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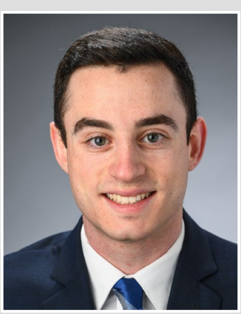

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Assessing Sub-Saharan Africa's Long-Term Growth Upside

While emerging market (EM) local bond markets have attracted foreign interest in recent months, the real debt burden for much of Sub-Saharan Africa (SSA) lies in external foreign currency debt. The question of whether SSA is headed towards another external debt crisis is of growing debate amongst investors, international organizations, and policymakers. Some have even argued for a HIPC 2.0 , or a subsequent round of debt restructuring.[1,2] We addressed this issue in a previous paper, "Africa's Rising External Debt: A Tempest in a Teapot?" and concluded that, for the time being, we do not see a regional debt crisis looming. As such, we believe SSA bonds remain an attractive asset class.

In this paper, we analyze the medium- to long-term growth outlook for the region, recognizing that growth is a crucial component of debt sustainability. We begin by assessing key longstanding features of SSA economies. We then examine economic dependence on commodity exports across the region more closely, as well as other structural issues that influence SSA's growth outlook.

On net, we remain constructive on the long-term growth outlook for the region due to structural factors such as a growing population, better macroeconomic policies, and some improvement in the business environment. Challenges abound, though, in the areas of climate change, availability of high-quality jobs, corruption, and low monetization of the economy, which negatively affects savings and tax collection. Dependence on commodity exports has not adversely impacted headline growth, but in some cases, standard of living improvements have been disappointingly slow despite these strong growth rates.

An Overview of SSA Growth

SSA has averaged 3.6% real annual growth over the past decade, down from 5.1% over the preceding 10-year period. Private consumption has been the strongest growth driver since 2009, contributing 2.3 percentage points (pps) on average annually over the period (Figure 1). The rise of private consumption has been driven by improved economic conditions and the subsequent rise of the African middle class, which, while positive on net, has also led to persistent current account deficits through dependence on imported consumer goods.[3] Following private consumption, gross capital formation (0.8 pps), public consumption (0.4 pps), and net exports (0.2 pps) have averaged smaller albeit positive contributions over this same horizon.

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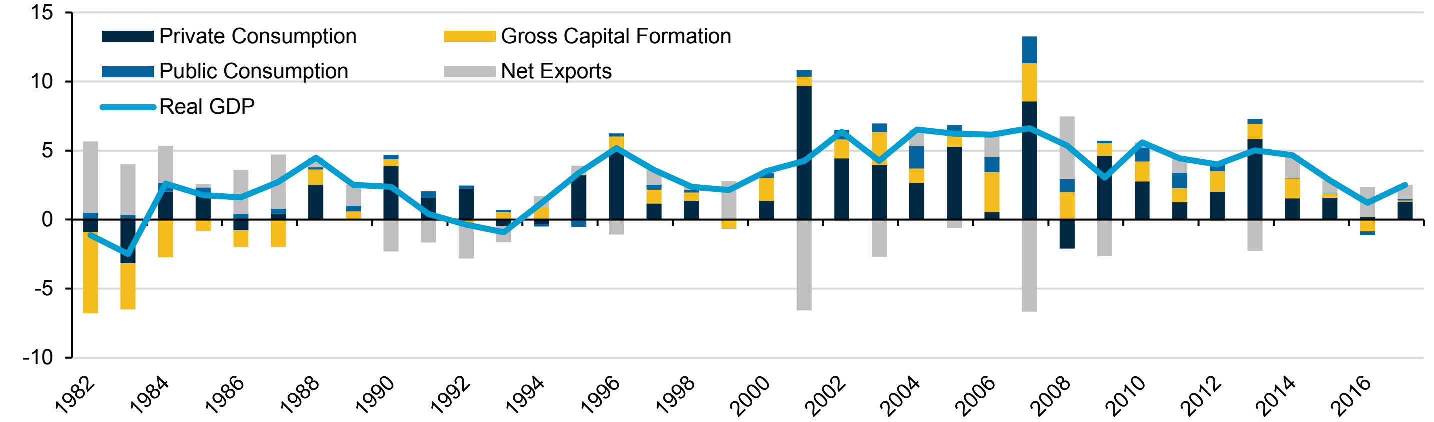
[1] In 1996, the IMF and World Bank launched the Heavily Indebted Poor Countries (HIPC) Initiative. This program aimed to reduce the debt burdens of poor countries to manageable levels, providing $76 billion in debt-service relief to over 30 countries. https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/11/Debt-Relief-Under-the-Heavily-Indebted-Poor-Countries-Initiative.

[2] "Africa's Rising External Debt: A Tempest in a Teapot?," PGIM Fixed Income, January 2019.

[3] On the rise of the African middle class, see, for example: Richard Dowden, The African Middle Class?, Royal African Society, May 31, 2019, http://royalafricansociety.org/blog/african-middle-class

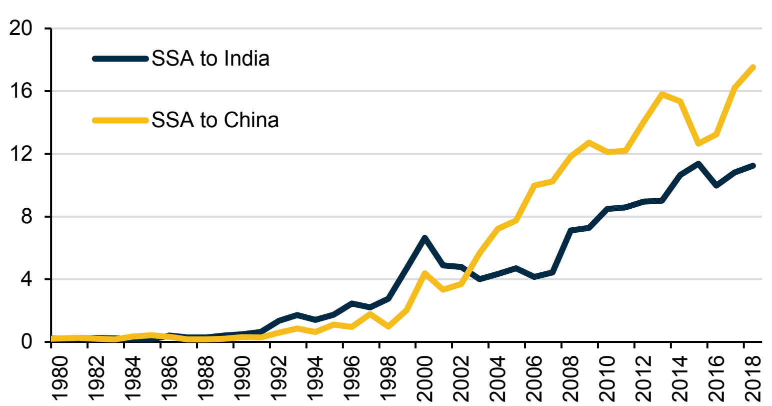
Figure 1: SSA Contribution to Real GDP Growth (% Year-Over-Year)



Source: World Bank, Haver, and PGIM Fixed Income from January 1982 to December 2017.

