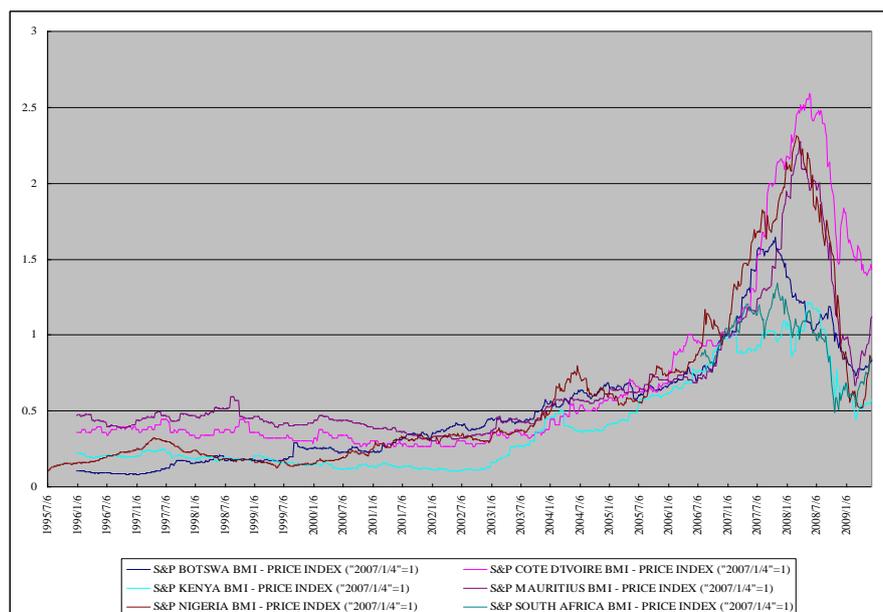
Since commodity prices play a critical role in Africa's economic prospects, the current price fall has rendered macroeconomic management and forecast more difficult than ever before. One particularly striking feature of this crisis has been the successive revisions—all in a downward direction—of global growth forecasts. For example, one year ago, the IMF forecast that global growth in 2009 would be 3.8%. In October of last year—that is, shortly after the events at Lehman Brothers and A.I.G.—it reduced its global growth projection for 2009 to 3.0%; lower, to be sure, than the earlier forecast but still a fairly robust rate. In January of this year, however, it again reduced its growth forecast for 2009, this time to 0.5%.; and in March, it released a new forecast projecting a negative global growth—on the order of 1.3%—for 2009. Likewise, the latest forecast by the World Bank, released in June 2009, expects the global GDP growth to fall by 2.9% and private capital flows to plummet to USD 363 billion this year (Global Development Finance Report, June 2009 updates). For Africa as a whole, growth forecasts for 2009 have been drastically revised downwards, from 5.9% in November 2008 to 2.8% in February 2009 to 1.8% in June 2009. This time, reacting to the above IMF forecast, even IMF Managing Director Strauss-Kahn warned that even these figures may be "too optimistic" (IMF, 2009c).

This challenge in forecasting movements in economic activity results partly from African countries' sensitivity to commodity price fluctuations. It is therefore understandable that the unprecedented economic growth record that Africa achieved under the global economic configuration of the last decade is reversing.

III. Impact of the crisis on selected African economies

African countries are quite homogeneous in terms of the impact of this crisis and how deeply it is affecting them. On the financial side, the impact has been immediate on African, mostly infant, financial markets. Yet the fall is nothing compared to those recorded in developed countries. As shown by the changes in the S&P BMI indexes (a market capitalization-weighted index that defines and measures investable publicly traded companies) for six African markets, the S&P BMI crashed in major African markets beginning July 2008 and accelerated two months later (see Figure 02)..

Figure 02. Change in S&P BMI—Price Index (2007/1/4 = 1)



Source: Thomson Reuters Datastream

In South Africa, the financial sector experienced a collapse of asset prices: between May 2008 and March 2009, South Africa's JALSH index fell by about 46% and the rand depreciated by 23% against the U.S. dollar. The result was dramatic increases in the cost of capital, and a severe contraction in lending, which has led to sharp downturns in the retail and manufacturing sectors.

In many African countries, although no major bank is under immediate threat, the banking sector may be exposed to a rising default risk from clients operating in export-oriented sectors. The resulting slowdown in bank lending has amplified the effects of the export sector's weak performance on growth. Thus, not only the African banks' degree of leverage but also their off-balance-sheet risk exposures have been much lower than those of failed banks in other countries. Instead, African banks have felt the impact of the global financial crisis indirectly through higher funding costs and increased impairments. This latter, however, is also attributable to the negative impact of lower real economic activity on borrowers following years of high credit growth.

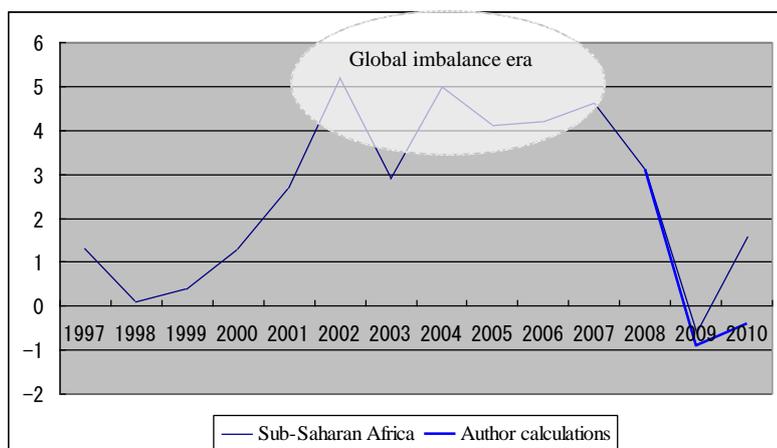
Beyond the specifics of crisis transmission, African banks are still allowing credit to flow, although they are applying much stricter lending criteria. For instance, in South Africa, unlike the case in Europe and the U.S., the interbank market is working normally, the capital adequacy ratios are strong, and no bank has had to approach the South African Reserve Bank for any extraordinary assistance.

(a) Economic growth. Economic growth in sub-Saharan Africa was initially projected to plunge to 3% in 2009 from 6% in 2008 (IMF, 2008). Yet the IMF's April 2009 projections expected Africa's growth rate to dip below 3% in 2009 (2.8%) for the first time since 2002 (IMF-WEO, 2009). Even worse, the growth outlook has since deteriorated severely, with the latest OECD (2009) calculations, like my own, pointing to less than 2% growth rates in 2009. Finally, in May 2009, the IMF predicted a 1.5% growth rate for Africa in 2009 (revised downward from a March 2009 prediction of 3.25% growth because of the slump in commodity prices and the credit squeeze), which is below the rate of population growth.

As already pointed out, growth projections for Africa after major crises have repeatedly been overly optimistic and the real outcomes disappointing. Hence, adjusting what we believe are overoptimistic forecasts, we revise the above projections using the concept of *achievable output* (the average level of output associated with resource utilization at its long-run levels). Specifically, using the Hodrick-Prescott filter, we calculate this output as five-period moving averages of annual GDP growth rates (see appendix Figure A01). Because it has been hypothesized that the African growth path in 2009–10 is likely to follow a similar path to that in 1974–78, our forecast is the result of applying the slope for the 1973–76 period of the cycle derived from the Hodrick-Prescott filter.

The global recession has brought back some well-known African growth constraints, and a widening saving-investment gap is exacerbating preexisting resource constraints. At the same time, uncertainty and the volatility in African growth will undoubtedly dampen long-term development. Moreover, although the current crisis has affected all countries, countries that had stronger economic fundamentals before the crisis seem to have weathered the storm better so far. These are typically nations that have successfully implemented comprehensive economic reforms or are less dependent on mineral exports. Hence, the IMF has slashed growth prospects for countries like the DRC, lowering its 2009 growth forecast to 2.7%, down from a previous estimate of 4.4% and far from the 8% estimate for 2008.

Figure 03. Real Per Capita GDP Growth (annual % change)



Data for 2009 and 2010 are projections

Source: AFR Regional Economic Outlook (IMF, April 2009)

Note: From 2009 onward (blue line), author projections, based on the achievable output concept derived from the Hodrick-Prescott filter.

One of the major impacts of the crisis for Africa is the expected drastic 2.6% reduction in fixed investment (see Table 01) in 2009. Another source of concern is the import-export pattern of growth in imports being consistently higher than that in exports (in major contrast to Asian emerging economies), two aggregates that are expected to grow uniformly in 2009.

Table 01. Sub-Saharan Africa forecast summary (annual % change unless otherwise indicated)

	1995–2005*a	2006	2007	2008	2009*b	2010*b	2011*b
GDP per capita (units in \$)	1.3	3.5	3.8	2.8	-0.9	1.8	3.2
PPP GDP*d	3.9	6.3	6.6	5.1	1.1	3.9	5.4
Private consumption	2.7	6.5	7.1	3.3	0.8	3.5	4.7
Public consumption	5.3	6.0	6.2	5.8	5.5	6.1	5.8
Fixed investment	7.4	18.7	20.5	12.4	-2.6	3.9	7.7
Exports, GNFS*e	4.8	5.1	4.1	4.7	-3.2	4.2	6.4
Imports, GNFS*e	6.2	12.7	11.9	6.6	-3.0	4.7	7.3
CFA countries	4.1	2.2	3.5	4.2	2.3	3.6	4.8

*a Growth rates over intervals are compound averages; growth contributions, ratios, and the GDP deflator are averages

*b Forecast

*c GDP measured in constant 2,000 U.S. dollars

*d GDP measured at PPP exchange rates

*e Exports and imports of goods and nonfactor services

Source: Global Development Finance 2009, World Bank

Even in South Africa, the leading economy in the region, economic growth is expected to decline in 2009 after four years of GDP growth around or in excess of 5%. In fact, the South African economic growth rate declined to 3.1% in 2008, with a contraction of 1.8% in the fourth quarter.

