

Modernizing Monetary Policy in Sub-Saharan Africa High-Level Conference

“Reforming Monetary Policy Frameworks and Modernizing Central Banking”

Speech by Tobias Adrian

February 28, 2022

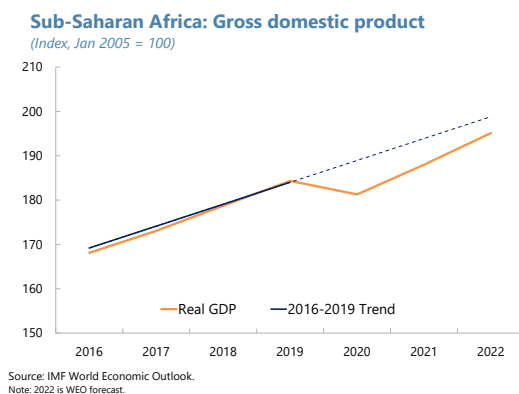
It is my pleasure to be with you to discuss modernizing monetary policy in sub-Saharan Africa. My remarks today will focus on monetary policy frameworks and central banks.

I will discuss some of the current challenges for monetary policy in sub-Saharan Africa and some important tools for managing these challenges, namely exchange rate flexibility and our work toward a so-called “Integrated Policy Framework, or “IPF”—an attempt to think in an integrated way about the use of different policy instruments by open economies in response to external shocks. I will then illustrate some IPF insights with simulations from one of the models that we have developed in this context.

Current Policy Challenges in Sub-Saharan Africa

To start with policy challenges, the pandemic caused a sharp contraction in output across sub-Saharan Africa. A recovery is now underway but projected to be slower than in the advanced economies. The chart shows the level of real GDP, together with the trend from the 3 years prior to the pandemic extrapolated into 2022. It suggests that—based on the [latest forecast](#) in our *World Economic Outlook*—output across sub-Saharan African countries as a group will remain substantially below the pre-crisis trend output this year. Moreover, the outlook remains uncertain, with risks tilted to the downside.

Output Growth Took a Hit During the Pandemic

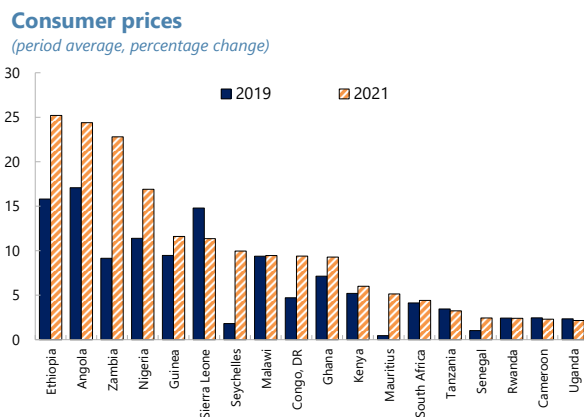


High and rising inflation is another key challenge for several sub-Saharan African countries. In these countries, inflation has risen rapidly during the pandemic.

There is a lot of heterogeneity, though, with inflation remaining low in several other sub-Saharan countries. For many of the latter countries, the relatively low inflation reflects their pegs to the

euro (through the Central African Economic and Monetary Community, or CEMAC, and the West African Economic and Monetary Union, or WAEMU), but the low-inflation group also includes, for instance, Uganda—which is an inflation targeter.

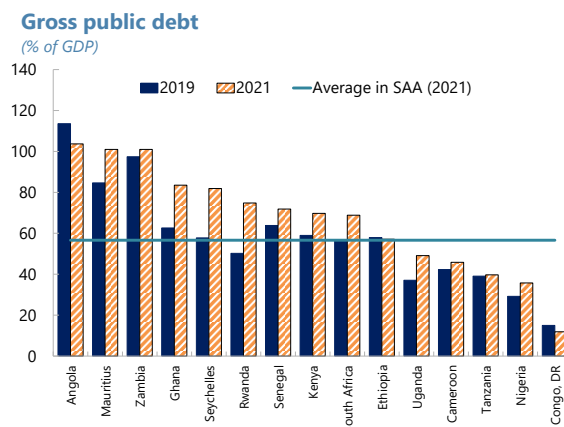
Several Sub-Saharan African Economies Face Rising Inflation



Source: World Economic Outlook Database.

