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Global Financial Crisis and Recession: Impact on Africa and Development Prospects

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Aims & Scope

- (1) Investigating the likely impact of the global financial and economic crisis on African economic development;
- (2) Exploring the likely consequences on Africa of recovery packages and adjustment measures put in place by developed countries;
- (3) Providing a set of options and policy recommendations to African policymakers as well as international donors.
- Focus: Botswana, Cameroon, Cote d'Ivoire, DRC, Ghana, Kenya, Mauritius, Nigeria, Senegal, South-Africa, Tanzania, Zambia).

Aims

- Early assessments indicate that the crisis could undermine decades of progress.

- Our investigation is based on two premises:
  -Foundations of the pre-crisis growth is likely to be different than the post-crisis one as the result of de-leveraging process and global re-balancing efforts.
  -Stimulus packages adopted by developed economies may impart unintended effect son Africa’s fragile economic growth.

Africa and the Global Macroeconomic Imbalances

- **African economies implicitly participated and benefited from key features of the global imbalances** such as excess liquidity, US frugality, China's excess foreign reserve and its hunger for raw materials which led to soaring commodity prices.
- Initially it was hoped that **African economies, immune as they were from the direct fallout of the subprime meltdown, would sail through the crisis**.
- **The pace of the downturn has been confounding the forecasters**.

Outline

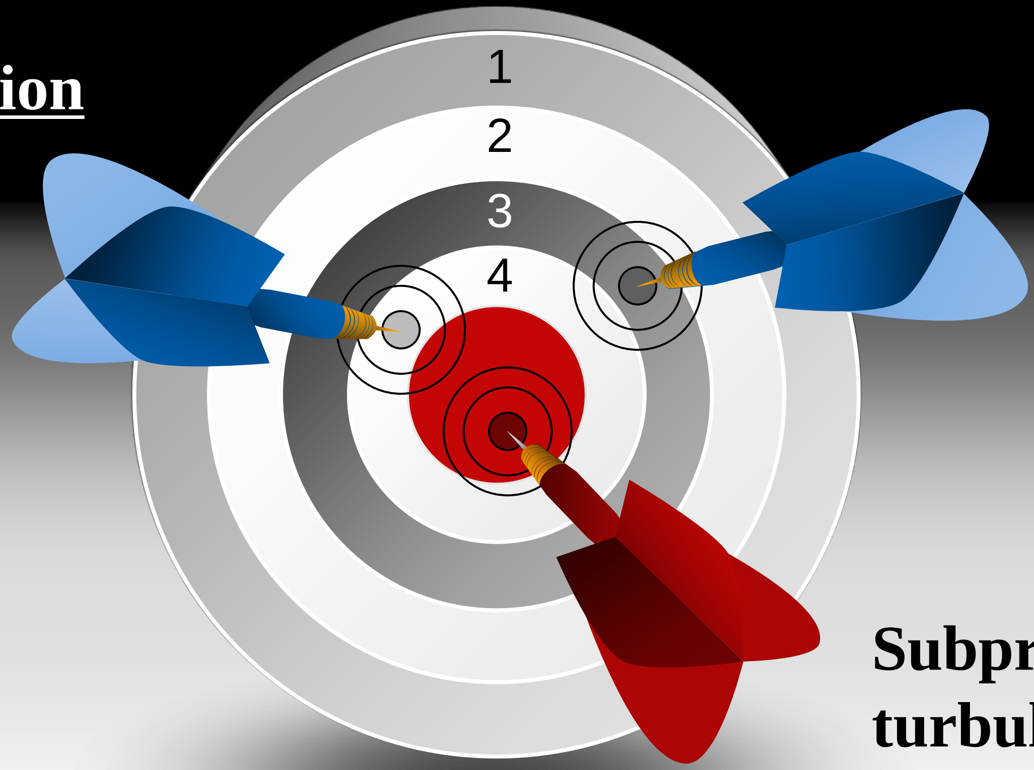
1. Underlying causes of the global financial crisis
2. Implications on African economic growth
3. Transmission Channel Empirics
4. Unintended macroeconomic Effects
5. Way forward

1

Underlying Causes of the Global Financial Crisis

Global Crisis: Three Dimensions

Global Recession in 2008



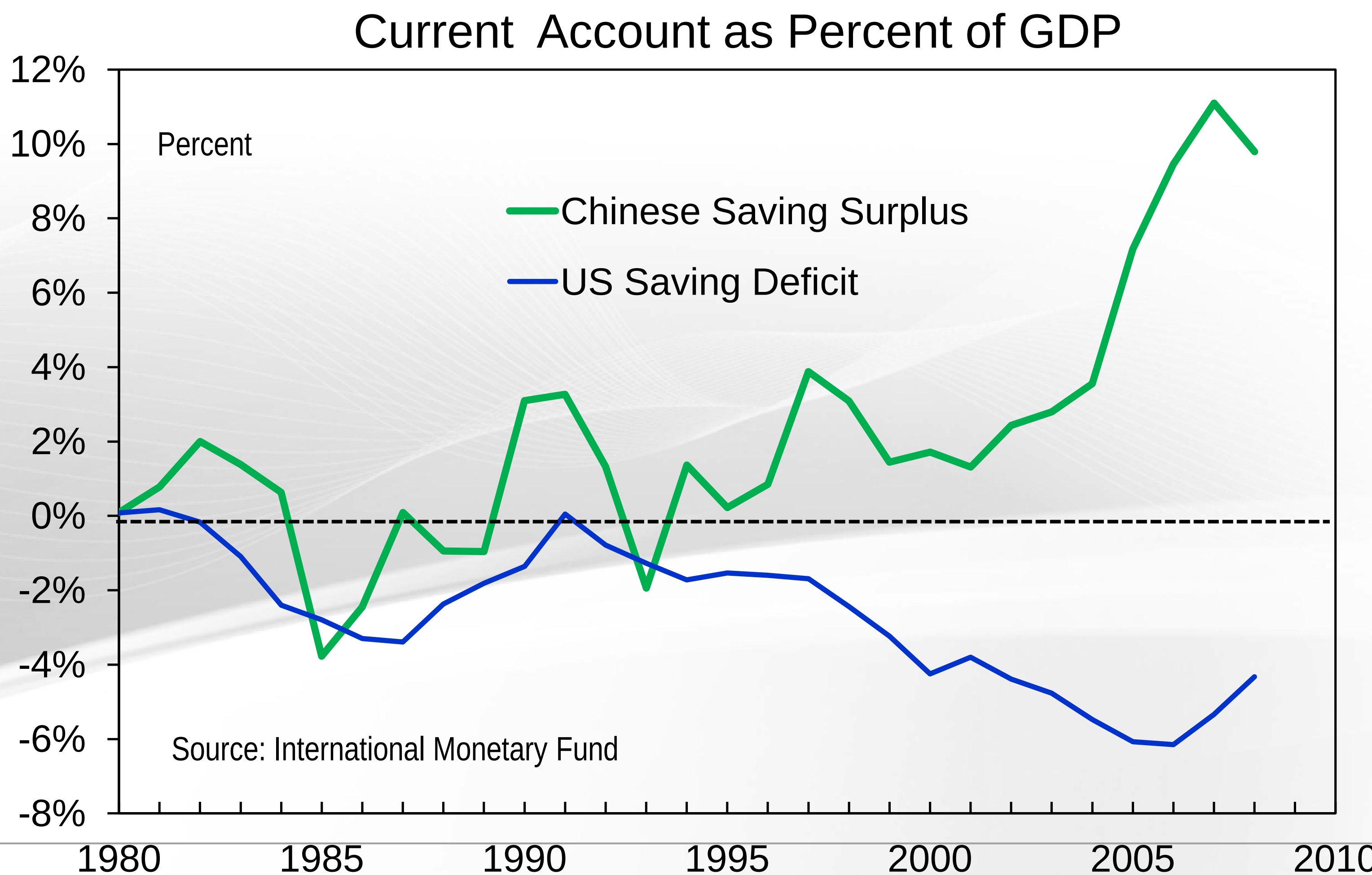
Development crisis in Africa in 2009

Subprime mortgage turbulence in the US in 2007, financial meltdown in 2008

Structural Vulnerabilities and Triggers

- **Global saving imbalances**
  - U.S. current account deficit recently as high as 6% of U.S. GDP! Financing provided by capital inflows from Asian countries and oil exporters;
  - **Implication:** infusion of liquidity into international financial system, searching for yield.
- **Low interest rates**
  - Lowest interest rates on 30-year record due to agressive U.S. monetary policy;
  - **Implicaton:** incentives to borrow for those who would normally never be able to afford it.
- **Triggers & Transmission**
  - **The bubble bursts (2007):** Subprime borrowers begin defaulting on their mortgages, when the oil price started to increase;
  - **Credit crunch (2008):** Lenders stop lending, afraid of losses; borrowers with good credit start defaulting on mortgages;
  - **Contagion effect** – a lack of confidence spread from the narrow MBS (mortgage-backed securities) segment to the wider ABS (asset-backed securities) segment.

