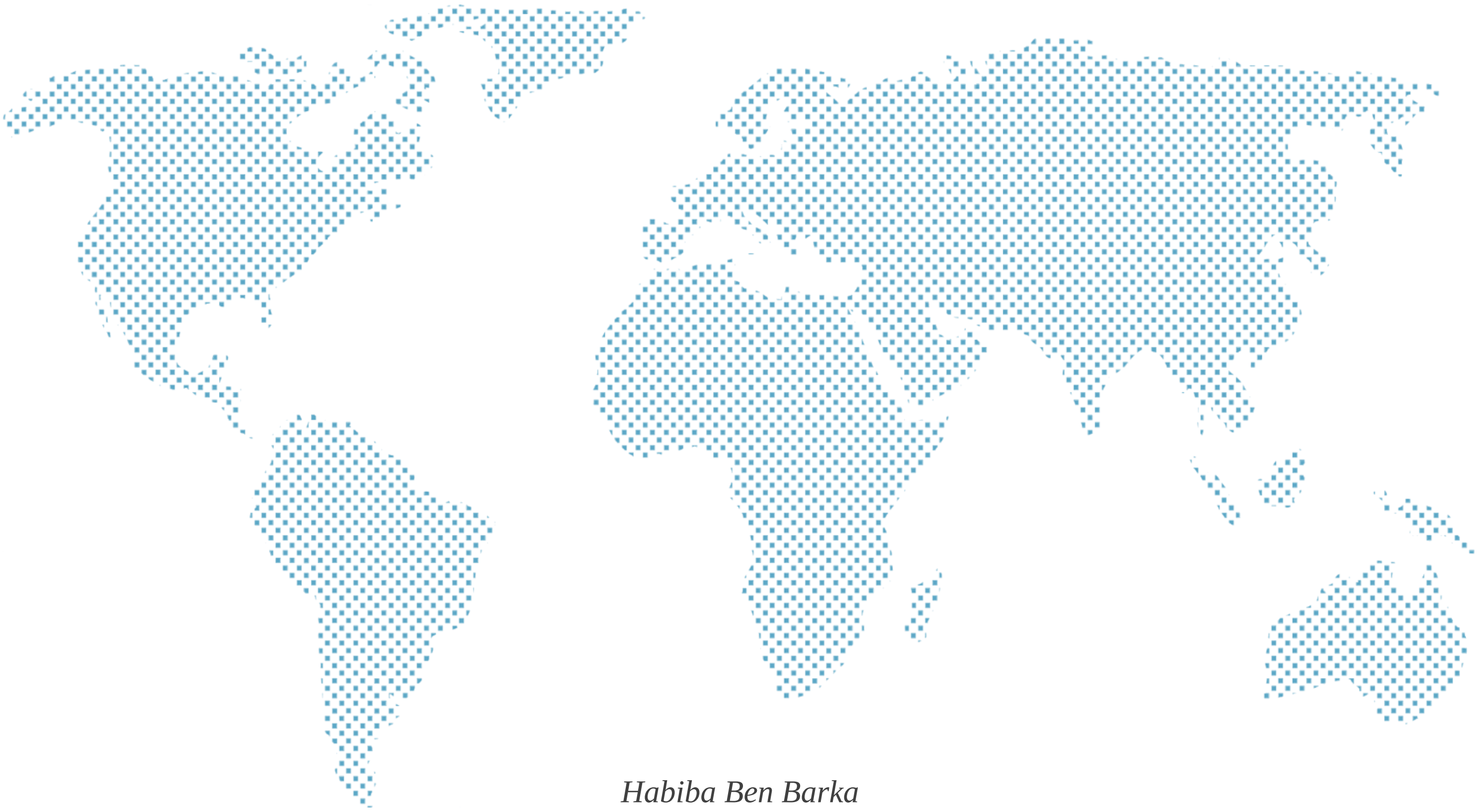
United Nations
Economic Commission for Africa

FINANCING INFRASTRUCTURE IN AFRICA: THE ROLE OF PENSION FUNDS



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I. Introduction

The African economy is one of the fastest-growing in the world, increasing at an annual average rate of more than 5 per cent since 2004, and many countries are expected to reach middle-income to high-income status by 2060. The period 2007-2017 witnessed a remarkable turnaround in Africa's economic growth trend. Between 2010 and 2015, 6 of the world's 10 fastest-growing economies were in Africa. In 2017, Ethiopia became the fastest-growing economy (forecast gross domestic product (GDP) growth rate of 8.3 per cent). Other fast-growing economies include the United Republic of Tanzania (7.2 per cent) and Djibouti (7 per cent). Such an optimistic outlook for the continent means that African policymakers must take advantage of the opportunities and address the challenges.

The positive Africa economic growth story, however, has not been inclusive, given that there has not been sufficient economic transformation and all members of society have not been able to participate in and contribute to the growth process more broadly. In 2016, Africa recorded a low GDP per capita of $1,898 (African Development Bank and others, 2017). This weak inclusive character of growth in Africa is of serious concern to many African Governments. Notwithstanding efforts made by African countries to eradicate poverty by 2030, more than 40 per cent of the population still lives below the poverty line ($1.90 purchasing power parity), while the number of poor Africans is on the rise owing to rapid population growth. Close to 80 per cent of African workers earn their income from the agriculture sector, which is often subject to low productivity and limited structural transformation.

In addition, the processes of industrialization, urbanization and modernization, or structural transformation, have not taken place in the various sectors of the African economy. The typical pattern of structural transformation for many African countries has been to move from agriculture to manufacturing, while neglecting to transform and raise productivity in agriculture or the urban informal service sector, which are the dominant sectors in Africa, estimated to account for between 50 and 80 per cent of employment. Evidence from other developing regions suggests that all economic sectors must be transformed towards technological upgrading and innovation and increasing returns to scale and world demand in order for effective structural transformation to occur. It is also understood that it cannot take place without investment in infrastructure, agriculture, education and skills training, and broader engagement with the private sector.

Many African countries are characterized by a pronounced infrastructure deficit, in particular in energy and transportation, and the potential for information and communications technology (ICT) has not been fully harnessed. Only 30 per cent of Africa's population has access to electricity, compared with 70 to 90 per cent in other regions of the world. Furthermore, road access in Africa is limited to 34 per cent of the population, compared with 50 per cent in other parts of the developing world. Although considerable progress has been made in ICT, as evidenced by the tremendous increase in mobile telephone connections since the mid-2000s, Africa began from a low base, and its Internet penetration rate is less than 10 per cent, compared with an average of 40 per cent in other parts of the world. According to the African Development Bank (AfDB), the continent's infrastructure deficit is due in large part to a lack of long-term financing. The lack of large-scale investment is a consequence of the limited participation of private sector players and the difficulties in mobilizing long-term financing from African financial systems to fund big-ticket items such as infrastructure.

Considerable investment in infrastructure using innovative sources of funding is needed to address Africa’s low level of structural transformation. Indeed, the New Partnership for Africa’s Development Programme for Infrastructure Development in Africa estimates that Africa will need to invest up to $93 billion annually for both capital investment and maintenance. Only $60 billion, however, can be met from the countries’ domestic resources and assistance from development financial institutions and other development partners. It is estimated that African countries invest on average between 15 and 25 per cent of GDP in transport infrastructure, while countries such as China and India invest close to 40 to 50 per cent of GDP. In the energy sector, the total power capacity installed in Africa is estimated to be only 147 GW. This is equivalent to the total capacity installed in Belgium and to what China installs every one to two years. In order to overcome this infrastructure challenge, Africa will need to add up to 250 GW between now and 2030 and invest an estimated $40 billion annually.

Closing Africa’s infrastructure financing gap will not be possible without a sound, developed and competitive financial sector. In Africa, the financial sector is a factor behind economic development growth because it plays a key role in facilitating trade, evaluating investment projects, mobilizing and pooling savings to fund projects, transferring funds where they are needed, monitoring the activities of capital users, distributing and monitoring risk and providing investors with diverse savings products. In addition, developing financial infrastructure in support of inclusive growth is a critical prerequisite for a well-functioning financial system.