Public debt is high in many sub-Saharan African countries, approaching 60 percent of GDP on average. And the pandemic has only added to the debt burden. This high public debt poses risks of fiscal dominance over monetary policy in some countries, including as some central banks continue lending to governments for fiscal purposes.

Debt Levels are Elevated in Many Sub-Saharan African Countries



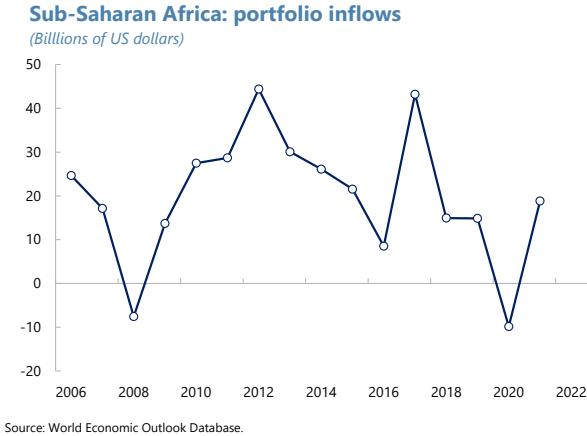
Source: World Economic Outlook Database.

Lastly, volatile capital flows also present a challenge. As shown in the next chart, capital flow volatility has been high in recent years.

During the pandemic, sub-Saharan African economies benefited from extraordinary policy stimulus in advanced economies. But this is likely to change now that the global surge in inflation is leading key advanced-economy central banks toward policy normalization, which is

likely to result in a tightening of global financial conditions. Other things equal, this could prompt capital outflows from emerging markets and developing economies.

Policy Normalization in Advanced Economies Poses Outflow Risks

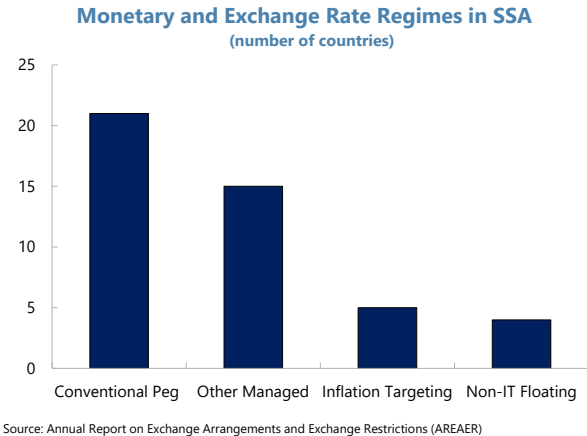


Managing Policy Challenges

As the previous charts have illustrated, sub-Saharan African countries face considerable challenges in the current environment. Let me now turn to how these challenges could be managed.

In this context, it is important to consider the exchange rate regime. Many sub-Saharan African countries have fixed exchange rate regimes. There can be benefits of fixed exchange rates, especially for smaller countries and members of currency unions. At the same time, countries with managed floats or free floats can benefit from allowing the exchange rate to serve as a shock absorber—even as there are some important limitations that I will discuss subsequently.

Monetary and Exchange Rate Regimes in Sub-Saharan Africa



Focusing first on the benefits, the literature finds that exchange rate flexibility can help dampen external shocks. In particular, by changing the relative prices of domestic versus foreign goods it can act as something of an automatic stabilizer. For example, in the face of a negative terms-of-trade shock, exchange rate depreciation will dampen demand for foreign goods and raise the demand for domestic goods, thereby supporting output while improving the balance of payments.