(b) Current accounts. Current accounts have also deteriorated, with the export growth rate expected to drop by 7% and the import growth rate by 5%. Moreover, following a sharp contraction in mineral and primary commodity demand in the U.S., the EU, Japan, and China; exports and tourism receipts are falling, leaving many countries facing twin deficits (current account and budget). With exports declining faster than imports, the trade balance has deteriorated in most countries, and in many, exports for 2009 and 2010 have been revised downward by about 40%. In all, the expected shortfall in export revenues as a whole amounts to USD 250 billion for 2009 (AfDB, 2009), with oil exporters suffering the largest losses. Thus, from an overall current account surplus position of 3.5% of GDP in 2008, Africa will face a deficit of 3.8% of GDP in 2009, and a forecast budget deficit of about 5.5% of GDP in 2009 (AfDB, 2009).

Figure 04. External Current Account (% of GDP)

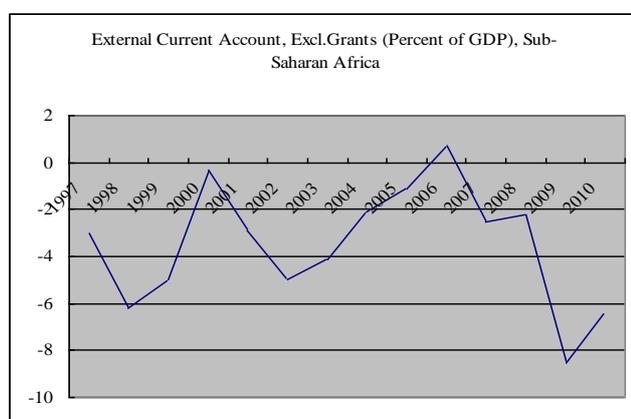
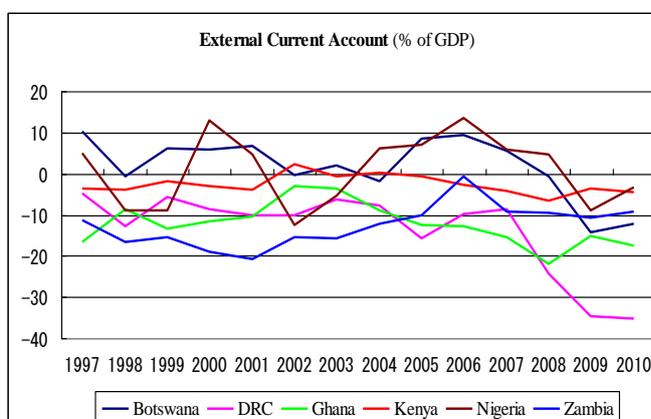


Figure 05. External Current Account (% of GDP)



* Data for 2009 and 2010 are projections by IMF staff

Source: AFR Regional Economic Outlook (April 2009)

African economic growth is driven by and coupled with China's growth via exports. That is, because China acts as a middleman in the global value chains leading to the U.S. market, African exports to China remain dependent on Chinese exports to the U.S. (see Table 02). Yet about half of China's imports are the raw materials used to produce its exports, meaning that exports function as a leading indicator of its importation of African commodities, which in this case, points to further deterioration. Such a fall in Chinese exports to the U.S. is likely to worsen African exports to China in the medium term, with a simultaneous decline in African exports to the U.S.

Table 02. Africa-East-Asia-U.S. trade chains (% change from previous year)

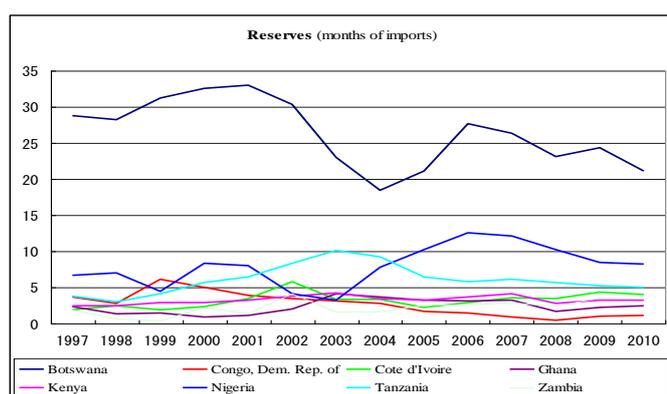
	1999	2000	2001	2002	2003	2004	2005	2006	2007
African exports to China	95%	144%	-18%	17%	93%	54%	52%	50%	30%
Chinese exports to USA	10%	24%	-4%	28%	32%	35%	30%	24%	16%

Author calculations. Sources: World Development Indicators Online (WDI) 2009; IFS, 2009.

This analogy of a manufacturing middleman also throws light on China's role in Asia. For instance, a recent paper from the Hong Kong Monetary Authority (cited in Delotte, 2009) notes that over 50% of exports to China from Malaysia, Philippines, Singapore, and Thailand (and significantly less from Indonesia) are intermediate inputs in goods that China reexports, which means greater exposure of ASEAN-5 exports to the West. Therefore, as China's exports to the West have suffered, so too have the imports of these intermediate goods. If the intermediate goods are discounted, actual Chinese demand for goods from S.E. Asia accounts for less than 10% of their total exports, although even these other exports have been hit.

Even precrisis success stories are showing signs of economic fragility. For example, Botswana has proved to be highly vulnerable to shocks because of its high dependence on diamond exports (representing 35 to 50% of government revenues). In our sample, three countries are still emerging with a current account surplus (see Table 02), while the other nine (with the DRC and Ghana being the most fragile) are already deep into the red zone.

Figure 06. Foreign currency reserves (in months of imports)



Ultimately, stocks of foreign exchange reserves are deteriorating. For instance, early in 2009, reserves in the DRC were down to only two weeks of import cover, preventing the country from purchasing imported essentials like food, fuel, and medication. At the same time, the DRC's external financing needs (as expressed in its current account deficit) were huge, its trade deficit unsustainable, and its sources of foreign exchange drying up rapidly. The drastic reduction in

remittances from Congolese workers abroad makes the situation even worse by creating an external financing gap that threatens macroeconomic stability and the CGF exchange rate.

In Kenya, from August 2008 to February 2009, the central bank reserve holdings declined from 4.1 months of imports to 3.1 months (below the statutory requirement of 4 months) as a result of tourism receipts being down 13% in the fourth quarter of 2008 compared to receipts in 1997 (AfDB, 2009). Likewise, in, Botswana, foreign

reserves are falling rapidly, and the fall in mineral revenues is expected to be prolonged, thereby limiting the government's ability to finance economic recovery plans.

The end result of this deteriorating external balance has been a worsening of public budget conditions for the continent as a whole, going from a global budgetary surplus of 2.8% of GDP in 2008 to a deficit of 5.4% of GDP in 2009 (World Bank, 2009). As a result, in countries like Nigeria—in which oil and gas extraction account for 30% of the GDP, over 90% of the exports, and a large share of government revenues—declining oil prices have led to a significant drop in investment, output, and government revenues.

In South Africa, although exports have been affected, imports have also declined in the wake of weak demand and lower international oil prices, resulting in a moderation of the current account deficit in fourth quarter 2009 to 5.8% of GDP (Mboweni, 2009). Nonetheless, despite lower capital inflows, South Africa can still finance the deficit on its current account even though, as in other emerging economies, the currency (rand) exchange rate has been relatively volatile over this turbulent period. The rand has, however, recovered significantly since the lows of late 2008.

(c) **Unemployment.** Unemployment is rising as the result of layoffs in export-oriented industries. An estimated 73% of Africa's workers are in vulnerable employment, and this number could rise to more than 77% this year. The number of workers in the region living in poverty—both in extreme USD 1.25 per day poverty and USD 2 per day poverty—is projected to rise across all three scenarios (ILO, 2009). In addition, since rising unemployment in the EU is compressing the demand for migrant and low-skill work forces, remittances are declining rapidly. For instance, the World Bank projected that sub-Saharan Africa would experience a decline of 8.3% in its remittance flows in 2009. Such declines are a great source of worry to countries that rely heavily on remittances as a safety net. In Kenya, for example, following a volatile year, remittances were down 27% in January 2009 compared to January 2008 (ODI, 2009).

At the regional level, South Africa represents a major destination for migrants from other African countries while being the engine of growth for the region. Therefore, the weakening of South Africa is expected to have significant knock-on effects on smaller neighboring economies through trade linkages and worker remittances. For instance, the falling remittance flows to Zimbabwe, Zambia, and the DRC resulting from the South African slowdown will further exacerbate the impact of the decline in mineral exports.

In addition, being the employment of last resort, the informal sector is being hit in three ways. First, it is expanding because it must absorb the mass of newly unemployed labor. Second, activities that benefited from the recent growth, and were thus closer to the so-called graduation line, will move back into informality. Third, declining income (growing poverty) will lead to further market segmentation. Other unrecorded costs of the crisis will manifest themselves in terms of human capital depreciation, the erosion of entrepreneurship by unemployment, and the loss of dearly accumulated skills and knowledge.