The financial sector in Africa has made significant progress in terms of its development and openness. Many African countries have made some progress in reforming their institutional framework and creating an enabling environment for increased access to the banking sector. Financial flows to Africa (i.e., official development assistance (ODA), foreign direct investment (FDI), portfolio equity and loans, and bonds) increased substantially during the past few years, driven by improved macroeconomic fundamentals, increased political stability, high commodity prices and robust domestic demand. For example, inflows of FDI were estimated at $55 billion in 2015, higher than ODA to African countries ($45 billion). It is worth noting that FDI is a critical source of international capital flows to African countries. It can create jobs, boost productive capacity, enable local firms to gain access to new international markets and bring with it transfers of technology that can have positive long-term effects.

African financial markets are increasingly becoming more sophisticated, given that African countries have sought to develop an array of financial instruments and mobilize additional resources for financing their development projects. Not only do the capital markets provide the long-term capital that firms need to invest and expand, but also they can play a key role in filling in the financing gap in Africa regarding the Sustainable Development Goals. African capital markets have developed steadily during the past few years, with 30 stock exchanges, compared with only 7 in 1988. They, however, are small, fragmented and illiquid, and the costs for small transactions are very high. Moreover, their growth and sustainability is affected by the following factors: low income levels; ineffective collateral registration systems; weak judicial institutions; exposure to external shocks; weak human capital and financial infrastructure; limited portfolio choice options; inadequate monetary policy and capital account regimes; financial literacy; and inadequate pension fund reform. High returns (an average of 34 per cent) present opportunities for international investors, notwithstanding their small size and low liquidity. Furthermore, addressing some of the challenges observed in many African economies (e.g., small-scale markets, large and low-income populations, a lack of market infrastructure, a large informal sector, a lack of regional integration and business risk) will pave the way to potential growth opportunities and more incentives for investors to tap into that window of opportunity.

In the present report, the opportunities that Africa's infrastructure offer institutional investors, and how pension funds, in particular, are uniquely positioned to engage in long-term, high-return impact investment in the infrastructure sector are examined. The first part will provide a brief presentation of the landscape of pension systems in Africa. What are the major pension funds or social security industries in the five African regions (East, Central, North, Southern and West Africa)? What are their sizes, characteristics and investment portfolio? The second part will help readers to better understand the African investment climate. What are the capital market potential and infrastructure finance opportunities? The third part will focus on the infrastructure investment opportunities in the selected countries. What are their infrastructure needs? What are the existing infrastructure financing vehicles? In conclusion, the report will present key policy recommendations for promoting private sector investment in Africa's infrastructure and illustrate some potential deals for investment in select countries.

II. African pension funds

African pension funds have been expanding in recent years, albeit from a low base, thanks to the rise of the middle class and the regulatory reforms that have brought more people into the social security net in several countries. The majority rely on public funds in the form of pay-as-you-go or social security, while the private pension industry in most African countries is small. Meanwhile, the pension coverage on the continent is much lower than the global average, owing in part to the young population, a large informal employment sector and migration with limited pension portability.[1] Similarly, the asset size as a share of GDP is relatively low (between 5 and 10 per cent), except in South Africa (more than 100 per cent in 2016) and Namibia (87 per cent in 2016) (Organization for Economic Cooperation and Development, 2017).

It is estimated that pension funds in the six largest African markets could grow to $7.3 trillion by 2050 (from $800 billion in 2014) should the conducive demographic, economic and regulatory factors be in place (Maurer, 2017). At such a growth rate, should African pension funds invest approximately 20 per cent of their total annual assets, they would be able to allocate some $77 billion in infrastructure and help to bridge the continent's infrastructure financing gap. A number of dynamics currently under way on the continent, such as expanding populations, increasing urbanization, rising per capita incomes and a growing and consuming middle class, are all contributing to a pension fund industry that urgently needs to diversify its investment portfolios.

The recent growth in the African pensions industry has created opportunities to fund long-term investment in infrastructure and in other sectors that the continent so desperately needs. This is especially true, given the current context of dwindling ODA budgets that have traditionally funded such investment. The growth in assets, which must be carefully managed, also brings supervisory and regulatory challenges. One of the key challenges is how to encourage the portfolio diversification necessary for these systems to manage risk, while ensuring that diversification does not become a source of risk as pension funds venture into hitherto unknown asset classes and markets.

[1] Only 17.8 per cent of the population is covered by at least one cash social protection in Africa (i.e., indicator 1.3.1 of the Sustainable Development Goals). There are large variations, with coverage ranging from 48 per cent in South Africa to 2.9 per cent in Uganda (International Labour Organization, 2017).

A. Characteristics of pension funds in Africa

There are four types of pension programmes or schemes in Africa: (a) non-contributory pension or transfers in old age assistance (also known as “zero” pillar); (b) mandatory contributory pension schemes (“first” or “second” pillar); (c) voluntary, regulated occupational or personal pension savings and insurance arrangements (“third” pillar); and (d) other informal voluntary savings arrangements and household assets, savings or transfers to support the elderly (“fourth” pillar). More than three quarters of African countries provide social security coverage under mandatory contributory national pension schemes, which are based mostly on defined benefits systems that are financed on a pay-as-you-go basis.[2] Other national pension schemes are based on defined contribution systems that are fully pre-funded. Some countries have provident fund schemes, which are publicly run funds based on fully funded defined contribution systems. The countries with provident funds include the Gambia, Kenya, Swaziland and Uganda. Ghana is the only African country that has a national pension scheme based on a hybrid system of defined benefits and defined contribution.

All African countries have civil service pension systems that provide social security coverage to public sector workers, civil servants or government employees and the military. The majority of African countries have separate pension schemes for public sector workers. Only 12 countries have an integrated pension system that covers both public and private sector workers (Algeria, Cabo Verde, the Central African Republic, Chad, Ghana, Libya, Nigeria, Rwanda, Sao Tome and Principe, Seychelles, Sierra Leone and Zambia). Two countries (Djibouti and Egypt) have set up special schemes for the military. Most civil service pension schemes are based on defined benefit systems financed on a pay-as-you-go basis, except nine countries (Angola, Burundi, Cameroon, the Democratic Republic of the Congo, the Gambia, Malawi, Mauritius, Mozambique and Uganda) that finance in full or in part civil service pension schemes from the government budget.

In terms of cost, pension expenditure on national pension systems as a share of GDP is relatively low in Africa, averaging 0.5 per cent, compared with an average of 9 per cent of GDP for developed countries. This can be explained by the small number of pensioners, the small size of the elderly population (less than 10 per cent of the total population) and the relative immaturity of pension systems in Africa. The majority of pension systems on the continent were set up in the past 30 years, which makes them relatively immature, with low ratios of eligible beneficiaries to contributors. Nevertheless, as the pension systems mature, the ratio of beneficiaries to contributors will increase, which can result in a fiscal burden, especially in the case of pension schemes financed on a pay-as-you-go basis. The immaturity of pension schemes also helps to explain the low contribution rates, given that it reduces financing needs on a pay-as-you-go basis. Currently, the average contribution rates (i.e., combined contributions from an insured person and employer) for national pension schemes in African countries is 12 per cent (compared with 10 per cent in developed countries), ranging from less than 1.8 per cent for Namibia to 30 per cent for Egypt. For civil service pension schemes, however, the contribution rates are relatively high (twice as high as for developed countries), ranging from 2 per cent for Seychelles to 35 per cent for Senegal. Table 1 provides an overview of the pension systems and costs in African countries.

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[2] Pay-as-you-go systems are “contracts issued by the government that promise to pay pensions in the future in exchange for contributions in the present” (Robalino, 2005).