Net export contribution is particularly important as this channel integrates SSA countries into the world economy and provides foreign currency to service their external debts. International trade more generally is one of the determinants of long-run economic growth, as countries open to trade gain access to a wider variety of products and technologies. For example, outward-oriented pro-trade policies were key drivers of growth for emerging Asian countries over the latter half of the 20th century, especially compared to the relatively closed economies of SSA and Latin America. Over more recent decades, SSA has become integrated into international markets thanks to tariff reductions, increasing roles of large developing countries in the global economy, and long-lasting commodity price booms.[4]

Figure 2: SSA Goods Exports to India and China (% of Total Goods Exports)



Source: International Monetary Fund, from January 1970 to December 2018.

A longstanding feature of SSA economies is a dependence on commodity exports, which is typically associated with susceptibility to terms of trade shocks and difficulty achieving broad-based economic growth.[5] For example, SSA's large net-export detraction in 2001 mirrored sharp annual declines in energy and metals prices. SSA commodity exports have also become relatively concentrated in a few key trade partners, further increasing exposure to demand shocks when these partners experience downturns.

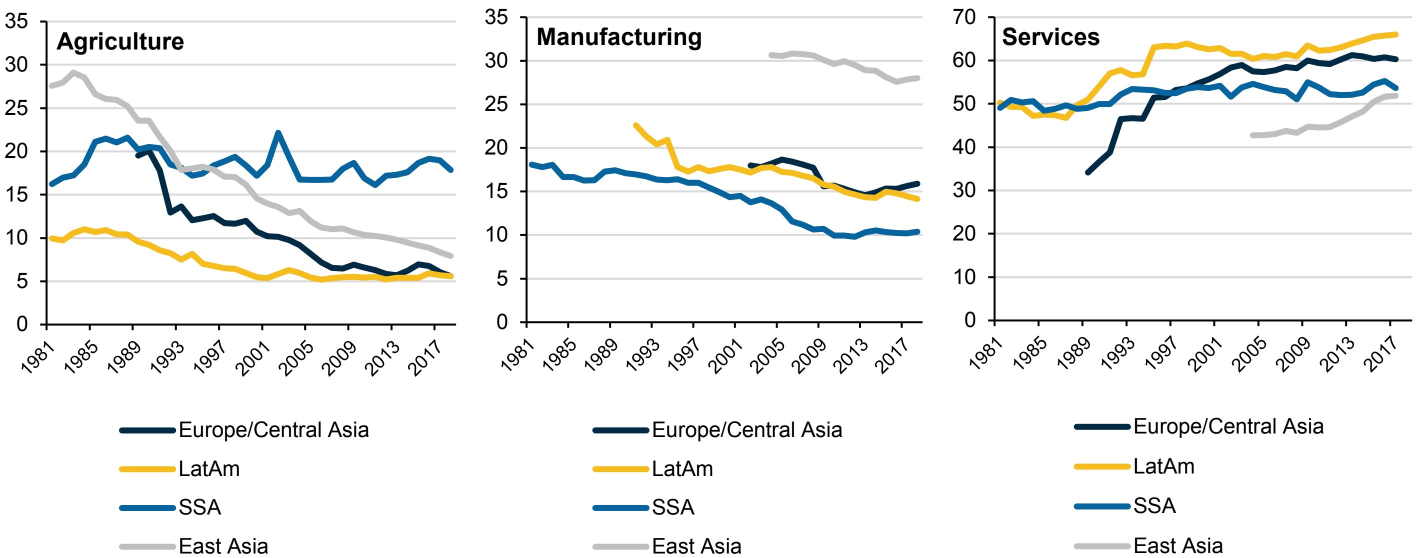
More specifically, SSA goods exports to China and India have risen substantially over the past three decades (Figure 2), with exports to China surpassing those to India in 2003. The degree of concentration in these trade partners, though, varies by country; for example, fuel exporters (Angola, Nigeria) tend to exhibit more dependence on China and India than food exporters (Côte d'Ivoire, Kenya, Senegal.)

Due, in part, to this longstanding dependence on commodity exports, SSA's economic development model has contrasted with that of other developing regions. Regional production shares tend to shift from agriculture to industry and/or services as economies develop and become more integrated. Compared to other developing countries, SSA is the only region with an increasing agricultural share of the economy (Figure 3); its 2018 share is actually above that of 1981 (17.8% vs. 16.2%, respectively). Additionally, its manufacturing and services shares lag most peers on both a level and trend basis. Broadly speaking, since price volatility in the agricultural sector tends to be higher than that in the manufacturing or service sectors, this growth model can impair the ability of countries to meet external debt obligations.

[4] *See United Nations Conference on Trade and Development report (2016) for more details.*

[5] *See Sacks, Davis S.; Fraser, Simon; O'Rourke, Kevin H.; Williamson, Jeffrey G. (2009), "Commodity Price Volatility and World Market Integration since 1700" and the references therein.*

Figure 3: Agriculture, Manufacturing, and Services Shares (% of Nominal Gross Value Added)



Note: Above figures only look at developing countries within each region. Regional shares between charts will not sum to 100 because manufacturing is a subset of industry shares. Aggregates are constructed by the World Bank. Source: World Bank, Haver, PGIM Fixed Income from January 1981 to December 2018.

Still, the cumulative growth of real GDP since 1990 in SSA has been similar to that of other developing regions (excluding emerging Asia, which has had experienced considerably faster growth). Given that common long-term growth constraints (e.g., low levels of infrastructure investment, electrification, and domestic revenue mobilization, due in large part to corruption and ineffective government policies) are more prominent in SSA than in other emerging regions, achieving a similar growth performance is an impressive result. Additionally, the region's quickly growing population yields an abundant supply of labor, yet it remains to be seen whether this can be channeled to more productivity-enhancing sectors of the economy. Consequently, it is difficult to say whether the living standards of the average SSA individual have improved significantly in recent decades: real per capita income growth has averaged a disappointing 0.7% per year since 1980[6], much lower than in other regions, but non-monetary indicators like life expectancy and school enrollment have improved noticeably.

In subsequent sections, we examine the relationship between commodity exports and the determinants of longer-term growth in more detail. We narrow our focus to the subset of SSA commodity-exporting countries included in the JP Morgan Emerging Markets Bond Index Global Diversified (EMBIGD). The long-term growth outlook and debt sustainability of this subset is presumably of greater interest because many EM hard currency portfolios are benchmarked to this index. For comparison purposes, we include Ecuador and Mongolia—two non-African commodity exporting emerging markets—in our sample, as well.

