Stuck Near Ten Billion: Public-Private Infrastructure Finance in Sub-Saharan Africa

Nancy Lee and Mauricio Cardenas Gonzalez

Abstract

Many stress the critical role of the private sector in filling yawning sub-Saharan Africa (SSA) infrastructure finance gaps, only widened by the pandemic. Our paper looks in detail at financially closed (construction-ready) transactions with private participation in SSA from 2007–2020. Despite the "billions to trillions" vision, we find no sustained upward trends for such transactions in volumes of total finance, multilateral development bank (MDB) finance, private finance, the share or volume of local private finance, participation by international institutional investors, or finance from bilateral development finance institutions (DFIs). External finance sources were larger than local sources, with Chinese DFIs dominant and the US DFI a marginal actor. Among MDBs, the African Development Bank provided the most finance cumulatively. Investment in renewable energy outpaced investment in fossil fuel infrastructure, but MDBs continued to make significant fossil fuel investments. Investment in water and social infrastructure remains about 5 percent of the total.

Policy implications include: the urgent need for greater MDB efforts to use their broad toolkits to catalyze more private infrastructure finance, including from local sources and in social sectors; the case for building on the African Development Bank's advantages; the importance of growing the US Development Finance Corporation's efforts; and the strong logic for more collaboration among infrastructure finance providers to SSA, including China, with MDBs providing not only finance but also fora for collaboration and support for the policy and institutional reforms that build sustainability and reduce risk for all actors.



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Key takeaways

- Overall, total domestic and external finance for financially closed infrastructure projects with private participation averaged \$9 billion annually for all of sub-Saharan Africa (SSA) over the period 2007–2020.
- Finance for such transactions rose even during the pandemic from \$6.4 billion in 2019 to \$9.4 billion in 2020, though this increase would have been largely driven by commitments made prior to the pandemic.
- External sources of finance were significantly more important than local sources.
- Bilateral development finance institutions (DFIs) and international private banks were larger funders than multilateral development banks (MDBs).
- Even after the launch of the 2015 "billions to trillions" vision,¹ total MDB finance for such transactions averaged only \$1.4 billion per year from 2016–2020—a small increase from a very low base in earlier years of the period.
- Total average annual private finance fell to \$3.7 billion in 2016–2020, from \$5.1 billion in the earlier years of the period.
- Among MDBs, the African Development Bank was the largest funder of publicprivate transactions, likely a surprise to some who would have expected the World Bank's International Finance Corporation (IFC) or the International Development Association (IDA) to rank first.
- Chinese DFIs provided 2.5 times more finance over the period than all other bilateral DFIs combined.
- The US DFI finance was an order of magnitude smaller than China's finance, and no upward trend is yet evident.
- Local banks dominated local private finance for infrastructure, but local institutional investors and debt and equity funds began to emerge as more important sources in 2019 and 2020.
- Investment in renewable energy from both private and public sources (including Chinese DFIs) outpaced investment in fossil fuel infrastructure, but MDBs continued to make significant fossil fuel investments.
- Investment in water and social infrastructure sectors together accounted for only about 5 percent of infrastructure finance in 2020.

In sum, we see no sustained upward trends in overall SSA infrastructure public-private finance volumes, MDB finance, private finance, the share or volume of local private finance, participation by international institutional investors, or finance from bilateral DFIs.

The paper draws a number of policy implications from these findings, including:

- 1. There is an urgent need for greater efforts by the MDBs, including IDA which includes a private sector window, to use their broad toolkits to catalyze more private infrastructure finance in SSA, including from local investors and lenders.
- 2. The African Development Bank is already playing a leadership role in this area and, with robust shareholder support, could do more.
- 3. The US Development Finance Corporation should develop and implement an ambitious strategy to grow its efforts in SSA infrastructure, especially given its prioritization of transactions in poorer countries and green finance.
- 4. There is a strong logic for collaboration among infrastructure finance providers to SSA, including China and development banks from within the region, with MDBs providing not only finance but also fora and mechanisms for collaboration and support for the policy and institutional reforms that strengthen sustainability standards and reduce risk for all finance actors.

Introduction

Even before the global pandemic, infrastructure finance for sub-Saharan Africa (SSA) was weighed down by daunting challenges: low levels of private participation; fiscal constraints on public infrastructure spending; waste in infrastructure spending; the impact of rapidly rising sovereign debt; low infrastructure investment in sectors important for development like health, education, and water; and ongoing investment in carbon-intensive power infrastructure.

Now in the era of COVID-19, there are fears of a collapse in infrastructure spending in favor of urgent health, economic stimulus, and other social needs, and even tighter fiscal constraints as recovery is slowed by delays in vaccination progress. These developments are part of the long-term prolonged scarring from the pandemic, especially for poorer countries,² and pose even greater challenges to achieving the Sustainable Development Goals in the hardest hit countries.³

This paper reviews recent developments in infrastructure transactions that combine public and private finance and puts them in the context of longer-term trends. Such analysis is a necessary underpinning of critical policy and institutional decisions regarding the infrastructure finance roles of multilateral development banks (MDBs), bilateral development finance institutions (DFIs), and local development banks, and the challenge of promoting more investment by private banks, institutional investors, and private equity and debt funds.

