

Policy Brief

**GROWTH IN SUB-SAHARAN AFRICA:
THE ROLE OF EXTERNAL FACTORS¹**

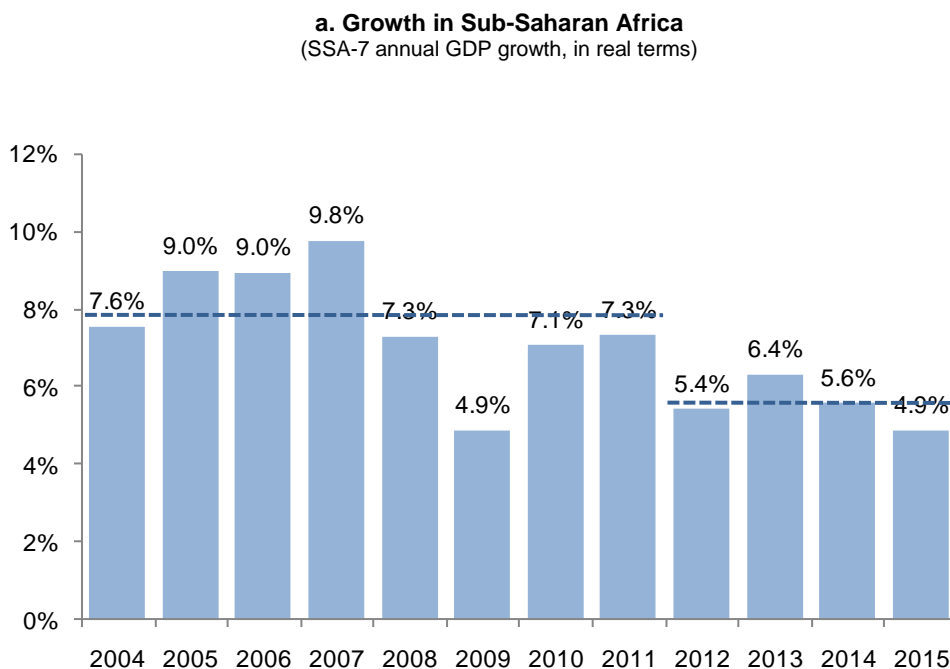
Spring Meetings

14-April-2016

The first decade of the 2000s was one of the most economically successful ever for sub-Saharan Africa (SSA).² Between 2004 and 2011, the region experienced a sizeable economic boom, growing at 8 percent per year on average. However, since 2012 this exuberant activity was followed by a substantial cooling-off, period in which SSA economies experienced a significant growth reversal of approximately 3 percentage points on average. This pattern of boom and subsequent slowdown was observed in every emerging region on the globe.

The strong synchronicity in output fluctuations suggests that common external factors are at play as key drivers of the business cycle in Emerging Economies.

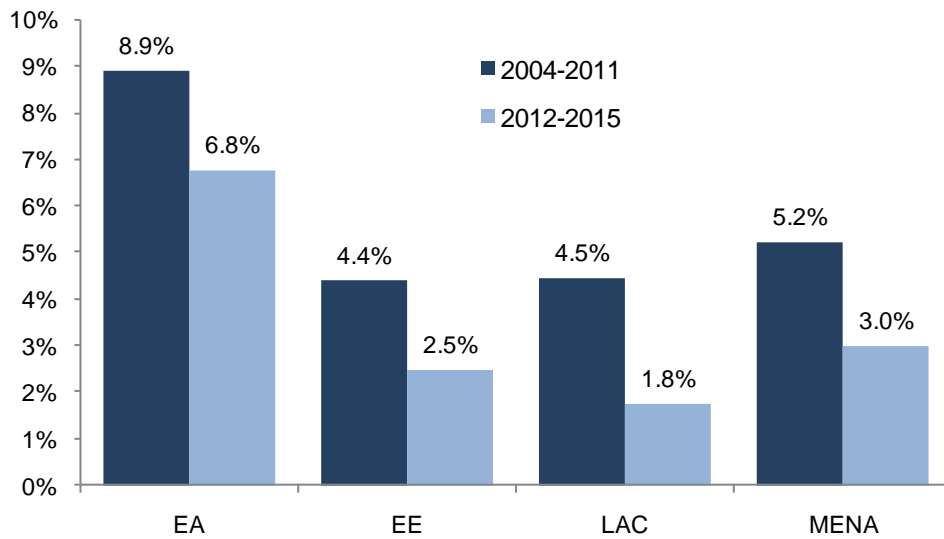
Figure 1. Growth Phases in Emerging Economies, 2004-2015



