

2. Capital Flows to Sub-Saharan Africa: Causes and Consequences

In the aftermath of the global financial crisis, there has been a spectacular increase in nonofficial cross-border capital flows to sub-Saharan Africa.¹ With official development assistance to the region on a declining trend, these flows could provide much-needed financing for development initiatives and boost economic growth and welfare. However, large inflows could also pose macroeconomic and financial stability challenges such as economic overheating, currency overvaluation, and unsustainable domestic credit and asset price booms. In the absence of adequate fiscal and macroprudential frameworks, inflows may also encourage excessive borrowing by the public and private sectors, and exacerbate currency, maturity, and capital structure mismatches on balance sheets—leaving countries vulnerable to a sudden reversal of capital flows that may be triggered by factors extraneous to the recipient economy.

The impact of capital flows depends on the type of flow. Debt flows are typically considered the riskiest, while foreign direct investment (FDI) is deemed the safest.² The residency of the investor also matters—nonresident investors tend to be more skittish than domestic investors (Forbes and Warnock 2012; Ghosh and others 2014). The recent episodes of capital outflows and the ensuing market volatility experienced by some emerging market economies is a reminder of the fickle nature of cross-border capital flows, and the importance of enhancing resilience to potential reversals.

Against this backdrop, this chapter examines the dynamics and implications of cross-border capital flows to sub-Saharan Africa by focusing on three key questions:

- How have nonofficial capital flows—by asset type, as well as by investor residency—evolved over time?
- What are the main drivers of these flows and, in particular, how vulnerable is the region to a sudden change in global financial conditions?
- What are the macroeconomic consequences of flows—both in terms of risks such as currency overvaluation, economic overheating and financial instability, as well as in terms of potential benefits such as domestic investment and economic growth?

The analysis in this chapter, based on a sample of 45 sub-Saharan Africa countries during 1980–2017, shows that nonofficial capital flows to the region are at historically high levels. In fact, scaled by economic size, net capital flows to sub-Saharan Africa have been larger than those to emerging market economies in recent years. Much of this increase has been due to an increase in liability flows (nonresident acquisition of domestic assets), which have more than tripled since the mid-2000s, while on the asset side, domestic residents have continued to invest abroad on a net basis.

In terms of composition, FDI continues to dominate, though the level of portfolio flows—especially portfolio debt—has increased significantly. Along with the magnitude, the volatility of nonofficial capital flows has also risen. Overall, nonresident flows are more volatile than resident flows, and among the different types of flows, the other investment category (which includes cross-border bank flows) is the most volatile for sub-Saharan Africa, as is the case in emerging market economies.

This chapter was prepared by a team led by Mahvash S. Qureshi and composed of Francisco Arizala, Xiangming Fang, and Mustafa Yenice.

¹ In the chapter, “capital flows” refers to the financial account of the balance of payments. Nonofficial capital flows exclude reserve asset and official other investment (asset and liability) flows (see Annex 2.1 for data description and sources). The terms “capital flows” and “financial flows” are used interchangeably throughout the chapter.

² See, for example, Korinek (2018), and Ghosh, Ostry, and Qureshi (2017). The impact of FDI, however, may depend on whether it is “greenfield” investment, mergers and acquisitions, or simply a “round-tripping” of flows (Calderon, Loayza, and Servén 2004; Aykut, Sanghi, and Kosmidou 2017; Gopalan, Ouyang, and Rajan 2018).

Global factors—notably, US interest rates and commodity prices—play an important role in explaining the dynamics of flows to sub-Saharan Africa, with lower US interest rates and higher commodity prices encouraging inflows, and vice versa. The relative importance of global factors, however, depends on the type of flow, with global market volatility having a more pronounced effect on foreign portfolio investment, while US interest rates and commodity prices have a stronger effect on FDI. Evidence from monthly data on investor fund flows and asset prices (sovereign bond yields and stock returns) for a subset of sub-Saharan Africa countries further suggests that these variables strongly co-move with global financial conditions, and that their sensitivity to global factors has increased since the global financial crisis.

While global factors are important, domestic factors also matter in explaining the behavior of flows. In particular, countries with strong economic growth, greater trade openness, and better institutional quality tend to receive more inflows, and are less likely to experience foreign investment reversals.

In terms of macroeconomic consequences, there is no strong evidence that nonresident flows are in aggregate significantly associated with macroeconomic or financial imbalances in sub-Saharan Africa; but the type of flow matters. On average, portfolio inflows are likely to move the real exchange rate and real output above trend, and to fuel credit growth—vulnerabilities that tend to raise the likelihood of a financial crisis. When it comes to domestic investment and economic growth, however, portfolio flows have at least historically not been strongly associated with either, though they do seem to boost public consumption (including social spending). By contrast, inward FDI appears to directly spur domestic investment, and in turn support economic growth.

These findings indicate that nonofficial capital flows have become an increasingly important source of external financing for sub-Saharan Africa, yet there is a complex relationship between these flows, domestic macroeconomic stability, and investment and economic growth in the region. On the one hand, the nonofficial external capital is needed

to fill the resource gap and promote economic development; while on the other hand, the fickle nature of such capital makes it a less reliable—and potentially risky—source of finance. This trade-off puts a premium on the careful macroeconomic management of capital flows, which should take into account the nature of the capital (FDI, portfolio, loans, etc.), its domestic use and impact, and the type of investor and borrower.

In this respect, to the extent that sub-Saharan Africa sovereigns are increasingly tapping international capital markets to finance development initiatives, policymakers need to be prudent in ensuring that the borrowed resources are utilized effectively, enhance productivity and promote economic growth. In attracting foreign capital, they also need to be mindful of the attendant consequences for exchange rates such as volatility and misalignments that could hurt the tradable sector and undermine competitiveness. In this regard, structural policies to reduce nominal rigidities and facilitate real exchange rate adjustment could play a useful role, though in some cases foreign exchange intervention to limit currency overvaluation and build adequate reserve buffers may be warranted.

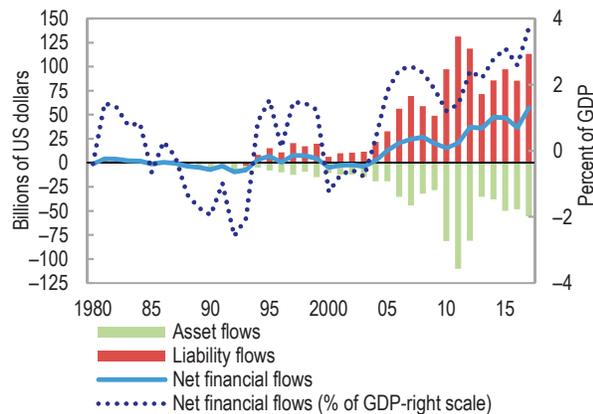
Vigilance is also warranted against economic overheating and the buildup of (private and public sector) balance sheet vulnerabilities to mitigate the risk of a hard landing when flows recede. Countercyclical macroeconomic and prudential policies should be adopted to limit such vulnerabilities and preserve debt sustainability. Improving the compilation and timeliness of balance of payments data is thus critical to monitor flows in real time and to implement the desirable policy actions swiftly. Moreover, to the extent that FDI tends to be less prone to generating vulnerabilities but more likely to energize private investment and growth, efforts should focus on attracting direct investment to the region through strong domestic macroeconomic fundamentals and an improved business climate. These factors are likely to play an even more important role in attracting foreign capital going forward, as global financial conditions may tighten with the normalization of monetary policy in advanced economies.