Global Current Account Imbalances:
(Savings from China flowed to US home buyers)

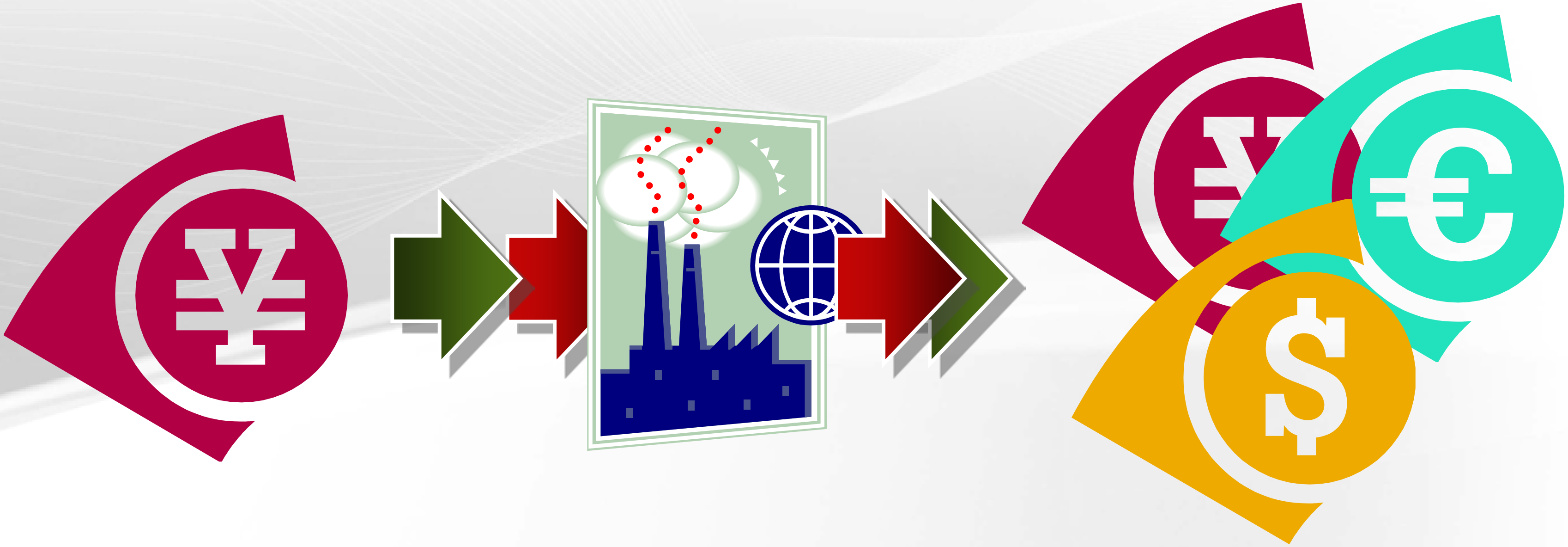


Structural cause 1

Financialization

Frenetic increase in the trading of currencies, equities, bonds, debt securities, financial derivatives and other complex financial instruments.

In recent years, 44% of firm profits in the US come from financial sector with only 10% from manufacturing.



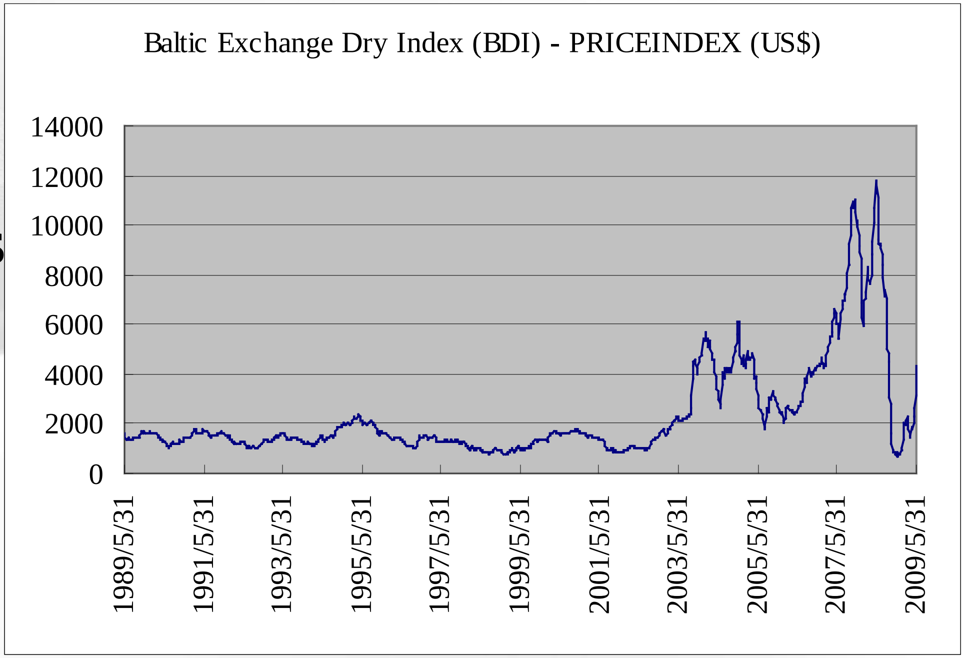
Structural cause 2

Financialization & Commodity Boom

•Net profit rates were been on the decline since the 1970s (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)).

•As financial instruments and stock markets become less attractive to financial investors, speculative capital shifts more into commodities trading such as oil, minerals and agricultural commodities; which led to 2004-8 commodity price booms.

Baltic Exchange Dry Index (BDI)



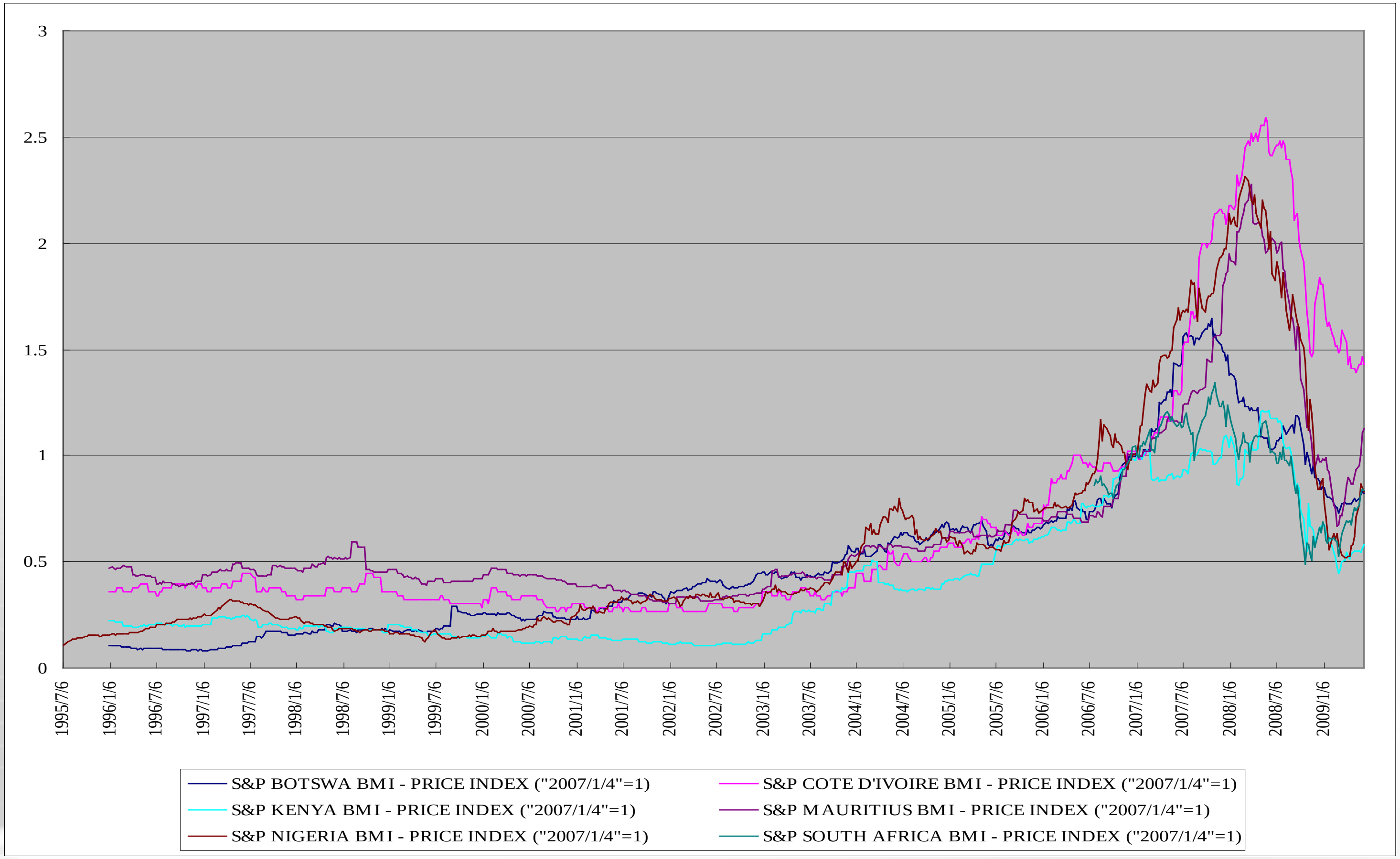
Source: Thomson Reuters Datastream, 2009