(d) **Investment climate.** In many African countries, the ongoing financial meltdown has also altered the investment climate. For instance, the drying up of capital inflows and trade with international investment (bonds, FDI) is expected to increase the slowdown, raise the country's risk, increase the decline in flows, and hurt international trade by producing protectionist waves in the EU and the U.S. Thus, the global credit crunch means

reduced capital flows for African countries that are chronically dependent on foreign capital inflows to sustain imports and pay older debts. Indeed, some countries are already feeling the pinch. For example, Kenya, Senegal, Tanzania, and Ghana have put on hold plans to access international capital markets, and Ghana and Kenya have postponed sovereign bond issues worth about USD 800 million (AfDB, 2009). Moreover, the levels of FDI inflows into Africa, although substantial precrisis, were still lower than those flowing into developing Asia. For example, in Botswana, the decline started as early as 2007 (Table 03).

Table 03. Foreign direct investment, net inflows (% of GDP)

	2000	2001	2002	2003	2004	2005	2006	2007
Botswana	92.56	36.69	679.92	504.97	397.84	265.01	441.91	-23.20
Cameroon	157.62	76.35	553.09	161.33	54.25	147.31	9.12	209.37
Congo, D. R.	385.30	164.55	246.55	569.57	15.10	-107.02	-135.74	804.17
Côte d'Ivoire	225.31	258.58	185.11	120.36	182.79	190.62	183.60	215.65
Ghana	333.30	168.20	95.62	179.36	156.98	135.23	500.20	640.64
Kenya	87.39	4.08	21.00	54.84	28.62	11.30	22.54	300.84
Mauritius	594.37	-60.98	70.50	119.34	18.41	66.08	166.32	499.39
Nigeria	247.94	248.05	317.01	296.41	213.33	179.37	370.77	367.85
Senegal	134.14	65.49	146.33	76.55	95.93	51.33	237.48	69.86
South Africa	72.91	613.64	66.31	46.99	32.47	269.13	-7.14	203.03
Tanzania	510.39	411.82	397.21	299.72	291.24	349.35	421.04	399.84
Zambia	375.76	197.14	815.37	420.68	657.85	485.77	565.65	865.82

Source: WDI, World Bank

In addition, most forms of capital are not only volatile but also minor (see Table 04). For instance, FDI inflows, which are relatively stable in some countries (the Ivory Coast, Senegal, Nigeria, Tanzania) but more volatile in others (the DRC, Zambia, Botswana, Cameroon), are still insignificant.

Accordingly, official creditors remain more important than private ones, and financial inflows are expected to fall as part of the deleverage process because of low investor confidence and asset reallocation. Bond and other long-term debt flows have always been low and are expected to decline further in 2009.

Table 04. Net capital flows to sub-Saharan Africa (USD billions)

	2002	2003	2004	2005	2006	2007	2008*
Current account balance	-6.2	-9.2	-1.0	6.4	6.9	-23.2	-18.7
as % of GDP	-1.7	-2.1	-0.2	1.0	1.0	-2.7	-1.9
Net private and official inflows	9.6	15.0	23.2	31.8	38.0	60.4	38.7
Net private inflows	6.9	13.5	20.9	32.8	40.3	55.5	35.9
Net equity inflows	9.8	13.6	16.6	24.2	33.5	42.1	35.6
Net FDI inflows	10.2	12.9	9.9	16.8	18.5	28.6	32.4
Net portfolio equity inflows	-0.4	0.7	6.7	7.4	15.0	13.5	3.2
Net debt flows	-0.2	1.4	6.6	7.6	4.5	18.3	3.1
Official creditors	2.7	1.5	2.3	-1.0	-2.3	4.9	2.8
World Bank	2.2	2.2	2.5	2.4	2.0	2.4	1.7
IMF	0.5	0.0	-0.1	-0.4	-0.1	0.1	0.7
Other official	0.0	-0.7	-0.1	-3.0	-4.2	2.4	0.4
Private creditors	-2.9	-0.1	4.3	8.6	6.8	13.4	0.3
Net M-L term debt flows	-1.1	0.9	2.7	4.9	-2.1	7.9	1.3
Bonds	1.5	0.4	0.6	1.3	0.3	6.6	-1.0
Banks	-1.9	1.2	2.4	3.8	-1.7	1.9	2.7
Net short-term debt flows	-1.8	-1.0	1.6	3.7	8.9	5.5	-1.0
Balancing item**	-3.2	-2.0	-0.6	-18.6	-13.2	-11.0	-0.9
Change in reserves (- =increase)	-0.2	-3.8	-21.7	-19.5	-31.7	-26.1	-19.0
Workers' remittances	5.0	6.0	8.0	9.4	12.9	18.6	19.8

* Projected

** Combines errors and omissions and net acquisition of foreign assets (including FDI) by developing countries

Sources: Global Development Finance 2009; World Bank.

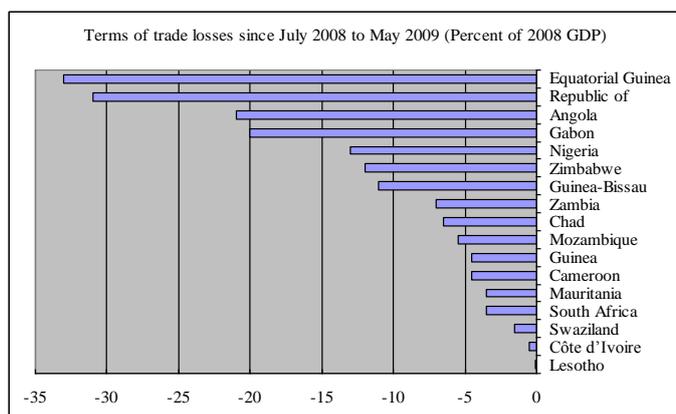
A number of private sector projects across Africa have been suspended or delayed because of investor withdrawal and more constraining funding conditions due to higher spread and lower debt-to-equity exposure. Government attempts to raise long-term finance through sovereign bond issue have also failed (South Africa) or been canceled (Ghana Telecom bond issue for USD 300 million) or delayed (Eurobond issues for Kenya, Nigeria, Tanzania, and Uganda) (AfDB, 2009). This lack of funding has caused costly delays in the implementation of planned public infrastructure programs.

Likewise, because of lower fiscal revenues, governments have been forced to severely curtail their public expenditure plans, including public infrastructure investment. For example, in Angola, government revenue for 2009 is expected to be 24% lower than in 2008. At the same time, the nonoil sectors such as construction, manufacturing and services are heavily dependent on public sector demand and are also expected to slow down considerably. Overall, following a double digit growth rate in 2008 (15.8%), the Angolan economy is expected to contract by 7% in 2009, a reversal of almost -23% (Angolan Central Bank, 2009). Crowding-out trends in the credit market have also been observed in Kenya, where credit to the private sector has declined considerably since the third quarter of 2008 after the government increased its domestic borrowing to finance the oil subsidy bill.

Terms of trade are also deteriorating sharply, especially for oil and commodity exporters. For instance, as Figure 6 shows, a sharp fall in trade is expected for Nigeria, Zambia, South Africa, and Cameroon. Oil-exporting countries will also experience a 34% deterioration in trade, while oil importing countries, such as Tanzania and

the Ivory Coast, are expected to gain a mere 2% in trade from 2008 to 2009 (IMF, 2009). Indeed, late last year, the IMF cut its projection for direct foreign investment in the DRC to \$800 million for 2009 from a previous forecast of \$2.5 billion investment into the country's vast mineral reserves. Understandably, excessive specialization in minerals has also proven to be even more disastrous for countries with poor governance and weak state institutions, such as the DRC and the Central African Republic.

Figure 06. Terms of trade impact of changes in international prices



Sources: Global Development Finance 2009; World Bank

Table 05. Terms of Trade (index 2000 = 100)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010*
Botswana	105.8	106.7	104.7	100	95.9	85.2	89.5	91.8	105.2	101.9	102.6	99.2	91	86.1
Cameroon	88.6	83.8	70.9	100	104.5	103.8	102.1	99.9	119.7	134.4	161.9	175.6	103	112.5
Congo, D. R.	102.3	110.1	104.8	100	104.6	107.8	124.4	133.1	153.1	166.2	186	186.9	152.3	159.5
Côte d'Ivoire	129.3	136.7	125.4	100	105.4	146.3	135.5	104.5	96	103.6	107.7	131.1	138.9	127.5
Ghana	127.8	140.4	127.2	100	101.2	110.8	127.2	107.9	100.5	105.2	116.9	123.1	145.4	137.1
Kenya	110.1	103.3	99.8	100	97.3	101.7	84	78.2	72.6	68.8	63.6	59.5	65.2	62.3
Mauritius	105.5	98.6	95.4	100	96.8	93.2	92	100.7	106.1	135.1	140.8	118.5	92.2	101.7
Nigeria	71.5	49.6	67	100	89.5	89.1	91.3	108.4	146.4	176.2	194.4	261.9	140.1	166.5
Senegal	93.7	97.2	95.9	100	105.5	100.5	100.1	97.6	96.4	107	94.8	110.5	97.2	96
South Africa	107.5	103.4	110	100	100.5	102.6	103.5	104.3	105.1	109.6	114.2	115.1	115.5	114.5
Tanzania	83.8	85.1	104	100	77	69.2	65.3	59.3	53.9	47.3	51.5	51.2	53.2	58.5
Zambia	119.2	111.7	105.3	100	100.2	97.1	98.1	127.8	140.8	215.5	233.5	212.3	145.5	152.4

* Data in 2009 and 2010 are projections by IMF staff

Source: AFR Regional Economic Outlook (April 2009)

In terms of competitiveness, Zambia and Kenya have been increasing their real effective exchange rates since 2004–05 (see Table 06). Yet, early in 2009, Kenya and South Africa experienced a higher than normal exit of foreign investors, resulting in more net outflows than inflows and an increasing demand for the dollar and other hard currencies that led to depreciation of their currencies.