EVOLUTION OF CAPITAL FLOWS

The financial landscape of sub-Saharan Africa has changed profoundly over the last few decades. The region has become more globally financially integrated, with a gradual relaxation of financial account restrictions and a sharp increase in nonofficial capital flows—especially since the global financial crisis (Figure 2.1). Nonofficial net capital flows to sub-Saharan Africa, which totaled about \$4 billion during the 1980s and 1990s, increased six-fold to \$25 billion in 2007, before doubling to about \$60 billion in 2017. In terms of GDP also, net capital flows to sub-Saharan Africa have been at a historically high level (3 percent of GDP) and exceeded those to emerging market economies (by about 2 percent of GDP) in 2015–17 (Figure 2.2).³ The difference between net capital flows to sub-Saharan Africa and emerging market economies is even larger when measured relative to their respective financial market sizes (proxied by M2; Annex Figure 2.1.1).

The increase in net flows has been largely driven by liability (or nonresident) flows, which increased from \$70 billion in 2007 to \$113 billion in 2017.

Figure 2.1. Sub-Saharan Africa: Financial Flows, 1980–2017



Source: IMF, World Economic Outlook database.

Notes: Statistics for 2017 are provisional. Negative values indicate outflows. Flows exclude reserve asset and official other investment flows. Net financial flows in percent of GDP is the sum of financial flows to the region in percent of regional GDP.

³ These trends remain similar if South Africa—a major recipient of nonofficial capital flows—is excluded from the sample. In that case, net flows have increased from about \$1 billion in 2007 to about \$44 billion in 2017, with liability flows increasing by about \$50 billion (Annex Figures 2.1.2 and 2.1.3).

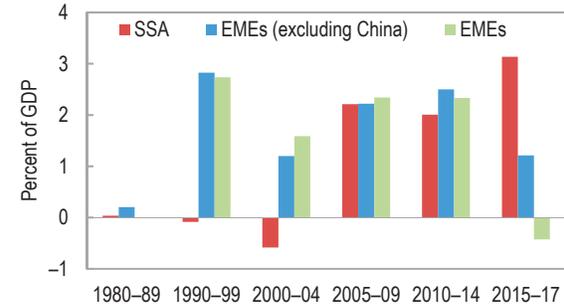
⁴ Although disaggregated balance of payments data on official and nonofficial portfolio debt flows are limited for sub-Saharan African countries, a comparison of recent sovereign and corporate bond issuances suggests that a large share of portfolio debt flows are to the public sector. For FDI, there has also been a change in the recipient sectors—while the extractive sectors were the main recipients in the 1980s and 1990s, FDI has spread across the manufacturing and services sectors in recent years (UNCTAD 2017).

The sharp rise in these flows has been broad-based, with nonresident flows more than doubling in most sub-Saharan Africa countries since the global financial crisis (Figure 2.3). At the same time, on the asset side, domestic residents continued to invest abroad on a net basis (Figure 2.4).

The rise in nonofficial capital flows has happened against a declining trend in official development assistance to the region. Concurrently, sovereign bond issuances have increased notably, suggesting that countries have been tapping alternative sources of finance to meet their developmental needs (Annex Figures 2.1.4 and 2.1.5). As a result, portfolio flows—especially portfolio debt flows—have increased notably, though FDI remains the most dominant type of nonresident flow to the region (Annex Figures 2.1.6 and 2.1.7).⁴

On the asset (domestic resident) side, outflows are concentrated in the direct and other investment categories, though the FDI outflows are mainly driven by Mauritius, which is a global financial center (Annex Figure 2.1.8). The scale of resident-driven outflows from sub-Saharan Africa has often attracted considerable attention, with several studies

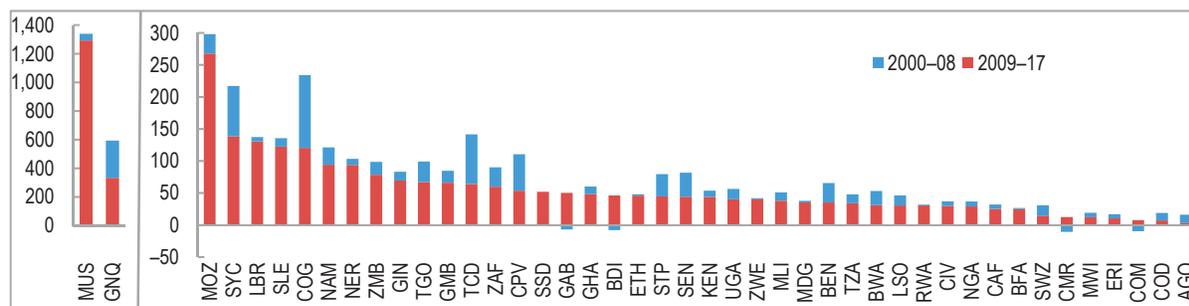
Figure 2.2. Sub-Saharan Africa and Emerging Markets: Net Financial Flows, 1980–2017



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Note: No statistics for EMEs including China are reported for 1980–89 because of lack of data availability on China's reserve asset flows for that period. For the period 1990–99, China's data are available for three years 1997–99. EMEs = emerging market economies; SSA = sub-Saharan Africa.

Figure 2.3. Sub-Saharan Africa: Liability Flows Before and After the Global Financial Crisis, 2000–17 (Percent of GDP)

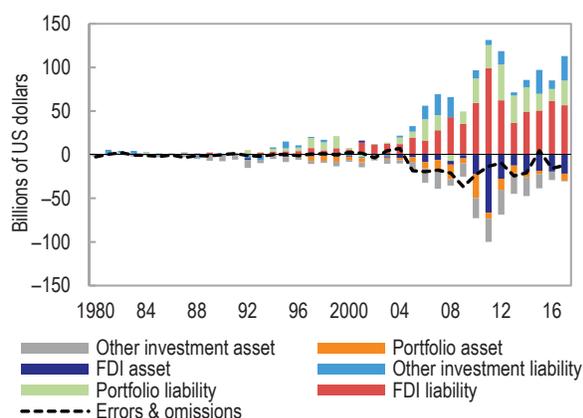


Source: IMF, World Economic Outlook database.