Cause 2 & commodity boom

2

Implications on African Economic Growth

Change in S&P BMI – Price Index

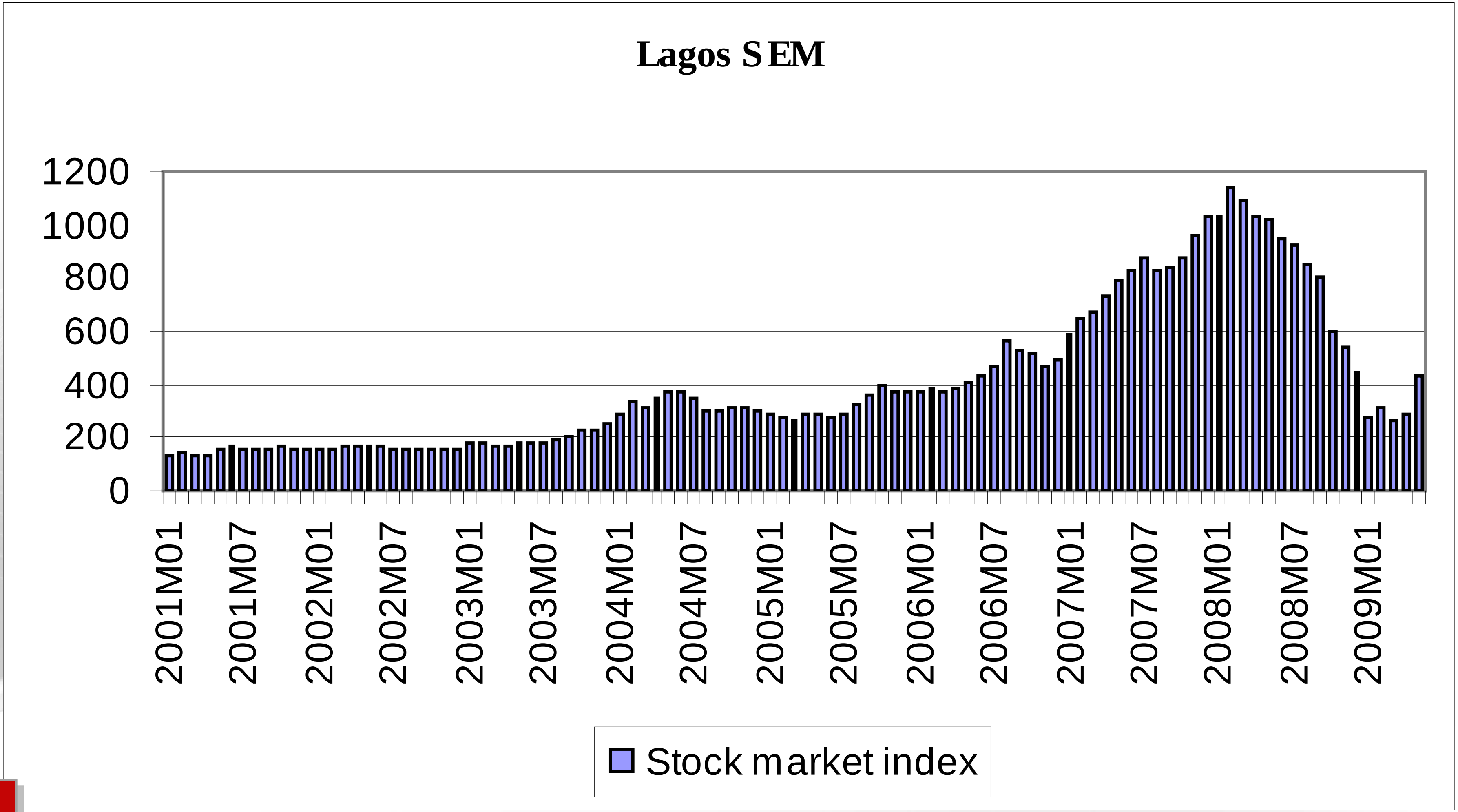


In South Africa the financial sector experienced a collapse of asset prices, Between May 2008 and March 2009, South Africa's JALSH index has fallen by about 46 percent.

Source: Thomson Reuters Datastream, 2009

Finance

Stock Market Trend

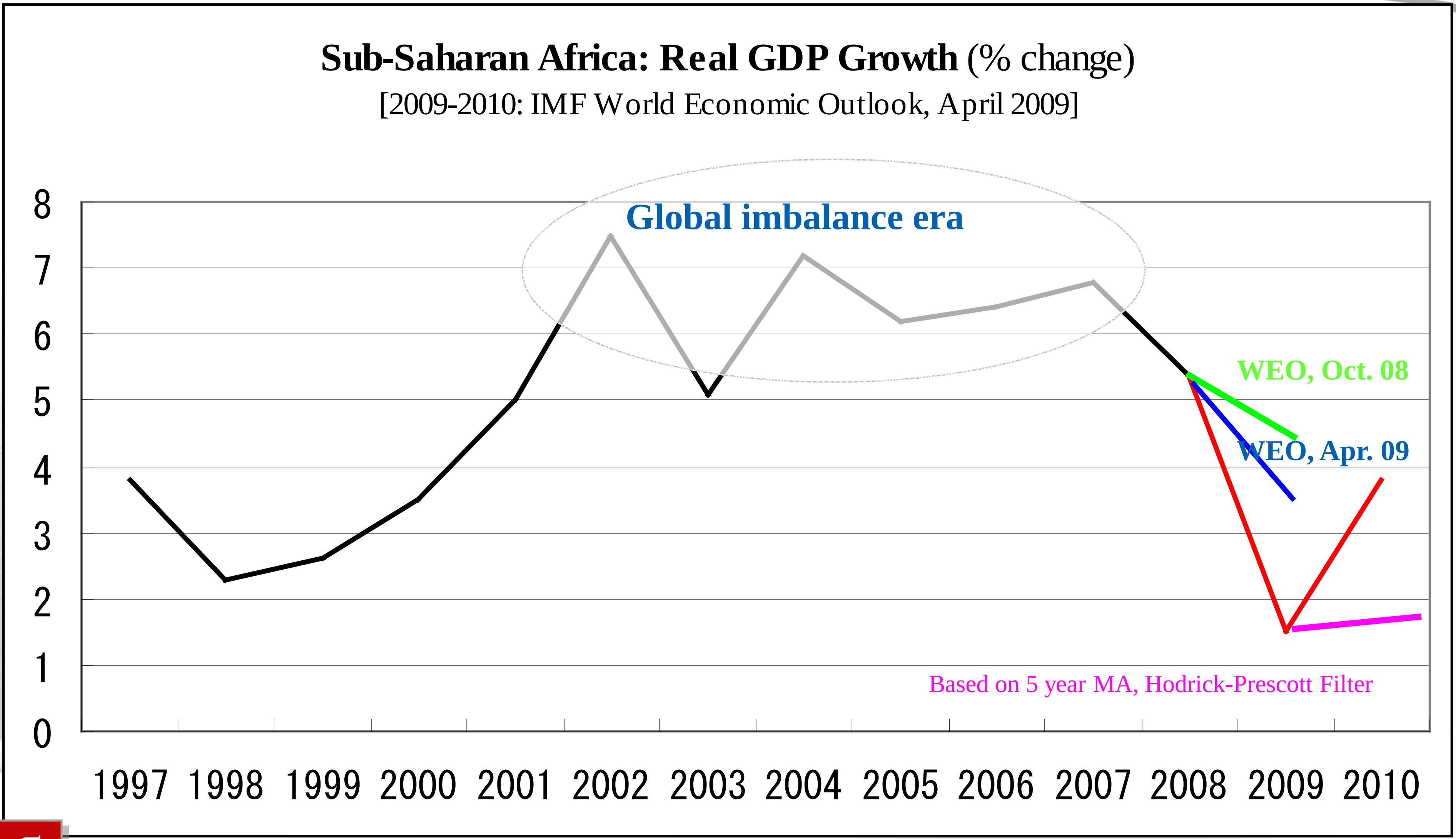


Finance

Banking Sector

- African banks have primarily felt the impact of the global financial crisis indirectly through **higher funding costs**.
- Beyond the specific of crisis transmission, African banks are still allowing credit to flow, although much stricter lending criteria are being applied by banks.
- Unlike in Europe and the US, interbank market has been working normally in South Africa, the capital adequacy ratios are strong, and no bank has had to approach the South African Reserve Bank for any extraordinary assistance.

Real Sector



Growth

-Continuous downward revisions of growth forecasts by the IMF & the WB.

-IMF (April 09) projected 1.5% in 2009 (IMF Oct. 08: 3%) and 3.5% in 2010; author: 1.5% in 2009, 1.7% in 2010.