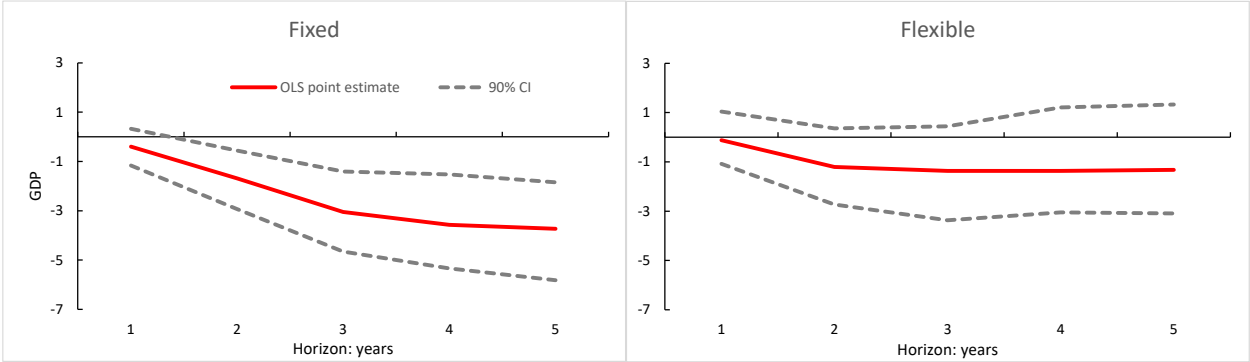
A flexible exchange rate can play a similar stabilizing role in the face of volatile capital flows. For example, exchange rate appreciation driven by large capital inflows will gradually reduce the expected foreign currency return on further inward investments, with a dampening effect on these inflows.

Importantly, a flexible exchange rate will also create room for monetary policy to pursue domestic objectives. Because in a flexible exchange rate regime monetary policy need not be devoted to maintaining a certain level of the exchange rate, it can contribute to stabilizing macrofinancial conditions.

There is considerable empirical evidence for these stabilizing qualities of flexible exchange rates. To start, the following charts show the different impact of a negative terms-of-trade shock on the output of countries with a fixed exchange rate (left hand side) and countries with flexible rates (on the right), respectively, revealing a much sharper negative impact on the former group.

Exchange Rate as Shock Absorber – Real Shocks

Output response to a negative terms of trade shock

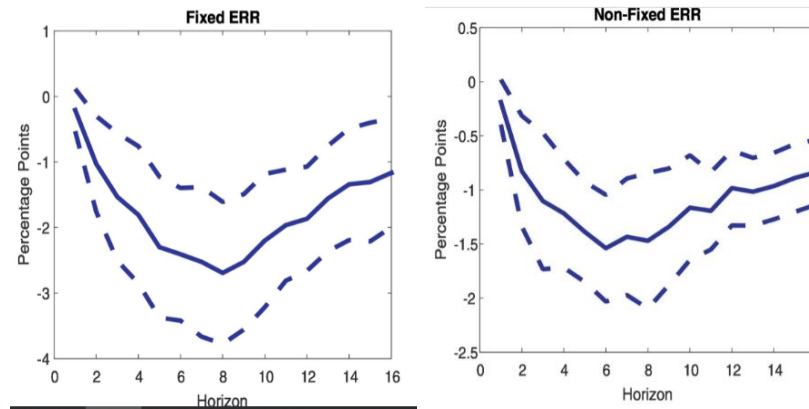


Source: Carrière-Swallow et al. (2021)

Moreover, as shown in the next chart, there is a similar difference in impact of a financial shock (again with the fixed exchange rates on the left-hand side and floating regimes on the right). The two charts here may look somewhat similar, but if you look at the difference in scale on the vertical axes of the left and right-hand charts, it is clear that the financial shock also has a much smaller impact in the floating exchange rate regimes.