The paper uses data on project and corporate infrastructure transactions to examine the pandemic's effects on infrastructure finance to SSA), trends in public sources of finance (local and external), trends in private sources of finance (local and external), and sectoral finance trends.

Specifically, the paper addresses the following questions:

Pandemic effects in the context of longer-term trends

- Did project and corporate infrastructure finance fall sharply in the wake of the pandemic?
- What happened to finance from different sources in 2020 as compared to earlier years?

Public sources of finance

- Which are the most important sources of local and external public finance in project and corporate infrastructure projects in SSA, and what are the trends over time?
- How have the roles of MDBs versus bilateral DFIs changed over time?
- Which bilateral DFIs have been most important and how have trends changed?

Private sources of finance

- What are the trends in external private finance?
- Have the roles of external private banks and other external private investors changed over time?
- Have local private sources of finance become more important over time?
- Which local finance sources are more important—local private banks or local nonbank private sources?

Infrastructure sectors

- How has the sectoral composition of infrastructure finance in SSA changed over time?
- Which sectors receive more public finance and which more private finance?
- Has the composition of energy infrastructure investment shifted from fossil fuels to renewable energy investments?
- What are the trends in traditionally underinvested infrastructure sectors—health, education, and water and sanitation?

Data overview

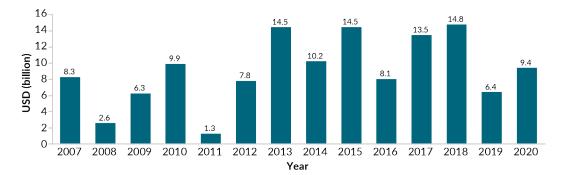
The principal data sources are IJ Global's Transaction and Directory Databases. IJ Global's Transaction database covers project and corporate finance for infrastructure, *with a focus on infrastructure transactions with private participation*. For each transaction, the database includes information on the type of finance (e.g., corporate, project, public sector), type of transaction (e.g., portfolio, primary financing, refinancing), transaction stage (pre-financing, financing, financial close), transaction values (in USD and local currency), regions, sectors, transaction debt and equity. IJ Global's Directory Database provides information on companies (name), sector, regions, and company type. In order to identify the volume and sources of finance for investments that are ready for construction, *we focus here on transactions that have reached financial closure*.

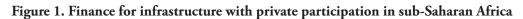
The analysis targets SSA as defined by the World Bank (48 countries),⁴ in order to examine developments and trends in the poorer countries of Africa. The timeframe is the period 2007–2020, which allows an assessment of the impact of the 2008–2009 global financial crisis and the COVID-19 pandemic (so far).

Sources of finance for infrastructure with private participation in SSA are grouped into four broad categories: private, public, external, and in-country sources of finance. Sectors are defined as fossil fuel energy, renewable energy, health and education (the social sector), tele-communications, transport, water and sanitation, and multiple sectors (transactions involv-ing more than one sector). See the Data Appendix for more information on the definitions of these sources and sectors.

Analysis

SSA infrastructure finance for transactions with private participation that have reached financial closure is quite variable from year to year, as might be expected with lumpy infrastructure investments (Figure 1). No upward trend is evident, and the total volume of finance for financially closed transactions remained stuck in the range of \$8–15 billion annually over the last five years (and averaged \$9 billion per year over the whole period).





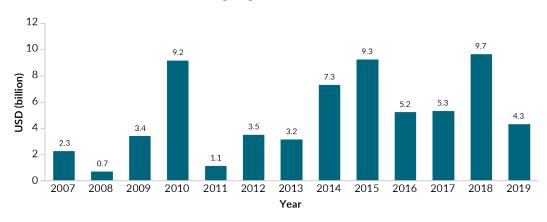
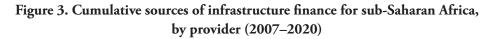
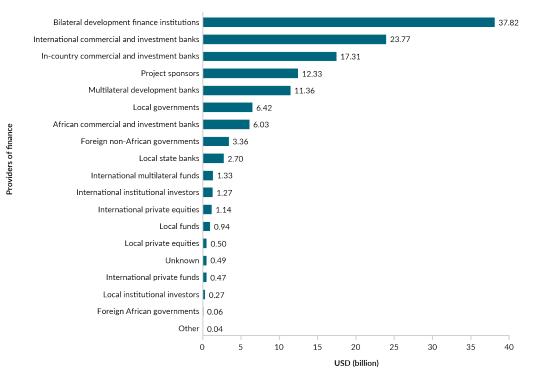


Figure 2. Finance for infrastructure with private participation in sub-Saharan Africa, excluding Nigeria and South Africa

Source: IJ Global. Data include debt and equity funding. Author's calculation based on IJ Global database.

Finance fell sharply in 2008 in the wake of the global financial crisis, but bumped up in 2020 during the pandemic—a much more damaging shock for the developing world. Given the lag in infrastructure transactions from financial commitments to closure, however, we may see more of a negative impact from the pandemic in future years.





South Africa and Nigeria dominated SSA transactions in some years but not others. In 2020, for example, SSA excluding South Africa and Nigeria accounted for 91 percent of transaction volume.