-Drastic fall in GDP, i.e. Angolan economy is expected to contract by 7 percent in 2009, following a double digit growth rate in 2008 (15.8 %), a reversal of almost -23%.

Sub-Saharan Africa Forecast Summary (annual % change)

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

	1995–2005*a	2006	2007	2008	2009*b	2010*b	2011*b
GDP per capita (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

Source: Global Development Finance 2009, World Bank

African Exports and Global Trade Chains

- African economic growth driven by and coupled with China's via exports.
- With China acting as a middle-man in the Global Value Chains leading to the US market, African exports to China remain dependent on the Chinese exports to the US.

Africa-East-Asia-US 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%

- A fall in Chinese exports to the US likely to worsen African exports and economic growth prospects.

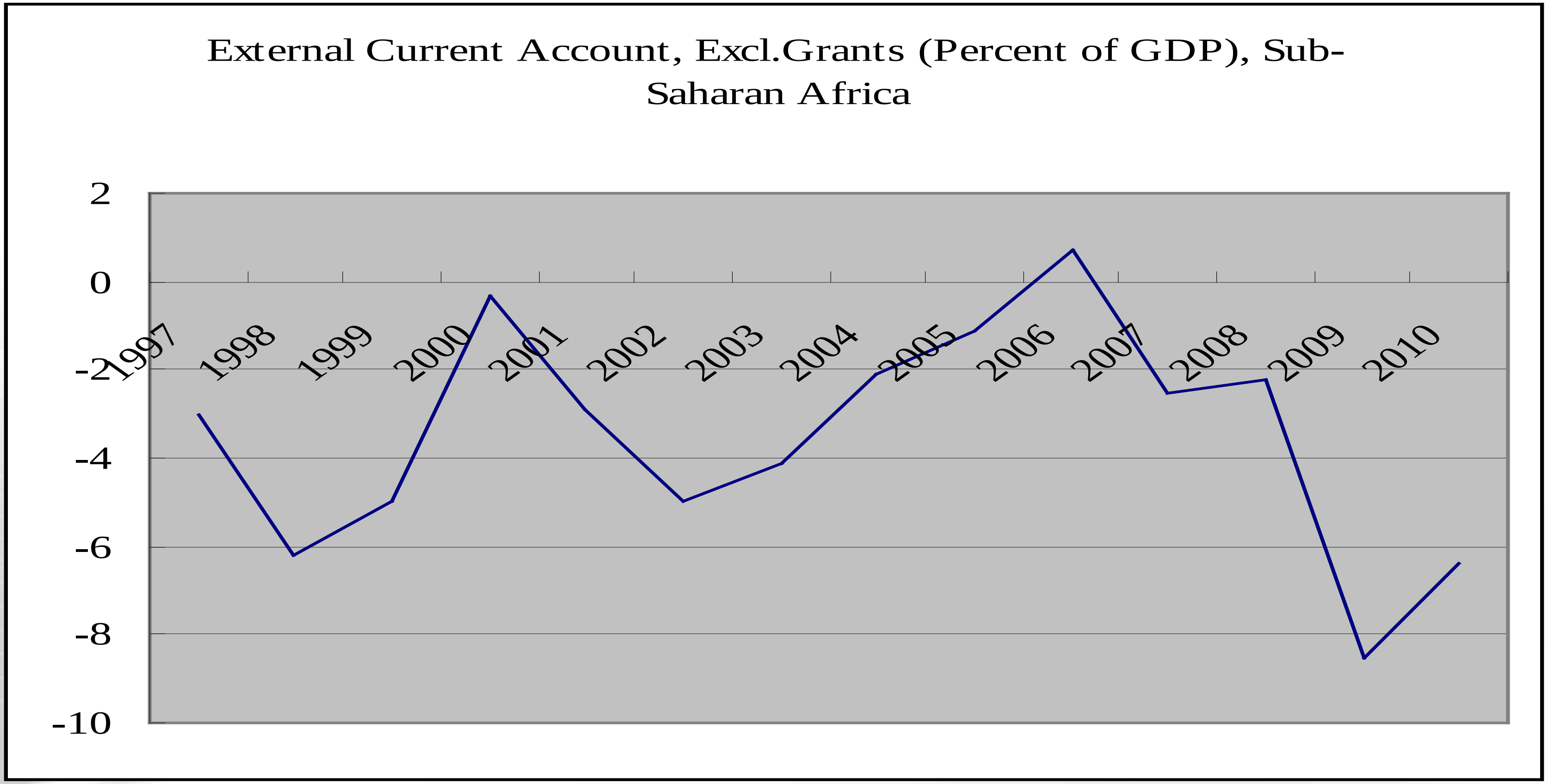
Growth

Balance of Payments

- **Balance of Payments** have deteriorated with export growth rate expected to drop by 7% and import growth rate to decline by 5%. F
- following a sharp contraction in mineral and primary commodity demand in the US, EU, Japan and China, exports and tourism receipts are falling; leaving many countries facing twin deficits (current account and budget deficits).
- With exports declining faster than imports, the **trade balance has deteriorated in most countries**. In many countries, exports for 2009 and 2010 have been revised downwards by about 40 percent. From a comfortable overall current account surplus of 2.7 per cent of GDP for both 2008 and 2007, African region will record an overall deficit of 4.3 per cent of GDP in 2009, according to the OECD (2009) projections.

External

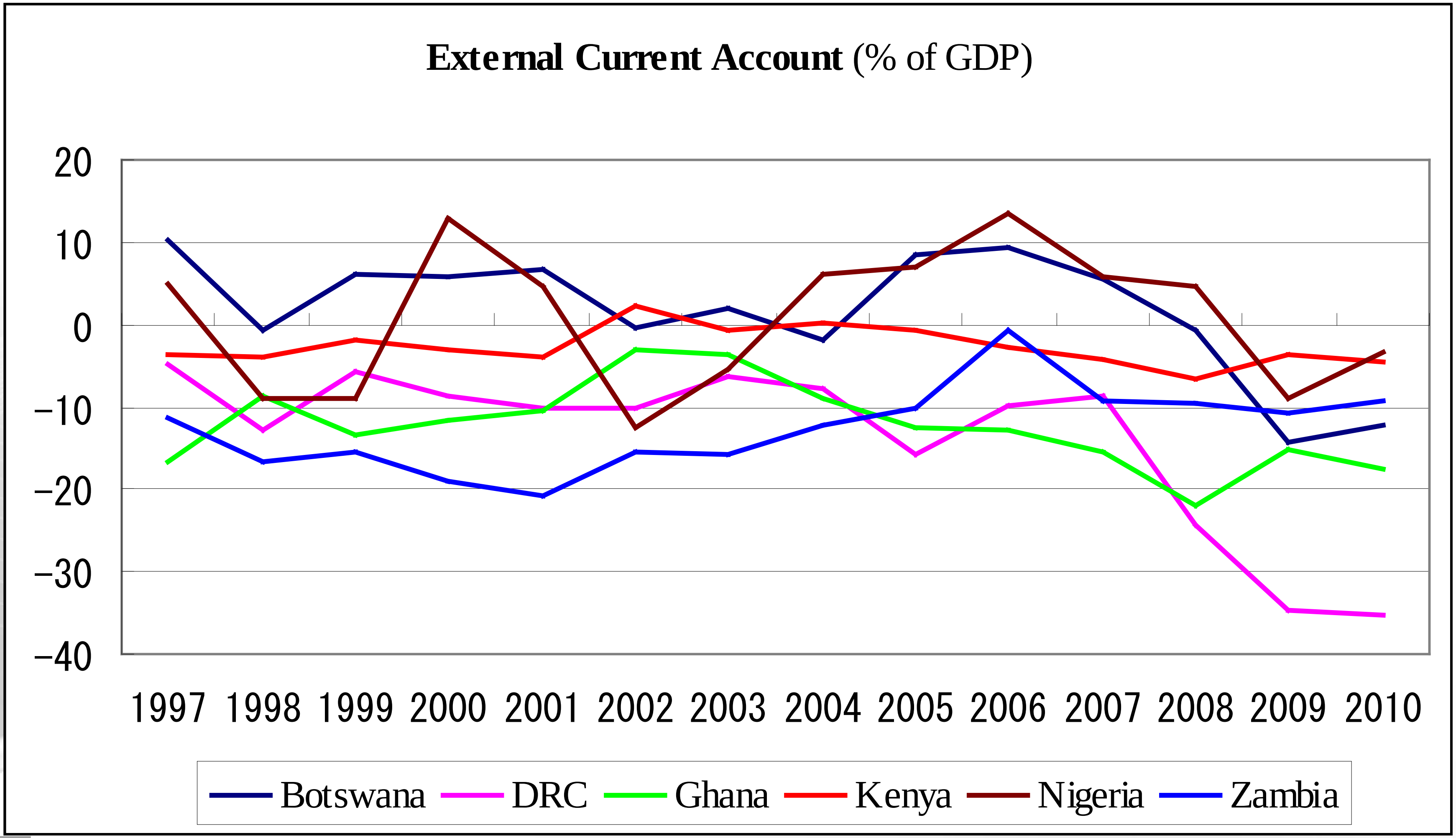
Average Current Account (% of GDP)