Notes: Statistics for 2017 are provisional. Negative values indicate outflows. Flows are cumulative values in percent of 2017 GDP. Flows exclude official other investment. Mauritius and Equatorial Guinea are plotted on a different scale because of the large size of their liability flows. See page 53 for country abbreviations table.

arguing that these outflows—together with the mostly negative errors and omissions recorded in the balance of payments—represent “domestic capital flight.”⁵ In percentage of GDP, however, sub-Saharan Africa’s asset flows are on par with emerging market economies, while the errors and omissions category has been much larger, especially since 2005, and largely accounted for by the region’s oil exporters (Annex Figures 2.1.9 and 2.1.10).

Figure 2.4. Sub-Saharan Africa: Composition of Liability and Asset Flows, 1980–2017



Source: IMF, World Economic Outlook database.

Notes: Statistics for 2017 are provisional. Negative values indicate outflows. Flows exclude official other investment flows. The components do not necessarily add up to total liability and asset flows because of lack of data availability. FDI = foreign direct investment.

As flows accumulate into stocks, the increase in nonresident flows has translated into a five-fold increase in the stock of external liabilities for sub-Saharan Africa since 2000, while the stock of external debt has more than doubled. Of particular concern is the rising share of short-term debt in total external debt, which has increased from about 8 percent in the early 2000s to 14 percent in the last few years (Annex Figures 2.1.11 and 2.1.12). Sub-Saharan Africa’s external debt is dominated by the public sector, with the share of public debt in total external debt, on average, amounting to about 80 percent in 2017.⁶

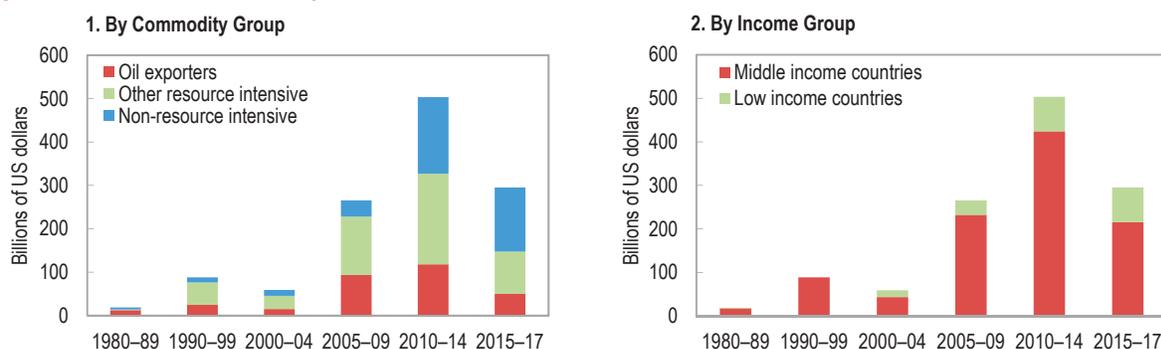
Shifting Patterns

Which countries have been the major recipients of nonofficial foreign flows in recent years? Since the global financial crisis, the share of flows received by non-resource-intensive, mostly low-income countries, has increased (Figure 2.5). This contrasts with earlier years when the resource-intensive countries received the bulk of foreign investment (mainly because of large direct investments in the natural resource sectors). Among the non-resource-intensive countries, Côte d’Ivoire, Ethiopia, Kenya and Mauritius, have been the most attractive destinations for foreign investors—together receiving more than 40 percent of the inflows during 2015–17.⁷

⁵ See, for example, Ndikumana and Boyce (2003), and Fofack and Ndikumana (2010).

⁶ This ratio is lower (less than 50 percent) for some market access countries (for example, Mauritius, Nigeria, and South Africa).

⁷ On the other end, available bilateral data for the outstanding stock of direct, portfolio, and bank investment indicates that the United States, United Kingdom, Eurozone countries (notably, France, Germany, Luxembourg, and the Netherlands), and China are the major sources of foreign investment in sub-Saharan Africa (Annex Figures 2.1.13–2.1.15).

Figure 2.5 Sub-Saharan Africa: Liability Flows, 1980–2017

Source: IMF, World Economic Outlook database.

Note: See page 52 for country groupings tables.

While foreign flows have been concentrated in a few countries, they have risen significantly across the vast majority of countries in absolute terms, as well as in terms of GDP. In 2000, for example, the average net flow received by sub-Saharan Africa countries was about 0.5 of a percent of GDP, which increased to 3 percent in 2007, and further to 5 percent in 2017.⁸ A larger number of countries are thus experiencing episodes of large inflows—or “surges”—which for analytical purposes are defined here as net capital flows (scaled by GDP) that lie in both the country’s own and the sub-Saharan Africa sample’s top one-third of the observations (Figure 2.6).⁹ Typically, these surges are driven by changes in nonresident flows, and in only a few years does retrenchment of investment from abroad by domestic residents outweigh the increase in foreign inflows. Among the countries that experienced an inflow surge after the recent oil price

collapse, most are non-resource-intensive countries (and none was an oil exporter in 2016).

Volatility in Capital Flows

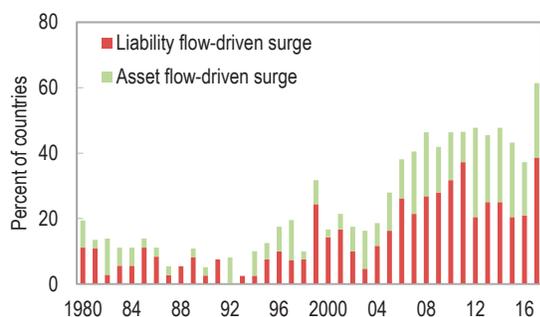
As the magnitude of capital flows to sub-Saharan Africa has increased, so has the volatility of such flows (Table 2.1). While both nonresident and resident flows (scaled by GDP) have become more volatile in the last two decades, the increase in the volatility of the former has been more pronounced. Overall, nonresident flows are more volatile than resident flows, and among the different categories, other investment has been the most volatile, followed by FDI.

Table 2.1. Volatility of Financial Flows (Percent of GDP)

	SSA			EMEs		
	1980–2017	1980–99	2000–17	1980–2017	1980–99	2000–17
Net Financial Flows	5.66	3.07	5.73	4.13	3.98	3.76
Net FDI	2.16	1.09	2.36	1.44	1.13	1.21
Net portfolio	0.68	0.08	0.59	1.61	1.22	1.84
Net other investment	3.85	2.61	3.61	3.25	3.30	2.62
Liability Flows	4.78	2.75	4.39	3.78	4.56	3.24
FDI	2.54	0.96	2.28	1.49	1.31	1.10
Portfolio	0.28	0.03	0.35	1.53	0.89	1.57
Other investment	3.34	2.15	3.38	2.81	2.93	1.61
Asset Flows	2.92	1.69	2.72	1.94	1.12	1.93
FDI	0.27	0.08	0.28	0.70	0.18	0.71
Portfolio	0.21	0.03	0.18	0.78	0.20	0.83
Other investment	1.83	1.33	2.15	1.64	1.09	1.66

Source: IMF staff estimates

Notes: Statistics are the median of the standard deviation of flows (percent of GDP) for individual countries over the relevant period. Outliers (for example, observations in the top and bottom percentile of the distribution for the relevant country group) are excluded. EMEs = emerging market economies; FDI = foreign direct investment; SSA = sub-Saharan Africa.