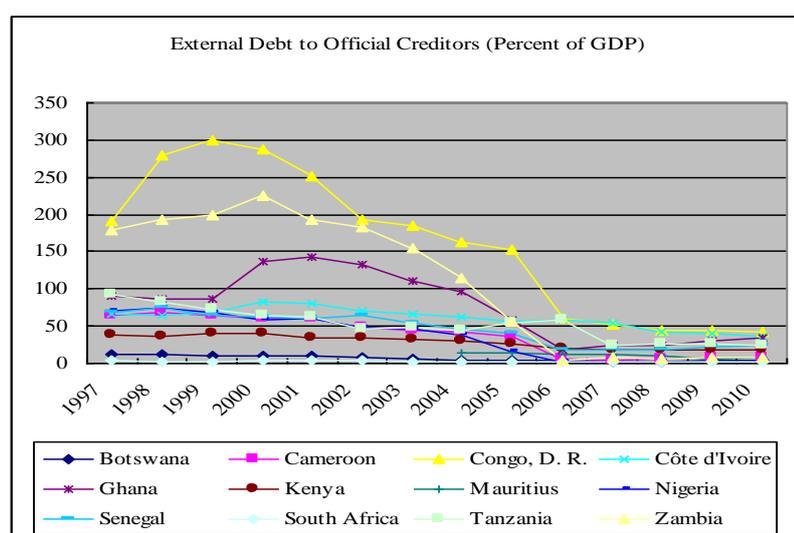
Table 06. Real effective exchange rates (annual average index 2000 = 100)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Botswana	93.6	93.5	95.6	100	103.8	109.3	115	110.3	107.2	104.1	97.5	92.8
Cameroon	107.5	111.2	109.7	100	103.4	107.1	110.5	110.6	109.7	113.2	114.6	119
Congo, D. R.	47.6	49.2	133.7	100	77.8	36.6	31.7	29.8	29.4	33	33.9	34.1
Côte d'Ivoire	100	106.9	106	100	103.4	107.6	115	116.5	116.5	116.1	118	123.3
Ghana	144.8	154.8	152.9	100	101.1	100.7	100.9	99.5	99.5	106.6	108.2	118.1
Kenya	96.6	103.8	95.2	100	105.4	105.1	106.6	104.1	116.1	135.2	146.5	168.7
Mauritius	96.1	92.9	94.8	100	96.8	96.6	94.3	92	88.4	87.7	88.9	100.3
Nigeria	172.3	196.1	98.8	100	111.1	111	105	107.8	124.3	133.4	130.9	145.1
Senegal	106	109.8	107.1	100	101.4	104	106.6	106.7	105.4	105.3	110.9	115.6
South Africa	118.6	109.8	104	100	87.7	73.9	97.4	107.7	108.6	104.3	94.9	77.3
Tanzania	94.1	101.6	98.3	100	99.9	90.8	76.1	69.2	67.5	63.3	62.6	66.9
Zambia	104.3	98.7	99.2	100	112	110.9	101.7	108	135	176.9	151.5	145.3

Source: AFR Regional Economic Outlook (April 2009)

(e) Debt servicing and early monetary policy responses. Debt servicing has become complex because of exchange rate volatility and uncertainty. Uncertainties surrounding commodity prices, particularly, have foreign exchange and fiscal implications. Debt arrears are also accumulating, further undermining Africa's capacity to mobilize external resources. In fact, inability to counter cycles is one of the greatest poverty traps faced by African countries. Admittedly, thanks to debt cancellation efforts, Africa's external debt, part of the debt ratio that for decades was thought to represent a major policy constraint, reduced in the second half of the 2000s (Figure 07). Unfortunately, however, the ongoing development crisis poses a serious challenge for Africa, which cannot mitigate the crisis without resorting to new borrowing. As a result, external debt is expected to increase over the next two years in all countries in our sample.

Figure 07. External Debt to Official Creditors (% of GDP)



Source: AFR Regional Economic Outlook (April 2009)

Except for the DRC and Nigeria (see Table 07), inflation is expected to be lower in 2009; which is consistent with the world trend. Inflation pressure is also easing in part thanks to reduction in export receipts and sterilization measures.

Table 07. Consumer prices (annual average % change)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010*
Botswana	8.5	6.6	8	9.2	7	8.6	11.6	7.1	12.6	8.1	5.2
Cameroon	0.8	2.8	6.3	0.6	0.3	2	4.9	1.1	5.3	2.3	2
Congo, D. R.	550	357.3	25.3	12.8	4	21.4	13.2	16.7	18	33.9	19.9
Côte											
d'Ivoire	-0.4	4.4	3.1	3.3	1.5	3.9	2.5	1.9	6.3	5.9	3.2
Ghana	25.2	32.9	14.8	26.7	12.6	15.1	10.2	10.7	16.5	14.6	7.6
Kenya	10	5.8	2	9.8	11.6	10.3	14.5	9.8	13.1	8.4	5
Mauritius	4.2	5.4	6.5	3.9	4.7	4.9	8.9	9.1	8.8	7.3	5.1
Nigeria	6.9	18	13.7	14	15	17.8	8.3	5.5	11.2	14.2	10.1
Senegal	0.7	3	2.3	0	0.5	1.7	2.1	5.9	5.8	1.1	2.2
South Africa	5.4	5.7	9.2	5.8	1.4	3.4	4.7	7.1	11.5	6.1	5.6
Tanzania	6.2	5.1	4.6	4.4	4.1	4.4	7.3	7	10.3	10.9	5.7
Zambia	26.1	21.7	22.2	21.4	18	18.3	9	10.7	12.4	12.2	8.3

* Projections by IMF staff

Source: AFR Regional Economic Outlook (April 2009)

Table 08. Monetary tension measure (% of broad money growth and export revenue growth ratio)

	2001	2002	2003	2004	2005	2006	2007	2008
Botswana	-62	-170	-513	130	-2	-392	1089	-5
Cameroon	208	-164	133	-41	-13	15	73	110
D.R.C.	191	-42	138	256	-32	180	27	-97
Côte d'Ivoire	207	134	316	118	32	159	-195	110
Ghana	-4.8	-277	-47	-127	77	137	-5219	90
Kenya	-180.3	98	-31	11	-35	-28	289	80
Nigeria	-179	54	4	-523	-332	-305	-653	-745
Senegal	235	-510	-337	331	238	-114	-500	326
S. Africa	65	31	-31	-43	337	100	130	-3
Tanzania	166	135	312	10	49	168	-116	7
Zambia	-198	160	66	8	231	230	71	-30

Author calculations. Data sources: WDI, 2009; IFS, 2009

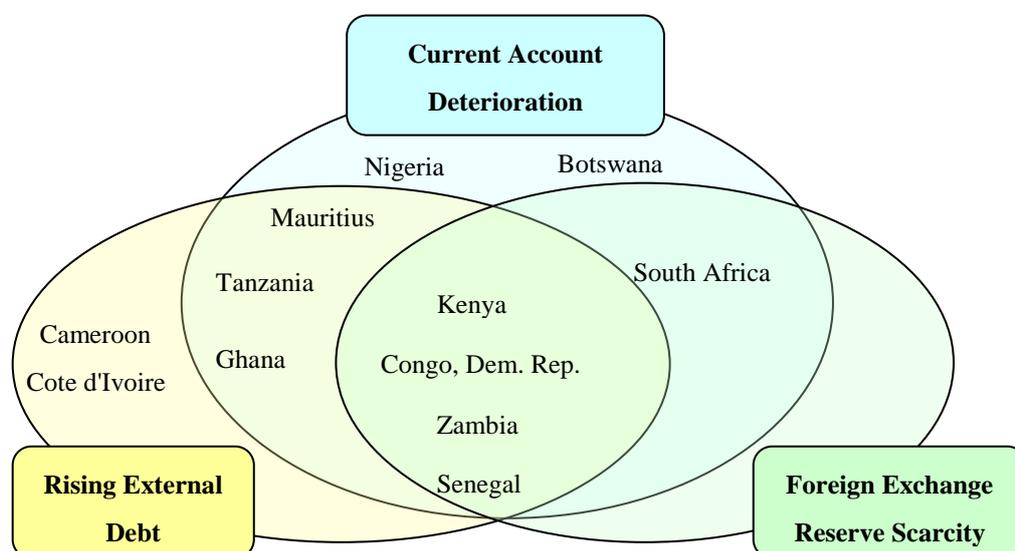
Some governments have undertaken measures to minimize the impacts of the crisis by implementing fiscal stimulus plans, including increases in public investment expenditures and tax reductions. In Mauritius, in January 2009, the government announced a stimulus package worth USD 0.3 billion, or approximately 3% of Mauritius's GDP, to boost domestic demand and increase job creation. In Nigeria, the government is contemplating using its USD 52 billion external reserves to shore up the economy through a stimulus package. Meanwhile, the South African government has proposed adjustments to personal income tax that should provide middle and lower income earners with USD 1.35 billion in tax relief. It has also increased funding for public investment projects with an allocation of about USD 80 billion over the next three years. In Senegal, the government lowered budgetary expenditure by 4% of the GDP and priority expenditure by 0.6% of the GDP. In other countries, the

severity of the crisis has forced governments to increase tariffs or introduce new taxes (e.g., the new airport tax in the DRC).