* Data in 2009 and 2010 are projections by IMF staff.
Source: AFR Regional Economic Outlook (April 2009)

External

External Account



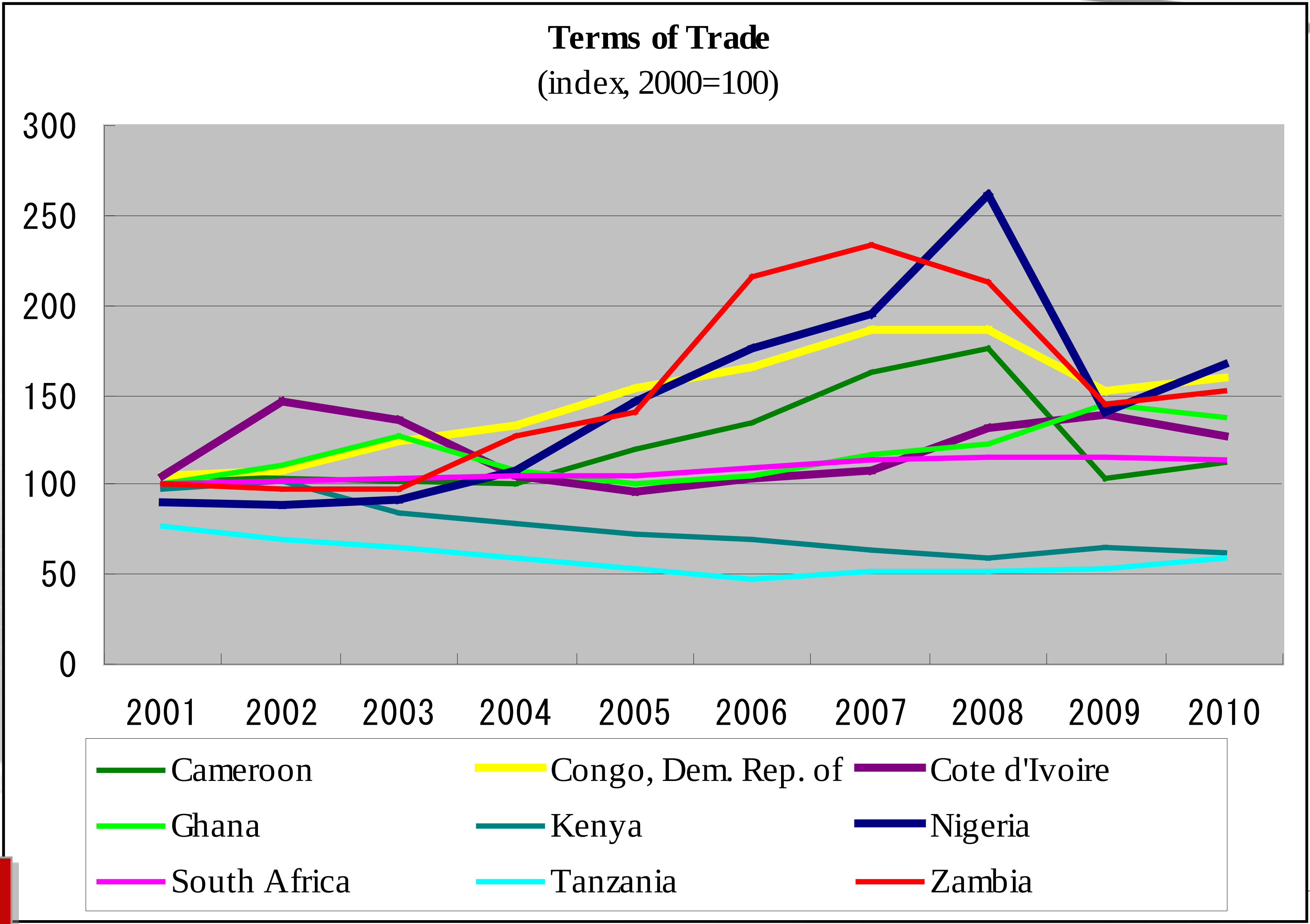
External

Average Current account balance (% of GDP)

Surplus			Deficit		
	Average	Geometric Mean		Average	Geometric Mean
Botswana	10.66	10.43	Cameroon	-3.47	-3.48
Cote d'Ivo.	2.11	2.08	Ghana	-5.99	-6.18
Nigeria	12.17	11.90	Kenya	-1.48	-1.50
			Mauritius	-2.55	-2.68
			Senegal	-7.15	-7.16
			South Africa	-3.55	-3.59
			Tanzania	-5.09	-5.18
			Zambia	-8.07	-8.24

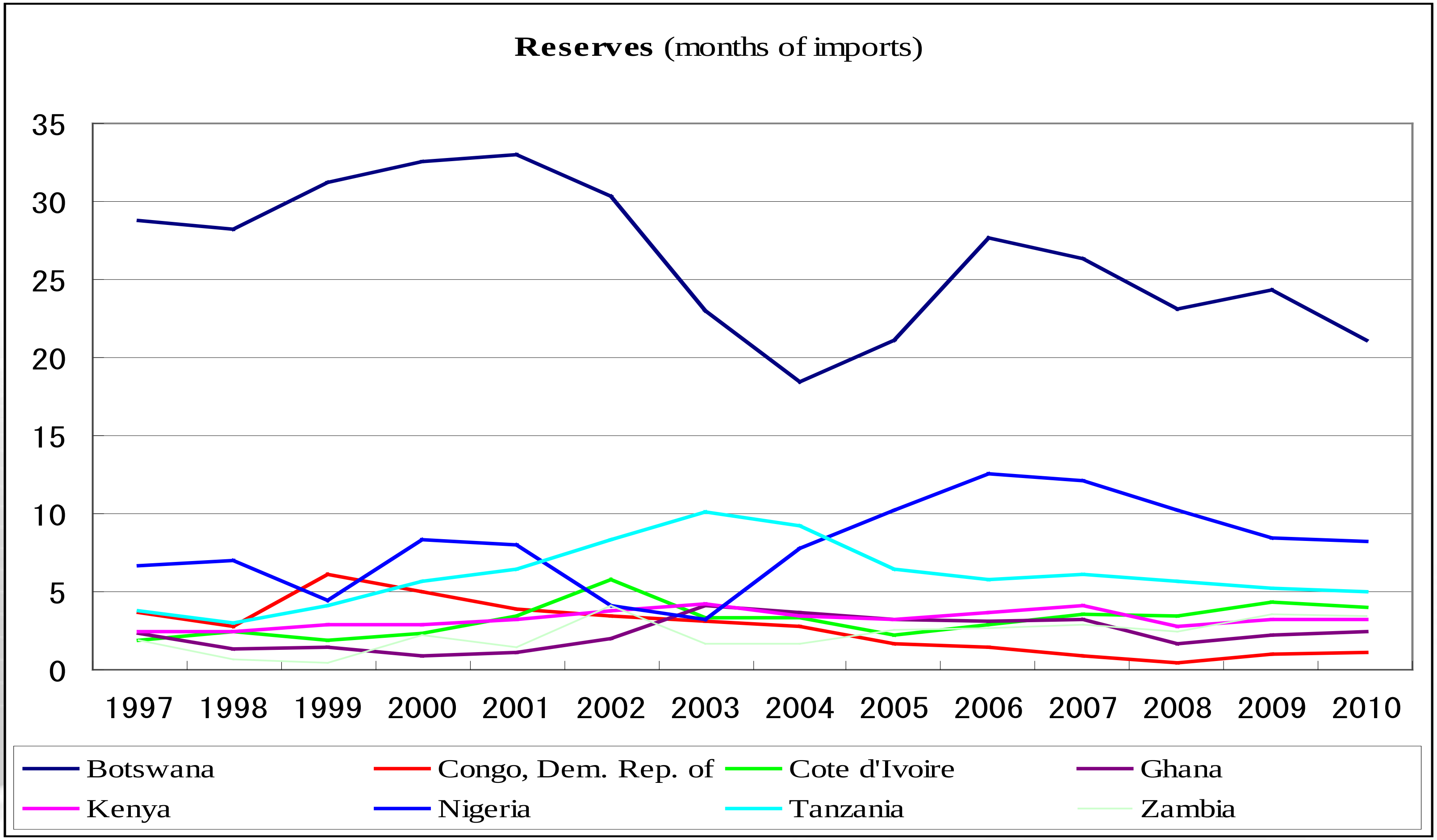
Source: Author's calculation based on the data from World Development Indicators Online (WDI), World Bank

External


Terms of Trade
(index, 2000=100)
300
250
200
150
100
50
0
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
Cameroon
Congo, Dem. Rep. of
Cote d'Ivoire
Ghana
Kenya
Nigeria
South Africa
Tanzania
Zambia