Figures 3 and 4 reveal that cumulatively over the period and consistently in recent years, a combination of public and private *external* (foreign) sources are most important for transactions reaching financial closure, although local private banks have played a major role in certain years. Cumulatively, bilateral DFIs and international private banks top the list. Local private banks rank third and multilateral development banks are in fifth place.

This pattern has persisted in recent years (Figure 5). We do not observe an upward trend in the role of local private finance. But external private finance accounted for 26 percent of SSA infrastructure finance in 2020, compared to a 6 percent share for local private finance (Figure 5).

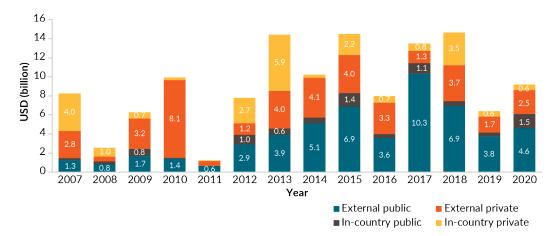


Figure 4. Sources of finance for infrastructure in sub-Saharan Africa

Note: External private includes international project sponsors, international private equities, international private funds, international commercial and investment banks, international institutional investors.

External public includes multilateral development banks, bilateral development finance institutions, foreign African and non-African governments, international multilateral funds.

In-country private includes in-country commercial and investment banks, local funds, local private equities, local institutional investors, in-country project sponsors.

In-country public includes local governments and local state banks.

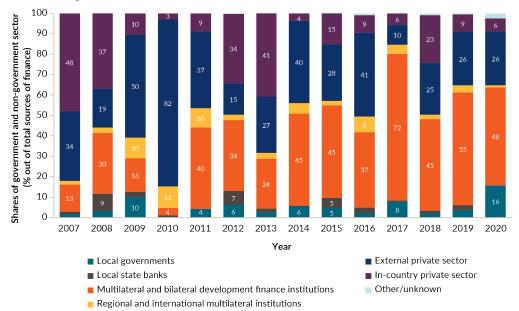


Figure 5. Shares of finance for infrastructure in sub-Saharan Africa

Note: Local governments includes state-owned companies, utilities, government agencies/public authorities.

Multilateral and bilateral development finance institutions includes multilateral development banks and bilateral development finance institutions.

Regional and international multilateral institutions includes African and foreign non-african governments (non DFIs), and international multilateral funds.

External private sector includes external commercial and investment banks, external institutional investors, external private funds, external private equities, external project sponsors.

In-country private sector includes in-country commercial and investment banks, in-country institutional investors, in-country local funds, in-country private equities, in-country project sponsors.

Source: IJ Global.

Data include debt and equity funding. Author's calculation based on IJ Global database.

Local public finance

In most years, local governments (ministries) accounted for the bulk of local public sector infrastructure spending in transactions with private participation, but local state banks were important in some years (Figure 6). The five largest local state bank actors in SSA are the Development Bank of Southern Africa (South Africa), the Industrial Development Corporation of South Africa (South Africa), Akwa Ibom State Government (Nigeria), Kakawa Discount House (Nigeria), and the Development Bank of Rwanda (Rwanda).

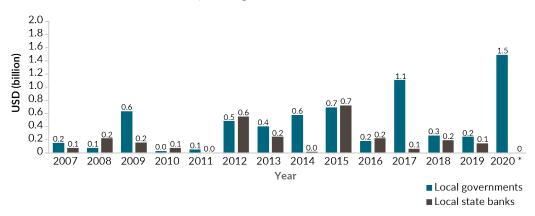


Figure 6. Funding for infrastructure in sub-Saharan Africa, by local government sources

* The high observation in 2020 was mainly due to an investment (equity) by the Ministry of Transport of Tanzania of 1.4 USD billion.

Source: IJ Global. Data include debt and equity funding. Author's calculation based on IJ Global database.

External public finance

When we break down external public finance, we find that multilateral and bilateral development finance institutions dominate (Figure 7).

But in volume terms, multilateral/bilateral DFI finance, while fluctuating annually, remained at low levels, ranging from \$3 to \$10 billion over the last five years.

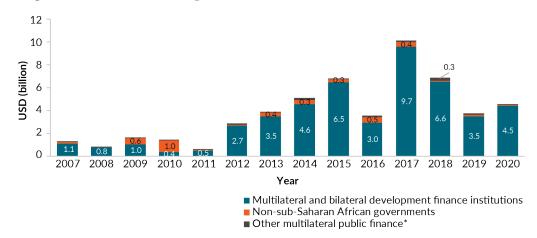


Figure 7. Sources of external public finance for infrastructure in sub-Saharan Africa

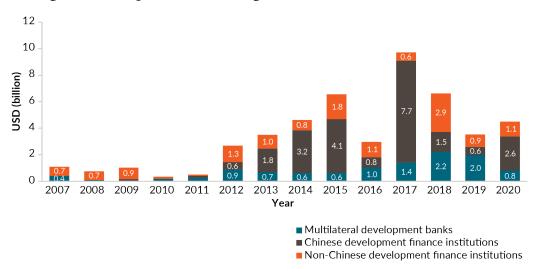
* Other multilateral public finance includes international multilateral funds, for instance, provided by the European Commission, and the European Union. Some of the biggest in volume of finance include the OPEC Fund for International Development and Emerging Africa Infrastructure Fund.