A Closer Look at Commodity Dependence

SSA exporters, like all commodity exporters, are vulnerable to Dutch disease,[7] corruption, white elephant expenses and, ultimately, booms and busts that, in turn, require debt reprofiling or restructuring. Accordingly, it is appropriate to start our analysis with a high-level look at commodity dependence.

Per the United Nations, a country is considered to be export-commodity dependent when more than 60% of its total goods exports are composed of commodities.[8] Interestingly, almost all SSA countries in the JP Morgan EMBIGD Index meet this threshold[9] and have not made significant strides over the past two decades in diversifying away from commodity exports (see Figure 4, with a 45-degree line superimposed). The pervasiveness of this dependence reflects the prevalence of natural resources in the region. Accordingly, this endowment is the competitive advantage through which these countries integrate themselves into the global economy.

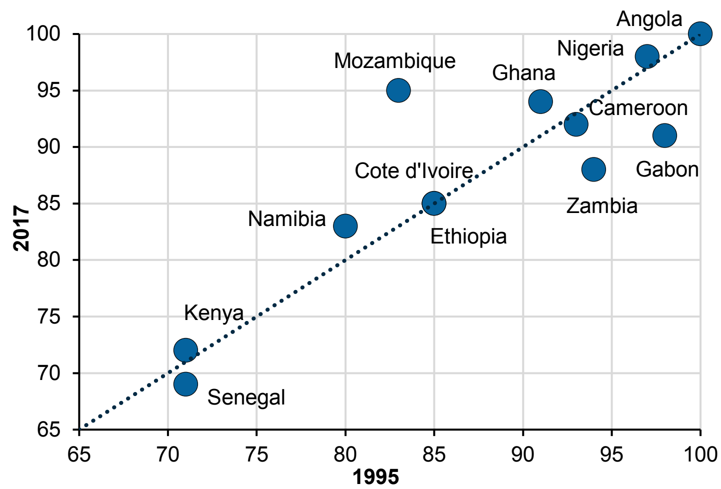
[6] *Based on 2011 international dollars, per the International Monetary Fund's October 2019 World Economic Outlook.*

[7] *Dutch disease refers to the appreciation of a nation's currency associated with a natural resource discovery, which diminishes non-resource export competitiveness.*

[8] *Source: United Nations State of Commodity Dependence report, May 2019. https://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=2439*

[9] *While South Africa is included in the JPMorgan EMBIGD Index, we excluded it from our sample because it just misses the United Nation's 60% threshold.*

Figure 4: Sample SSA Countries' Commodity Exports (% of Total Goods Exports)

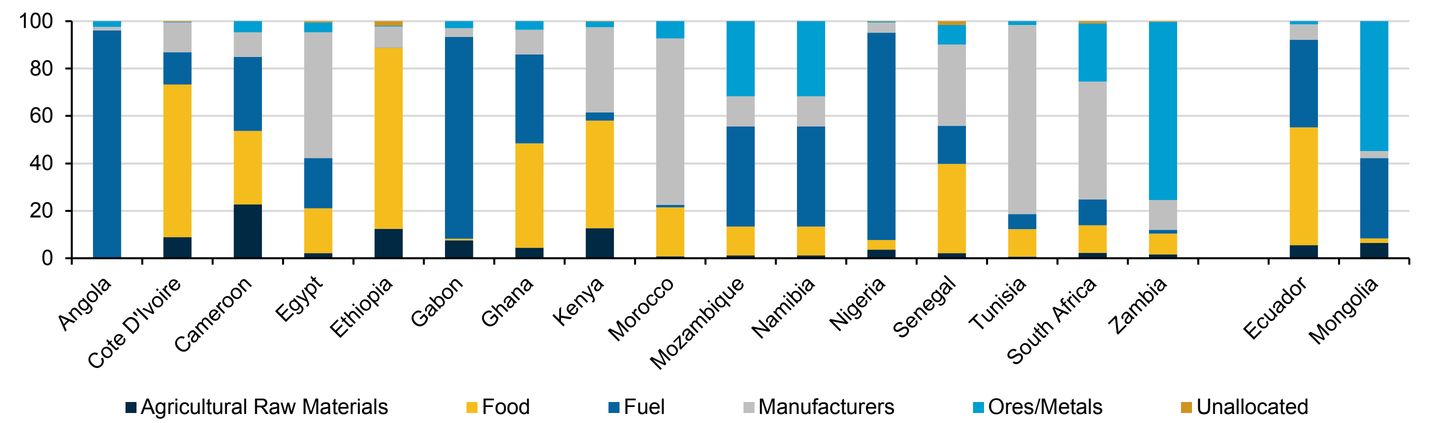


Source: United Nations as of December 2017.

While the aggregate picture reflects broad-based commodity dependence, there is considerable heterogeneity in commodity specialization across countries (Figure 5). For example, Angola's and Nigeria's merchandise exports are concentrated in fuel, Ethiopia's and Cote D'Ivoire's are concentrated in food products, and Zambia's are concentrated in ores/metals. Countries with exports heavily concentrated in a single product are naturally at a higher risk of experiencing fluctuations in their export receipts.

Different commodities face disparate market structures as well (i.e., oil and OPEC's influence as opposed to agricultural commodities) and consequently experience unique price volatilities. Idiosyncratic factors also affect the supply of commodities differently, as agricultural commodities are exposed to climate volatility while oil is exposed to geopolitical tensions. Ultimately, though, the world economic cycle tends to act as a common factor in the pricing of all commodities by affecting global aggregate demand.

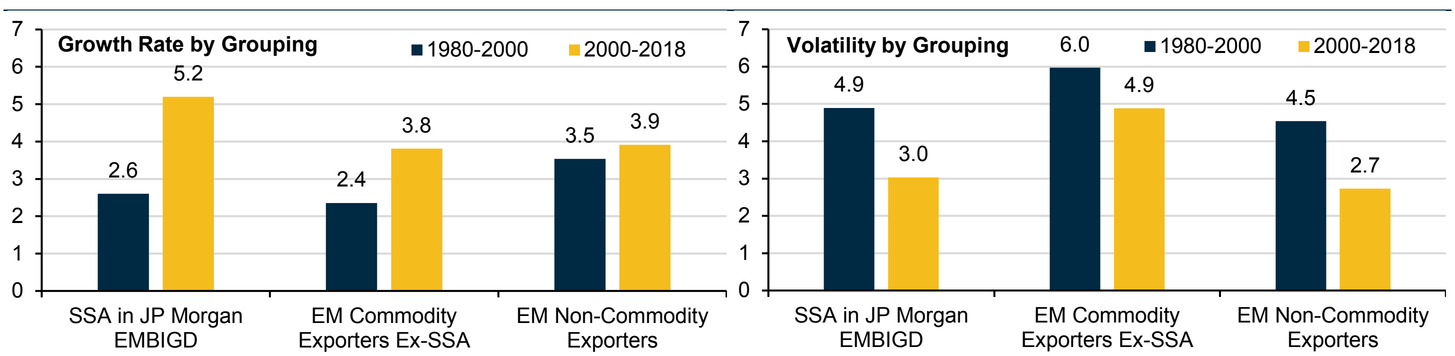
Figure 5: Sample SSA Countries' Composition of Goods Exports (3-Year Averages)



Source: Haver, World Bank as of December 2018.