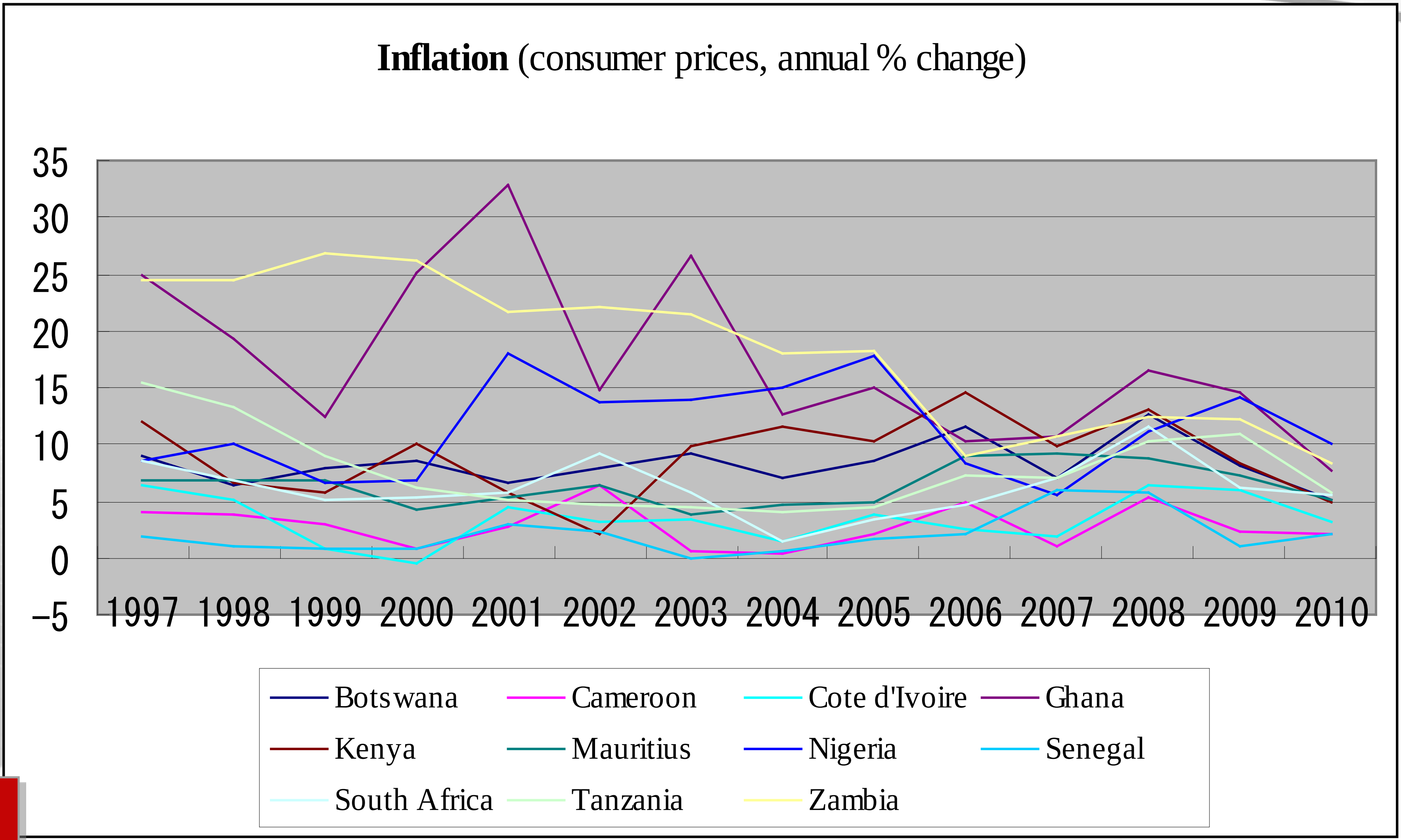
External

Stock of Foreign Currency Reserves



- The stocks of foreign exchange reserves are deteriorating.
- Kenyan Central Bank's reserves holding declined from 4.1 months of imports to 3.1 months (below the statutory requirement of 4 months).
- Also, Botswana's foreign reserves are falling rapidly.

External

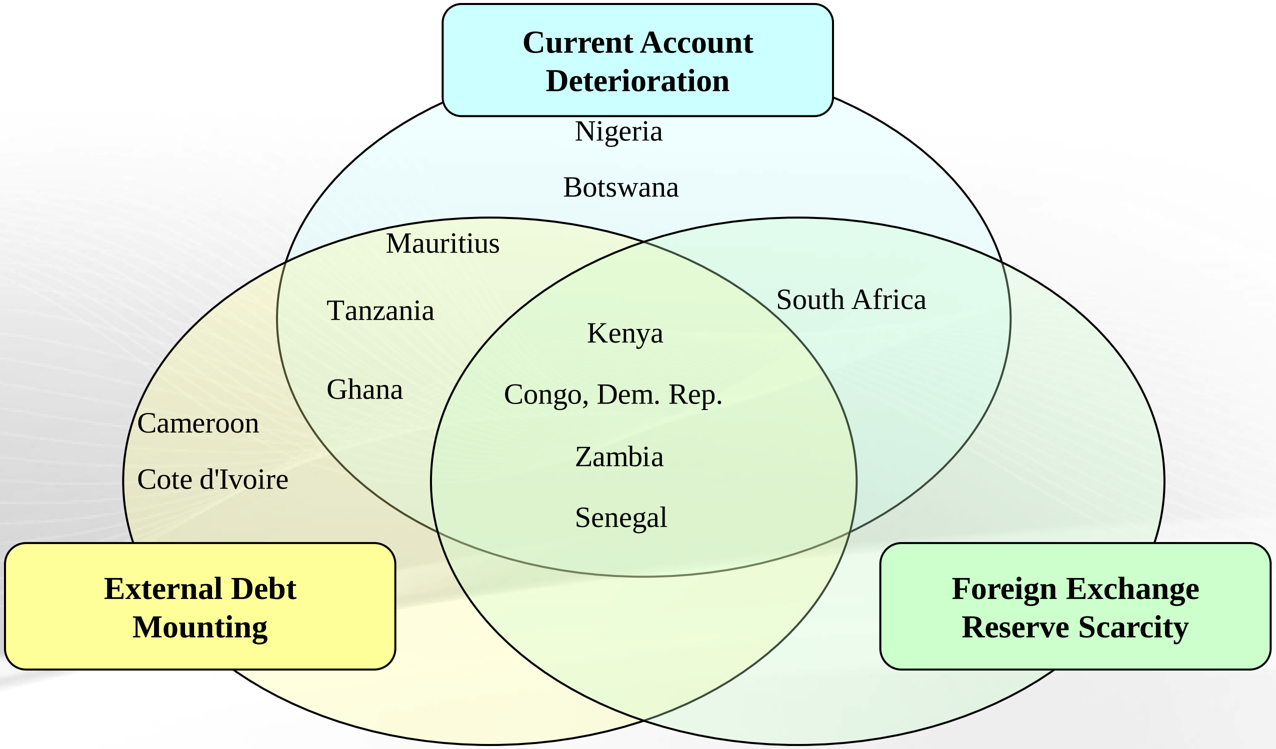


IMF, 2009 Source: AFR Regional Economic Outlook (April 2009)

Government

Overall External Vulnerability

Vulnerabilities remain in countries with triple rapid deterioration: current account, External debt and foreign reserve depletion.



Mauritius, Tanzania, Ghana, countries with very high, and increasing, external debt ratios are facing a deteriorated perception of risk, e ven in the context of significant reserve accumulation.

Other Developments

- Deterioration in external balances results in worsening of public budget condition for an increasing number of countries;
- Debt serving has become complex because of exchange rate volatility and uncertainty;
- As
- Except for the DRC and Nigeria, inflation is expected to be lower in 2009; which is consistent with the world trend.

Government

Monetary Tension and Inflation Risks

[Broad money growth and export receipts growth ratio (in %)].

	2001	2002	2003	2004	2005	2006	2007	2008
Botswana	-62.7059	-170.752	-513.748	130.0115	-2.18466	-392.175	1089.127	-5.45059
Cameroon	208.1633	-164.014	133.6898	-41.721	-13.9349	15.20795	73.43787	11.965
D.R.C.	191.1807	-42.9231	138.0808	256.6876	-32.5431	180.7359	27.45573	-107.637
Côte d'Ivoire	207.9794	134.9354	316.4056	118.4228	32.81013	159.0249	-195.547	11.6766
Ghana	-4.82949	-277.079	-47.6583	-127.187	77.21744	137.8399	-5219.34	90.35428
Kenya	-180.323	98.00836	-31.6667	11.25	-35.7772	-28.9059	289.206	80.62665
Nigeria	-179.663	54.07577	4.223901	-523.348	-332.896	-305.092	-653.905	-745.556
Senegal	235.443	-510.474	-337.786	331.4642	238.4164	-114.117	-500.559	32.0274
South Africa	65.09252	31.45246	-31.9128	-43.8378	337.7535	100.25	130.207	-3.87382
Tanzania	166.2338	135.8025	312.0155	10.75977	49.94451	168.6036	-116.846	7.21825
Zambia	-198.482	160.3896	66.36771	8.650066	231.4174	230	71.02273	-30.9911

•Reduction in inflationary pressure as external monetary tension declined from 2008.