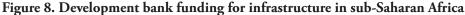
Source: IJ Global.

Data include debt and equity funding.

Bilateral DFIs and multilateral development banks

As others have noted, Chinese DFIs have dominated development bank infrastructure finance in recent years (Figures 8 and 9).⁵ Chinese DFI finance volume shrank after 2017 before recovering somewhat in 2020. (In the earlier years of the time period, some Chinese DFI transactions may not be covered.) MDB investment peaked in 2018 at \$2.2 billion for all of SSA.





Source: IJ Global. Data include debt and equity funding. Author's calculation based on IJ Global database.

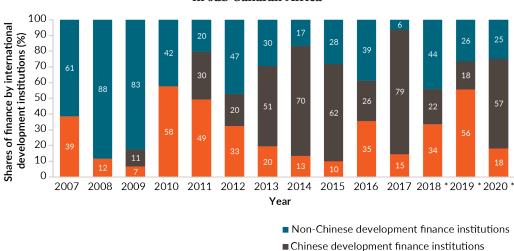


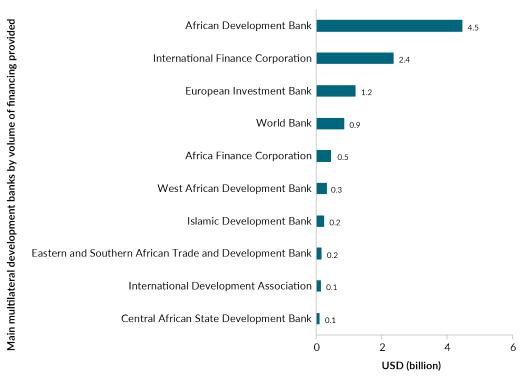
Figure 9. Shares of development finance institutions for infrastructure in sub-Saharan Africa

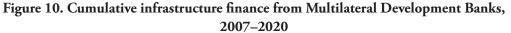
* Over 60% of financing from Chinese DFIs has been channeled to the power sector between 2018–2020. *Source:* IJ Global.

Multilateral development banks

Data include debt and equity funding.

The largest MDB finance sources for infrastructure with private participation are the African Development Bank, the IFC (finance to the private sector in the World Bank Group), the European Investment Bank, and the World Bank (finance to governments) (Figure 10). The World Bank's concessional window, IDA, is a minor player in transactions with private participation, despite the fact that many countries in SSA are IDA eligible (with the notable exceptions of some of the largest countries—e.g., Nigeria and South Africa). The IDA Private Sector Window, established under the IDA18 replenishment, allocates some of its concessional finance to infrastructure, but it has not yet moved IDA up in the ranks of MDBs as a major source of finance.

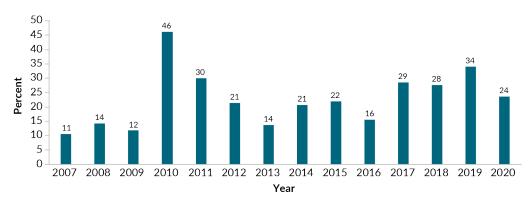




Source: IJ Global. Data include debt and equity funding. Author's calculation based on IJ Global database.

Figure 11 shows that, on average for the period, MDBs participated in 23 percent of the transactions with private participation. The last four years saw some growth in that share, but with no evident impact on increasing the volume of private finance mobilized (see below).

Figure 11. Share of transactions with MDB financial support* for infrastructure in sub-Saharan Africa



* Number of transactions that include MDB finance/total number of transactions per year. *Source:* IJ Global. Data include debt and equity funding.

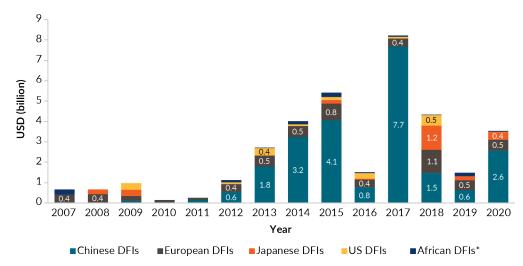
Author's calculation based on IJ Global database.

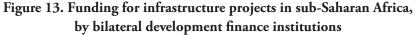
China Exim dominates bilateral DFI finance, followed by a much smaller China Development Bank volume (Figure 12). The US Overseas Private Investment Corporation (now DFC), the Japan Bank for International Cooperation, KfW, and FMO each provided less than a tenth of China Exim's volume, and the rest contributed a combined total of less than \$3 billion cumulatively over the period.

Figure 12. Cumulative infrastructure finance from bilateral development finance institutions, 2007–2020



The US DFI has generally played a minor role in infrastructure finance in SSA (Figures 13 and 14), outspent by China by an order of magnitude. European and Japanese DFIs have become more important actors in recent years.





*African DFIs include sub-Saharan Africa DFIs only.

Source: IJ Global.

Data include debt and equity funding. Author's calculation based on IJ Global database.