Table 1

Selected African pension schemes

	National pension schemes			*Civil servant pension schemes*		*Contribution rates (old age, disability, survivors)*		
Country	*pay-as-you-go defined benefits*	*Provident fund*	*Funded defined contribution*	*Separate from national scheme*	*Integrated with private sector*	*Insured person*	*Employer*	*Total*
Algeria					X	7	10.25	17.25
Angola	X			X		3	8	11
Benin	X			X		3.6	6.4	10
Botswana								
Burkina Faso	X			X		5.5	5.5	11
Burundi	X			X		4	6	10
Cabo Verde	X				X	4	8	12
Cameroon	X			X		2.8	4.2	7
Central African Republic	X				X	3	4	7
Chad	X				X	3.5	5	8.5
Congo	X			X		4	8	12
Côte d'Ivoire	X			X		6.3	7.7	14
Democratic Republic of the Congo	X			X		3.5	3.5	7
Djibouti					X	4	4	8
Egypt				X		13	17	30
Equatorial. Guinea	X					4.5	21.5	26
Ethiopia	X				X	7	11	18
Gabon						2.5	5	7.5
Gambia		X		X		5	10	15
Ghana	X		X		X	5.5	13	18.5
Guinea	X			X		2.5	10	12.5
Guinea-Bissau	X				X	--	--	--
Kenya		X		X		6	6	12
Lesotho						--	--	--
Liberia	X				X	3	3	6
Libya					x	3.75	10.50	14.25
Madagascar	X			X		1	9.5	10.5
Malawi			X		X	--	--	--
Mali	X			X		3.6	5.4	9
Mauritania	X			X		1	8	9
Mauritius	X			X		3	6	9
Morocco				X		3.96	7.93	11.89
Mozambique	X			X		--	--	--
Namibia						0.9	0.9	1.8
Niger	X			X		5.25	6.25	11.50
Nigeria			X		X	8	10	18
Rwanda	X				X	3	3	6
Sao Tome and Principe	X				X	6	8	14
Senegal	X			X		5.6	8.4	14
Seychelles	X				X	2	2	4
Sierra Leone	X				X	5	10	15
South Africa				X		--	--	--
Sudan	X			X		8	17	25
Swaziland		X		X		5	5	10
Togo	X			X		4	12.5	16.5
Tunisia				X		4.74	7.76	12.50
Uganda		X		X		5	10	15
United Republic of Tanzania	X			X		10	10	20
Zambia	X				X	5	5	10
Zimbabwe	X			X		3.5	3.5	7

Source: Economic Commission for Africa, based on data from the World Bank and the International Social Security Association.

B. Regional overview of pension funds

In Africa, there are significant disparities among regions, with Southern Africa being the largest and more conducive market for institutional investors. Within regions, there are also huge disparities among countries. The regional level overview will provide more details about the countries that dominated the markets in their relevant regions.

EAST AFRICA

In general, findings from a recent survey by the Milken Institute of 44 institutional investors in four East African Community countries, namely, Kenya, Rwanda, Uganda and the United Republic of Tanzania, highlighted that there was unmet demand for regional investment funds. Up to 2016, the savings by local institutional investors (pension funds and insurance companies) had nearly doubled in four years, to approximately $19 billion, up from $10.7 billion in 2010. More than three quarters of local institutional investors preferred to invest in regional infrastructure, which could help to diversify the risks and boost the return by extending a portfolio of infrastructure projects throughout the East African Community region. In this context, it is clearly shown that investors have a strong desire to finance infrastructure projects, in particular cross-border transport and energy projects in the region, but they lack clear policy direction that would harmonize individual institutional investors from each partner State.

Most East African Governments have plans to tap into the pensions sector to fund infrastructure projects, but, because of the sluggish reforms in the sector, many projects could not materialize. In December 2017, a World Bank assessment of the East African financial sector highlighted that there were no incentives for private sectors to participate in development through pension industry reforms. They could therefore be incentivized to participate in the provision of infrastructure development through the reforms that would create greater flexibility in their investment process, limit the ability of members to withdraw and reduce trustee rotation.

Table 2 provides an overview of the size of the major economies in the East African region, namely, Ethiopia, Kenya, Rwanda, Uganda and the United Republic of Tanzania. Kenya dominates the East African institutional investment landscape, with its pension assets amounting to $8.14 billion, followed by the United Republic of Tanzania ($3.8 billion), Uganda ($2.2 billion) and Rwanda ($779 million). Kenya's central position in the region is due in part to its strong economic growth, stable business climate, growing middle class and more readily available human capital, compared with other countries in the region. Although Ethiopia is the largest economy by GDP (close to $178 billion in terms of purchasing power parity) and by population (more than 100 million) in the region, it receives relatively little capital from impact investors. According to the Global Impact Investing Network and Dalberg (2015), Ethiopia accounted for only 7 per cent of impact capital disbursed to the region. This is due in part to Ethiopia's business regulatory system, which is unfriendly to foreigners (in terms of profit repatriation), its low human capital and underdeveloped financial markets.

Table 2
Selected economies in East Africa

Country	*GDP PPP (2016) (Billions of United States dollars)*	*Real GDP growth (2016) (per cent)*	*FDI inflow (2016) (Millions of United States dollars)*	*Population (2016) (Thousands)*	*Ease of doing business (2017) (Rank/190)*	*Total pension fund assets (United States dollars)*
Ethiopia	177.95	7.6	3 988	101 853	159	--
Kenya	153.19	6.0	393	47 251	92	8.14 billion
Rwanda	22.84	5.9	254	11 883	56	779 million
Uganda	75.63	4.8	523	40 323	115	2.2 billion
United Republic of Tanzania	150.60	7.2	1 365	55 155	132	3.8 billion

Abbreviations: FDI, foreign direct investment; GDP, gross domestic product; PPP, purchasing power parity.

Source: African Statistical Yearbook 2017 (GDP growth and population); World Bank 2017 world economic indicators (GDP purchasing power parity and FDI inflow); *Doing Business 2017* (ease of doing business); various sources (assets).

CENTRAL AFRICA

The Central African region has the least developed pension systems in terms of coverage (of both workers and the elderly), assets under management and pension investment regulation. Nevertheless, as with many African countries, those in Central Africa present some opportunities for institutional investors, given their growing economies (in terms of GDP purchasing power parity) and population and increasing demand for infrastructure development.

For example, a country such as Cameroon offers significant opportunities for investors, in particular institutional ones, with potential gains in key sectors such as transport, energy, communications, construction and housing. As a resilient and diversifying economy, with a growing population of 23.4 million, an unemployment rate of 4.3 per cent and an age dependency ratio of 85.4 per cent, Cameroon represents a potential market for pension funds and insurance industries. In 2014, social insurance programmes in the country covered only 3.4 per cent of the population. The National Social Insurance Fund of Cameroon, which is a State-run pension fund, provides pension services to employees in public and private enterprises and to civil servants. Its assets amount to $5.6 million, compared with a total asset of $299 million for insurance companies. There are 24 insurance companies (both domestic and foreign) operating in Cameroon.

Another Central African country that presents investment opportunities is Gabon, a relatively stable country with some socioeconomic advantages (e.g., abundant natural resources, skilled human capital and strategic geographic location). The Government has been implementing a series of reforms aimed at more effectively diversifying the economy, which depends heavily on revenue generated from natural resources, principally hydrocarbons. To implement its “Emerging Gabon” strategic plan, the Government has been promoting foreign investment in key strategic sectors, including oil and gas, mining, timber, infrastructure and ecotourism. In pursuing its goal of becoming an emerging economy, Gabon has also committed itself to becoming a regional leader in service industries, including financial services, ICT, education and health-care systems. With regard to investment, the country is implementing measures to improve its business and investment climate in order to become an attractive destination for foreign investment. The Government is making efforts to address the structural factors that are constraining the investment environment (e.g., low institutional capacity, limited infrastructure, a small domestic market and poorly developed capital markets) and to promote foreign portfolio investment. Gabon is host to the Central Africa Regional Stock Exchange.

Table 3 provides an overview of the major economies of the Central African region, namely, Cameroon, Chad, Congo and Gabon. Countries of the region are resource-rich in their majority, except Cameroon, which has a relatively diversified economy. Most economies in the region depend heavily on the energy and mining sectors, undermining significantly their resilience to external shocks. For example, the fall of oil prices in 2014 had a significant impact on these economies, contracting sharply their GDP growth rates (e.g., -3.4 per cent and -2.4 per cent for Chad and Congo, respectively) and severely deteriorating their fiscal stability and macroeconomic conditions. Notwithstanding the fall in world oil prices and the regional security risks, Cameroon growth remained relatively stable, at 3.2 per cent in 2016. Its economic growth was driven by strong performances in the transport, telecommunications, trade and hotel and catering industries, as well as investment in basic infrastructure.