Figure 2.6 Sub-Saharan Africa: Surges in Net Financial Flows, 1980–2017

Sources: IMF, World Economic Outlook database; and IMF staff calculations.

⁸ See Annex Figure 2.1.16 for the distribution of net capital flows (in percent of GDP) to sub-Saharan Africa over the years.

⁹ See Annex 2.1 for methodological details to identify inflow surges.

The volatility of FDI is, however, driven by a reduction in such flows rather than by their reversal. In fact, the probability of experiencing negative flows (or outflows of nonresident investment) after positive flows is the lowest for FDI, and the highest for other investment and portfolio debt investment.¹⁰ There is also considerable heterogeneity across countries, with flows being the most volatile for oil exporters in the region. Notably, the volatility of both nonresident and resident flows to sub-Saharan Africa is generally higher than that to emerging market economies—highlighting the fickleness of these flows to the region.

DRIVERS OF CAPITAL FLOWS

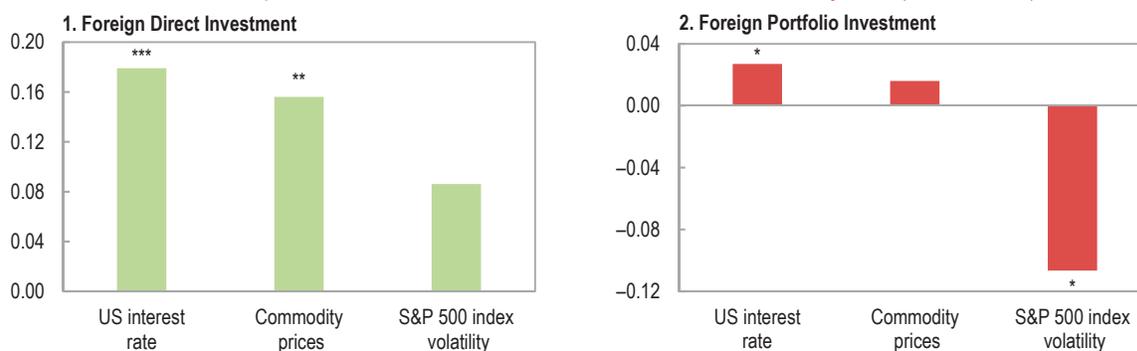
What explains the dynamics of capital flows into sub-Saharan Africa countries? Empirical analysis based on annual data over 1980–2017 shows that global factors (such as US interest rates and commodity prices) play an important role, but some domestic characteristics also matter.¹¹ Specifically, net flows to the region are significantly affected by US interest rates (proxied by US 10-year government bond yield), with a 100 basis point decline in the nominal US government bond yield, on average, implying an increase in net flows by about 0.2 to 0.4 of a percent of GDP. Countries with better macroeconomic performance (measured

by real GDP growth), higher real GDP per capita, and a greater need for external financing also receive more inflows on a net basis.

Much of the impact of the decline in US interest rates on net flows stems from an increase in nonresident flows. A 100 basis points decline in the US government bond yield, on average, increases nonresident flows by about 0.3 to 0.5 of a percent of GDP. In addition, nonresident flows are significantly affected by international commodity prices, with a 10 percent increase in the commodity price index implying an increase in these flows by about 0.2 to 0.3 of a percent of GDP. Among domestic factors, there is some evidence that countries with greater trade openness, higher economic growth and per capita income, and better institutional quality attract more nonresident flows, while those with higher external debt receive fewer inflows.

The effect of global factors, however, depends on the type of flow. In general, US interest rates and commodity prices have a much stronger effect on inward direct investment than on other types of flows, while global market volatility has a statistically stronger effect on foreign portfolio flows (Figure 2.7). A 100 basis point reduction in the US government bond yield, for example, implies an increase of about 0.2 percent of GDP of FDI,

Figure 2.7. Sub-Saharan Africa: Impact of External Factors on Direct and Portfolio Investment Liability Flows (Percent of GDP)



Source: IMF staff estimates.

Note: Bars in panels 1 and 2 show the estimated increase in direct and portfolio investment liability flows, respectively, for a 100 basis point decline in the 10-year US government bond yield, a 10 percent increase in the international commodity price index, and a 1 standard deviation shock to the global market volatility index. Estimates obtained from a regression of flows (percent of GDP) on external factors and domestic factors (lagged current account balance to GDP, lagged trade openness, log real GDP per capita, real GDP growth, de facto exchange rate regime, and country-fixed effects.) See Annex Table 2.1.5. ***, **, and * indicate statistical significance of the variable at the 1, 5, and 10 percent levels, respectively.

¹⁰ See the transition probabilities presented in Annex Table 2.1.1. For emerging market economies, FDI is the most stable type of flow, while other investment flows are the most volatile (and documented to be associated with a significantly higher likelihood of financial crises).

¹¹ See Annex 2.1 for technical details and additional results.

but about 0.03 of a percent of GDP increase in foreign portfolio investment to sub-Saharan Africa. By contrast, a one standard deviation shock to the global market volatility index reduces portfolio flows to sub-Saharan Africa by about 0.1 percent of GDP but has no statistically significant effect on FDI.

Surges and Reversals

As described above, the frequency of foreign capital inflow surges to sub-Saharan Africa has increased over time. What factors influence the probability of experiencing such large inflow episodes, as well as their reversal? The results highlight the importance of global factors, though the effect is not necessarily symmetric on surge and reversal occurrence (Annex Table 2.1.6). A 100 basis point increase in the US interest rate around the mean value, for example, lowers the likelihood of the occurrence of an inflow surge by about 2 percentage points, and raises the likelihood of a large reversal by 2 percentage points (against an unconditional surge and reversal probability of about 20 percent in the estimated sample; see Figure 2.8). An increase in international commodity prices, however, has a strong impact on the likelihood of a surge across sub-Saharan Africa countries, but only has a statistically significant effect on the probability of a reversal in resource-intensive-countries. When compared to emerging market economies, these results are generally similar, except for the statistically muted effect of global market volatility on surge occurrence and reversal (which is typically strongly associated with surges and reversals in emerging market economies,

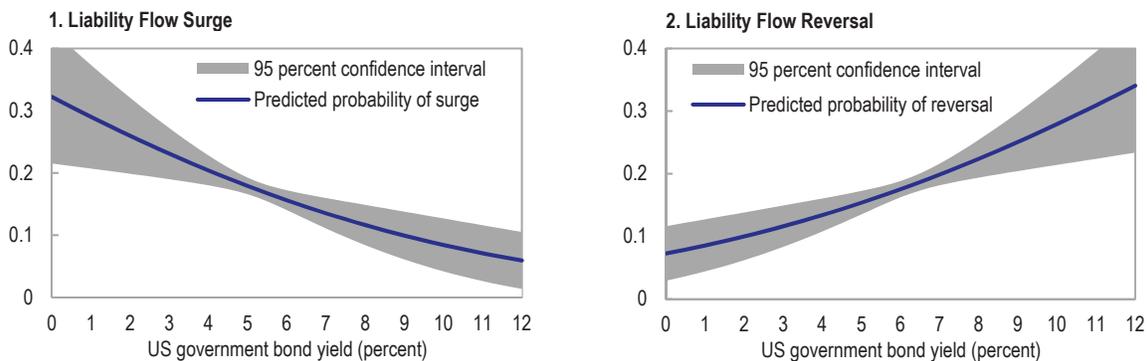
perhaps because of a much larger share of portfolio equity flows in these countries; Qureshi and Sugawara, 2018).