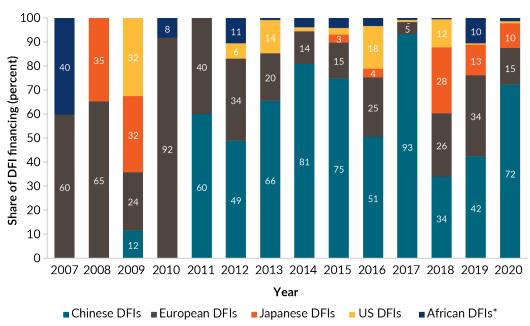


Figure 14. Shares of bilateral development finance institutions for infrastructure in sub-Saharan Africa

*African DFIs include sub-Saharan Africa DFIs only.

Source: IJ Global.

Data include debt and equity funding.

External private finance

Despite its important share of finance, the volume of external private finance for SSA infrastructure has been stuck below \$5 billion per year over the whole period, with the exception of the 2010 loans by Standard Chartered Bank and Barclays in the telecoms sector in Nigeria and Uganda (Figure 15). It increased slightly in 2020 over 2019, but no long-term upward trend is evident.

External banks remain the most important external private sources of finance, though small in absolute volume (Figure 16). To date, we have not seen a significant uptick in finance from either external private equity or external institutional investors.

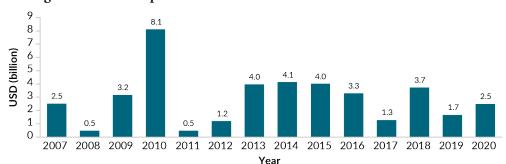


Figure 15. External private finance for infrastructure in sub-Saharan Africa

Note: Sources of external private finance include external commercial and investment banks, external project sponsors, external private equities, external institutional investors, and external other private funds.

Source: IJ Global.

Data include debt and equity funding. Author's calculation based on IJ Global database.



Figure 16. Sources of external private finance for infrastructure in sub-Saharan Africa

* This observation is mainly influenced by loans for projects in Nigeria and Uganda in the telecoms sector (USD 7.9 billion).

** External other private funds are very small and negligible yet are included in this graph.

Note: Sources of external private banks includes external commercial and investment banks.

Other external private investors include external project sponsors, external private equities, external institutional investors.

Source: IJ Global.

Local private finance

When comparing local and external private finance, we do not yet see a growing role for local private finance providers (Figure 17). In 2020, local private finance accounted for about 20 percent of private infrastructure finance in SSA.

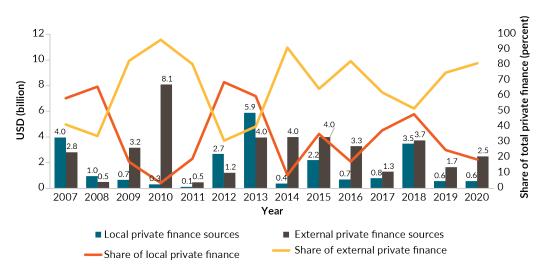


Figure 17. External vs local sources of private finance for infrastructure in sub-Saharan Africa

Note: Local private finance sources includes in-country commercial and investment banks, in-country project sponsors, in-country institutional investors, in-country local private equities, in-country local funds.

External private finance sources includes external project sponsors, external commercial and investment banks, external private equities, external institutional investors, external private funds.

Source: IJ Global.

Data include debt and equity funding.

Author's calculation based on IJ Global database.

For most of the period, local banks were the largest source of local private finance (Figures 18 and 19). In 2019 and 2020, local institutional investors and debt and equity funds increased their share, though the overall volume of local private finance dropped sharply.

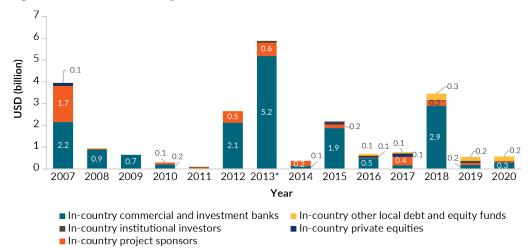


Figure 18. Sources of local private finance for infrastructure in sub-Saharan Africa

* This observation is mainly influenced by loans (4.1 USD billion) for projects in the renewables and telecoms sectors in Nigeria and South Africa.

Source: IJ Global.

Data include debt and equity funding. Author's calculation based on IJ Global database.

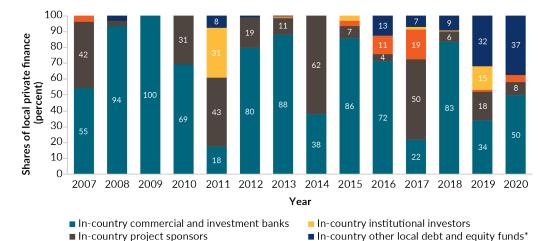


Figure 19. Shares of local private finance for infrastructure in sub-Saharan Africa

* May include private equity funds with some debt funding.

Source: IJ Global.

Data include debt and equity funding.

Author's calculation based on IJ Global database.

In-country private equity

Finance by sector

By sector, energy, telecommunications, and transport dominate infrastructure finance with private participation (Figure 20). The private sector has played a bigger role in telecoms, and accounted for nearly half of fossil fuel infrastructure development. The public sector share is larger for transport and renewable energy.