Table 3

Selected economies of Central Africa

Country	*GDP PPP (2016) (Billions of United States dollars)*	*Real GDP growth (2016) (per cent)*	*FDI inflow (2016) (Millions of United States dollars)*	*Population (2016) (thousands)*	*Ease of doing business (2017) (Rank/190)*	*Total pension fund assets (United States dollars)*
Cameroon	84.76	3.2	128.20	23 924	166	5.6 million
Chad	28.82	-3.4	559.85	14 497	180	--
Congo	29.36	-2.4	2 006	4 741	177	--
Gabon	35.90	2.9	703.19	1 763	164	236.7 million

Abbreviations: FDI, foreign direct investment; GDP, gross domestic product; PPP, purchasing power parity.

Source: African Statistical Yearbook 2017 (GDP growth and population); World Bank 2017 world economic indicators (GDP purchasing power parity and FDI inflow); *Doing Business 2017* (ease of doing business); various sources (assets).

North Africa

The pension funds in North African countries are at various stages of development. While the pension fund market in Morocco is more advanced, with assets of approximately \$30 billion in 2014, those in Egypt and Algeria are to be developed, with assets of some \$6 billion and \$5 billion, respectively (PricewaterhouseCoopers, 2015).

With regard to the investment portfolio, a large number of pension funds in Africa invest heavily in domestic debt, and most of them are subjected to an investment limit on infrastructure and other requirements.[3] For example, some 60 per cent of pension fund assets was invested in government securities/bonds in Morocco (Ibid.). In Egypt, more than 70 per cent of the pension fund portfolio was invested in National Bank of Egypt Investment certificates and in government bonds and bills (Sourial and Amico, 2015; PricewaterhouseCoopers, 2015).[4] Table 4 provides an overview of the size of the major economies in the North African region, namely, Algeria, Egypt, Morocco and Tunisia.

Table 4
Selected economies of North Africa

Country	*GDP PPP (2016) (billions of United States dollars)*	*Real GDP growth (2016) (per cent)*	*FDI inflow (2016) (millions of United States dollars)*	*Population (2016) (thousands)*	*Ease of doing business (2017) (Rank/190)*	*Total pension fund assets (United States dollars)*
Algeria	610.81	3.5	1 637	40 376	156	4.8 billion
Egypt	1 066.96	4.3	8 107	93 384	122	6.1 billion
Morocco	281.96	1.0	2 318	34 817	68	30 billion
Tunisia	132.48	1.0	695	11 375	77	--

Abbreviations: FDI, foreign direct investment; GDP, gross domestic product; PPP, purchasing power parity.

Source: African Statistical Yearbook 2017 (GDP growth and population); World Bank 2017 world economic indicators (GDP purchasing power parity and FDI inflow); *Doing Business 2017* (ease of doing business); various sources (assets).

SOUTHERN AFRICA

In South Africa, both the pension fund and insurance industries are huge. South African retirement funds have been able to invest up to 5 per cent of their assets in Africa since changes to foreign exchange regulations in 2008.[5] The allocation remained at 5 per cent between 2012 and 2017. The largest pension fund in South Africa, the Government Employees Pension Fund, is mandated to invest 10 per cent of its holdings outside the country, with half of that amount earmarked for long-term investment in Africa. Based on the fund's size of approximately 1 trillion rand, this allocation amounts to approximately 50 billion rand. The stated aim of the Fund is to initially focus on markets on the basis of size and liquidity and then diversify into private equity and "development investments" that include infrastructure, energy and other such projects.

Pension funds in Botswana were allowed to invest up to 2.5 per cent in private equity (PE) under the general "other assets" category before 2015. The Non-Bank Financial

[3] Even if the requirements are met, institutional investors may find it difficult to invest because they lack the technical skills to assess complicated infrastructure projects. The risk-adjusted return of infrastructure projects may not be very attractive, given the high interest rates on government bonds and riskier nature of infrastructure projects. More importantly, compared with the issue of asset allocation, the pension systems are subjected to several pressing challenges, including large and unaffordable pension promises, financially unsustainable schemes and fragmented schemes with weak and costly administration (Robalino, 2005).
[4] This is far above the minimum investment requirement (i.e., 15 per cent of the portfolio in bills and bonds issued by public administration) (Organization for Economic Cooperation and Development, 2017b; Egypt Financial Regulatory Authority data).
[5] As part of the revised Regulation 28, the foreign exchange limits are set by the South African Reserve Bank, which can change the limits at any time.

Institutions Regulatory Authority Act's Revised Pension Prudential Investment Rule, issued in October 2015, now allows pension funds to invest up to 5 per cent in the asset class. Investment in private equity by Botswanan pension funds appears to be significant, compared with other countries ($125.6 million as of 2015 of a potential $261 million). Few funds, however, have the size and internal capacity to be able to invest in this asset class.

The experience of Zimbabwe has been peculiar. The pension fund industry is one of the areas that was adversely affected by hyperinflation in the country. Ideally, when an economy is functioning well and companies operate on full capacity, employers facilitate the pooling of resources to a pension fund. By doing so, capital will be generated by way of contributions from employers and employees and investment income. The main objective is to build an income replacement mechanism for pension fund members when they reach retirement age. In the early months of 1999, however, the temporary dysfunction of the economy interrupted the regular rhythm of both pension savings and benefits. The multicurrency system was adopted in early 2009, after which the economic environment began to operate with a stable currency.

Table 5 provides an overview of the size of selected economies in Southern Africa, namely, Botswana, Mozambique, South Africa, Zambia and Zimbabwe. One can observe that South Africa is a significant outlier in the region, with its assets amounting to $322 billion, compared with $6 billion for Botswana, $1.1 billion for Zimbabwe, $850 million for Mozambique and $783.9 million for Zambia. In terms of impact investment, South Africa alone accounted for 85 per cent of capital disbursed in the region (Global Impact Investing Network, 2015).

Table 5
Selected economies of Southern Africa

Country	*GDP PPP (2016) (billions of United States dollars)*	*Real GDP growth (2016) (per cent)*	*FDI inflow (2016) (millions of United States dollars)*	*Population (2016) (thousands)*	*Ease of doing business (2017) (Rank/190)*	*Total pension fund assets (United States dollars)*
Botswana	38.23	2.9	10.47	2 304	71	6 billion
Mozambique	35.14	3.3	3 128	28 751	137	850 million
South Africa	740.66	0.3	2 250	54 979	74	322 billion
Zambia	65.38	3.0	1 575	16 717	98	783.9 million
Zimbabwe	32.80	0.5	343	15 967	161	1.1 billion

Abbreviations: FDI, foreign direct investment; GDP, gross domestic product; PPP, purchasing power parity.

Source: African Statistical Yearbook 2017 (GDP growth and population); World Bank 2017 world economic indicators (GDP purchasing power parity and FDI inflow); *Doing Business 2017* (ease of doing business); various sources (assets).

WEST AFRICA

In West Africa, the current level of impact investment is very small, with the exception of Ghana and Nigeria, which, together, account for more than 50 per cent of capital deployed in the region. According to the Global Impact Investing Network, between 2005 and 2015, an estimated $6.8 billion was deployed in the region as direct impact investment. Nigeria and Ghana accounted for 28 per cent ($1.9 billion) and 25 per cent ($1.6 billion), respectively, of the total capital deployed, while Côte d'Ivoire and Senegal accounted for a combined 22 per cent. Nevertheless, the Global Impact Investing Network clarified that the non-development financial institution investment[6] represented a very small proportion of the total capital deployed in the region, at approximately 3.4 per cent ($221 million). These impact investors include foundations, institutional investors and fund managers. The relatively small level of impact investment in West Africa, especially compared with the other African regions, is a result of the region's challenging business environment, in particular in terms of infrastructure, energy provision and human capital.