How has commodity dependence affected growth and its corresponding volatility? Figure 6 shows the growth of our SSA EMBIGD subset compared to other emerging markets, distinguishing commodity exporters from non-commodity exporters. On average, the SSA subset achieved higher growth rates than its peers in the 2000s (Figure 6, left), with lower or similar growth volatility (Figure 6, right).

Figure 6: Real GDP—Growth Rate by Grouping and Volatility by Grouping (%)



Sources: International Monetary Fund and PGIM Fixed Income as of December 2018.

It is important to recognize that growth volatility in developing countries need not emanate *exclusively* from commodity price swings. Indeed, political events, sanctions, or other idiosyncratic factors can also drive volatility across emerging markets. This begs the question of whether skepticism towards SSA commodity exporters is justified, on the margin, relative to non-commodity exporting peers.

The real issue is whether the region's higher growth rates can persist, on average, moving forward. In the following sections, we examine what we deem to be important long-term, structural growth factors for SSA, including policies that have already been adopted to support economic development.

Long-Term Growth and Factors of Production

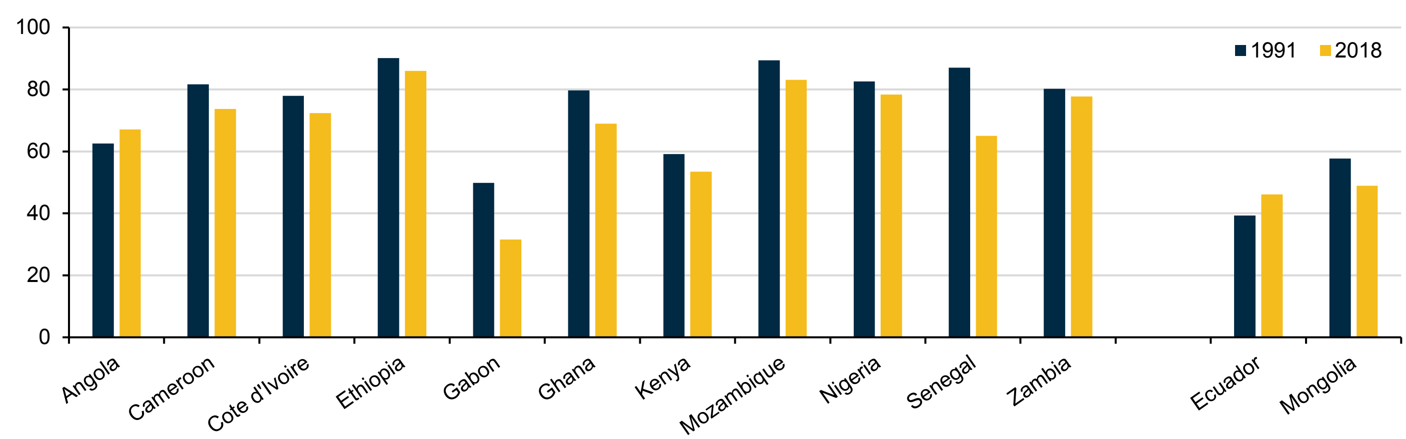
Textbook theories of economic growth center around the Solow growth model, where long-run growth is a function of changes in the labor force, capital stock, and exogenous technological innovations. Key contributors to these factors include changes in human capital (through a more educated workforce), political and government initiatives (through more stable policies that incentivize investment and foster effective revenue mobilization), and international trade (through specialization and access to new technologies developed abroad). Below, we look at each of these factors in more detail.

Population and Labor Force Growth

All countries in our SSA sample have strong population growth rates, particularly compared to more developed countries. This growth in population offers simultaneous opportunities and challenges. Opportunities include a more abundant labor supply and higher potential output, although the relationship between working-age population growth and real GDP growth is stronger for more developed countries.[10] Challenges include higher youth unemployment, which represents an inefficient allocation of resources, and downward pressure on real wages. Overall, managing job creation in the face of this population growth will be critical for SSA from both an economic and sociopolitical perspective.

A related challenge is improving the quality of employment opportunities. SSA has the highest rate of vulnerable employment of any regional aggregate, which encompasses workers who are less likely to have formal work arrangements. Informal work arrangements are associated with lower-quality employment opportunities and "act as a constraint not only to improving employment conditions, but also to growing labor productivity and increasing economic development in the region" (ILO World Employment Social Outlook, 2018). This partially reflects the region's commodity-centric economic development model, where employment opportunities tend to be concentrated in the agricultural sector, as well as the absence of policies to help low-income earners or encourage pursuit of better opportunities. For example, most SSA countries do not offer unemployment benefits. Of course, these jobs still represent sources of income for much of the working poor, and the conversion to more formal employment opportunities could price the more vulnerable workers out of jobs. Additionally, while the levels of vulnerable employment are high, we have seen these percentages decrease over the long-term horizon for almost all SSA countries in our sample (Figure 7).