Exchange Rate as Shock Absorber – Financial Shocks

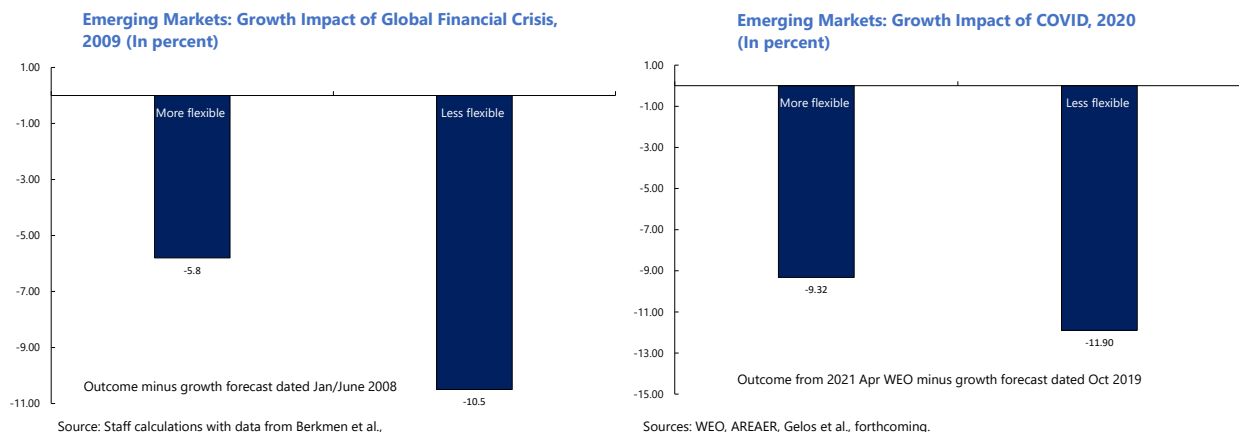
Output response to a contractionary credit supply shock



Source: Ben-Zeev (2019)

And lastly, the next charts show the impact on output of the global financial crisis, and the recent COVID-19 pandemic, respectively. Again, it shows that floating exchange rate regimes fared considerably better.

Exchange Rate as Shock Absorber – Crisis Episodes



Source: Staff calculations with data from Berkmen et al.,

Sources: WEO, AREAER, Gelos et al., forthcoming.

Toward an Integrated Policy Framework (IPF)

Let me turn now to the [IPE](#). To deal with the macroeconomic and financial stability risks posed by volatile capital flows, many policymakers in emerging market and developing economies complement flexible exchange rates and interest rate policy with additional tools—including foreign exchange intervention (FXI), capital flow measures (CFMs), and macroprudential policy measures (MPMs). However, a significant shortcoming is the lack of clear frameworks to guide how these tools should be used in concert to achieve central bank objectives. As you know, IMF staff have been engaged in a major push to develop a framework, anchored by newly

developed conceptual and quantitative models, that guides how these tools should be used in an *integrated* way.

Let me first explain what prompted the IPF. We have seen that a flexible exchange rate can be very useful and desirable. However, in practice, in many emerging market and developing economies, there are also important limits to the role of the exchange rate as a shock absorber.

For instance, *dominant currency pricing* can weaken some of the expenditure-switching effects I mentioned earlier, though without fully eliminating them.¹ But importantly, real-world vulnerabilities that many emerging markets and developing economies exhibit, can undermine some of the positive impacts of exchange rate adjustments.

In particular, *shallow markets* can yield excessive exchange rate volatility. Large *foreign exchange mismatches* on balance sheets can cause exchange rate depreciations to have detrimental impacts on the financial health of corporates and households, generating negative co-movements between output and inflation. And *weak central bank credibility* can result in high pass through from the exchange rate to inflation. Foreign exchange mismatches and high pass-through tend to worsen the tradeoff facing policymakers—for instance, with an easier policy stance providing less of a boost to output and causing inflation to rise more.

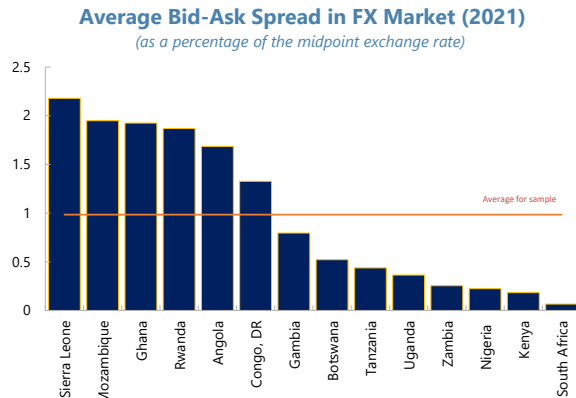
These vulnerabilities—or frictions—are relevant in many sub-Saharan African countries, too—as I will show in the next set of charts.