As one of Africa's biggest economies, Nigeria has been outperforming others in terms of economic growth, infrastructure development, business regulations, market capitalization and investment. Its recent focus on the promotion of non-oil sectors as drivers of economic growth, which has enabled the diversification, sophistication and growth of capital markets, has created significant opportunities for institutional investors. For example, the market capitalization of the Nigeria Stock Exchange averaged approximately one fifth of GDP between 2006 and 2014 (PricewaterhouseCoopers, 2015). Its pension industry grew significantly in recent years, with total assets increasing from almost $7 billion in 2008 to $25 billion in 2014, representing some 5 per cent of GDP. That rapid growth of pension fund assets was due in part to the various pension reforms introduced by the Government/National Pension Commission between 2004 and 2014, which were aimed at improving the rules, regulation and governance of the pension schemes, increasing coverage and enhancing financial sustainability. The growth trend in the country's pension industry is set to continue as the country's growing young population enters the workforce and positively influence the national coverage of pension and other social security systems. Currently, only 6.5 million Nigerians are contributing to pension systems.

Ghana has also embarked on pension reforms, which resulted in increased investment allocation in equities by pension funds (29 per cent). The Social Security and National Investment Trust is the largest institutional investor in the country, with total assets estimated at $1.8 billion, representing 69.2 per cent of all pension fund assets ($2.6 billion). Although Ghana's pension fund assets are very small, compared with Nigeria or other emerging countries, its relatively conducive business environment, good macroeconomic policies and diversified economic sectors provide great opportunities for investment. In 2015, the market capitalization of the Ghana Stock Exchange was estimated at close to $20 billion, or 7 per cent of GDP.

The economy of Côte d'Ivoire has experienced strong growth since the end of the sociopolitical crisis in 2012. The main factors behind this are political stability and improved security, increased productivity in the agricultural sector, better management of the mining, oil

[6] This is impact investment made by non-government backed investors such as institutional investors.

and gas sectors and implementation of important reforms, especially for sound macroeconomic and fiscal management, and improved business environment. These have also contributed to boosting investor confidence, enabled the inflows of FDI, which was valued at 1.31 per cent of GDP in 2016, and promoted the development of public-private partnerships. The country does not have a national stock exchange but hosts the West African Regional Stock Exchange, which trades equity securities and serves the West African Central Bank countries, namely, Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, the Niger, Senegal and Togo. The Exchange's market capitalization reached a historic peak of $9.1 billion in 2014.

In Senegal, strong economic growth, a stable political environment, relatively good infrastructure and good institutional capabilities have helped to create an attractive environment for investors. The Government has been implementing various reforms pertaining to infrastructure, the energy sector, fiscal management and skilled human capital in order to improve its business and investment environment. The country has been able to establish itself as a regional hub in terms of the cross-border transportation, logistics and services sectors. The Government has also put in place policy measures to develop and diversify its capital markets. For example, in 2012, it adopted its first mid-term debt management strategy during the period 2013-2016. The country has been issuing debt instruments in local currency on the regional market. It issued its first $500 million benchmark bond in the foreign bond market in 2011. Senegal has five-year and seven-year bonds, quoted on the West African Regional Stock Exchange. The Government has been urging domestic institutional investors to play a more active role in the financial markets. The reforms to the country's pension systems in 2004, 2006 and 2008 were aimed at ensuring financial sustainability and promoting the good governance of the social security industry.

Table 6 provides an overview of the size of the major economies in the West Africa region, namely, Côte d'Ivoire, Ghana, Nigeria and Senegal.

Table 6
Selected economies of West Africa

Country	*GDP PPP (2016) (billions of United States dollars)*	*Real GDP growth (2016) (per cent)*	*FDI inflow (2016) (millions of United States dollars)*	*Population (2016) (thousands)*	*Ease of doing business (2017) (Rank/190)*	*Total pension fund assets (United States dollars)*
Côte d'Ivoire	87.68	8.4	481.02	23,254	142	--
Ghana	121.31	4.0	3,485.33	28,033	108	2.6 billion
Nigeria	1,092.21	-1.5	4,434.64	186,988	169	25 billion
Senegal	39.62	6.6	392.81	15,589	147	--

Abbreviations: FDI, foreign direct investment; GDP, gross domestic product; PPP, purchasing power parity.

Source: African Statistical Yearbook 2017 (GDP growth and population); World Bank 2017 world economic indicators (GDP purchasing power parity and FDI inflow); *Doing Business 2017* (ease of doing business); various sources (assets).

In Africa, only a handful of countries have succeeded in creating and promoting innovative domestic investment opportunities for their pension funds, insurance companies and other social security systems. Countries such as Mauritius, Morocco, Namibia and South Africa have been categorized by PricewaterhouseCoopers as "advancing markets", with relatively well-developed financial sectors and the largest proportion of pension fund assets on the continent. Another group of good performers, namely, Botswana, Egypt, Ghana, Kenya and Nigeria, made significant progress in improving the quality of their financial institutions and infrastructure. That group of countries, categorized as "promising markets", have smaller financial sectors and fund industries compared with the advancing markets but they present significant potential for investment, given the growing proportion of their pension and insurance industries, the increasing amount of their institutional assets and their demographic dividend. Other countries on the continent are mostly in the nascent stage of the development of their institutional investment industries.

III. Investment climate

A. African capital markets

Globally, institutional investors, in particular pension funds, insurance companies and mutual funds, are major players in capital markets, with substantial investment in equities and bonds. Pension funds and insurers are major investors in a large number of developed economies, with assets representing more than 60 per cent of GDP in countries such as Canada, the Netherlands, the United Kingdom of Great Britain and Northern Ireland and the United States of America (Organization for Economic Cooperation and Development, 2013). In most African States, institutional investment is less developed, with few exceptions, including South Africa, which has one of the largest pension fund industries on the continent. Many of these funds and insurance companies allocate substantial portions of their portfolios to government securities, real estate and bank deposits, with low allocations to private sector securities. The investor's decision to invest is due in part to quantitative investment limits set by regulatory authorities in some countries. In East Africa, for example, Kenya, Uganda and the United Republic of Tanzania set comparatively high ceilings on the maximum share of the portfolio that pension funds can allocate to local government securities (see table 7), which ultimately led to low investment in private equities and mutual funds.

Table 7

Maximum investment limits for pension funds in government debt, bank deposits and real estate for select Eastern African countries

(Per cent)

	Government[a]		*Bank deposits*		*Real estate*
	Bills	Bonds	Demand	Term	
Kenya	90		5	30	30 + 30
Rwanda	5	50	5	40	35
Uganda	80		5	30	30
United Republic of Tanzania	70		-	35	30

[a] Regulatory limits for government debt in Kenya, Uganda and the United Republic of Tanzania apply to combined totals of government bills and bonds.

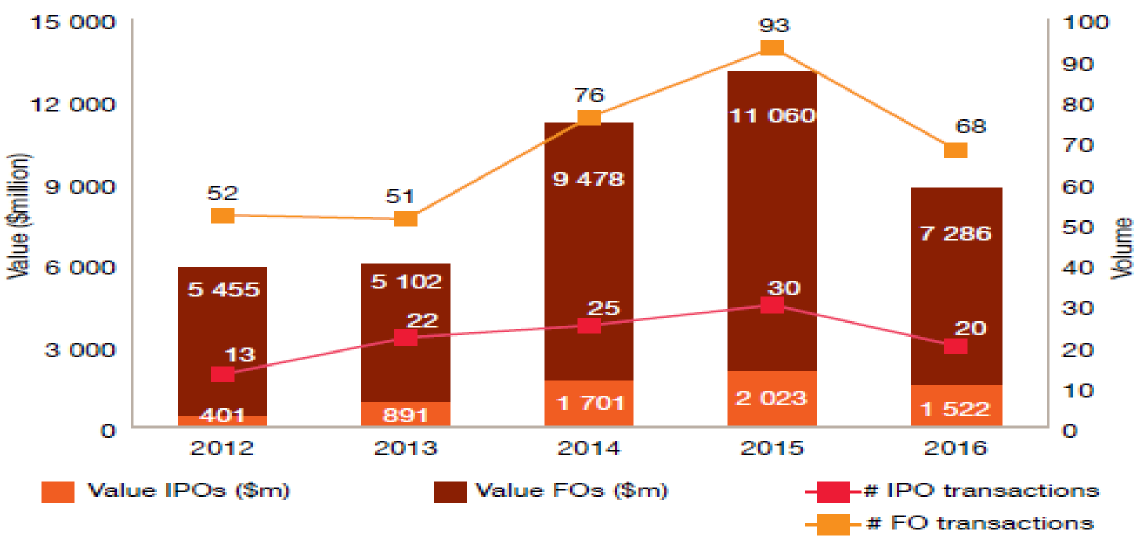
Source: Irving, J., and others, 2017.