Among other factors, higher real GDP growth, better institutional quality, and more flexible exchange rate regimes increase the likelihood of experiencing an inflow surge, and lower the likelihood of a sudden reversal of foreign capital (Figure 2.9). The finding of more flexible exchange rate regimes experiencing a higher surge likelihood in sub-Saharan Africa is in contrast to the existing evidence for emerging market economies, which shows that countries with fixed exchange rate regimes receive larger inflows, presumably because of lower currency risk (Ghosh and others 2014; Magud, Reinhart, and Vesperoni 2014; Obstfeld, Ostry, and Qureshi 2018).

Global Financial Cycle and Sub-Saharan Africa

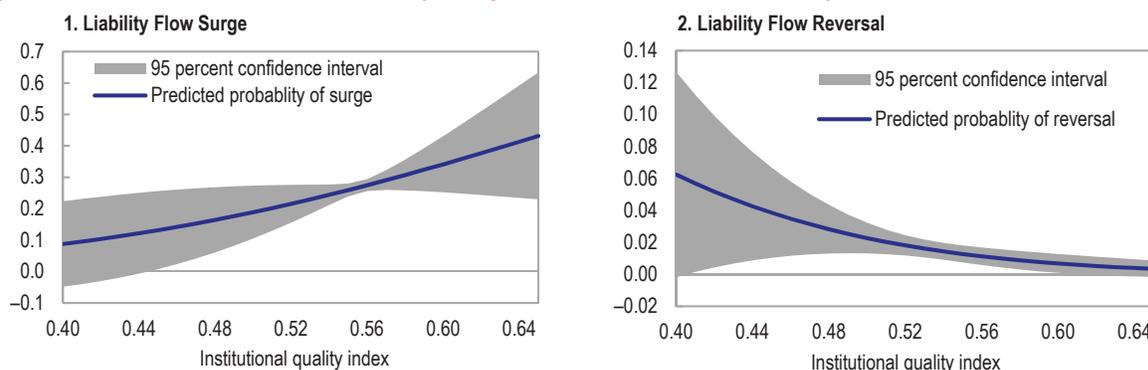
Global factors are thus an important driver of capital flows to sub-Saharan Africa—but how closely is the region connected to the “global financial cycle,” defined as the co-movement in global and domestic financial conditions across countries (Rey 2013)? To explore this question, high-frequency monthly data on investor fund flows (specifically, bond and equity flows) and asset prices (bond yields and stock returns) are analyzed. Those data are available for a sub-sample of sub-Saharan African countries (listed in Annex Table 2.1.2) over 2000–17. Using these data, the analysis reveals that global factors such as US interest rates, global risk appetite (proxied by the VIX index),

Figure 2.8. Sub-Saharan Africa: Predicted Probability of Surge and Reversal and US Interest Rate



Source: IMF staff estimates.

Notes: Panels 1 and 2 show the predicted probability of experiencing a liability flow surge and large reversal, respectively, at different levels of US government bond yield around the mean, obtained from a probit model controlling for other external factors (commodity prices; S&P 500 index volatility) and domestic factors (lagged current account balance to GDP, lagged trade openness, log real GDP per capita, real GDP growth, de facto exchange rate regime, external debt to GDP, international reserves to GDP, and country-fixed effects).

Figure 2.9. Sub-Saharan Africa: Predicted Probability of Surge and Reversal and Institutional Quality

Source: IMF staff estimates.

Notes: Panels 1 and 2 show the predicted probability of experiencing a liability flow surge and large reversal, respectively, at different levels of the institutional quality index around the mean, obtained from a probit model controlling for external factors (US interest rate; commodity prices; S&P 500 index volatility) and domestic factors (lagged current account balance to GDP, lagged trade openness, log real GDP per capita, real GDP growth, de facto exchange rate regime, external debt to GDP, international reserves to GDP, and country-fixed effects).

and commodity prices affect bond and equity fund flows, but also bond yields and stock prices in sub-Saharan Africa. A one standard deviation shock to the VIX index (in log terms), on average, reduces fund flows by about 0.4 of a percent of GDP, increases bond yields by about 20 basis points, and lowers real stock returns by about 2 percentage points (Figure 2.10). Similarly, a 100 basis point increase in the US government bond yield is, on average, associated with a reduction in fund flows of about 1 percent of GDP, a proportionate increase in bond yields, and a decline in real stock returns by about 1 percentage point.

Notably, these effects are similar to those for emerging market economies (except for commodity prices, which have a significantly larger effect on flows and asset prices in sub-Saharan Africa than in the emerging market economies sample, perhaps because of a fewer number of commodity exporters in that sample). In addition, the sensitivity of both fund flows and asset prices to global factors has generally increased since the global financial crisis (Figure 2.11). For example, a 100 basis point increase in the US government bond yield had a statistically negligible impact on fund flows and bond yields before the crisis, but it has implied a reduction in flows of about 1 percent of GDP and a rise in bond yields of about 115 basis points since the crisis. These results suggest that sub-Saharan Africa has become increasingly connected with the global financial cycle, with domestic financial conditions in the region (as captured by asset prices) moving in tandem with global financial conditions.