¹ This policy brief summarizes the findings of the forthcoming “Output Fluctuations in Sub-Saharan Africa: The Role of External Factors,” a joint project undertaken by the Brookings Global-CERES Economic and Social Policy in Latin America Initiative (ESPLA) and the Africa Growth Initiative (AGI). Both ESPLA and AGI are part of the Global Economy and Development Program at the Brookings Institution.

² The analysis is performed on a representative aggregate of Sub-Saharan Africa composed of Angola, Ghana, Kenya, Nigeria, South Africa, Ethiopia, and Tanzania (SSA-7)—the region’s seven largest economies, comprising 75 percent of sub-Saharan Africa’s total GDP.

b. Growth in Emerging Regions
(Annual GDP growth, in real terms)



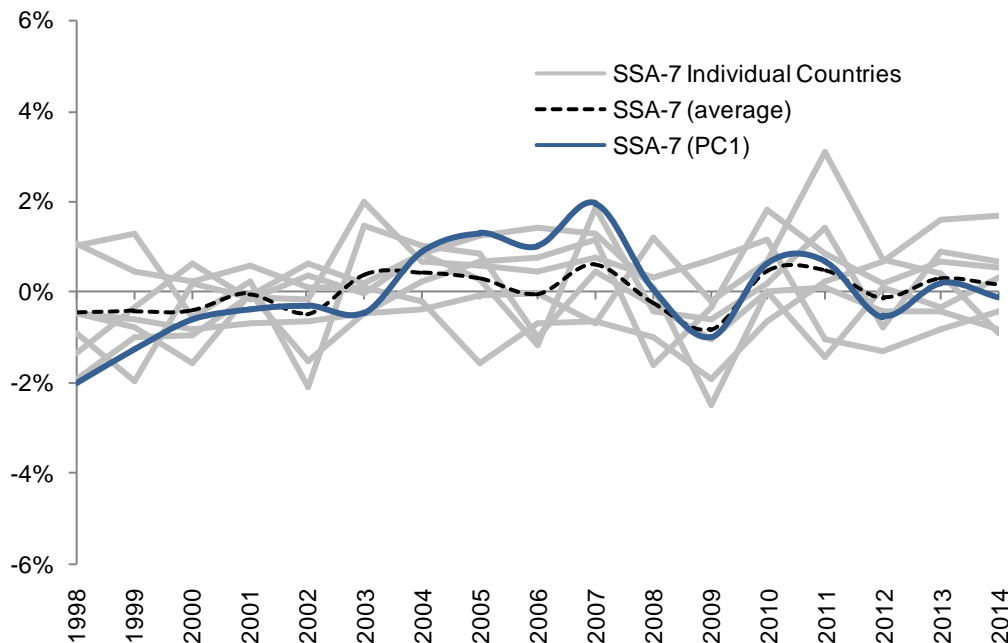
Note: Emerging and developing Asia (EA), Emerging and developing Europe (EE), Latin America and the Caribbean (LAC), and Middle East and North Africa (MENA) refer to the World Economic Outlook (WEO) country group classification.

KEY FINDINGS

1

There is a high degree of synchronization in SSA countries' output fluctuations.

Figure 2. Growth Rate Co-movement in Sub-Saharan Africa
(Annual GDP growth in real terms, standardized)



The pattern of co-movement observed in Figure 2 suggests the existence of common factors driving the output fluctuations of SSA economies. More formally, this pattern of co-movement can be measured statistically by principal component analysis (PCA), which shows that a single component explains 40 percent of the region's output fluctuations, while the first two components account for 60 percent of SSA output fluctuations. In layman's terms, PCA tries to explain the maximum amount of the output variance