For instance, foreign-exchange markets in sub-Saharan Africa tend to be shallow, which can unduly amplify exchange rate movements. The below chart shows bid-ask spreads for a selection of sub-Saharan African countries. This is of course just one of several possible measures of market depth (others include, e.g., uncovered interest rate parity premia), but one that is widely available and relatively straightforward in interpretation.

South Africa (on the right) provides a natural benchmark of a country with relatively deep markets. Clearly, many sub-Saharan African countries exhibit much larger spreads than South Africa, suggesting more limited market depth.

¹ See Gopinath et al. (2020).

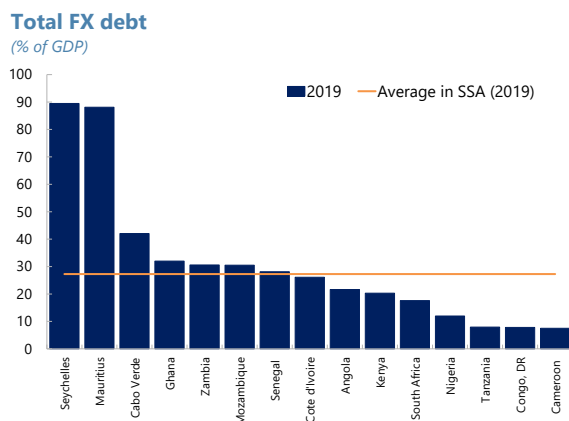
Foreign Exchange Markets are Often Shallow



Source: Refinitiv Eikon Datastream.

Foreign-currency-denominated debt exposures are also substantial for several sub-Saharan African countries. The next chart shows the total foreign exchange debt for households, corporates, banks, and government. While foreign exchange exposures could be hedged to various degrees (which is not picked up in the chart), this variable is at least indicative of the presence of considerable foreign exchange vulnerabilities in many sub-Saharan African countries.

Foreign Exchange Exposures in Sub-Saharan Africa Vary, but Can be Significant

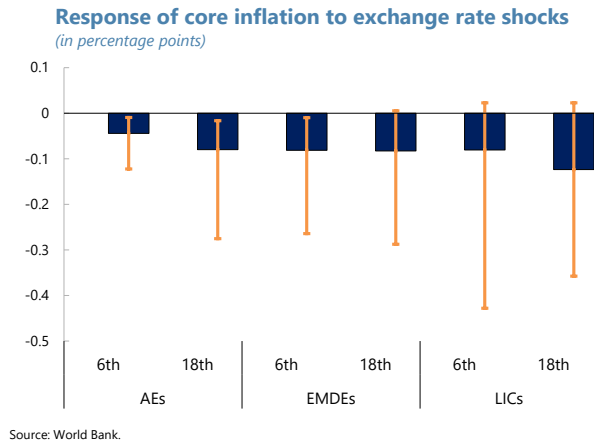


Sources: BIS, IFS, WEO, Staff calculations.

Pass through is also an important issue for many emerging markets and low-income countries. The final chart here shows that pass through tends to be high for low-income countries as a group, which comprises many countries in the sub-Saharan African region.²

² Specifically, the chart shows cumulative impulse response functions, or “IRFs,” after 6 and 18 months of domestic core inflation following a one-percentage-point increase in the exchange rate. Medians and interquartile ranges (25th and 75th percentiles) of IRF distributions are shown for each country group.

Pass Through is Key Issue for Many Emerging Markets and Low-Income Countries



So how should countries that exhibit such vulnerabilities manage their policy responses? First, it is important to reduce the vulnerabilities over time. Thus, it is key to reduce balance sheet mismatches; develop money and foreign exchange markets; and reduce pass through by building monetary policy credibility. These are each areas where IMF technical assistance can help, and I will return to that at the end of my remarks.

But in the meantime—while vulnerabilities continue to be present—the work that we have been doing on the IPF suggests that using the additional tools that I mentioned earlier—FXI, MPMs, and CFMs—can help ease trade-offs for certain shocks.

Policy Responses: Broad Insights from the IPF

The foundational analytical [paper](#) on the IPF that was discussed in the IMF Board a little over a year ago offers several broad insights.