MACROECONOMIC CONSEQUENCES OF CAPITAL INFLOWS

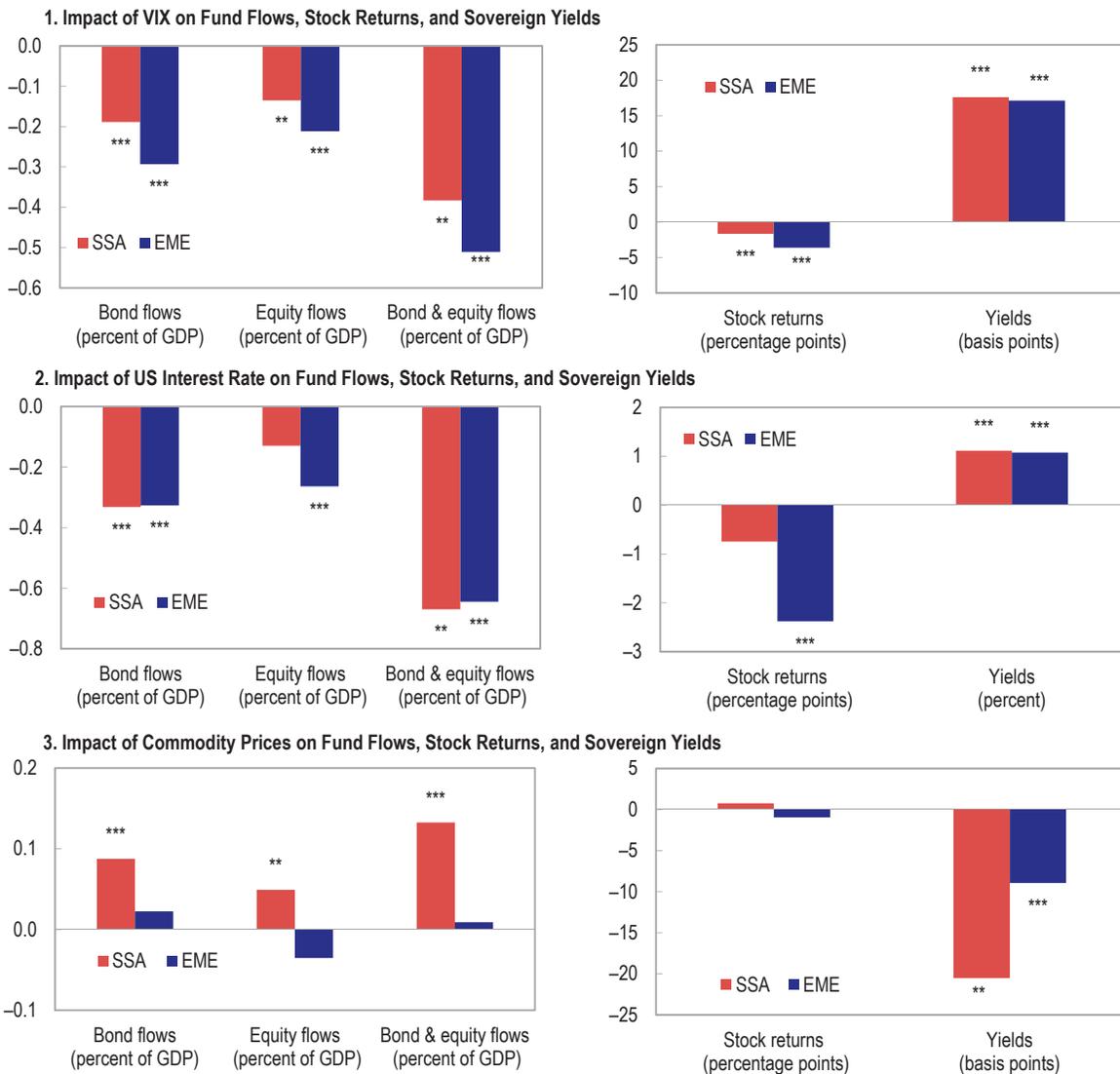
The volatility of capital flows can pose challenges for macroeconomic management when flows surge, but especially when they recede. Recent studies in the context of emerging market economies have shown that the way in which surge episodes are managed has an important bearing on how they end: limiting macroeconomic and financial vulnerabilities during inflow booms can significantly reduce the likelihood of a hard landing when global financial conditions become less conducive (Ghosh, Ostry, and Qureshi 2016). Understanding the macroeconomic implications of inflows to sub-Saharan Africa is thus important to identify the policy tools to mitigate the risks and maximize their potential benefits.

The domestic impact of financial flows, however, may depend on the type of flow. Previous studies in the context of emerging market economies generally show that portfolio and other investment flows are the most prone to creating macroeconomic imbalances and financial vulnerabilities—such as economic overheating, currency overvaluation that may hurt the tradable sector and undermine competitiveness, and excessive credit growth—while FDI is the least risky (see Combes, Kinda, and Plane 2012; Caballero 2016; Ghosh and Qureshi 2016). For sub-Saharan Africa, our results show that, on average, nonresident portfolio flows tend to move the real exchange rate and output above trend (variables typically used as proxies for currency overvaluation and economic

overheating, respectively) and also fuel credit growth. A 1 percent of GDP increase in portfolio inflows is thus associated with a 0.3 of a percentage point larger real exchange rate appreciation relative to the trend, a 0.2 of a percentage point wider gap between the real output and trend, and a 0.1 percent of GDP increase in credit to the private sector (Figure 2.12).

These vulnerabilities—currency overvaluation, economic overheating, and rapid credit growth—are typically associated with an increased likelihood of a financial crisis (Gournichas and Obstfeld 2012; Ghosh, Ostry, and Qureshi 2015). Given the generally low level of financial development in sub-Saharan Africa, the expansion of domestic credit could be viewed as a positive development (reflecting an increase in access to financial services) rather than as a potential source of

Figure 2.10. Sub-Saharan Africa and Emerging Markets: Impact of Global Factors, 2000M1–17M12



Source: IMF staff estimates.