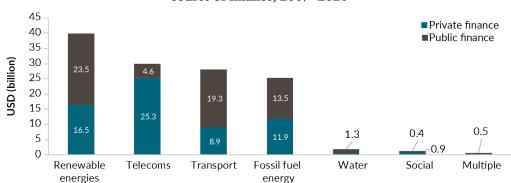


Figure 20. Funding for infrastructure in sub-Saharan Africa, by sector and source of finance, 2007–2020

Note: Fossil fuel energy sector includes gas, coal, oil-fired projects; transmission and distribution,* and co generation projects.

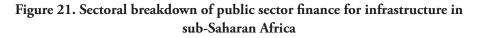
Renewable energy sector includes thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other reenewables, waste-to-energy, and marine projects.

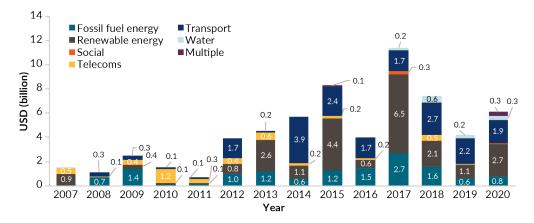
* Some of the investments in the transmission and distribution subsectors are related to hydro power generation. *Source:* II Global.

Data include debt and equity funding.

Author's calculation based on IJ Global database.

Over time, investment in renewable energy has become an important driver of public infrastructure finance, but fossil fuel investment persists (Figure 21).





Note: Fossil fuel energy sector includes gas, coal, oil-fired projects; transmission and distribution,* and co generation projects.

Renewable energy sector includes: thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other reenewables, waste-to-energy, and marine projects.

*Some of the investments in the transmission and distribution subsectors are related to hydro power generation.

Source: IJ Global.

Data include debt and equity funding.

Transport investment is the other major driver. Investment in social sectors and water and sanitation remains negligible.

Private finance has shifted from an early concentration in telecommunications to a focus on energy and transport (Figure 22).

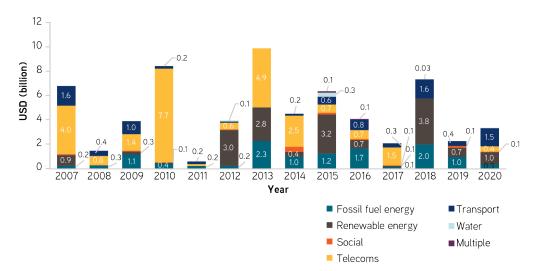


Figure 22. Sectoral breakdown of private sector finance for infrastructure in sub-Saharan Africa

Note: fossil fuel energy sector includes gas, coal, oil-fired projects; transmission and distribution,* and co generation projects.

Renewable energy sector includes thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other reenewables, waste-to-energy, and marine projects.

* Some of the investments in the transmission and distribution subsectors are related to hydro power generation. *Source:* IJ Global.

Data include debt and equity funding.

Author's calculation based on IJ Global database.

MDBs boosted finance for renewable energy and transport in recent years before falling back in 2020 (Figure 23). Fossil fuel investments continue to take a significant share of their overall investment (e.g., 56 percent in 2020).

Chinese DFI finance in SSA is mostly in the energy and transport sectors (Figure 24). Overall, China's investment in renewables has exceeded its investment in fossil fuels.

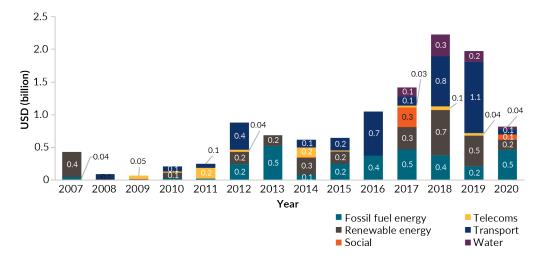


Figure 23. Sectoral breakdown of MDB finance for infrastructure in sub-Saharan Africa

Note: Fossil fuel energy sector includes gas, coal, oil-fired projects; transmission and distribution,* and co generation projects.

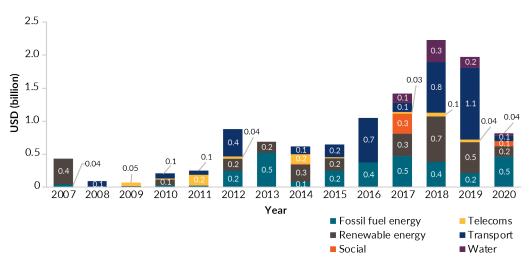
Renewable energy sector includes thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other reenewables, waste-to-energy, and marine projects.

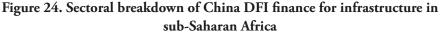
*Some of the investments in the transmission and distribution subsectors are related to hydro power generation.

Source: IJ Global.

Data include debt and equity funding.

Author's calculation based on IJ Global database.





Note: Fossil fuel energy sector includes gas, coal, oil-fired projects; transmission and distribution,* and co generation projects.

Renewable energy sector includes thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other renewables, waste-to-energy, and marine projects.

*Some of the investments in the transmission and distribution subsectors are related to hydro power generation.

Source: IJ Global.

Data include debt and equity funding.

Investments from DFIs outside China have also been mainly in transport and energy, with renewable investments exceeding fossil fuel investments in recent years (Figure 25).