In response to the large depreciation of their national currencies, governments have also undertaken a variety of measures to defend the currency or boost competitiveness. However, defending local currencies has proven unsustainable in the context of declining export revenues because the central bank soon runs out of foreign reserves. It is thus important to also ask whether donor countries will act as they have in past financial crisis, which would mean sizable decreases in aid budgets (Frot, 2009). As it turns out, because of the scale of the current crisis, international institutions and donor countries have already taken action, or at least made pledges, to tackle its consequences for developing countries.

In general, national responses are aiming to mitigate early manifestations of socioeconomic fragilities. However, the maneuvering room for such measures as adoption of expansionary fiscal and monetary policies depends on balance of payments constraints, external debt, and foreign reserves (prerequisites for capital goods importation). In Figure 08, therefore, we summarize the evolution of three major fragility variables (the current account balance, external debt, and foreign exchange reserves) for our sample countries in 2008–09, using simple averages of the ratios for each country of current accounts (deficit = fragility) and external debt variables to GDP (over 8% = fragility), as well as reserves in months of imports (less than 6 = fragility).

Figure 08. External Fragility Evaluation



The type of policy package to be adopted depends on the countries' current stance. For those countries with a strong debt and foreign exchange reserve position but a relatively weak current account (Nigeria and Botswana are two important examples), the room for maneuvering lies more in monetary than fiscal policy. More specifically, Nigeria and Botswana are facing a rapid current account deterioration, which is keeping strong

pressure on the foreign reserve. Nonetheless, monetary policies offer significant room for maneuver. For instance, Botswana may further ease its monetary policy by cutting interest rates to stimulate consumption and encourage borrowing. In fact, Botswana's central bank did cut its bank rate by 50 basis points to 15% in December 2008. Nigeria has also been moving toward the right policies: such as reducing the benchmark interest rate, otherwise known as the monetary policy rate (MPR), by 175 basis points to 8.0% from 9.75% and lowering the liquidity ratio for banks to 25% from the previous 30%. However, given the health of Nigeria's banking sector, the Nigerian central bank should further relax its cash reserve requirement (CRR) to somewhere below the current 1% in an effort to boost liquidity in the financial system.

The most efficient and well-developed financial market of the region is that of South Africa, whose acceptable debt level suggests that it can still raise funds on the financial markets to mitigate the crisis. This case clearly illustrates that monetary and fiscal policies can be effective. For example, the South African Reserve Bank reduced its repurchase rate to stimulate borrowing and boost private investment and consumption. Current account and foreign reserves are also at acceptable levels in Cameroon and the Ivory Coast (two CFA economies), although external debt there has been increasing rapidly. These examples clearly illustrate that fiscal policies also proffer significant room for maneuvering.

Nonetheless, for all the above countries, if policy intervention is to be effective, it is crucial to identify the mechanisms by which the crisis is being propagated.

IV. Transmission channel empirics

This section addresses the propagation mechanisms by building on an extensive body of literature that can be roughly grouped into two categories: financial integration and macroeconomic synchronization. Within these areas, the literature on financial contagion or macroeconomic comovement is more relevant to today's global economy than ever before; however, to be a matter of policy concern, it must be empirically relevant. Unfortunately, despite the advanced stage of the policy debate and the large body of research it has generated, economists do not yet agree on and are often unclear about what they mean by these concepts. The crux of the matter, therefore, is to identify potential transmission mechanisms and differentiate those that represent simple contagion from those that represent comovement. As a first step, it is helpful to understand what the different related terms mean.

First, we define pure contagion as crisis propagation that is transferred between markets even in the absence of real intermarket links. This approach is supported by corroboration in recent studies of the view that external factors, such as terms of trade and world interest rate shocks, play an important role in explaining differences in output volatility between developing and in industrial economies (Caballero et al., 2006). Nonetheless, as Moser (2003) points out in his discussion of the information channel of market signal transmission, information imperfections and the costs of acquiring and processing information make correct assessment of fundamentals difficult and a certain degree of ignorance rational. As a result, market participants are uncertain about the true state of a country's fundamentals. Thus, a crisis elsewhere might lead them to reassess the fundamentals of other countries and cause them to sell assets, call in loans, or stop lending to these countries, even if their fundamentals remain objectively unchanged.

Given our overwhelmingly pragmatic motivation, however, we skip the conceptual debate on such issues as contagion, comovement, and interdependence, and use the terms interchangeably to mean market and economic integration. Hence, as used here, the term *international comovement* refers to the existence of common long-run patterns in aggregate economic behavior across countries (Loayza et al., 1999), while *interdependence* among countries arises because their economic fundamentals are linked through balance of payments. A crisis in one country can therefore affect the fundamentals of another.

Depending on the purpose, many different methods can be used to measure the amount of comovement between two countries. In our empirical investigation, we use output variables (i.e., the GDP) rather than industrial production because in the case of Africa, manufacturing activity represents less than 15% of aggregate output and an even lower portion of exports. It therefore seems, a priori, to be unrepresentative of total output, stock market price indices, and interest rates. We also assume that, instead of causal shocks, the simultaneous occurrence of financial crises may result from coincidence or common cause (Moser, 2003); specifically, adverse common shocks that have the potential to inflict balance-of-payment difficulties. In African economies particularly, such shocks include changes in global interest rates, exchange rates between major currencies, and commodity prices; and/or recessions in major industrial countries.

Since financial contagion effects have yet to be observed in Africa (IMF, 2009c), we test only the business cycle and economic integration hypotheses. Moreover, although we adopt an approach based on cointegration methods, instead of assuming a linear cointegration relationship as in the extant literature, we test for a general nonlinear form. We therefore employ a nonlinear generalization of cointegration (Granger and Hallman, YEAR), threshold autoregressive regression (TAR)—most specifically, threshold cointegration models—whose features are recognized as being particularly realistic.

Threshold effects take place when larger shocks (i.e., those above a certain threshold) lead to a different response than those brought about by smaller shocks. In other words, a shock may have to be of a particular size to provoke a significant response (Goodwin and Harper, 2000). Recent research in this area has concentrated on the potential for asymmetric adjustments in current accounts, which is also a major focus of our study. In particular, conventional wisdom suggests that policy responses to current account deficits may differ from responses to current account surpluses.

In the standard cointegration framework, the adjustment to long-term equilibrium is linearly dependent on the magnitude of the deviation. In practice, however, market frictions introduce a nonlinear adjustment (Balke and Fomby, 1997). One popular approach, designed to account for nonlinearity in the adjustment to long-term equilibrium, is threshold cointegration methodology (Enders and Granger, 1998; Enders and Siklos, 2001), based on which Balke and Fomby (1997) derive a model that encompasses Tsay (1998) and Hansen-Seo's (2002) multivariate case for the unknown cointegration vector. The first stage of this two-stage threshold cointegration methodology employs the ordinary least-squares (OLS) method to estimate cointegration using the following bivariate equation:

$$y_t = \alpha + \beta X_t + u_t \quad (1)$$

The second stage focuses on the OLS estimates of ρ_1 and ρ_2 in the following TAR model:

$$\Delta u_t = I_t \rho_1 u_{t-1} + (1 - I_t) \rho_2 u_{t-1} + \sum_{i=1}^l \varphi_i \Delta u_{t-i} + \varepsilon_t, \quad (2)$$

where ε_t is the white-noise disturbance and the residuals u_t from (1) are substituted into (2) to obtain better estimates. I_t is the Heaviside indicator function such that

$$I_t = 1 \text{ if } u_{t-1} \geq \tau \quad (3a)$$

$$I_t = 0 \text{ if } u_{t-1} < \tau, \quad (3b)$$

where τ is the threshold value. One necessary condition for μ_t to be stationary is $-2 < (\rho_1, \rho_2) < 0$. In either case, under the null hypothesis of no cointegration, the F -statistic for the null hypothesis ($\rho_1 = 0 = \rho_2$) has a nonstandard distribution (Enders and Siklos, 2001). Enders and Granger (1998) also show that if the sequence is stationary, the least-squares estimates of ρ_1 and ρ_2 have an asymptotic multivariate normal distribution. The estimation uses Chan's (1993) method for calculating the threshold value τ by a grid search-based procedure that considers a range of nonzero values for the threshold in (3), drawn from the central 70% of the ordered values of u_t . The selected threshold is then specified as the value of u_t delivering the lowest residual sum of squares for the estimated TAR testing equation, an approach referred to as consistent-threshold estimation (Cook, 2007). Subsequently, as proposed by Enders and Siklos (1999), the preferred threshold value is used to test for cointegration through t -Max* and F^* -tests on the statistical significance of the coefficients in (2) and a Wald of the null hypothesis of symmetric adjustment (i.e., that the two coefficients in (2) are equal).

Empirical results: Integration properties

Stationarity tests. We tested stationarity using two common procedures for determining whether the univariate time series contains a unit root: the Dickey–Fuller (1979) and the Augmented Dickey–Fuller (1979) test (hereafter, DF and ADF, respectively). The more widely used of the two is the ADF, in which a series is said to be integrated of order d , denoted by $I(d)$, if d is the number of times it must be differenced to achieve stationarity. Hence, an $I(1)$ series is one that must be differenced once to obtain stationarity, while an $I(0)$ series is stationary without being differenced. The tests performed included either a simple intercept or a linear time trend. The maximal integration orders (d_{\max}) for the variables were set to 1. The integration results are given in appendix Table A1, which shows that all the variables of interest are integrated of order 1. The $I(1)$ series results for the variables of interest then allow us to test for a long-term equilibrium relationship (cointegration) between the financial and trade variables of African economies and their major external partners.