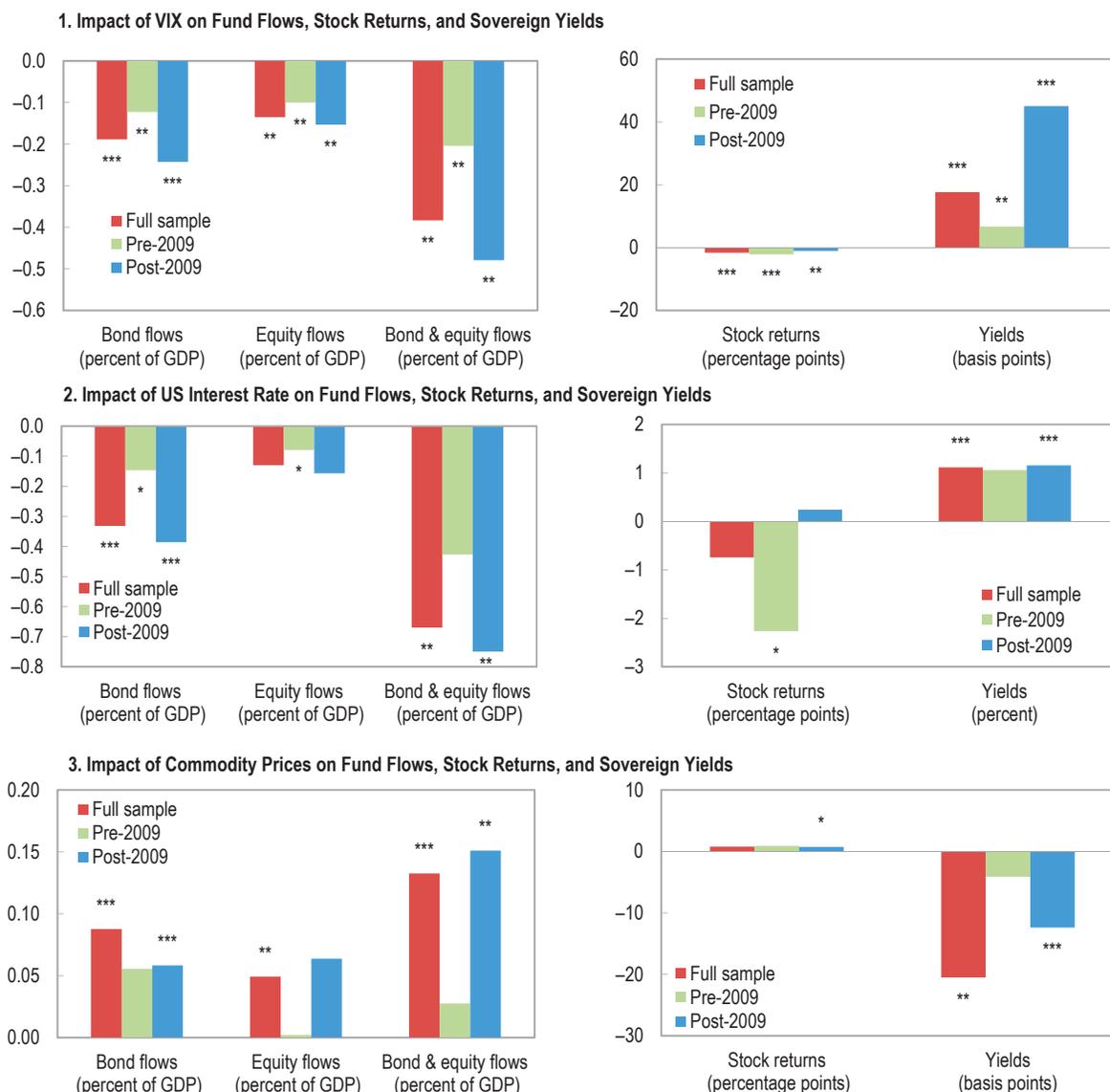
Note: Panel 1 computes the estimated impact of a 1 standard deviation increase in the (log) VIX; panel 2 shows the estimated impact of a 100 basis point increase in the US 10-year government bond yield; and panel 3 shows the impact of a 1 standard deviation increase in the (log) commodity price index. ***, **, and * indicate statistical significance of the variable at the 1, 5, and 10 percent levels, respectively. EME = emerging market economies; SSA = sub-Saharan Africa; VIX = CBOE Volatility Index.

financial instability. It does however emphasize the critical role of effective credit risk monitoring and management capacity of the financial sector.¹²

While portfolio flows may create macroeconomic challenges, there is little evidence that they are, on average, significantly associated with domestic

investment (public or private) or economic growth in sub-Saharan Africa. These flows, however, appear to be positively associated with public consumption (including social spending) in sub-Saharan Africa countries. By contrast, FDI is strongly associated with both private and total investment, with a 1 percent of GDP increase in FDI implying about

Figure 2.11. Sub-Saharan Africa: Pre and Post-Global Financial Crisis Impact of Global Factors, 2000M1–17M12



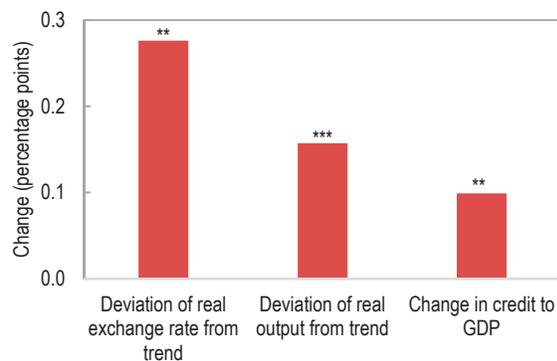
Source: IMF staff estimates.

Notes: Panel 1 computes the estimated impact of a 1 standard deviation increase in the (log) VIX; panel 2 shows the estimated impact of a 100 basis point increase in the US 10-year government bond yield; and panel 3 shows the impact of a one standard deviation increase in the (log) commodity price index. ***, **, and * indicate statistical significance of the variable at the 1, 5, and 10 percent levels, respectively. SSA = sub-Saharan Africa; VIX = CBOE Volatility Index

¹² The key threats to financial stability from rapid credit expansion in low-income countries emanate from the erosion of asset quality, excessive exposure to specific sectors, and political lending (IMF 2014).

a 0.5 of a percentage point higher investment ratio (Figure 2.13).¹³ In addition, there is some evidence that the strong effect of FDI on domestic investment in turn translates into a positive association between FDI and economic growth—specifically, a 1 percent of GDP higher level of FDI lifts the short-run economic growth rate by about 0.1 of a percentage point. Among other factors, an improvement in terms of trade, greater trade openness, and lower levels of public debt are also significantly associated with higher growth prospects.¹⁴

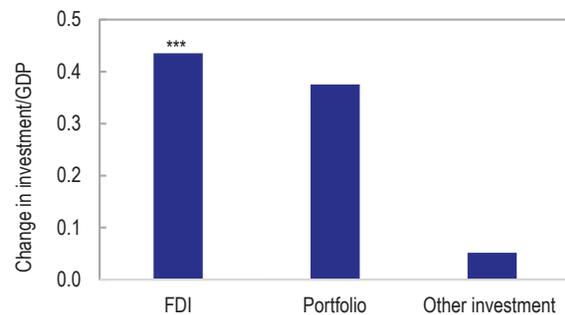
Figure 2.12. Sub-Saharan Africa: Macroeconomic Consequences of Portfolio Inflows (Percentage points)



Source: IMF staff estimates.

Note: Estimates are based on the results reported in Annex Table 2.1.11. ***, **, and * indicate statistical significance of the variable at the 1, 5, and 10 percent levels, respectively.

Figure 2.13. Sub-Saharan Africa: Impact of Liability Flows on Domestic Investment (Percentage points)



Source: IMF staff estimates.

Note: Estimates are based on the results reported in Annex Table 2.1.12. ***, **, and * indicate statistical significance of the variable at the 1, 5, and 10 percent levels, respectively. FDI = foreign direct investment.

CONCLUSION

Nonofficial capital flows to sub-Saharan Africa have increased sharply since the global financial crisis. While these flows can offer myriad benefits, they also carry risks. Much of this increase has been driven by liability (nonresident) flows, which tend to be more volatile than asset (domestic resident) flows.

Global factors—notably, US interest rates and commodity prices—are important in explaining the dynamics of financial flows to sub-Saharan Africa. However, the relative importance of these factors depends on the type of flow. In general, portfolio flows are more sensitive to global market volatility, while FDI appears to respond more to global interest rates and commodity prices. Domestic factors also matter: countries with strong macroeconomic performance, greater trade openness, and better institutional quality tend to receive more inflows, and are less likely to experience large foreign investment reversals.