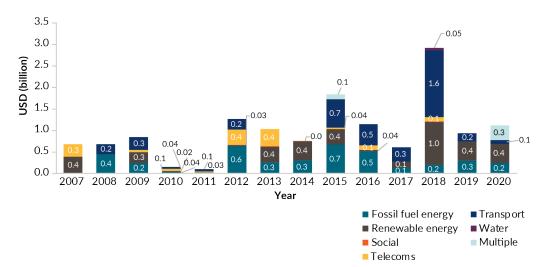


Figure 25. Sectoral breakdown of non-China DFI finance for infrastructure in sub-Saharan Africa

Note: Fossil fuel energy sector includes gas, coal, oil-fired projects; transmission and distribution,* and co generation projects.

Renewable energy sector includes thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other reenewables, waste-to-energy, and marine projects.

*Some of the investments in the transmission and distribution subsectors are related to hydro power generation. *Source:* II Global.

Data include debt and equity funding.

Author's calculation based on IJ Global database.

Overall investments in renewable energy have significantly outpaced investments in fossil fuels for most years since 2011, but fossil fuel investment still accounted for an average of 41 percent of total energy investment for 2016–2020 (Figure 26).

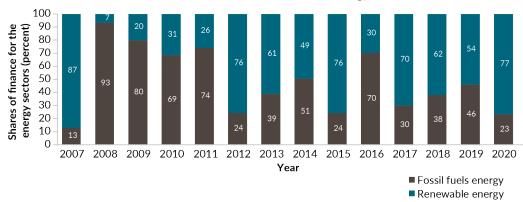


Figure 26. Shares of finance for infrastructure in sub-Saharan Africa, renewable vs non-renewable energy

Note: Fossil fuel energy sector includes gas, coal, oil-fired projects; transmission and distribution,* and co generation projects.

Renewable energy sector includes thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other reenewables, waste-to-energy, and marine projects.

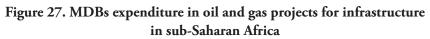
*Some of the investments in the transmission and distribution subsectors are related to hydro power generation. *Source:* IJ Global.

Data include debt and equity funding.

Author's calculation based on IJ Global database.

MDB finance for oil-fired and coal-fired power generation has fallen off, with gas-fired power investment rising sharply in 2020 (Figure 27).





Source: IJ Global. Data include debt and equity funding.

Finance for water and sanitation infrastructure, though higher in recent years, remains below \$1 billion annually (Figure 28).

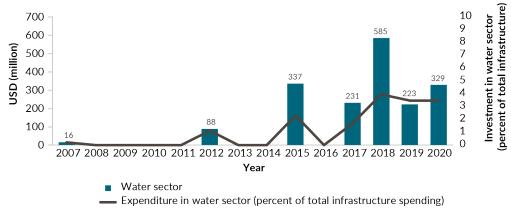


Figure 28. Finance for water infrastructure in sub-Saharan Africa

Source: IJ Global.

Author's calculation based on IJ Global database.

And social sector infrastructure investment remains well below \$500 million annually or less than 2 percent of infrastructure finance in 2020 (Figure 29).

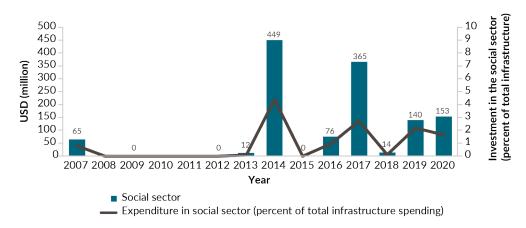


Figure 29. Finance for social infrastructure in sub-Saharan Africa

Data include debt and equity funding.

Policy implications

Despite the overall low levels of investment and general absence of upward trends, a few positive aspects are evident in this picture. We are seeing some signs that local investors could be a growing source of finance. DFIs from Europe and Japan boosted their investments in recent years. And all are shifting toward renewable energy.

But there is no indication that more of the vast amounts of global private equity and institutional investments is beginning to flow into SSA infrastructure. Nor is the MDB finance share growing, including in neglected infrastructure sectors like water, health, and education. And the US DFC remains a bit player in infrastructure finance in the region.

We can draw several policy implications from this evidence. To crowd in additional private finance, MDBs need to boost the priority of infrastructure finance in SSA, not just on their own accounts but in ways and using instruments that open up more space for commercial investors. Certainly, one part of the MDB toolbox that is critical for reducing infrastructure investment risk is policy and institutional reform. Supporting sectoral reforms that specifically strengthen the investment climate for private participation in infrastructure should be a major focus.

In the near term, there are signs that local private investors may present a more promising target for MDB efforts (in part because currency mismatches are less of an issue). Local institutional and private equity investors can and should become less volatile and more resilient sources of infrastructure finance as they seek to diversify their portfolios with local assets.