First and foremost, we find that optimal policies depend on the nature of shocks, country characteristics, and initial conditions. Second, when vulnerabilities or frictions are present, macroprudential measures, foreign exchange intervention, and capital flow measures can enhance monetary autonomy, improve financial and price stability, and reduce output volatility. And third, in some circumstances, precautionary capital flow measures on inflows can lower financial stability risks.

This said, the findings do not rationalize the indiscriminate use of these tools. In particular, they should not be used to maintain a misaligned exchange rate. And they are not a substitute for deep markets, healthy balance sheets, and strong institutions. Moreover, it will always be important to weigh the benefits of multiple tool use against the potential negative impacts on transparency and credibility of the central bank and against possible adverse long-term consequences—for example, those for market development.

Quantitative IPF Model: Main Features

Let me briefly illustrate some of the IPF insights with the use of the [quantitative IPF model](#).

The quantitative IPF model is an open economy new Keynesian framework and is very similar to the models typically used by central banks. However, it has newly added features that aim at increasing the model's ability to capture key characteristics of emerging markets. In other words, the model recognizes that country circumstances are often more complex than what standard models imply, and it features key real-world vulnerabilities that matter for policy.

Specifically, the model accounts for nominal rigidities in prices and wages and posits that some agents form inflation expectations adaptively. In addition, financial markets are assumed to be incomplete. This means that we explicitly account for occasionally binding constraints such as the effective lower bound on interest rates, as well as a domestic borrowing constraint, which can give rise to sudden stops. Finally, the quantitative IPF model allows us to account for spillovers, although for our purposes here today I will just focus narrowly on a small open economy case.

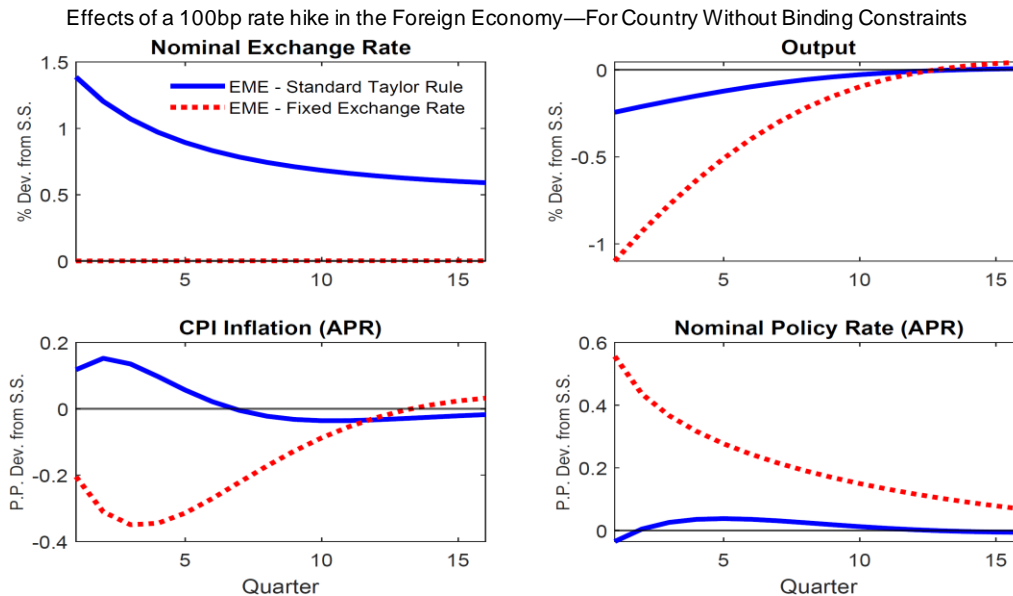
The quantitative IPF model reflects that volatile capital flows are a key concern in vulnerable economies, and, under these conditions, foreign exchange intervention emerges as a complement to—rather than substitute for—inflation targeting. The model identifies conditions under which foreign exchange intervention can help improve outcomes.

Insights from the Model

So what does the model tell us? First of all, it confirms that for countries without special vulnerabilities, exchange rate flexibility is indeed optimal. The model simulation in the next chart—which shows the impact of a 100-basis-point increase in foreign interest rates—illustrates that under a standard Taylor rule (represented by the solid blue line), the exchange rate acts as a shock absorber—just as we have seen earlier from the empirical literature.