Figure 7: Sample SSA Countries' Vulnerable Employment (% of Total Employment)



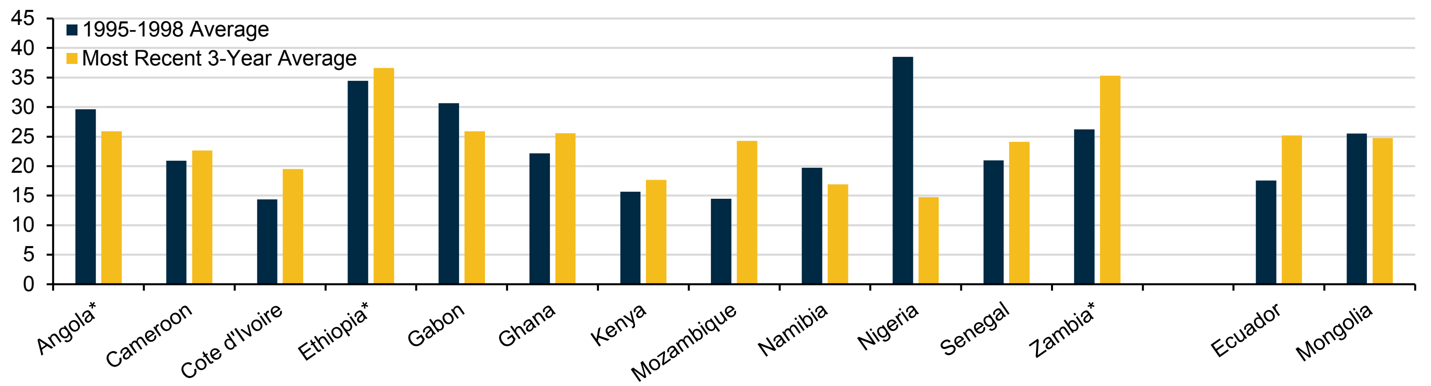
[10] One hypothesis is that growth in emerging economies is driven by an array of (potentially) volatile economic factors, policies, and shocks. See "The Economics of Global Aging: Grey Skies, Rays of Policy Hope?" PGIM Fixed Income, December 2018.

Source: World Bank and Haver as of December 2018.

Capital and Investment

A growing labor force cannot be absorbed if active labor policies are absent or if there are no investments that create job opportunities. While the propensity to invest across our sample varies, rates are similar to representative frontier markets in Asia and Latin America (Figure 8). Investment has risen in recent years across most of our panel. Furthermore, investment across SSA is often publicly, rather than privately, funded. This is due to a variety of reasons including imperfect domestic credit markets and a combination of laws, regulations, and independence of regulators that negatively affect the business environment.

Figure 8: Gross Fixed Capital Formations (% of GDP)



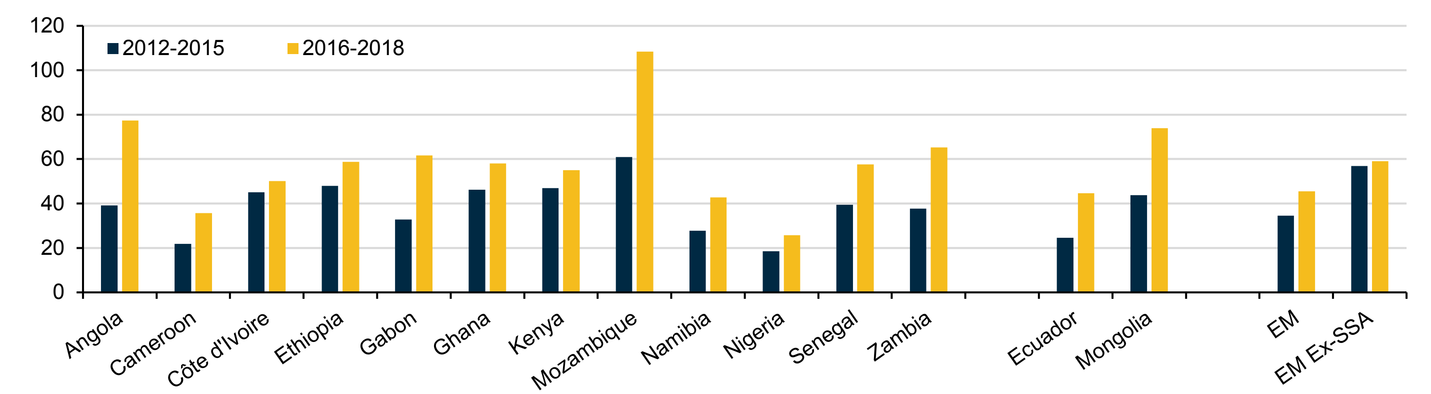
Due to data availability, the blue bars show the following periods: Angola 2000-2002, Ethiopia 2011-2013, and Zambia 2010-2012. Sources: World Bank and Haver as of December 2018.

Investments need to be financed and domestic savings in SSA are either not large enough or not easy to mobilize, or both. SSA countries have notoriously lower tax revenues as a percentage of GDP than other emerging markets, as shown in our previous SSA paper,[11] and their revenues often depend on volatile commodity related income. Furthermore, the presence of a large informal sector in many countries lowers the government's potential revenue intake, thus negatively impacting public savings. Likewise, the informal economy is often not based on monetary transactions, and the low level of monetization affects the mobilization of private savings.

Fiscal and Monetary Policies

In addition to economic diversification and factor endowments, sustainable growth depends on sound economic policies. Fiscal prudence is essential in this region, especially in light of deteriorating savings gaps and rising government debt post-HIPC initiative (Figure 9). In some cases, like Mozambique and Angola, the increase in public debt since 2012 has been significant, but their fiscal stance in recent years appears to be more careful than in the past. Of course, this does not mean that their debt is sustainable nor that it is without risk.

Figure 9: Gross Public Debt to GDP (%; 2016-2018 Average vs. 2012-2015 Average)



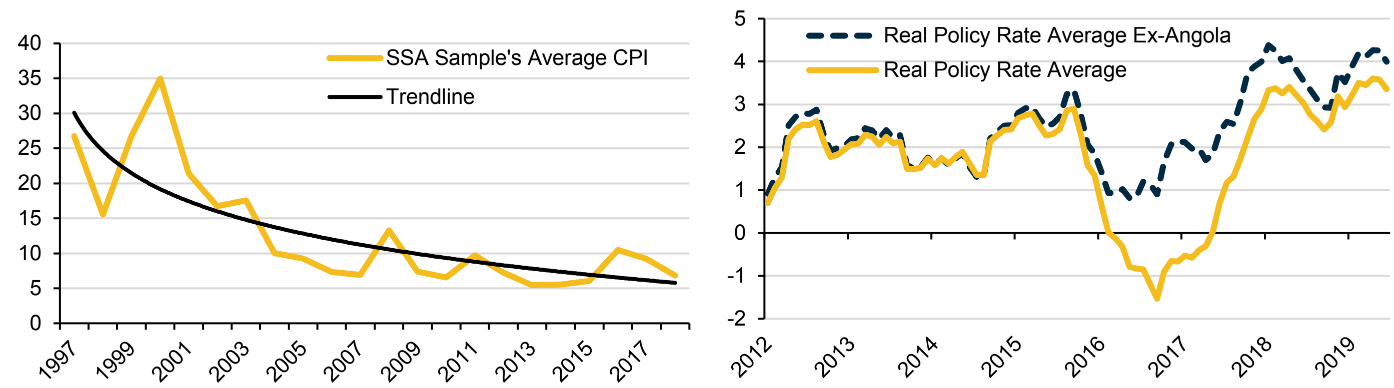
[11] *"[Africa's Rising External Debt: A Tempest in a Teapot?](),"* *PGIM Fixed Income, January 2019.*

Source: International Monetary Fund and Moody's as of December 2018.