TAR tests. The cointegration results, presented in appendix Tables A2(a-d), show that, except for South Africa–UK, the null hypothesis ($\rho_1 = 0 = \rho_2$) cannot be rejected for any of the equity equations, implying an absence of long-term asymmetric cointegration. However, in most cases, the null hypothesis is rejected fully for the GDP relationship but only moderately for the current account nexus, indicating acceptance of the null hypothesis of symmetric adjustment.

As also reported by Caner and Hansen (2001), the Wald test statistic W_T revealed the existence of a threshold; that is, the null hypothesis of linear cointegration was rejected. Hence, based on the results given in Table 1, we

were able to identify eight long-run relationships in trade variables between African countries and their main trade partners. We were also able to identify the presence of a unit root using the threshold unit root test statistic R_T . These latter results led to the rejection of the unit root hypothesis for all six relationships; that is, all six relationships were cointegrated.

Overall, the results suggest several different mechanisms by which the current financial meltdown and economic recession crisis might have spread into Africa via business cycle and trade comovement rather than financial linkage. This finding in turn implies that the most effective policies for mitigating the impact of the crisis in Africa would be those that are progrowth and protrade rather than merely financial. In other words, they highlight the importance of trade links for crisis transmission, which is in line with the assumption that the driving force is interdependence of fundamentals rather than pure contagion. Our results are also consistent with the fact that Africa's share in world trade is significantly higher than its financial integration. They thus imply that liquidity assistance is an appropriate response to pure contagion only: common shocks and interdependence, as matters of economic fundamentals, must be dealt with through policy measures that seek to improve these very fundamentals. In other words, if a country is vulnerable to adverse external shock because of the initial state of its fundamentals, the availability of additional foreign reserves at relatively low cost, although it can help stabilize the economy in the short term, does so at the risk of worsening underlying vulnerabilities.

We acknowledge that this empirical analysis is subject to two limitations. First, we do not explicitly consider the possibility of shock transmission involving lags of more than one year (the frequency of our data). Second, because of data constraints, our analysis focuses on the period from 1970 to 2007 and thus does not cover the most recent months of the unfolding crisis. Hence, any interpretation of our findings should be accompanied by two caveats. First, recent reversals in the conduct of monetary policy may have changed the transmission channels of global shocks while increasing global production sharing, and financial interdependence and information technologies are contributing to amplification of the inherent spillover effects. Second, our econometrics exercises are only crude approximations of what are actually a complex set of linkages. However, if our empirical findings are upheld in future work with other African countries' data, the reconfirmation of Africa's vulnerability to external shocks is worrisome, particularly amid a global crisis requiring current account adjustment.

Such evidence also raises the deepest questions about the way forward for Africa as the U.S. embarks on adjusting the current account deficit, as well as the global implications of its unwinding. Because of the costs to Africa of previous international current account corrections in the 1970s and 1980s (Easterly, 2001), it is crucial to frame the prospects of African development in terms of external shocks, including unintended consequences of the external adjustment occurring in industrialized economies as part of their macroeconomic corrections and responses to the crisis.

Nonetheless, even though the dynamic forces driving trade imbalances remain too poorly understood to allow precise predictions of how a correction will occur, our understanding of Africa's misadjustments in the 1970s and 1980s say much about what the unintended costs of global rebalancing may look like for Africa. The bottom line

is that by learning lessons from experience, we can avoid the worst of the past. The question is what does the past tell us about the chain of post-crisis events and are there any signals that we should be reading?

IV. Post past-crisis performance, development prospects, and risks

In the search for clues from past crises, it would be valuable to revisit Africa's performance during the economic setbacks following the 1973–75 and 1981–82 downturns, which, as previously pointed out, annihilated the progress of the 1960s and caused two decades of devastation. Most important, Africa did not share in the rapid average economic growth rates that followed these decades and instead remained trapped in prolonged economic distress. At present, we are seeing some of the very same factors that gave rise to Africa's excessive decade-long recession in the 1970s and early 1980s and that caused its external debt to balloon from USD 140 billion when the crisis emerged in 1982 to over USD 270 billion in 1990. The most relevant of these factors for this study are as follows:

(A) The persistence of negative real interest rates in global financial markets during most of the 1970s because of lax monetary and fiscal policies in industrial countries. The unintended result was that for developing countries, it was economically rational to borrow externally for development and consumption rather than saving or attracting equity;

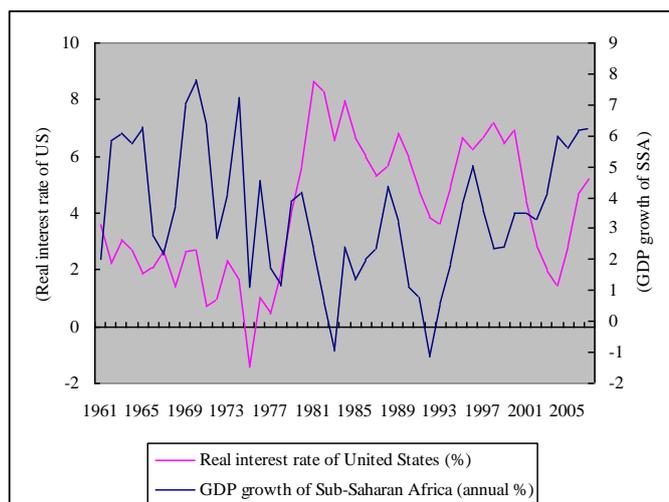
(B) The targeting of developing countries in general as major export markets to be provided with too-easy credit to facilitate the adjustment of industrial countries facing excess production capacity. This situation is amply illustrated by the case of the 1970's oil shock;

(C) The FED interest rate shock of 1979–81 (when U.S. real interest rates rose from 1.2% to 8.1% over the 1979–84 period), which aimed at ridding the world of inflation but had the adverse effect of inducing a long, deep recession, particularly in debt-ridden developing countries in which the recession lasted for 70 months instead of the 16 in the OECD world; and

(D) The emergence of high, positive real interest rates throughout the 1980s, which compounded Africa's debt servicing and debt accumulation burdens. These latter were worsened by depreciation of the U.S. dollar between 1985 and 1990, which increased the dollar value of Africa's outstanding debts denominated in dollars or currencies that appreciated against the U.S. dollar. (Fondad, 1992)

Although these policy changes were not of course intended to harm Africa, their effects on the continent were devastating (see the Figure 09 illustration of the countercyclicity between U.S. interest rates and African growth rates in the 1970s).

Figure 09. Real Interest Rate in the U.S.(%) and GDP Growth in Sub-Saharan Africa (annual %)



Source: WDI, World Bank

Hence, despite the role of local factors, worldwide factors like the increase in world interest rates may have contributed to developing countries' stagnation (Easterly, 2001) in the 1970s and 1980s. Other scholars have observed that a rise in U.S. interest rates adversely affects the funding of developing economies not only by increasing their debt-servicing costs and lowering their creditworthiness (Calvo et al., 1996) but also by exacerbating asymmetric information problems (Mishkin, 1997). Likewise, Wolf (2009) observes that Nixon's devaluation of the dollar in August 1971 could not have occurred without forcing other countries to change their exchange rate policies.

In addition, Lane and Milesi-Ferretti (2005) estimate that a 300 basis point (3 percentage point) increase in developed countries' interest rates relative to the end-of-2004 level would have a fiscal impact on developing countries amounting to 1.5% of the GDP in 2006-07. Likewise, Khor (2006), citing a World Bank study, notes that a 2 percentage point rise in U.S. interest rates would reduce economic growth in emerging economies by 1% in 2005 and 2006. If such increases were accompanied by widening interest rate spreads, the slowdown would be worse, by 2 additional percentage points in 2005 and 4.5 additional percentage points in 2006. Hence, beginning in 2010, as the recovery gains further momentum, African policymakers must manage the transition to higher interest rates with extreme care.

Nonetheless, although it makes perfect sense to anticipate interest rates trends, we believe that the global economy is undergoing a number of significant structural changes that must be contemplated in the context of Africa's longer term development prospects. Two major topics of concern in the recent debate over development policies are the U.S.'s current account adjustment as part of the unavoidable reduction of its trade account deficit, and, ultimately, the global imbalances that led to the crisis in the first place. To the extent that the ongoing global recession requires repetition of the above policies or past events, it is not surprising that many scholars and financial market analysts in search of precedents and/or insights have been reexamining past episodes of current account corrections that involve slowing trade and fiscal expansion. However, developing countries should also

be concerned with the question of whether a reduction in U.S. current account deficits will lead to heavy rebalancing costs.

The U.S. economy has already embarked on a macroeconomic correction process likely to include adjustments in prices, quantities, trade rules, and tariffs, as well as efficiency of resource use. For example, in a recent interview with the Financial Times (2009), Larry Summers, President Obama's top economic advisor, describes the new American economy as one that will be oriented to export more than consumption, to environment more than energy production, and to bio-, software, and civil engineering more than financial engineering.

With respect to these last four economic strategies, current account adjustment in the U.S. will involve either an increase in domestic savings relative to investment, a decline in savings relative to investment in East Asia and oil exporting countries, or a movement in the interest and exchange rates that allow current accounts to accommodate to changed savings-investment patterns. Hence, given the size of the U.S. current account deficit (averaging 6% of GDP in recent years), there is a definite risk that the burden of such rebalancing will be absorbed disproportionately by countries with structural rigidities like those of Africa.