Importantly, the model illustrates that the nominal depreciation (top left panel) mitigates adverse effects of the shock on output (top right), without large inflationary repercussions (bottom left). In contrast, under a fixed exchange rate (dotted red lines), domestic interest rates would need to increase to defend the peg (bottom right panel), which would generate deflation and exacerbate the output contraction.

Benefits of Flexible Exchange Rates Confirmed



Vulnerable Economies

Now turning to a vulnerable emerging market economy that exhibits the IPF-type frictions, we consider how foreign exchange intervention could affect the policy frontier of such an economy affected by a decline in global risk tolerance (so again, an external financial shock). Specifically, it compares the transmission under a baseline Taylor rule (the solid blue lines) to cases in which the authorities also intervene in foreign exchange markets (red dotted lines).

The simulation shows that foreign exchange interventions can significantly reduce the depreciation of the exchange rate, thus muting inflationary pressures and allowing monetary policy to be more accommodative. This policy combination helps allay the stagflationary effects of the crisis scenario, reducing inflation while boosting output.

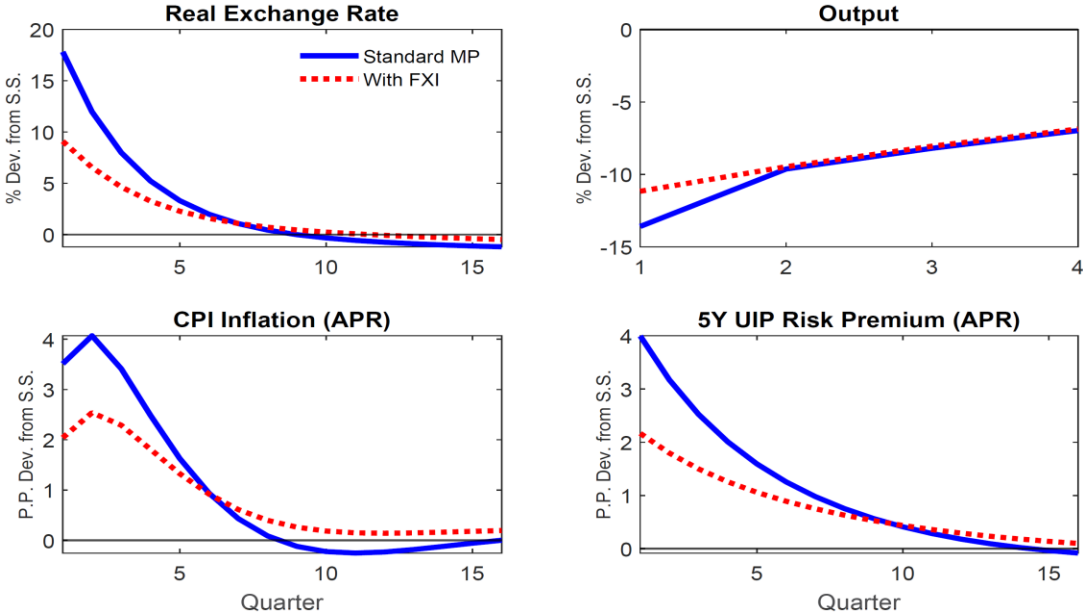
Regarding output, note that it exerts even larger expansionary effects on domestic demand, since real net exports improve to a lesser extent in this scenario. The gains in macroeconomic stability are particularly large if the intervention is strong enough to prevent a sudden stop, which is assumed here.

In the medium term, however, the stronger exchange rate and domestic demand under foreign exchange intervention translate into less improvement in the trade balance, and, consequently, a slower accumulation of net foreign assets. This creates an intertemporal tradeoff for policymakers as preventing a deep recession today comes at the cost of higher vulnerability in the future.

Overall, while there are longer-run costs associated with foreign exchange interventions, their ability to improve near-term inflation-output tradeoffs can make them attractive, especially in the case of mostly transient shocks. Their appeal is diminished, however, as the shock becomes more protracted: while foreign exchange interventions still improve the near-term tradeoffs, they weaken the turnaround in domestic borrowing that is needed to lower the risk of another sudden stop.