In addition, MDBs have the opportunity to pool infrastructure investments within institutions and across institutions in ways that offer diversified, sustainable investment opportunities at scale for larger investors, including external institutional investors. Such opportunities could be in the form of "synthetic" securitization, investor purchases of tranches of MDB portfolios while the assets remain formally on MDBs balance sheets to ensure that sustainability standards are maintained. Or MDBs could purchase private insurance to offload the risk of a part of their portfolios, freeing up their capital for more infrastructure investment. The African Development Bank's (AfDB) Room2Run initiative involved both of these mechanisms, demonstrating their feasibility.⁶ But there are obstacles that need to be addressed by sovereign creditors, rating agencies, and by the MDBs themselves through greater transparency about their asset performance.⁷

IDA donors and management should pay particular attention to how and how much to boost IDA's contribution to SSA infrastructure finance with private participation. Public infrastructure investment has not been a high IDA public finance priority for many years. But the IDA Private Sector Window (PSW) is an important addition to the IDA and IFC toolkits which, after a slow start and a significant shift in IFC strategy, has begun to yield results. Over a quarter of IFC's finance volume in IDA countries was supported by the IDA PSW in 2020 and IFC's long-term finance commitments to IDA countries increased 31 percent in that year. While not all of that was infrastructure, using IDA finance more catalytically to crowd in private infrastructure investment is especially important for three reasons: (1) governments simply cannot meet SSA infrastructure needs through exclusively public sector projects, especially given the magnitude of finance gaps, growing debt sustainability challenges, and other demands on IDA lending to governments, e.g., for social needs; (2) support in the form of first loss tranches, guarantees, currency hedging, and other credit enhancements is often critical to bring investments within the risk-adjusted return targets of private investors; and (3) that support is particularly salient for significantly increasing finance to sectors where commercial investors are hard to attract, like the water and social sectors.

The data also suggest that further increases in AfDB capital would be a good investment in infrastructure finance. AfDB is already the largest MDB source of finance for infrastructure with private participation in the region, suggesting that it has the internal skills, capacity, partner network, and transaction development capability to effectively use additional capital in the infrastructure sphere.

We see an obvious opportunity and need for the US DFC to invest more in SSA infrastructure, especially green infrastructure. This is consistent with the Build Act focus on more investment in low- and lower-middle-income countries, with the importance of offering a viable, market-based alternative for SSA infrastructure finance to the state-dominate Chinese model, and with the DFC's ambitious plan to move its portfolio to net zero carbon emissions by 2040. Close collaboration with the U.S. Millennium Challenge Corporation, which is very active in infrastructure in Africa, and with Power Africa, would facilitate a much larger DFC role.

Finally, China remains a major actor in SSA infrastructure finance, even with some pullback since the peak of 2017. Its outsized contribution to SSA infrastructure should be recognized and acknowledged as an overall positive, despite some problems with project quality and debt sustainability in some countries. As China has learned in recent years, even highly favorable (to China) debt contracts are not enough to protect China's credits when countries are in serious debt distress. It is in China's own interest to focus more on ensuring that its investments are productive and green, which will increase the growth, repayment capacity, and resilience of its SSA debtor country partners.

More broadly, there is more than enough room for DFIs from China, Europe, Japan, and the US to expand infrastructure finance in SSA. Competition among them to offer better financing terms, better project choices and designs, and more cost efficiency is by no means a bad thing. But more collaboration to share risk and exposure, especially on very large projects and in difficult environments, makes eminent sense. That collaboration should encompass development banks within the region, including the Development Bank of South Africa, that have deep knowledge of regional infrastructure needs, challenges, opportunities, and key actors. MDBs have a vital role to play here, in providing fora and mechanisms for collaboration, in fostering strong sustainability standards, and in supporting the policy and institutional reforms that reduce risk for all finance actors.

Data definitions

Finance sources

Sources of finance are defined as follows:

Private finance

- Commercial and investment banks (external and in-country): this category includes investment and commercial banks, and financial service providers.
- Project sponsors (external and in-country): this category includes private companies, developers, and engineering procurement and construction firms.
- Institutional investors (external and in-country): this category includes insurance companies, pension, and sovereign wealth funds.
- Private equity (external).
- Local fund (in-country) and other private funds (external): these categories include infrastructure funds.
- Other local debt and equity funds (In-country).

Public finance

- Multilateral development banks (external): this category includes multilateral and international financial institutions.
- Bilateral development finance institutions (external): this category includes development banks, export credit and development agencies.
- African and non-African public finance (external): this category includes government entities, other than development banks or export credit agencies, that are located outside the country where the transaction takes place, be it in or out the African continent.
- Other multilateral public finance (external): this category includes multilateral sources that are not MDBs, such as the European Union/European Commission.
- Local government (in-country): this category includes government agencies, public authorities, state-owned companies, and utilities.
- Local state banks (in-country): this category includes state or national banks and public financial institutions.

Others/unknown: This category includes transactions whose source of finance was not possible to determine.

Sectors

The seven sectors analyzed are:

- 1. Fossil fuel energy (non-renewables)
- 2. Renewable energy
- 3. Social (health and education)
- 4. Telecommunications
- 5. Transportation
- 6. Water and sanitation
- 7. Multiple (more than one sector)

The fossil fuel energy⁸ sector includes gas, coal, oil-fired projects such as transmission and distribution and co-generation projects.

The renewable energy sector includes thermal solar, small hydro, hydro, onshore wind, photovoltaic solar, biomass, energy storage, biofuels, geothermal, other renewables, waste-to-energy, and marine projects.

Some of the investments in the transmission and distribution subsectors are related to hydro power generation.

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