Monetary policy in the region has also become more growth friendly, particularly by developing and strengthening institutions that have helped rein in inflation (Figure 10, left). Inflation has been declining across most countries in our sample: 8 out of 12 countries experienced a lower average inflation in 2017-2018 than in 1998-1999 and only three countries experienced double-digit inflation in 2018: Angola, which is in a transitional period from a highly-controlled economy; Ethiopia, which is growing at a very rapid pace;[12] and Nigeria, where inertial inflation has been difficult to rein in.

Aside from Angola, all countries in our sample have positive real policy rates (Figure 10, right), which we deem as appropriate for their current economic situations. This is the result, at least in part, of more autonomous central banks which have adopted inflation target regimes, a good approximation of de facto, if not de jure, independence.

Figure 10: Sample SSA Countries' Average CPI and Real Policy Rates

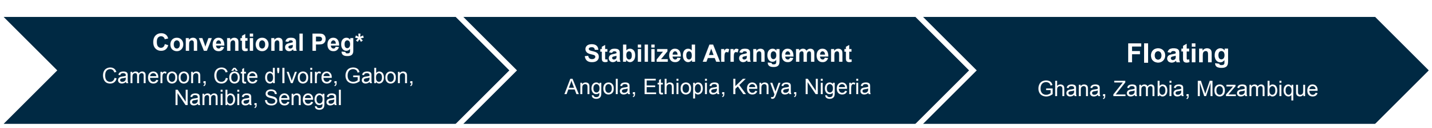


Sources: IFS, national sources, and PGIM Fixed Income as of September 2019. Policy rates are equally-weighted averages of the SSA subset.

The monetary policy stance also depends on a country's FX regime. In our view, there is no "one size fits all" regime for emerging markets. The optimal FX regime depends on the individual country's stage of development, comparative advantages, external constraints, strength of its policy institutions, and the availability of FX reserves, among other factors. It is interesting, though, to note that in recent years emerging markets in general have veered towards more flexible arrangements.

Accordingly, there is much heterogeneity in the current FX regimes across our panel. The CFA zone countries (Cameroon, Cote D'Ivoire, Gabon, Senegal) have the back-stop of the French authorities. Therefore, their fixed exchange rate regimes are very credible. Other countries have more flexible arrangements (Figure 11).

Figure 11: Sample SSA Countries' Differing FX Regimes



**The Namibian Dollar is pegged to the South African Rand. All other countries listed are members of the West African Economic and Monetary Union (WAEMU) and the Central African Economic and Monetary Community (CEMAC) and peg their currencies to the Euro.*
Source: International Monetary Fund Annual Report on Exchange Arrangements and Exchange Restrictions (2019).

Without diving into a discussion of the benefits and costs of different exchange rate regimes, we aim to highlight that more flexible exchange rates enable more exogenous creation of money. This is an important point in countries where the degree of monetization—as measured by the ratio of M2 and nominal GDP—is low, as is the case for most of SSA. Monetization is important because it facilitates trading and savings (and, therefore, investments) as well as the collection of taxes, an area where African countries are lagging, as explored in our previous SSA paper, *"Africa's Rising External Debt: A Tempest in a Teapot?"*

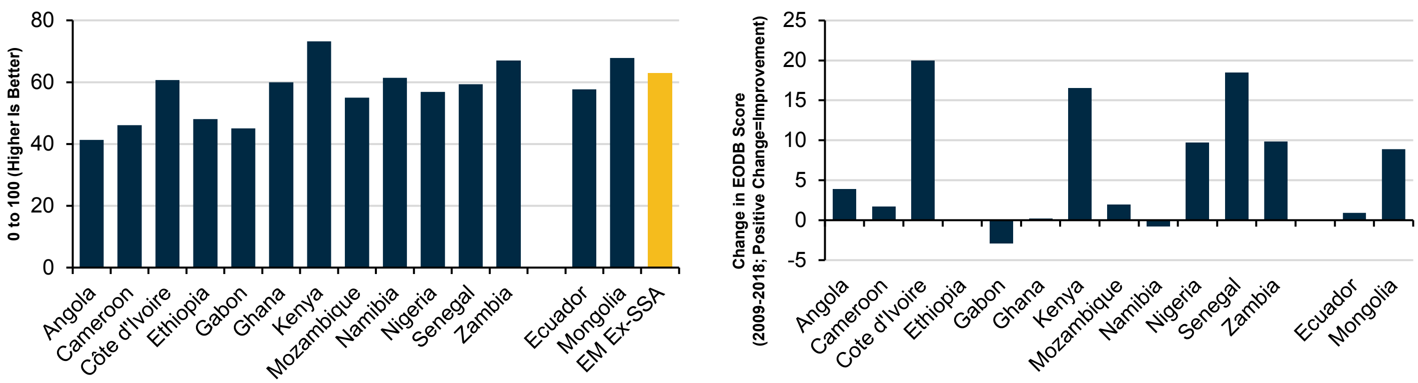
[12] *Real GDP growth in Ethiopia has averaged almost 9.3% annually since 2014.*

Growth and the Private Sector

The private sector climate is also a crucial factor in the growth and development process. One way to gauge the economic dynamism and potential for future growth, thus, is to compare the state of the private sector across our country panel. To do so, we use the World Bank's Ease of Doing Business (EODB) data, which measures 11 areas of regulation affecting small and medium-size domestic firms in the largest business cities of 190 countries. Note that EODB scores reward countries for effective regulation, not the mere absence of it.

While our SSA subset, with the exception of Kenya and Zambia, score below the average EM, there is considerable variation across countries. This variation loosely corresponds to commodity export groupings. For example, the two worst performers in our panel are fuel exporters, while non-fuel exporters (e.g., Kenya, Zambia) tend to fare better (Figure 12).