Foreign Exchange Intervention and Capital Flow Measures in a Vulnerable Economy

Impact of a decline in global risk tolerance under a standard Taylor rule combined with foreign exchange intervention (FXI)



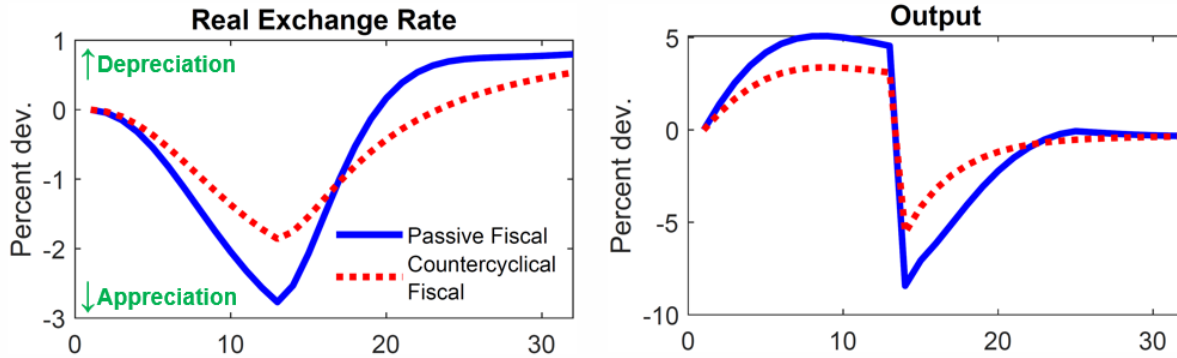
Fiscal Policy

The model also allows us to assess the impact of fiscal policy. The next chart highlights the benefits of a more prudent fiscal stance in cushioning the blow from a shift in investor risk sentiment (which is assumed to materialize around the 12th quarter) in a small emerging market economy, which maintains a fixed exchange rate regime. Specifically, it illustrates that an active, counter-cyclical fiscal policy can help mute the impact of the shock on the real exchange rate, thereby cushioning the blow for output.

The simulations assume full credibility of the foreign exchange regime, and so outcomes could be worse (notably for inflation) if the shift in risk sentiment also undermined the peg.

Role of Fiscal Policy in a Small Open Economy with a Peg

Role of fiscal policy in an overheating scenario (strong domestic demand and capital inflows) followed by a capital flow reversal (assumed to happen around the third year)



IMF Support in Capacity Development

I hope that these illustrations with the quantitative IPF model have piqued your interest and given you a sense of the value that the IPF can bring for policy analysis and policymaking in economies with considerable frictions.

Before I conclude by summarizing the main points made in this presentation, I want to briefly return to the role of the IPF in capacity development that I alluded to in passing earlier.

Of course, the IMF is here to help its members manage the challenges. In this context, we provide technical support, including for countries that are transitioning to a more flexible exchange rate. Many countries in sub-Saharan Africa have been on the receiving end of such support.

The technical assistance includes a wide range of specific areas ranging from broad transition planning and the development of institutional capacity—where capacity development in the areas of forecasting and policy analysis systems and monetary policy communications have been in particularly high demand—to market development, the design and implementation of monetary operations, including frameworks for foreign exchange intervention, and macroprudential regulation.

Various of these areas come together in technical assistance on the implementation of inflation targeting, which we have also been offering to a large group of members over the years.

Thus, if you require assistance with managing policy challenges, as always, do reach out to us.

Summary

To conclude, let me summarize the main points. Sub-Saharan African countries face key challenges and a likely tightening of global financial conditions. Exchange rate flexibility can

help buffer shocks, though with some key limitations that are likely to be relevant for many sub-Saharan African countries.

The IPF suggests that in the face of vulnerabilities (shallow markets, foreign-currency debt, high pass through), FXI, MPMs, and CFMs can alleviate short term trade-offs. But such use of tools always needs to be weighed against possible negative impacts on central bank credibility and long-term consequences.

The IMF stands ready to continue supporting modernization of monetary policy frameworks in Sub-Saharan Africa.

Thank you very much for your attention.

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