Between 2012 and 2016, it is estimated that African equity capital market activity comprised 110 initial public offerings and 340 further offers. The year 2015 accounted for the largest number of initial public offerings and further offers during the period, with 30 and 93, respectively. In 2016, equity capital markets in Africa recorded a decline of 28 per cent from 2015 in the number of transactions and of 33 per cent from 2015 in terms of capital raised (PricewaterhouseCoopers, 2017). Since 2012, there have been 450 African equity capital market transactions, raising a total of $44.9 billion, an increase of 8 per cent in terms of capital raised during the period 2007-2011. Figure I shows a trend of African equity capital market transactions during 2012-2016 (Ibid.).

It has been suggested that a critical step in building capital markets is to develop the "buy side," that is, to encourage greater participation by local institutional investors such as pension funds and insurance firms in domestic capital markets (Irving and others, 2017). This, however, is not always possible, especially in Africa, given that there is a limited supply of investment vehicles for developing the buy side in emerging and frontier markets. Notwithstanding the rapid growth in pension and insurance business, which is supported in large part by excessive savings caused by the nature of a region's demography (i.e., high population growth rates and low rates of ageing), African capital markets are, with few exceptions, weak and characterized by low turnover, including Southern and North Africa. The situation has reduced investor confidence in investing in capital markets. For example, trading data from Kenya's Capital Markets Authority shows that the Nairobi Securities Exchange equity market turnover dropped to $1.36 billion between January and November 2016, from $1.89 billion in 2015. The Rwanda Stock Exchange turnover also registered a drop of 17.3 per cent between January and November 2016, to $40.8 million, from $49.3 million in 2015.

Figure I

Equity capital market activity, 2012 – 2016



Abbreviation: FO, further officers; IPO, initial public offerings.

Source: PricewaterhouseCoopers, 2017.

In West Africa, stock markets have been advancing since 2013, notwithstanding falling commodity prices. The security exchange market in Nigeria showed a total of four new issues, valued at 22.22 billion naira in the second quarter of 2015. The Nigerian stock market, however, closed 2016 on a negative note, with a 6.17 per cent loss, compared with a 17.36 per cent loss in 2015. That translated to an average monthly loss of 0.27 per cent in 2016, compared with 1.34 per cent recorded in 2015. The total market capitalization of listed securities (i.e., equities, fixed income securities and exchange-traded funds) at the end of 2015 stood at 17.02 trillion naira. That figure indicated an increase of 4.71 per cent, compared with its position of 16.25 trillion naira at the end of 2014 (Nigeria Stock Exchange, 2015). Investor confidence remained significantly low as market net worth continued to decline.

The situation is different in North and Southern Africa, where the significance of capital markets in the economy is substantial. For example, the Johannesburg Stock Exchange is the largest in Africa and has more than 400 firms registered. The bond market also is well developed with large numbers of highly liquid government bonds issued. According to the South African Reserve Bank, the turnover for exchange-traded derivatives in the Johannesburg Stock Exchange for 2012 was approximately $504 billion. Equity derivatives accounted for 81 per cent of that and commodity, interest rate and currency derivatives accounted for 10, 7 and 2 per cent, respectively. In 2017, the net average daily turnover in the South African foreign exchange market increased slightly, by 1 per cent, from $19.1 billion in the second quarter of 2017 to $19.3 billion in the third quarter. The Government of South Africa also raised $2.5 billion in the international capital market in September 2017 through the placement of two bonds with the equivalent value of 33.9 billion rand.

In North Africa, Egypt has the largest number of mutual funds, with 75 listed on the Egypt Stock Exchange, including 20 equity funds, 23 fixed income funds that invest in bonds and 9 Islamic funds. In Morocco, major banks offer mutual funds as savings products to their clients, including expatriate local citizens who have significant funds to invest. While Tunisia has few local funds, Amen Bank, the largest private bank in the country, offers a fund that invests in equities and bonds (African Development Bank, 2012).

In line with the above, there has been increased government intervention and the privatization of government assets aimed at facilitating the development of local capital markets. For example, in 2016, the Government of the United Republic of Tanzania, through its parliament, approved a finance bill that required electronic and communication companies registered in the country to list their shares on the Dar es Salaam Stock Exchange from July 2016.[7] In Nigeria, as part of an agreement reached with the Federal Communications Commission, MTN Group Ltd. agreed to list its business on the Nigerian Stock Exchange (PricewaterhouseCoopers, 2017).

[7] All Africa, "Tanzania: finally telecoms initiate share listing process on DSE", 6 January 2017. Available at http://allafrica.com/stories/201701060588.html.

B. Investment landscape for institutional investors in Africa

Between 2007 and 2017, inflows of investment increased significantly in Africa, surpassing ODA. In 2015, FDI inflows to Africa were estimated at $45.7 per capita, compared with $37.8 per capita for ODA (African Development Bank and others, 2017). In sub-Saharan Africa, FDI and private equity inflows peaked at $44.6 billion in 2011 before declining to $40.6 billion in 2015 and $28.1 billion in 2016.[8] The drop in FDI inflows was due in part to the impact of commodity price shocks, mainly oil and minerals prices, on many African resource-dependent economies, which created macroeconomic imbalances and fiscal and current account deficits, which have, in turn, reduced investor confidence and negatively affected FDI flows to the continent. With regard to institutional investors on the continent, according to the Global Impact Investing Network and Dahlberg (2015) and the Global Impact Investing Network and Open Capital Advisors (2016), Southern Africa received $5.6 billion of investment during the period 2005-2015, with South Africa being the key receptor ($4.9 billion). In East and West Africa, the amount of investment was relatively smaller, at $1.4 billion and $221 million, respectively.

The investment landscape is changing gradually in Africa. Historically, foreign investment flows to Africa have been concentrated in the oil and extractive industries (in the form of FDI, debt, remittances and capital investment). More recently, foreign investors are diversifying their sectors of investment and targeting consumers, construction and real estate. According to the 2017 *Africa Investment Report*, real estate was the top sector by capital investment in 2016, accounting for $36.5 billion, or 40 per cent, of FDI in the region, while construction was the top business activity by capital investment, accounting for 40 per cent of FDI (Analyse This, FDI Intelligence and This is Africa, 2017). Some African countries are also benefiting from a gradual rise in domestic sources of investment including domestic savings reserves and assets from domestic institutional investors, such as banks, insurance companies and pension funds.

Institutional investors have traditionally managed and invested significant assets in exchange trade securities (e.g., bonds) and stocks (e.g., equities), accounting for approximately 90 per cent of their investment portfolios. Nevertheless, the investment strategies of institutional investors are increasingly focusing on alternative assets, including private equity, private debt, hedge funds, real estate, natural resources and infrastructure. While global institutional investors have been allocated only some 2 per cent of their assets in infrastructure, there is growing investor interest in the sector, in particular in the untapped African markets. According to the Global Impact Investing Network (2017), impact investment activity in Africa was estimated at $9 billion of assets under management in 2015, representing approximately 15 per cent of those global assets. Impact investors in Africa include not only institutional investors (e.g., pension funds, insurance companies and commercial banks), but also development finance institutions, funds, private foundations and high net-worth individuals. According to the Global Impact Investing Network and Open Capital Advisors (2015) and the Global Impact Investing Network and Dalberg (2015), Southern Africa received $5.6 billion in investment with South Africa being the primary recipient ($4.9 billion). In East and West Africa, the amount of investment was relatively smaller, at $1.4 billion and $221 million,

[8] World Bank, "International debt statistics", Debtor Reporting System. Available at http://datatopics.worldbank.org/debt/ids/ (accessed on 7 June 2018).

respectively. Table 8 illustrates the investment characteristics of these types of impact investors.