Figure 12: Sample SSA Countries' Ease of Doing Business Scores (2019)



Source of graph on left: World Bank as of September 2019. Source of graph on right: World Bank Ease of Doing Business as of September 2019.

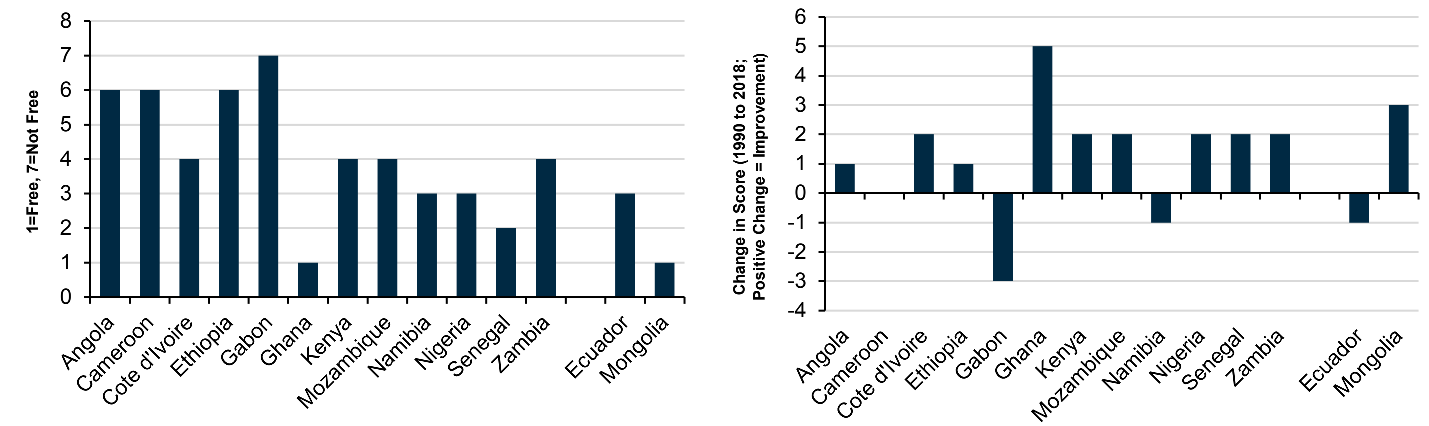
Despite underperformance relative to EM peers, changes in EODB scores over the past decade across our panel indicate that most countries are improving their private sector climates. In fact, over the last two years, three of the countries in our panel, Kenya, Cote D'Ivoire, and Nigeria, were among the top 10 most improved economies out of 190 countries.

Political Stability

A robust and functioning private sector must be complemented by political stability to foster sustainable economic growth. This requires a political system that allows for peaceful transition of power from one party to another and a system that can promulgate laws according to a well-defined constitutional process. In this respect, much progress has been made in SSA. In our sample, only Cameroon's President Paul Biya has been in power for more than 10 years (since 1982). All the other leaders have been in power for 10 years (Gabon's Ali Bongo) or less and are either in their first or second term in office. Elections have generally become more transparent and fair in many countries across SSA. This does not mean that the ruling elite is not taking financial advantage of their position, but the era of the "strong man" controlling a country politically for a long time and enriching himself, like former Angolan president Dos Santos or DRC's (Zaire's) Mobutu Sese Seko, seems to have ended, at least in the SSA countries that are part of our investable universe.

Figure 13 shows the Freedom House's assessment of political rights in the region. While many countries still score poorly, with a 7 indicating "not free", nine of the 12 countries in our SSA panel have improved since 1990, when cohesive political structures were not as developed or functional. There is no clear pattern within commodity groupings: among oil exporters, for example, Angola and Gabon score poorly, but Nigeria scores relatively well.

Figure 13: Sample SSA Countries' Political Rights Scores (2018)

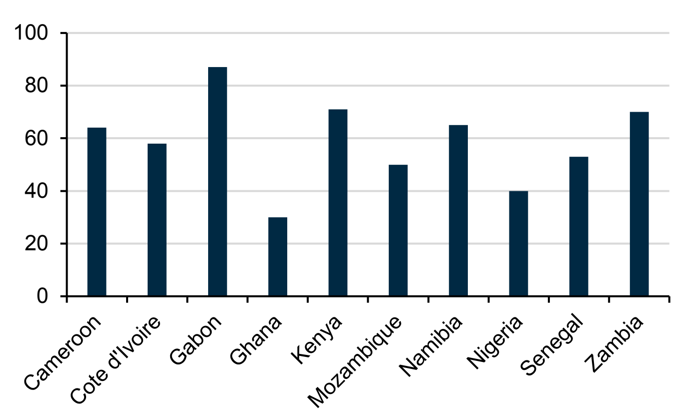


Source: Freedom House as of December 2018.

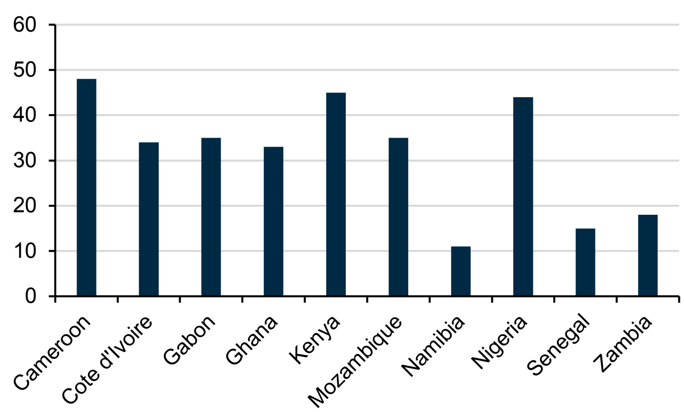
While SSA countries work to foster robust private sectors and cement stable political systems, corruption remains an ever-present threat to these efforts. In addition to undermining the effectiveness and integrity of the public sector and distorting resources, corruption can dampen a country's business climate and diminish its attractiveness to foreign investors, further hampering development.

The African Union designated 2018 as the year of "Fighting Corruption in the Continent".[13] While there have been some high-level headlines on this front—e.g., the ousting of former Angolan president Dos Santos's children from leadership at the Angolan state-owned oil company and the sovereign wealth fund, as well as the arrest of Kenyan Finance minister Henry Rotich on corruption and fraud charges—Transparency International's *"Global Corruption Barometer Africa 2019"* paints a more worrisome picture on the ground. Across most countries in our panel, a majority of polled citizens think their governments are failing to tackle corruption and startling percentages of public service users paid a bribe in the previous 12 months (Figure 14). Evidently, much ground remains to be covered.