In addition, Corsetti et al. (2009) argue that although there is considerable uncertainty about the timing and drivers of current account movements, the basic mechanism of adjustment requires a transfer of real resources from the U.S. to the rest of the world and a decrease in domestic spending relative to production accompanied by a simultaneous relative increase abroad. Yet, because of the sheer magnitude of the reallocation of resources on a global scale, the macroeconomic consequences of adjustment are bound to be pervasive along many dimensions. Accordingly, in this increasingly complex world economy, particular attention should be paid to the unintended consequences of certain policies, such as the types of adjustment that the IMF recommended to Asian economies in the aftermath of the Asian financial crisis. These adjustments resulted in, among other things, the accumulation of huge (and sometimes costly) foreign reserves that fueled the savings glut, as well as global imbalances that eventually contributed to ongoing financial turmoil.

Another important area of concern for fiscally weaker Africa is the expansion of fiscal debt in many advanced countries, exemplified in the U.S. by the USD 787 billion stimulus package and the broad issuance of public bonds. Since neither foreign nor private domestic purchases will suffice to fund the U.S. federal deficit—expected to total about 13% of the GDP in 2009—it is clear that the U.S. monetary authorities have resorted to the same recipe as in the 1970s, with the same potential for inflationary consequences. That is, if global inflation rises, the U.S. current account adjustment will resemble the second half of the 1970s and necessitate a rise in interest rates, making the process even more costly for Africa through higher financing costs. Hence, even though the average debt ratio is lower this time around, a continually rising interest rate presents serious challenges for access to private funds, meaning that African central banks would have less room to maneuver. As a result, fiscal policy would be further constrained, and the exchange rate would become the main tool for external adjustment and, thereby necessitating a weak real exchange rate during the entire adjustment period.

At the same time, a current account deficit in the fiscal deficit country would have to be matched by a current account surplus elsewhere. Therefore, to bring about this net increase in foreign savings and restore global equilibrium between world income and expenditure, interest rates would also have to rise. The net effect would

be a shift from current to future expenditure abroad that exactly matches the shift from future expenditure to current expenditure in the country running the increased fiscal deficit. Since the adjustment between countries running deficit and surplus current accounts is never smooth, some weaker economies will be caught in between, unwilling facilitators of the required adjustment (i.e., via international commodity prices).

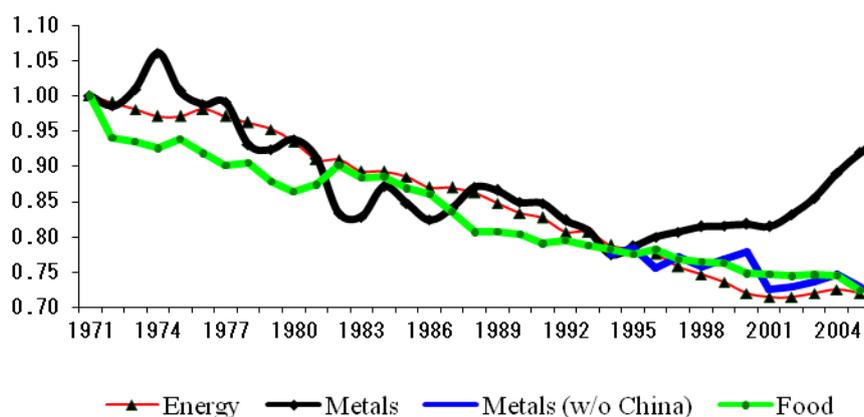
Equally important is the fact that economic stimulus programs in developed countries are much larger than those in developing countries and might eventually substantially alter conditions for competition and future investment decisions by TNCs (UNCTAD, May 2009). Moreover, numerous governments in developed countries have partially or fully nationalized domestic companies or are envisaging such a step, which alters international competition to the disadvantage of Africa. Hence, the hard-won market reforms in Africa are now at odds with the new economic role of the State. Ultimately, much will depend on whether the trend toward more state ownership and control remains a temporary fire-fighting measure during the crisis or whether it results in more permanent structural changes that have long-term implications.

Further unintended negative effects on African post-crisis development may arise from clauses included in the stimulus packages implemented in recent months. For example, many of the U.S.'s trading partners are concerned about the "Buy American" clause in the USD 787 billion American Recovery and Reinvestment Act of 2009, which requires the use of local over foreign products in public projects. China has also been using taxes or quotas to discourage the export of bauxite, coke, magnesium, and zinc; thereby distorting international competition.

Overall, our contention is that as a result of the substantial fiscal, monetary, and sectoral initiatives put in place in developed economies, recovery is likely in 2009. Yet, because of the lag in the transmission of potential spillovers into Africa, it is likely that by the time developed countries start retreating from recovery' policies, Africa will find itself in deep desynchronization vis-a-vis developed nations. This scenario would be a repeat of the 1970s when Africa was entrenched in an outdated precrisis economic structure that no longer fit the new world economic structure of the time.

Admittedly, other external factors like skill-biased technical change may have contributed to developing countries' stagnation (Easterly, 2001) via, among other things, the decline in commodity intensity (see Figure 10), measured by dividing mineral commodity use by GDP. Most especially, the scientific and technological revolution has undoubtedly accelerated the pace of equipment, and hence skill, obsolescence.

Figure 10. Technological Progress and Increases in the Efficiency of Resource Use

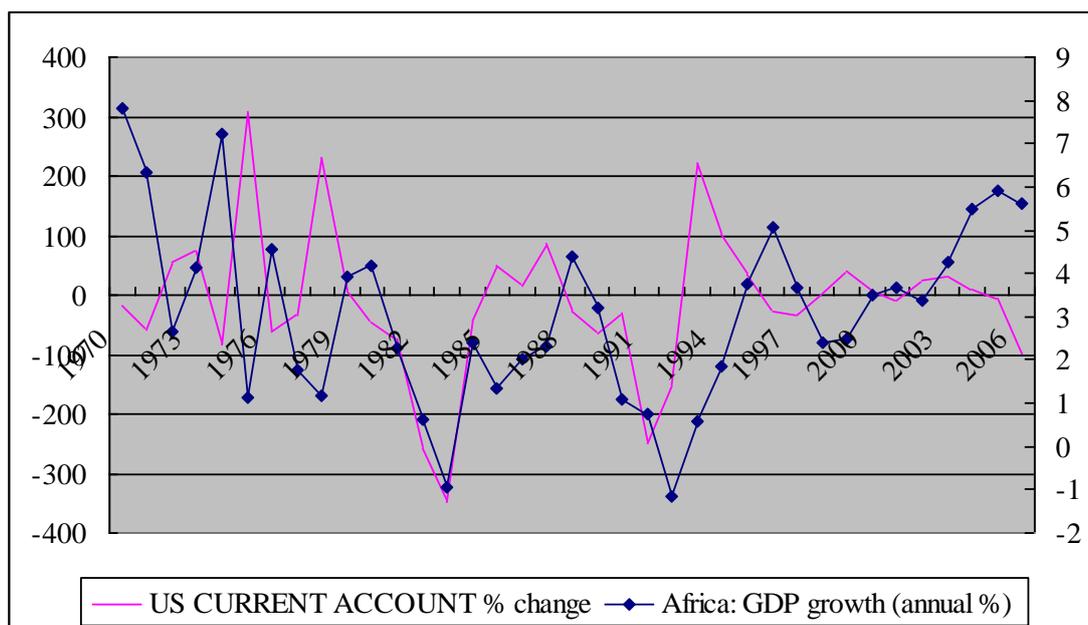


Commodity intensity of GDP, index 1971 = 1

Source: World Bank, 2009

In addition, as shown in Figure 11, there is an uncanny mirror image between the growth rate in Africa and the annual change in the U.S. current account balance, especially in the 1970s, mid-1980s, and the post-1997 period. As the U.S. current account deficit improved from 3.4% of GDP in 1986 to 0.8% in 1992, African growth eased from 2% to -1.1% during the same period. Obviously, adjustment in the U.S. current account implies some shift in African economic growth via trade channels. Thus, after finding an association between a 2.6% GDP reduction in the U.S. current account deficit and a 2.7 percentage point slowdown in the rest of the world’s growth rate, Cline (2006) observes that this experience must be seen as a warning about the adverse effects if an even greater U.S. external adjustment is needed in the future.

Figure 11. Changes in Africa’s GDP Growth and the U.S. Current Account



Author calculations. Sources: WDI, 2008; IMF-BOP, 2009

Since the 1990s, the banking system has also been playing a key role in the process of global imbalances by intermediating the capital inflows into the U.S. (the obverse of the trade deficit) and converting them into consumption via an expansion in mortgage, credit card, and consumer loans. However, after the collapse of the financial engineering put in place for the above purpose, banks are no longer willing to make consumer loans. With stock and real estate markets down so dramatically, the question of how African economies are going to adjust to the swiping away of the U.S. consumption that pumped global growth and liquidities becomes crucial. Indeed, Rodrigo de Rato Figaredo (2006) argues that substantial fiscal adjustment in the U.S. in the absence of measures to increase demand in other countries could reduce global demand in the same way as a fall in the U.S. demand would. In this respect, some observers, including the governor of the African Development Bank, expect China to lift African growth to precrisis levels (Business Report, July 7).

More specifically, robust growth and the construction boom in China are expected to weigh significantly on global demand growth rates for steel, iron ore, and coking coal, as well as other industrial metals like copper and aluminum. However, can China step up and replace U.S. consumption? Because China, together with the U.S., was at the center of the imbalances in global balance-of-payments, it is likely to have much of the required adjustment forced on it, particularly as the country that has benefited most from U.S. overconsumption. In other words, China is the country most likely to have to adjust to a drastic cut in consumption.