Remittance Flows & Unemployment

Rising Unemployment

Unemployment is rising as the result of laying off in export oriented industries. In the DRC, 100,000 workers lost jobs following mining firms leaving the country. 80,000 workers in Zambia's copper belt.

Falling Remittances

Remittances are rapidly declining since rising unemployment in EU is compressing the demand for migrant and low skill work force. The estimated $15 billion in remittances sent to Africa each year are expected to decline in 2009.

Falling Tourism Revenues

In Kenya, remittances steadily falling since October 2008 from US$ 61 mio. to US$ 39 mi. in Jan. 2009. **Tourism receipts** were down 13 percent in the 4th quarter of 2008 compared to 2007.

Drying up of Capital Inflows and Trade

international investment (bonds, FDI)	Economic fragility reaching Best performers	Project suspension and delay
Drying up of capital inflows and trade with international investment (bonds, FDI) expected to further slowdown, country risk to rise, aid flows to decline, and international trade hurt to protectionist waves in EU and the US.	Botswana has experienced a **sharp decline in industrial production, exports and public revenues**. It has proved to be vulnerable to shocks due to its high dependence on diamond exports (35 to 50% of public revenues).	Attempts to raise long-term finance via sovereign bond issue have failed (South Af.), been canceled (Ghana Telecom bond issue for USD300 million) or delayed (Eurobond issues for Kenya, Nigeria, Tanzania and Uganda).

Capital Inflows

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: World Development Indicators Online (WDI), World Bank

3

Transmission Channel Empirics

Contagion, Co-movement, Interdependence, Market Integration

- Our motivation being overwhelmingly practical in nature, we skip the conceptual debate on contagion, interdependence, co-movement and so on, and use interchangeably these terms to mean market and economic integration.
- The present empiric investigation used output variables (i.e. GDP) rather than industrial production. The conceptual reasoning behind using industrial production is less convincing in the case of Africa since manufacturing activity represents less than 15 percent of aggregate output while representing even lower portion of African exports; so a priori it would not seem to be representative of total output, stock market price indices, and interest rates.
- Candidates adverse common shocks with the potential of inflicting balance-of-payment difficulties, particularly in African economies, are changes in global interest rates, exchange rates between major currencies, commodity prices, or recessions in major industrial countries.

Estimation Framework: Threshold Autoregressive Regression

- Because of its realistic feature, a nonlinear generalization of cointegration (Granger and Hallman), the TAR (Threshold Autoregressive Regression), was used; mainly Threshold Cointegration Models.
- Recent research in this area has concentrated on the potential for asymmetric adjustments in prices at various market levels. In particular, the conventional wisdom suggests that responses to price increases may differ from responses to price decreases.
- Threshold effects occur when larger shocks (i.e., shocks above some threshold) bring about a different response than do smaller shocks. Put another way, a shock may have to be of a particular size before a significant response is provoked.

Estimation Framework: Threshold Autoregressive Regression

- The second stage focuses on the OLS estimates of $Y_t = a + bX_t + u_t$ (1) and in the following threshold auto-regression model (TAR):
- $$\Delta u_t = I_t \rho_1 u_{t-1} + (1 - I_t)\rho_2 u_{t-1} + \sum_{i=1}^{l} \varphi_i \Delta u_{t-i} + \varepsilon_t \qquad (2)$$
- where is the white-noise disturbance and the residuals *ut* from (1) were substituted into (2) to obtain better estimates. is the Heaviside indicator function such that
- $I_t = 1$ if $u_{t-1} \geq \tau$
- $I_t = 0$ if , $u_{t-1} < \tau$
- where is the threshold value. A necessary condition for to be stationary is:. In either case, under the null hypothesis of no convergence, the *F*-statistic for the null hypothesis () 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 and have an asymptotic multivariate normal distribution.
- In addition, we employed the method of Chan (1993) to estimate the threshold value.

Estimation Framework: Threshold Autoregressive Regression

- **Results of TAR Tests**
- The co-integration results given in Tables A2(a-d) in Appendix show that the null hypothesis is not rejected in all (but South Africa-UK) the equity equations (which implies the non-existence of a long-term asymmetric co-integration). However, the null hypothesis is rejected in most cases in the GDP relationship and moderately in the current account nexus (which indicates acceptance of the null hypothesis of symmetric adjustment).
- The main finding is that the different mechanisms by which the current financial meltdown and economic recession crisis might have spread into Africa via business cycle and trade co-movement rather than financial links.

Overall Implications

- Importance of business cycle and trade channels;
- Global imbalances (current account deficit, savings excess) as trade factors;
- Current account and recovery packages in developed economies;
- International current accounts’ adjustment costs;
- De-leveraging costs;
- Unintended effects of current account adjustment in developing Africa.
- Potential risks ahead: learning from past world economic crises.
- The prospects of African development post-crisis must therefore be explained in terms of both the forces that brought about this global financial crisis, and those that are making its impact on Africa particularly severe.

4

Post-past-crisis Performance, Development Prospects and Risks.

Work in Progress

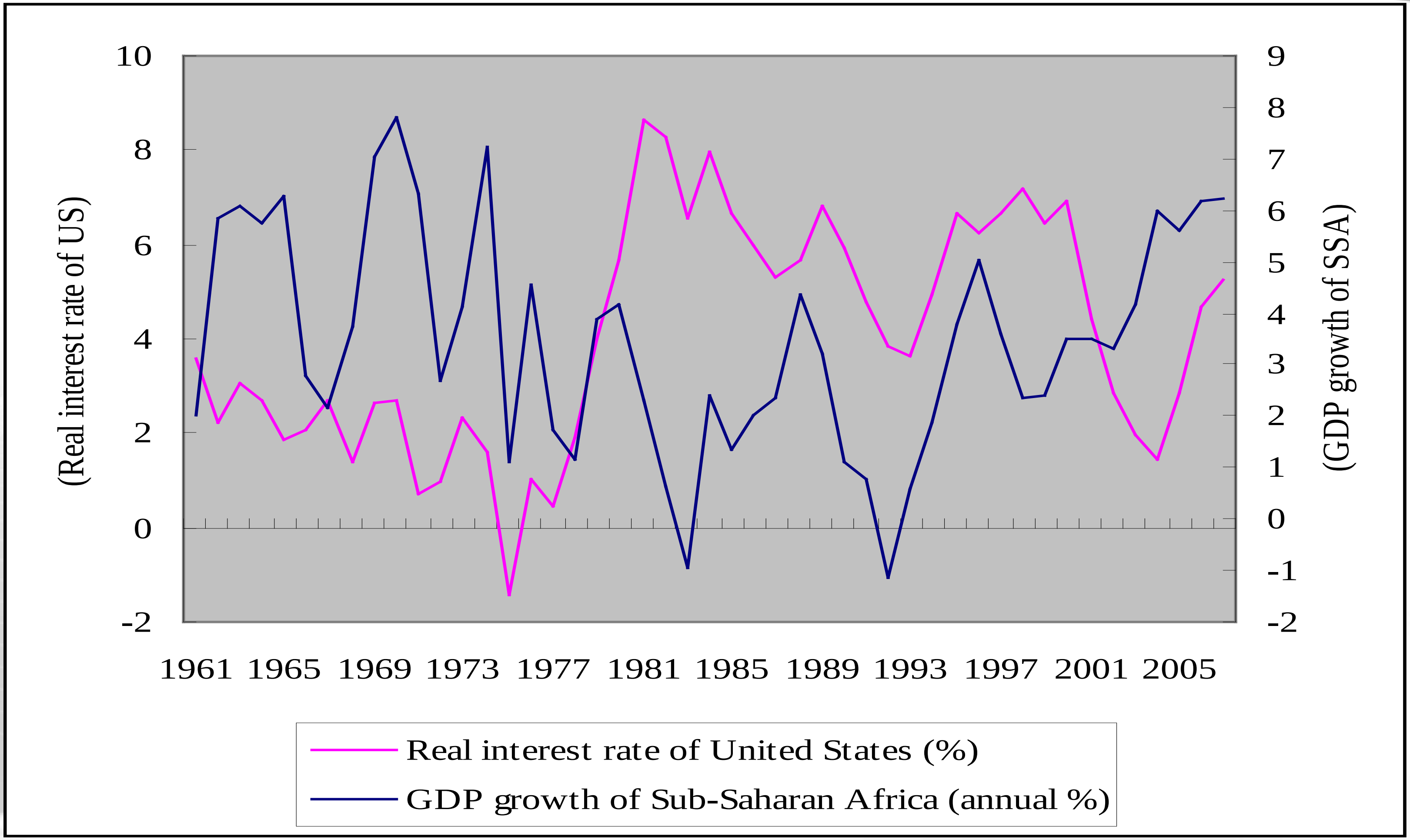
Past Crises

- Full effects of soaring interest rates and growing debt services on African economies were not fully expected since they were not linked to policies implemented in the US –drastic contraction of money supply, higher interest rates—as responses to oil shocks and inflationary pressure.
- **By ignoring possible unintended costs of the above US economic and monetary policies on African fragile economies, over-optimistic figures were projected**, and based on these, ill-conceived policies were implemented.
- **Traditionally, African growth projections after major crises repeatedly forecast over-optimistic figures** (Easterly, 2001).