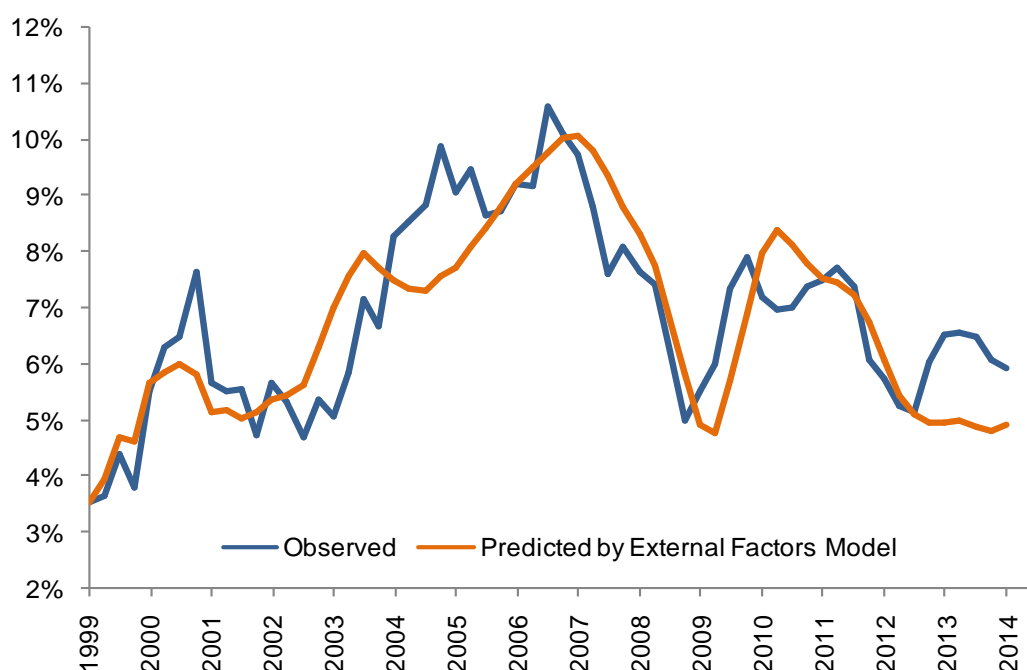
of individual countries with the fewest number of “principal components.” If all SSA countries moved together, the first component (PC1) would explain 100 percent of their output fluctuations, but if their business cycles were completely uncorrelated one would need a principal component for each individual country in order to explain 100 percent of their output variance.

Thus, the fact that two principal components explain most of SSA’s output fluctuations strongly suggests that some set of common factors is behind the region’s business cycle.

2 Almost half of SSA’s output fluctuations since 1998 can be explained by a small set of external factors—namely, GDP growth in G7 countries, GDP growth in China, oil and non-oil commodity prices, and borrowing costs for Emerging Economies in international capital markets.

Figure 3 illustrates that this small set of external variables has a very significant power to track SSA output fluctuations, explaining 44 percent of the region’s output variance.

Figure 3. Sub-Saharan Africa’s Business Cycle: The Role of External Factors
(Annual GDP growth, in real terms)