This likelihood results from two factors. First, early estimates suggest that Chinese importation of bulk energy and raw material commodities, including iron ore and crude oil, has grown in the first six months of 2009, while the importation of manufactured goods has declined. Additionally, as Delotte (2009) argues in his Q2 Global Economic Outlook, China may not help Africa mitigate the crisis as much as expected because Africa's top two export destinations are the EU and the U.S., whose sharply slowing economies have led to slowing imports.

Second, it is worthy noting that although the U.S. precrisis consumption was driven by household, China's domestic savings is dominated primarily by a corporate component. Therefore, even assuming an absolute (dollar-for-dollar) replacement, it is obvious that the composition of this hypothetical Chinese consumption would be different from that fueled by the precrisis consumption boom. In fact, China's GDP is about 3.4 times smaller (\$4.0 trillion) than the U.S.'s GDP (\$13.5 trillion), leading Pettis (2009) to observe that a 5% adjustment in the U.S. is equal to a roughly 17% adjustment in China. Hence, all else being equal and bearing in mind that in China consumption is only around 30–35% of the GDP, Chinese consumption would have to rise by 17% of the GDP to compensate globally for the decline in the U.S.

Even worse, there is reason to believe that Chinese private consumption is likely to slow down in response to rising uncertainties and a slowing economy. On the other hand, by June 2009, China's stimulus measures were showing positive signs. Therefore, as argued by Sabot (2005), if the U.S. imports from developing economies and China continue to grow during the period in which the U.S. is closing its external deficit, other developing countries will find it much easier to adjust than if the imports of both the U.S. and China were declining. Nonetheless, this situation is complicated by the fact that Chinese banks invest primarily in funds rather than consumer spending, meaning that technically, they might not be as well equipped to deal with a drastic increase in private consumption as expected. Hence overall, rather than an overexpectation of China's growth path, Africa

should already be engaging in structural reform to fit the new global structure, thus avoiding repeat of the 1970s' passivity that led to a forced structural adjustment.

Finally, despite our previous discussion of certain unintended effects, this investigation has yet to stress the likelihood that, in contrast to the impact in other regions, the full negative impact of the ongoing financial crisis on Africa will only manifest after the industrial economies of other nations have recovered (around 2010, according to the latest IMF forecasts). Hence, we now turn our focus back to the steps that African economies should take in preparation.

First, because global rebalancing is a complex and unpredictable process, African policymakers and external stakeholders should focus on the less trivial macroeconomic management tools; namely, demand and supply management. However, it should also be noted that whereas the speed of adjustment on the demand side is fast, that on the supply side is inevitably slow because resources are not perfectly mobile across sectors or substitutable in uses (Nayyar, 2008). Therefore, countries facing declining exports in their key commodities may choose to undergo a supply adjustment, which usually takes time, through the reconversion of existing or creation of new production units. In this regard, investment should support capacity enhancement, alleviation of infrastructural bottlenecks, reorientation of public utilities, and so on. Likewise, supply adjustment based on a contraction of output in declining industries should be encouraged provided that the associated employment loss is addressed by either reconversion training or a social safety net.

Nonetheless, the dynamics of supply being slow in expansion but faster in contraction, the risk of a disruptive adjustment is simply higher for most African economies. This risk is worsened by the absence in African countries' policy arsenals of effective tools that could significantly reduce the negative impact of any external adjustment resulting from the U.S.'s rebalancing of its current account, which leaves donors' assistance as the sole effective short-term cushion. Moreover, as past financial crises show, even if the above measures are adopted, it may take Africa four to five years to rebound after the economic recovery of OECD countries, which is itself not expected before the end of 2009. The outcomes of previous crises also suggest that economic growth in Africa will probably be down by 3% to 4% for a decade unless a huge boost is provided to productivity growth.

There will also be a reduction of funds from private sources among multilateral lenders because, as financial institutions cut back on lending as part of the deleveraging process, they become reluctant to lend to unqualified borrowers (with whom they often associate developing countries) out of fear that lending to such borrowers was a contributing factor in the global financial meltdown.

Should we also, then, expect aid to fall? Obviously, the past suggests we should. For example, looking at past aid disbursements by Finland, Norway, Sweden, and Japan, all of which experienced a financial crisis in the 1980-1990s, Roodman (2009) not only observes the same pattern of drastically falling aid disbursement that is manifesting in this present crisis but shows that it took many years before these nations' economies, and thus their aid disbursement, reached precrisis level. In Africa, where international aid accounts for more than 50% of total public health spending, important development initiatives like the Global Fund to Fight HIV/AIDs, tuberculosis, and malaria are already facing funding shortfalls (Seguino, 2009).

The prospects for African postcrisis development must therefore be explained in terms of both the forces that brought about this global financial crisis and those that are having a particularly severe and probably long-lasting impact on the continent. Admittedly however, although the 1970 and 1980s' examples help illustrate the risks facing African development, gauging the effects of a current account correction in the U.S. in terms of its impact on Africa's economic development may require a quantitative estimation framework, an exercise beyond the scope of this paper. Nonetheless, it is important to emphasize that, because a drastic correction of the U.S. external position is extremely likely, the adverse spillovers and unintended effects on African economies could be severe. It is therefore urgent that policy debate be focused on this area instead of on falsely optimistic forecasts and a view of the continent as resilient to the global recession.

V. Concluding Remarks

This paper has focused on the effects of the global financial crisis on Africa's economic and development prospects. Although it finds that, despite stock market failures in some African nations (e.g., South Africa, Nigeria, and Kenya), the spillovers into Africa of the U.S. subprime crisis and financial meltdown are as yet limited, it also shows that foreign direct investment has dwindled and exports and international trade in general are suffering. Most specifically, the fall in world demand for primary commodities, which has impacted the African economy primarily through external accounts, is of great concern for Africa, not only because its growth turnaround since 1995 has been quite fragile but because this turnaround rested on two foundations: a commodity boom and a related high demand by the Chinese for African commodities.

Like most developing countries, Africa has been hammered not only by the fall in trade but also by the reduced availability of trade finance and FDI inflows. In addition, government revenues and remittances are dwindling, which, combined with rapidly rising unemployment, results in a more fragile safety net and a deteriorating living standard. Taken together, the above trends suggest that throughout Africa, poverty may well be on the increase, threatening the gains achieved by MDGs, as well as the ongoing institutional changes that are central to development.

Indeed, our empirical tests for possible transmission channels of the global crisis into Africa confirm that African countries have been hit by more than the initial financial shocks of the global recession. Particularly worrisome, given a global crisis that requires current account adjustment, is our evidence that trade links represent the primary African shock transmitter. Such a finding also raises the deepest questions about the way forward for Africa as the U.S. embarks on adjusting its current account deficit and the global implications of such adjustment. Because of the costs for Africa of previous international current account corrections in the 1970s and 1980s, it is crucial to frame the prospects of African development in terms of external shocks, including the unintended consequences of external adjustment occurring in industrialized economies as part of their macroeconomic corrections and responses to the crisis.

Likewise, given the role of global current account imbalances in facilitating the global financial crisis, external account considerations become even more central to confronting Africa's postcrisis development challenges. That is, current account adjustment requires at least two trading partners, but it is always less clear which partner will ultimately bear the burden of adjustment. In this regard, history seems to have been unkind to Africa. Hence,

policy awareness of the impact of the ongoing external adjustment in the U.S. and the importance of policy response by African economies is crucial.

Needless to say, the fiscal tightening that must follow the stimulus measures in developed economies is likely to strangle recovery in Africa: the unintended effects of the recovery packages put in place by industrialized countries, as well as Africa's own unresolved competitiveness constraints, will negatively affect the continent. Hence, the main shortcoming of prevailing analyses and forecasts, as well as the policy recommendations derived from them, is their failure to mention the fundamental role played by the unintended effects of some policies implemented in industrialized economies, policies that set the implicit rules of the game in the international economic and financial field.

Additionally, in terms of development prospects as nations come out of the recession, there is no guarantee that commodity prices will recover to their precrisis levels. Most particularly, since recent economic growth has not been accompanied by noticeable changes in underlying dynamics, a return to the path of sustained growth experienced in recent years appears to be a hope rather than a probability. Thus, even though optimism and hope are essential in mobilizing human resources, it is perhaps this very blissful optimism that best explains the repeated overforecasting after major crises of African growth projections that never materialize.

The ongoing crisis is, however, informative in that it shows that economic imbalances (either in terms of excess or deficit) are harmful to the global economy. For example, it clearly illustrates that, because the high level of savings relative to investment in East Asia is the principal source of global imbalances, policy measures to directly reduce this gap are desirable. Likewise, reinvesting excess savings and foreign reserves in Africa (rather than fueling unsustainable U.S. debt) could reduce global investment-savings imbalances while providing genuine profit opportunities in the real sector. It would thus reduce the *financialization* of advanced economies and its inherent financial bubbles.

Given the current account imbalances that facilitated the global financial crisis, external account considerations are likely to be central to confronting today's challenges. Hence, the goal of global rebalancing should not be simply to bring down the U.S.'s current account deficit but also to adjust the imbalances at minimum cost to developing countries while providing them with a robust growth and consumption capacity. Likewise, because of the cost of global rebalancing and the inherent burden spilling across countries, there is a need for global coordination. Indeed, given that the living standards of many poor folk in Africa make them an accident waiting to happen—one far worse than any Lehman Brothers-type fiasco—global coordination is absolutely essential when it comes to too-large-to-fail African countries.

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