In terms of the macroeconomic consequences of foreign inflows, portfolio flows appear to be more prone to generating macroeconomic vulnerabilities such as deviation of the real exchange rate and output from trend, as well as with faster credit growth, while there is no strong evidence that these have been statistically significantly associated with domestic investment or economic growth. Portfolio flows do, however, appear to be associated with an increase in public consumption (including social spending). By contrast, FDI appears to directly spur domestic investment, and in turn promote economic growth.

These findings indicate a complex relationship between external finance, domestic macroeconomic stability, and investment and economic growth in sub-Saharan Africa. On the one hand, the region needs nonofficial external capital to fill the resource gap and promote economic development; while on

¹³ These results are robust to using five-year averages of the variables to address serial-correlation concerns, as well as to using instrumental variable methodology where flows to the region (percent of regional GDP) are used as an instrumental variable. See Annex 2.1 for details.

¹⁴ These estimates are obtained from annual panel data—the association between FDI and economic growth statistically weakens when using five-year averages of the variables (see Annex 2.1 for details). More generally, the finding of a statistically weak association between portfolio flows and economic growth does not necessarily imply that a reversal of such flows would be inconsequential. A large reversal of these flows could, for example, lead to currency depreciation pressures and a spike in interest rates with attendant consequences for economic stability and growth.

the other, the fickle nature of such capital makes it a less reliable—and potentially risky—source of finance. This trade-off puts a premium on the careful management of capital flows, which should take into account the nature of the capital (FDI, portfolio, loans, etc.), its domestic use and impact, and the type of investor and borrower.

Thus, to the extent that sub-Saharan Africa sovereigns are tapping international capital markets to finance development initiatives, policymakers need to be prudent and ensure that the borrowed resources are utilized effectively, enhance productivity, and promote economic growth. In attracting foreign capital, they also need to be mindful of the attendant consequences for exchange rates such as instability and misalignments that could hurt the tradable sector and undermine competitiveness. In this regard, structural policies to reduce nominal rigidities and facilitate real exchange rate adjustment could play a useful role, though in some cases foreign exchange intervention to limit currency overvaluation and build adequate reserve buffers may be warranted.

Vigilance is also warranted against economic overheating and the buildup of (private and public sector) balance sheet vulnerabilities to mitigate the risk of a hard landing when flows recede. Countercyclical macroeconomic and prudential policies should be adopted to limit such vulnerabilities and preserve debt sustainability. Improving the compilation and timeliness of balance of payments data is thus critical to monitor flows in real time, and to implement the desirable policy actions swiftly. Moreover, to the extent that FDI tends to be less prone to generating vulnerabilities, but more likely to energize private investment and growth, efforts should focus on attracting direct investment to the region through macroeconomic stability and an improved business climate. Strong domestic fundamentals are likely to become even more important in attracting capital going forward as global financial conditions may tighten with the normalization of monetary policy in advanced economies.

REFERENCES

- Aykut, D., A. Sanghi, and G. Kosmidou. 2017. "What to Do When Foreign Direct Investment is Not Direct or Foreign: FDI Round Tripping." Policy Research Working Paper 8046, World Bank, Washington, DC.
- Caballero, J. 2016. "Do Surges in International Capital Inflows Influence the Likelihood of Banking Crises?" *The Economic Journal* 126(591): 281–316.
- Calderon, C., N. Loayza, and L. Servén. 2004. "Greenfield Foreign Direct Investment and Mergers and Acquisitions—Feedback and Macroeconomic Effects." Policy Research Working Paper 3192, World Bank, Washington, DC.
- Combes, J., T. Kinda, and P. Plane. 2012. "Capital Flows, Exchange Rate Flexibility, and the Real Exchange Rate." *Journal of Macroeconomics* 34(4): 1034–043.
- Fofack, H., and L. Ndikumana. 2010. "Capital Flight Repatriation: Investigation of its Potential Gains for Sub-Saharan African Countries." *African Development Review* 22(1): 4–22.
- Forbes, K., and F. Warnock. 2012. "Capital Flow Waves: Surges, Stops, Flight, and Retrenchment." *Journal of International Economics* 88(2): 235–51.
- Ghosh, A., and M. Qureshi. 2016. "Capital Inflow Surges and Consequences." ADBI Working Paper 585, Asian Development Bank Institute, Tokyo.
- Ghosh, A., J. Ostry, and M. Qureshi. 2015. "Exchange Rate Management and Crisis Susceptibility: A Reassessment." *IMF Economic Review* 63(1): 238–76.
- Ghosh, A., J. Ostry, and M. Qureshi. 2016. "When Do Surges End in Tears?" *American Economic Review Papers and Proceedings* 106(5): 581–85.
- Ghosh, A., J. Ostry, and M. Qureshi. 2017. "Taming the Tide of Capital Flows: A Policy Guide." MIT Press, Cambridge, MA.
- Ghosh, A., M. Qureshi, J. Kim, and J. Zalduendo. 2014. "Surges." *Journal of International Economics* 92(2): 266–85.
- Gopalan, S., A. Ouyang, and R. Rajan. 2018. "Impact of Greenfield FDI versus M&A on Growth and Domestic Investment in Developing Asia." *Economia Politica: Journal of Analytical and Institutional Economics* 35(1): 41–70.
- Gourinchas, P., and M. Obstfeld. 2012. "Stories of the Twentieth Century for the Twenty-First." *American Economic Journal: Macroeconomics* 4(1): 226–65.
- International Monetary Fund (IMF). 2014. "Macroeconomic Developments in Low-Income Developing Countries." Washington, DC.
- Korinek, A. 2018. "Regulating Capital Flows to Emerging Markets: An Externality View." *Journal of International Economics* 111(C): 61–80.
- Magud, N., C. Reinhart, and E. Vesperoni. 2014. "Capital Inflows, Exchange Rate Flexibility and Credit Booms." *Review of Development Economics* 18(3): 415–30.
- Ndikumana, L., and J. Boyce. 2003. "Public Debts and Private Assets: Explaining Capital Flight from Sub-Saharan African Countries." *World Development* 31(1): 107–30.
- Obstfeld, M., J. Ostry, and M. Qureshi. 2017. "A Tie that Binds: Revisiting the Trilemma in Emerging Market Economies." IMF Working Paper 7/130, Washington, DC.
- Qureshi, M., and N. Sugawara. 2018. "Surges and Reversals in Capital Flows." *International Review of Economics & Finance* 56(C): 92–98.
- Rey, H. 2013. "Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence." Proceedings Federal Reserve Bank of Kansas City Economic Policy Symposium, Jackson Hole, 285–333.
- United Nations Conference on Trade and Development (UNCTAD). 2017. *World Investment Report*. Geneva.

Note: Annex with additional figures and results for this chapter is available online. International Monetary Fund (IMF). 2018. Chapter 2, Background Paper, *Regional Economic Outlook: Sub-Saharan Africa*. Washington, DC, October. <https://www.imf/en/Publications/REO/SSA/Issues/2018/09/20/sreo1018>