Figure 14: Govt is Failing to Tackle Corruption (%)



Public Service Users Who Paid Bribe Prior 12 Months (%)



Note: Data not available for Angola and Ethiopia.
Source: Transparency International based on 2016-2018 survey. See https://www.transparency.org/gcb10/africa?/news/feature/global_corruption_barometer_gcb_africa_2019.

[13] *Source: "President Buhari of Nigeria Launches the AU Theme of The Year 2018 on Fighting Corruption in the Continent." African Union Press Release, January 29, 2018. See https://au.int/en/pressreleases/20180129/president-buhari-nigeria-launches-au-theme-year-2018-fighting-corruption.*

The Effects of Climate Change on Sub-Saharan Africa

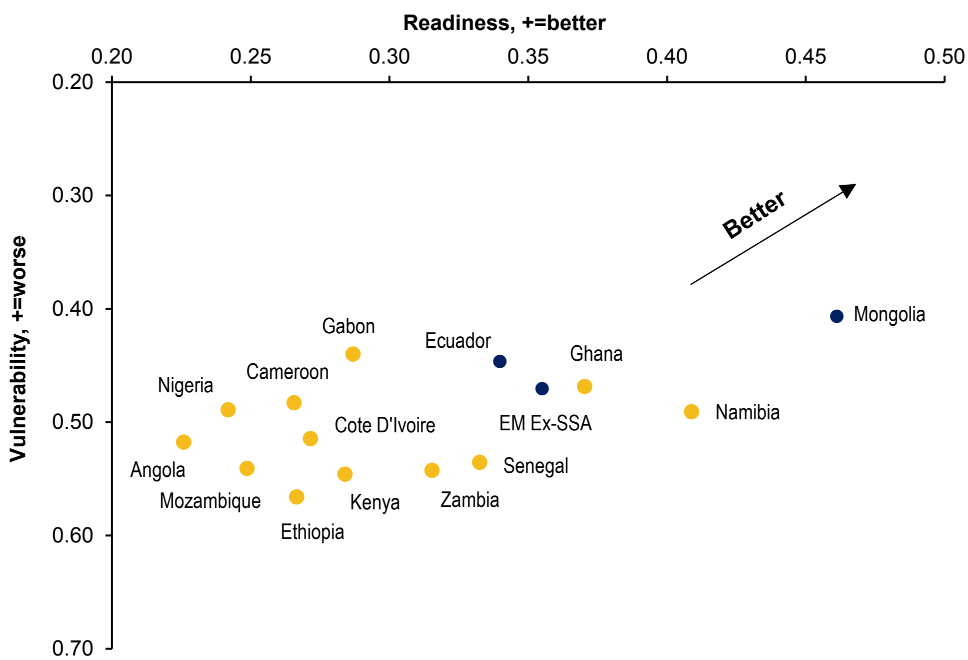
The impact of climate change on Sub-Saharan Africa has long been a topic of analysis and policy debate. One feature of climate change is that severe weather conditions have become more extreme and more frequent. SSA countries are particularly vulnerable to the negative economic impact of extreme weather due to their reliance on agricultural commodity exports and subsistence farming. But it is not only agriculture that is exposed: floods can affect mining and droughts can curtail the electricity supply, therefore impacting the whole economy. The effects of climate change are also complicated by a relatively quickly growing population, social inequality, and outdated infrastructure.

We assessed the impact of climate change on SSA using data from the Notre Dame Global Adaptation Initiative (ND-GAIN). ND-GAIN quantifies two measures: 1) vulnerability, which measures a country's exposure, sensitivity, and capacity to adapt to the negative effects of climate change; and 2) readiness, which measures a country's ability to leverage investments and convert them to adaptation actions. Each measure is constructed into an index, which ranges from 0 to 1.

These indices are slow moving as the implementation of more climate-friendly growth models takes time and institutional support. Thus, we find it more informative to examine the index values themselves (in levels), rather than their deltas. **As shown in Figure 15, the majority of SSA countries are in a worse situation than the average emerging country. If recent climate trends are not reversed, SSA will likely face more climate disruption to its economic activity and social costs are bound to increase.**

This will stretch their fiscal resources, thus worsening their growth outlook and, ultimately, their ability to pay, unless contingency plans and/or more foreign assistance is forthcoming. The IMF is devising a strategy to deal with the impact of climate change on poor economies, but it is not clear when or if this strategy will be implemented. Last April, we might have witnessed a preview of what could happen when the IMF extended emergency aid to Mozambique (which is still in default on its external debt and stopped implementing an IMF program) following the devastating cyclone Idai.

Figure 15: Sample SSA Countries' Climate Change Readiness



Sources: University of Notre Dame (2019 release of ND-GAIN) and PGIM Fixed Income. Data as of December 2017, most recent available.

Conclusion

The long-term growth outlook for SSA is fundamental to achieving debt sustainability. Our analysis examines a range of factors that we believe are crucial for achieving sustainable long-term growth, such as export diversification, population growth, fiscal policies, and business environment. Of course, external shocks can influence growth as well. Traditionally, analysis has focused on commodity price or terms of trade shocks as the major external shock threatening commodity exporters like SSA countries. We also looked at a different type of shock—climate change—and how prepared SSA countries are to tackle rising temperatures and their ensuing complications.

Our main findings:

- *SSA countries have been doing well relative to their emerging market peers in terms of economic growth, despite their reliance on commodity exports. The increasing role of large developing economies in international markets is certainly a factor, but other dynamics have contributed to the positive growth story.*
- *Population growth presents both an opportunity and a challenge, as does the struggle to raise the propensity to invest without further deteriorating the savings gap.*
- *Macroeconomic policies, such as the adoption of more flexible exchange rate regimes, seem to be more prudent than in the past. This is in part driven by International Monetary Fund programs, of which half our panel has participated in over 2018 or 2019.*
- *Solid progress has been made in improving the business environment, thus allowing for a more efficient allocation of resources, while political stability has also improved.*
- *While much remains to be done on improving governance, reducing corruption, and addressing climate change, SSA's long-term growth outlook has appeared more encouraging in recent years.*
- *These positive long-term growth prospects, combined with relatively manageable external debt levels, lead us to believe that SSA bonds remain an attractive asset class.*

Notice: Important Information

Source(s) of data (unless otherwise noted): PGIM Fixed Income as of November 2019.

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