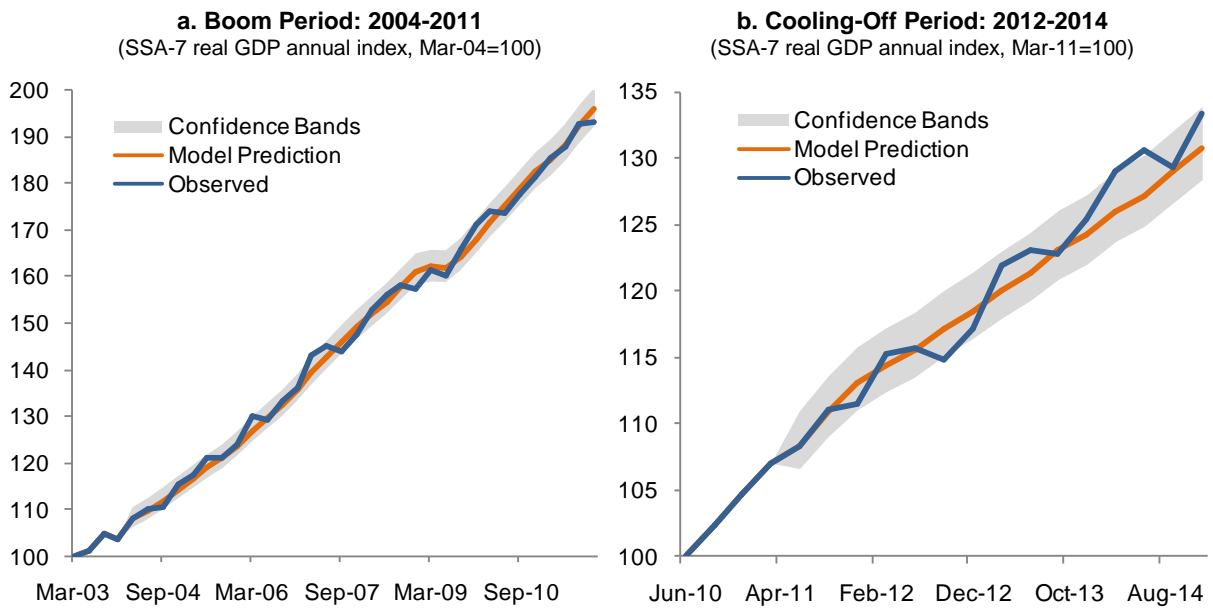


Note: Predicted GDP growth corresponds to the prediction of a vector error correction model using only the observed external factors from Q1.1998 to Q4.2014. For technical details, see “Booms and Busts in Latin America: The Role of External Factors” (Izquierdo, Romero and Talvi 2008).

3 Both the boom experienced between 2004 and 2011 and the sharp deceleration observed since 2012 can, to a large extent, be attributed to significant changes in the external environment, from extremely favorable in the former period to more adverse in the latter.

Figures 4a and 4b illustrate very forcefully that, had we known the trajectory of the relevant external variables, the model would have predicted with a high degree of accuracy what actually happened during the boom and the cooling-off periods.

Figure 4. Predictive Power of External Factors Model, 2004-2014

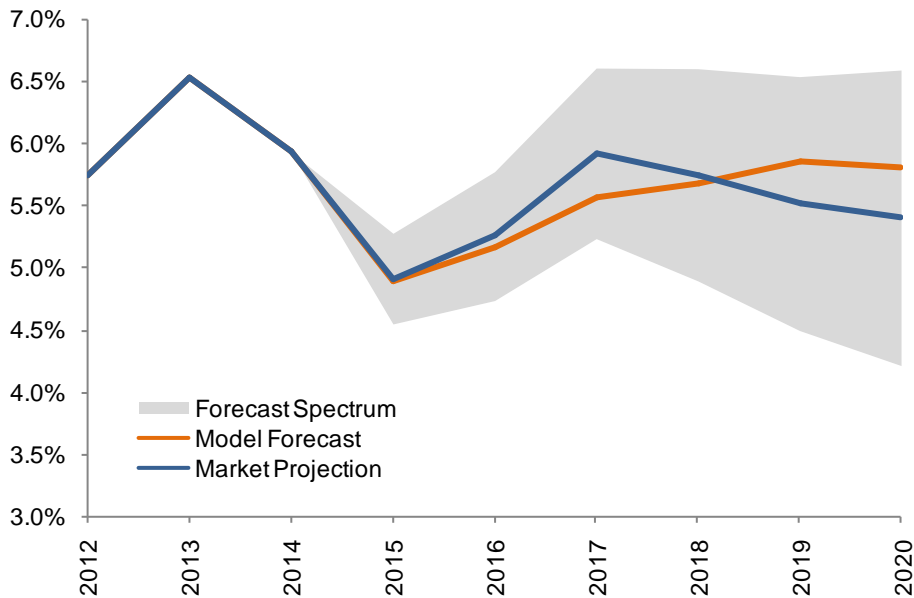


4

Under current market expectations for G7 growth, Chinese growth, commodity prices, and emerging market bond spreads, our model predicts that SSA growth will average 5.6 percent per year through 2020, much in line with current market projections.