African domestic institutional investors are increasingly deploying capital into "developmental investment", that is, allocating assets in economic infrastructure projects, environmental sustainability, labour-intensive sectors and micro, small, and medium-sized enterprises. For example, in 2014, the Public Investment Corporation, one of South Africa's largest pension funds, deployed close to $3.5 million of assets under management that supported renewable energy projects and funded 309 micro, small, and medium-sized enterprises in South Africa alone (United Nations Development Programme, 2015). It is worth noting that South Africa has been a pioneer on the continent for impact investment and socially responsible investment and since the adoption of the Pension Funds Act in 2011, which requires the consideration of environmental, social and governance criteria in pension fund investment decision-making.

Only a few African countries, however, have been implementing policy and regulatory incentives for the participation of domestic institutional investors in impact investment, including Kenya, Namibia, Nigeria, South Africa and Zambia. In the majority of African countries, institutional investors remain reluctant to invest in developmental investment, in part because of their fiduciary duty and organizational structure, lack of expertise on structuring appropriate investment vehicles and instruments and lack of transparency and good governance of infrastructure projects. Other investment barriers that domestic and international institutional investors face when engaging in developmental investment in some African countries include underdeveloped or nascent capital markets, the absence of a market for illiquid assets or class asset investment, the scarcity of well-structured bankable infrastructure projects and risks relating to political stability and security. Another shortcoming is that African pensions funds are relatively small and fragmented, which hamper their ability to invest or attract foreign investors into co-financing mechanisms for large-scale projects that require significant investment such as infrastructure projects. Some of these market constraints call for the need to promote the growth of African pension funds, support the development of locally listed vehicles to create liquidity and encourage co-investment among African pension funds or with global pension funds. Some of the existing co-investment platforms for infrastructure financing in Africa are the Pan African Infrastructure Development Fund, the Africa50 Infrastructure Fund, the Emerging Africa Infrastructure Fund and the Global Infrastructure Fund.

Table 8
Types of impact investors in Africa

Investor type	*Typical financial products*	*Typical sector focus in Africa*	*Average deal size range (United States dollars)*
Development finance institutions	Equity, debt, mezzanine, quasi-equity, guarantees and grants for technical assistance	Infrastructure, financial services, agriculture, energy	5 million – more than 50 million
Fund managers	Grants for enterprises at a relatively early stage	Infrastructure projects, agriculture, financial services, telecommunication, retail	Early stage finance: less than 50,000

	Equity, debt, quasi-equity, inventory finance Equity for enterprises in the growth state	Access to basic services (food, health, education, water, energy) and social/human development	Venture capital and private equity: 500,000 – 1 million
Foundations and private foundations	Equity, debt, grants, quasi-equity for seed stage and market building	Access to basic services (food, health, education), social/human development, and market creating initiatives (i.e., associations, accelerations, competitions, networks)	500,000 – 5 million
Institutional investors	Direct investment: providing co-investment through debt (banks) or invest in funds (pension and insurance funds)	Projects (i.e., agriculture, energy, water, transportation, telecommunication) and growth stage of financial services (retail and real estate)	

Source: United Nations Development Programme (2015).

C. Investment destinations in Central and West Africa

There are significant regional disparities in Africa's investment climate, with North and Southern Africa being the most attractive to institutional investors. East Africa has made significant progress in terms of removing bureaucratic and procedural barriers to investment and doing business and improving their business and investment environment. The East African region is increasingly becoming the destination of choice for institutional investors. In Central and West Africa, many countries are plagued by cumbersome administrative procedures, corruption, political uncertainty and insecurity, making them less attractive to institutional investors. Nevertheless, some countries in both regions present significant investment potential in terms of their economic growth, demographic dividend, growing middle class and urbanization. These countries include Cameroon, Côte d'Ivoire, Ghana, Nigeria and Senegal. The countries have made improvements in economic performance, have competitive markets, compared with other countries in the subregions, have stronger State capabilities than the rest of the subregions and have implemented policies and regulations to improve business and investment climate with incentives targeting foreign investors. Moreover, their relatively stable credit ratings (see table 9) and commitment to fighting corruption are promising conditions for improving their investment climate.

Table 9

Sovereign ratings and corruption risks of selected African countries

	Moody's	*Standard & Poor's*	*Fitch*	*Corruption Perceptions Index (rank)*
Cameroon	B	B	B	145
Côte d'Ivoire			B+	108
Ghana		B-	B	70
Nigeria		B	B+	136
Senegal	Ba3	B+		64

Source: Economic Commission for Africa, based on country ratings/data from Moody's, S&P, Fitch and Transparency International.

CAMEROON

Cameroon is the most diversified economy in Central Africa. Its economy grew by 5.8 per cent between 2013 and 2015 before falling to 3.2 per cent in 2016, owing to slower growth in the oil and gas sectors (i.e., the impact of oil and gas price volatility). Its growth outlook is positive and expected to average 4 per cent annually between 2017 and 2021 (African Development Bank, 2018), supported by increased investment in infrastructure (energy and transport) and agro-industry, rising oil production and increased revenue/receipts from the services sector (financial services, hotels and restaurants).

Notwithstanding the regional security threats from Jama'atu Ahlis Sunna Lidda'Awati Wal-Jihad (Boko Haram) and rebel groups in the Central African Republic, Cameroon continues to attract foreign investment, in particular in the energy, oil and gas, construction and transportation sectors. Its political stability, transparent legal system, dynamic and skilled labour force, growing urban population (58 per cent of the total population, growing at 3.3 per cent annually) and the commitment of the Government to economic and business reforms have been the major factors behind investment flows in the country. The major credit rating agencies have reported that the country's credit outlook is stable and indicated that the country is borrowing cautiously and spending wisely. Notwithstanding the Government's anti-corruption mechanisms and measures, public institutions remain vulnerable to corruption, especially in government procurement and the awarding of licences or concessions.

CÔTE D'IVOIRE

The growth of the economy of Côte d'Ivoire has been relatively strong since the end of the sociopolitical crisis of 2011, with an average GDP rate of 9.1 per cent since 2012, following a contraction of 4.4 per cent in 2011, fuelled by strong productivity in the agricultural sector, the vitality of the service sector (transport, trade and telecommunications) and significant improvement in the business climate and the macroeconomic environment. According to the African Economic Outlook (2017), economic growth was driven by exports from the agricultural sector, which accounted for approximately 60 per cent of total exports. On the other hand, the fluctuations in global prices for cocoa and oil may affect growth, with GDP growth expected to slow down to 7.3 per cent in 2017. Since 2012, the Government has put in place several institutional and regulatory reforms (e.g., the adoption of the 2012 Investment Code, the establishment of a national investment promotion agency, the reduction in the rate of the value added tax and the elimination of customs duties on computers and mobile telephones), which are aimed at improving the business climate and facilitating increasing investment in key economic sectors, including the extractive industries. Those initiatives facilitated the creation of 9,430 new enterprises in 2015, enabled the inflow of FDI, which was valued at 1.31 per cent of GDP in 2016, and promoted the development of public-private partnerships. National security and transparency in government decision-making, however, continue to be challenges for investors.

GHANA

Recent economic growth in Ghana peaked at 14 per cent in 2011. While the fall of oil prices had a severe impact on oil production and resulted in a low growth rate (3.5 per cent in 2016), the economy recovered in 2017 (with GDP growth estimated at 6.3 per cent), spurred by the recovery of non-oil sectors (i.e., agriculture, manufacturing and services), lower inflation (from 19.2 per cent in 2016 to 12.2 per cent in 2017) and the exploration of new hydrocarbon wells. GDP growth is projected to accelerate to 8.5 per cent in 2018 (African Development Bank, 2018). The country's political stability and regulatory reforms have significantly assisted in creating and promoting an attractive business environment for investors. Rising costs for starting business and limited access to credit, however, remain key challenges for domestic investors and the private sector.

NIGERIA

Nigeria is the continent's largest economy, representing close to one third of sub-Saharan Africa GDP, at $1.4 trillion. The recent drop in global oil prices, combined with heightening security threats in the northern region of the country in the form of Boko Haram, have caused a widening recession. Nevertheless, there are signs of recovery, with GDP estimated to grow by 0.8 per cent in 2017, following a contraction of 1.5 per cent in 2016. The economic recovery is expected to continue and growth is projected to reach 2.5 per cent by 2019, aided by higher oil prices and production and increased agricultural productivity (African Development Bank, 2018). The country's non-oil sector has become very diversified in recent years and its contribution to GDP has significantly increased, reaching an estimated 57 per cent to GDP in 2014, compared with only 12.9 per cent for the oil sector (PricewaterhouseCoopers, 2015). Although the business and investment environment remains challenging, in particular in terms of inadequate power and transportation infrastructure, high energy costs, an inconsistent regulatory and legal environment, insecurity and corruption, it remains the leading destination for international investors and is considered to be a secured gateway to the West African market.