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

- Economic setbacks of the 1970s annihilated the progress of the 1960s and the social devastation went on for two decades.
- Worldwide factors like the increase in world interest rates… and skill-biased technical change may have contributed to the developing countries' stagnation (Easterly, 2001).
- When fiscal stimulus exceeds a certain level, the financing of deficits is likely to cause a sharp increase in *real* longer-term interest rates.
- A rise in US 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).

Real Interest Rate of United States (%) and GDP growth of Africa (annual %)



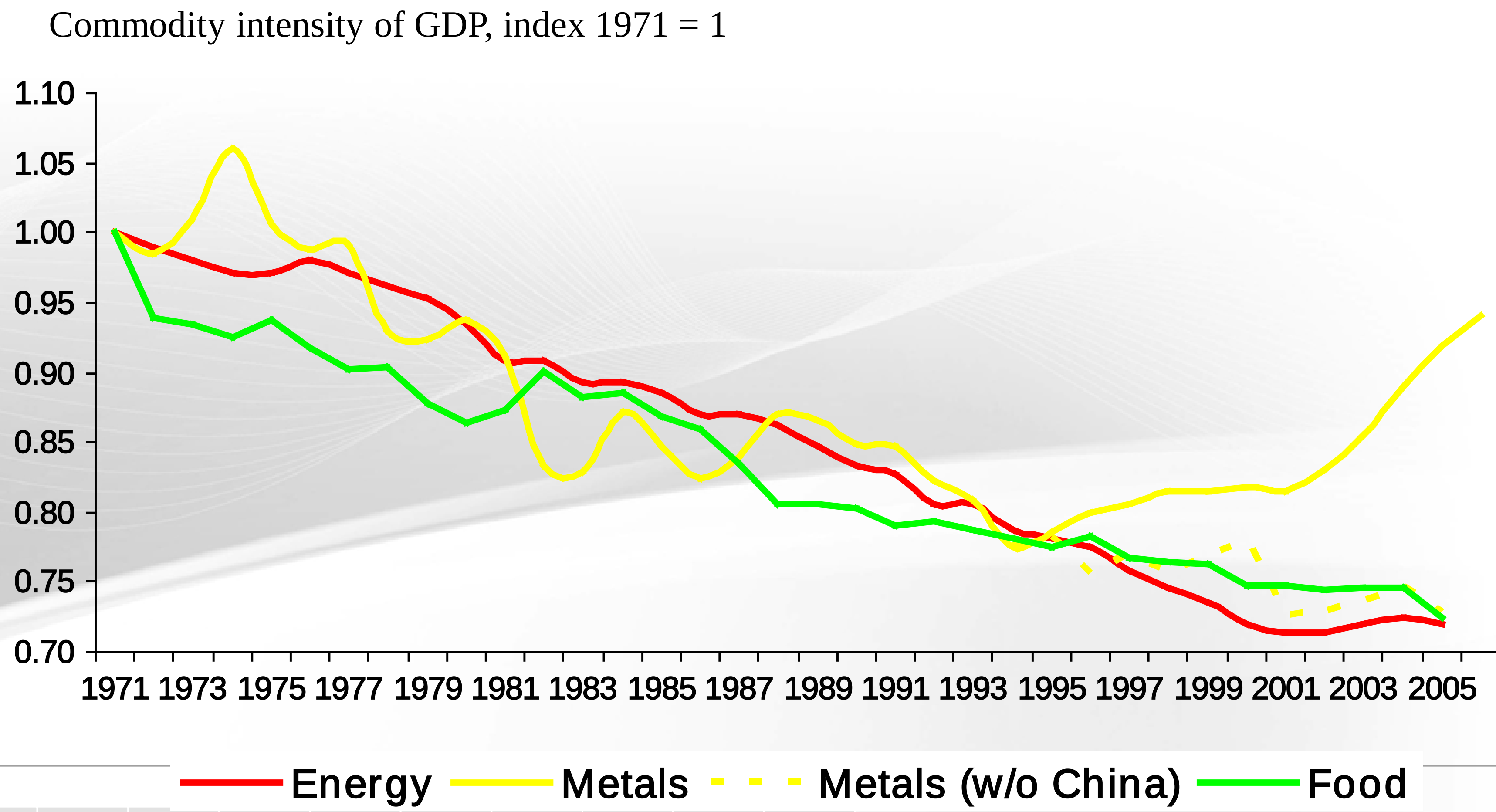
There is an inverse correlation between the US Real Interest rates and the SS Africa's GDP growth rates (-26.74).

Source: World Development Indicators Online (WDI), World Bank

Possible Unintended Macroeconomic Effects

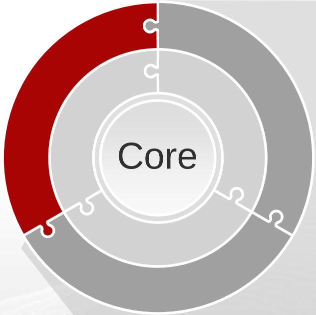
- Many countries are simultaneously expanding their fiscal deficits;
- A current account deficit in the fiscal deficit country must be matched by a current account surplus elsewhere.
- To bring about this net increase in foreign savings, interest rates must rise to restore a global equilibrium between world income and expenditure.
- The net effect will 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 required adjustment between countries running deficit and surplus current account is never smooth, there will be some weaker countries caught in between and, unwillingly, facilitating the required adjustment** (i.e. via international commodity prices).
- Required adjustment in countries running current account deficit can take the form of increases in the efficiency of resource use, which may affect (ex-post) the yield of previously realized investment projects in the booming commodity exports in the current account surplus countries.

Technological Progress Increases the Efficiency of Resource Use



Source: World Bank, 2009; author estimates.

External Factors beyond the 1970s-1980s Development Debacle in Africa

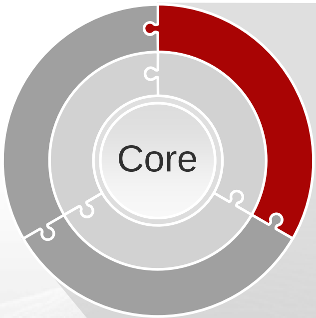


Low Interest Rates

(a) **The persistence of negative real interest rates during most of the 1970s** in global financial markets caused by lax monetary and fiscal policies in industrial countries **which made it economically rational for developing countries to borrow externally** (rather than save or attract equity investment) for development and consumption;

(c) **the FED interest rate shock of 1979-81** (US real interest rates rose from 1.2% to 8.1% in 1979-1984), **which aimed at ridding the world of inflation but had the unintended effect of inducing a long recession in debt-ridden Africa** (d) the emergence of high, positive real interest rates over the 1980s which compounded Africa's debt servicing and debt accumulation burdens;

External Factors beyond the 1970s-1980s Development Debacle in Africa



Consumer of last resort

- The targeting of developing countries in general, and oil-exporting countries in particular, as major export markets to be provided with too-easy credit to facilitate the adjustment of industrial countries to the two oil-shocks (of 1973 and 1979);
- Volatile exchange rate movements throughout the 1980s with US dollar depreciation between 1985-90 resulting in increasing the dollar value of Africa's outstanding debts, over a half of which were denominated in currencies or composites which appreciated against the US dollar;

Lessons from the Asian Financial Crisis: National and Global Unintended

	National (intended effects)	Regional (intended effects)	Global (unintended)
Boosting savings (Pre-1997)	Domestic capital accumulation (reduction in foreign capital exposure)	De-leverage	Lower consumption led to over-capacity: structural export-led model, over consumption in the US.
Boosting foreign currency reserves (post-1997)	To counter volatile exchange rate movement, reduce abrupt capital flight	Reducing systemic contagion	Yield seeking, increased in the marketability of US housing related securities

5

Way Forward

Looking to the Future

Taken together the discussion suggests:

Throughout Africa poverty may well be on the increase; threatening thus the gains achieved by the MDGs

The highest risk for development prospects lies on unintended macroeconomic effects of stimulus measures rather than from the global financial crisis per se.

The basic challenge for Africa thus appears to center less on triggering growth and more on sustaining it.

Looking to the Future

Solving global imbalance via support to Africa

- **The ongoing crisis is informative in that it tells us that economic imbalances (either in terms of excess or deficit) are harmful to the global economy.**

- **As the high level of savings relative to investment in East Asia is the principal source of global imbalances, re-investing excess savings and foreign reserves in Africa would provide genuine profit opportunities in the real sector, reducing thus the *financialization* of advanced economies and the inherent financial bubbles.**

Thank You Very Much