Figure 5. Forecast of Economic Activity for Sub-Saharan Africa

(Annual GDP growth, in real terms)



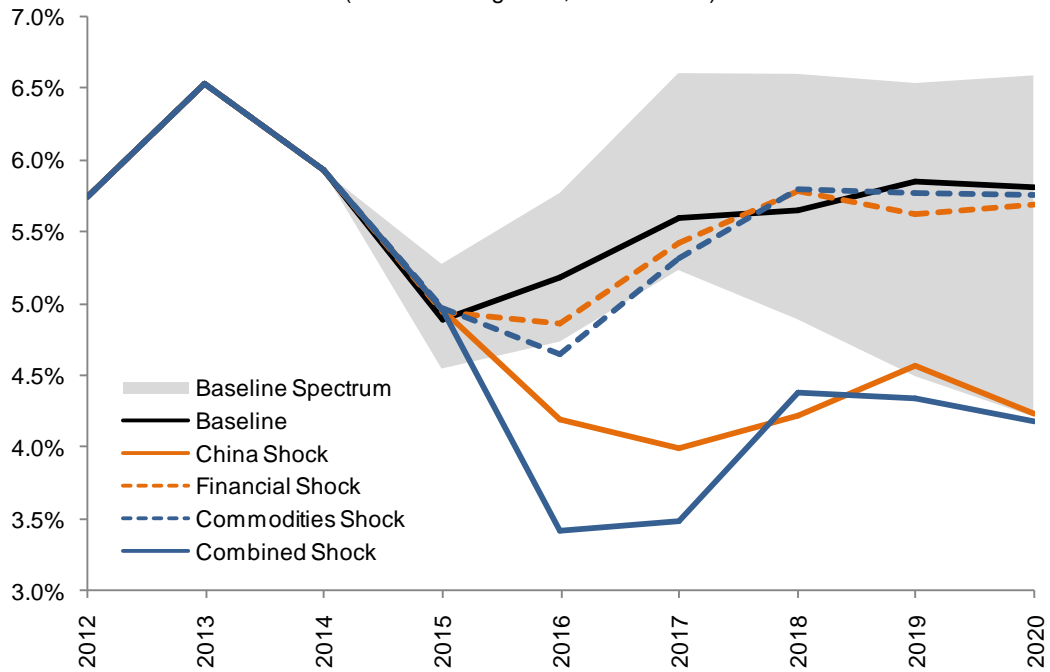
Note: The model forecast corresponds to the prediction of the vector error correction model when external factors are assumed to evolve according to market expectations. Market expectations are those projected by the International Monetary Fund (IMF) and the World Economic Outlook (WEO).

5

Key downside risks for SSA growth include a sharp slowdown in China's growth, a further decline in commodity prices and a tightening in international financial conditions for Emerging Economies. Whereas permanently lower commodity prices and tighter financial conditions for Emerging Economies would only have temporary effects on SSA output growth, a permanent Chinese slowdown would have a larger and persistent effect.

Figure 6. Counterfactual Scenarios for SSA Growth

(Annual GDP growth, in real terms)



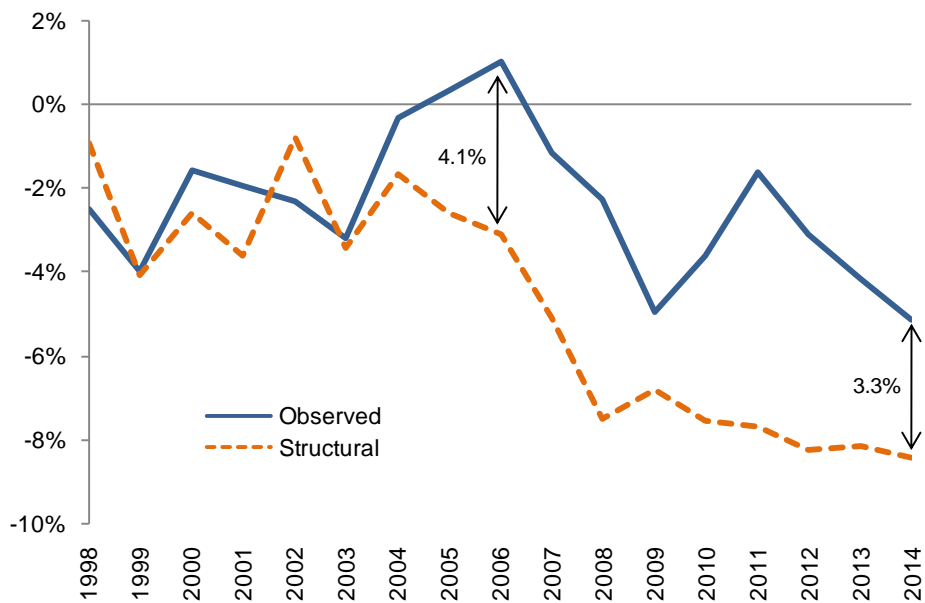
Note: The baseline scenario corresponds to the prediction of the model when external factors are assumed to evolve according to market expectations. The China shock is a reduction in growth from 6.5% to 4%; the financial shock is an increase of 300 bps above baseline EMBI+ levels; the commodities shock is a price fall of 20% below baseline levels; the combined shock combines all of the above simultaneously.

6

Fiscal sustainability (i.e., the ability to run fiscal deficits and pile up public debt without compromising a country’s perceived solvency) in SSA is more accurately depicted by the structural fiscal balance—the fiscal position that would result when the key external drivers of the business cycle are computed at their long-run values.

Figure 7. Structural Fiscal Balance

(% of GDP)

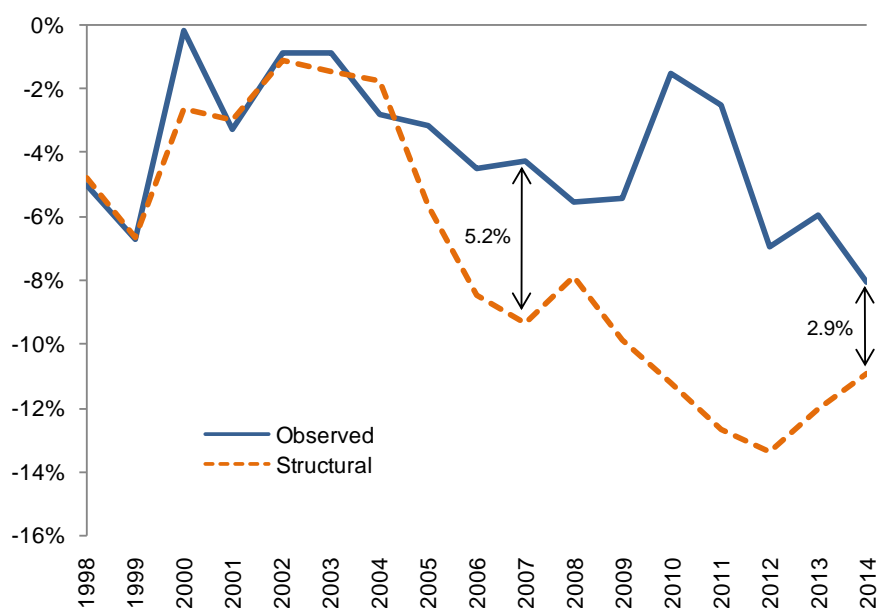


Note: The structural fiscal balance is calculated by performing a linear estimation on observed fiscal revenues between 1998 and 2003, before the boom began, and extrapolating from then on.

In order to properly evaluate a country's fiscal fundamentals, it is important that policymakers work with indicators of sustainability that compute the external drivers of the business cycle at their long-run rather than their current values. Figure 7 above shows that during the boom period (2004-2011), the observed fiscal balance was consistently above the structural fiscal balance and thus conveyed the impression that the fiscal position was stronger than it actually was. As commodity prices declined and output growth decelerated during the cooling-off period (since 2012), the observed fiscal balance began moving towards the structural fiscal balance, revealing that the underlying fiscal position was weaker than the observed one.

7 External sustainability (i.e., the ability to sustain excess spending over income with external capital inflows) in SSA is more accurately depicted by the structural current account balance—the current account position that would result when commodity prices are computed at their long-run values.

Figure 8. Structural Current Account Balance
(% of GDP)



Note: The adjusted current account balance is calculated by using the average of export and import prices observed between 1992 and 2003, before the boom began.

In order to properly evaluate a country's external fundamentals, it is important that policymakers work with indicators of sustainability that compute commodity prices at their long-run rather than their current values. Figure 8 above shows that during the boom period (2004-2011), the observed current account balance was consistently above the structural current account balance and thus conveyed the impression that the external position was stronger than it actually was. As commodity prices declined during the cooling-off period (since 2012), the observed current account balance began moving towards the structural current account balance, revealing that the underlying external position was weaker than the observed one.