SENEGAL

Senegal is one of the very few African countries that has maintained a stable political environment for decades. Its relatively well-developed State capability, strong democratic institutions and skilled labour force have contributed to strong economic performance and macroeconomic stability. In 2016, it was one of the 10 fastest-growing economies in Africa, with a GDP growth rate of 6.6 per cent. Economic growth remained strong in 2017 (6.8 per cent) and is expected to increase to 7 per cent in 2018 (African Development Bank, 2018). Such growth is spurred by the tertiary sector (i.e., trade, telecommunications, financial services, government services and real estate services), which contributes 60 per cent to GDP. The Government has made significant progress in terms of public expenditure and the provision of public services through improved infrastructure, including transport, energy, ICT and water. Its commitment to creating and sustaining an attractive environment for businesses and investors can be seen through a series of reforms that it implemented in energy, higher education and fiscal management, as well as incentives put in place to attract foreign investment in infrastructure development. The private sector and foreign investors, however, continue to face some obstacles, including high factor costs, inadequate access to financing, a rigid labour force and bureaucratic bottlenecks (United States of America, Department of State, 2017).

IV. Potential for investing in African infrastructure

The story of Africa's high growth since 2005 (estimated at an average yearly GDP growth rate of 5 per cent) has not been characterized by impressive levels of investment, in particular in infrastructure. Increasing investment in key productivity-enhancing sectors such as infrastructure would be an important catalyst for boosting employment, enhancing growth and reducing poverty. Furthermore, raising the level of domestic savings and impact investment would lead to more investment flows and foster economic transformation through increased productivity, competitiveness, profit-seeking and an entrepreneurial spirit. Leveraging the increasing wave of private and institutional investment in alternative vehicles of financing could help to not only create dynamic capital markets, but also address some of the continent's development challenges. For example, the recent growth of pension funds in Africa (with assets under management reaching some $415 billion in 2014) and the expectation that the pension fund industry will continue to grow on the continent could be a major channel for financing the continent's infrastructure. It is estimated that if only 10 to 15 per cent of pension fund assets is allocated to infrastructure, it could help to close Africa's infrastructure financing gap.

A. Infrastructure in Africa

Many African countries are characterized by a pronounced infrastructure deficit, predominantly in energy and transportation, while the potential for ICT has not been fully harnessed because it lacks long-term infrastructure financing. Africa's infrastructure deficit is the result of limited generation capacity, due in large part to a lack of long-term financing. Many experts have argued that the lack of large-scale investment in the continent's infrastructure is due in part to the limited participation of the private sector and the difficulties in mobilizing long-term financing from African financial systems. It is estimated that African countries invest on average between 15 and 25 per cent of GDP in transport infrastructure, while countries such as China and India invest close to 40 to 50 per cent of GDP. In the energy sector, the total power capacity installed in Africa is estimated at only 147 GW. At the regional level, only Southern Africa has made the transition to a competitive regional power market. According to AfDB, little major investment has been made in regional energy infrastructure on the continent, including the Ethiopia–Djibouti and Ethiopia–Kenya connections, as well as the 300 kV Nigeria–Benin coastal transmission backbone. With investment needs estimated at $130 billion to $170 billion annually and commitments from all sources at $62.5 billion in 2016, the financing gap for Africa's infrastructure is in the range of $67.6 billion to $107.5 billion. In general, the share of infrastructure financing by the private sectors declined from $7.4 billion in 2015 to $2.6 billion in 2016, as illustrated in table 10. In terms of the regional allocation of the 2016 financing commitments to Africa's infrastructure, West Africa received the highest amount, at $16.3 billion (26.1 per cent of $62.5 billion), followed by East Africa, ($13.1 billion, or 21 per cent), North Africa ($12.9 billion, or 20.7 per cent), Southern Africa, excluding South Africa ($6.5 billion, or 10.4 per cent) and Central Africa ($6.3 billion, or 10.1 per cent). Approximately 9.4 per cent of the commitments ($5.9 billion) was allocated to South Africa alone.

Table 10
Trend of infrastructure financing in Africa by source, 2012-2016
(Billions of United States dollars)

Source	*2012*	*2013*	*2014*	*2015*	*2016*	*Average*
African GOVERNMENTS	26.3	30.5	43.6	24.0	26.3	30.1
Donors (ICA members)	18.7	25.3	18.8	19.8	18.6	20.2
MDBs and other bilaterals	1.7	2	3.5	2.4	3.1	2.5
China	13.7	13.4	3.1	20.9	6.4	11.5
Arab countries	5.2	3.3	3.4	4.4	5.5	4.4
Private sector	9.5	8.8	2.9	7.4	2.6	6.2
Total	**75.1**	**83.3**	**75.4**	**78.9**	**62.5**	**75.0**

Abbreviations: ICA, Infrastructure Consortium for Africa; MDB, multilateral development bank.

Source: African Development Bank (2018).

The level of financial commitments to infrastructure at the regional level does not always correspond to the level of infrastructure development in the regions. For example, while the West African region received significant amounts of infrastructure financing, its infrastructure lags well behind the other regions, with the exception of Central Africa, which has the least developed infrastructure network on the continent. According to AfDB, while approximately 80 per cent of people and goods in the Central African region are transported by land, paved roads represent less than 20 per cent of the entire regional road network. In the West African region, it is estimated that only 30 per cent of the population has access to electricity, compared with 70 to 90 per cent in other developing regions; road access is limited to 34 per cent of the population, compared with 50 per cent in other developing regions; and the Internet penetration rate is only 6 per cent, compared with an average of 40 per cent in other developing regions. In both Central and West Africa, the maritime ports face serious capacity constraints that negatively affect the inland transport systems and result in increasing costs of trading across borders.

For East Africa to close its infrastructure deficit, it will require more than $100 billion of investment in the coming four years, mainly in the energy and transport sectors.[9] For example, Ethiopia faces numerous infrastructure challenges in its power sector, in which a further 8,700 MW will be needed in the coming decade, double the current capacity. The transport sector also faces the challenges of low levels of rural accessibility and inadequate road maintenance. The country's ICT sector suffers from a poor institutional and regulatory framework. In 2011, the World Bank estimated that, to address Ethiopia's infrastructure deficit, it required a sustained annual expenditure of $5.1 billion in the coming decade. While Kenya has had several incentives to invest in infrastructure such as bridges and roads, compared with its peers, it still faces a different set of challenges, in particular with regard to its power infrastructure. The country ranks poorly on the ability of businesses to acquire electricity on a global scale. Inadequate electrification rates are also a major constraint on the wider business environment. Because Kenya relies heavily on hydroelectric generation, less power is available during periods of drought.

[9] See "EA region needs $100b for infrastructure gap", *The East African* (Nairobi), 6 July 2017. Available at www.theeastafrican.co.ke/business/EA--region-needs-100b-dollars-for-infrastructure/2560-4003018-nuwd1mz/index.html.

North and Southern Africa are the only regions that have relatively well-developed infrastructure on the continent. In the latter region, however, there are some disparities among countries in standards and quality. For example, South Africa is the economic powerhouse of the region, with the most sophisticated infrastructure (i.e., transport, power and telecommunications), good regulation and greater industrial and sector capacity. Angola, on the other hand, has just 4 km of roads per 100 km² of land area, while the Port of Luanda is known for lengthy delays and capacity constraints, with a general cargo vessel pre-berth waiting time of 144 hours (PricewaterhouseCoopers, 2014).

Considerable investment in infrastructure using innovative sources of funding is therefore needed to address Africa's low level of structural transformation. Country reforms and new financing instruments are especially needed to attract new institutional investors. Recently, there have been various reforms to improve the size and nature of portfolio allocation by the pension funds. For example, the Government of Kenya is now considering tapping into its $9.6 billion pension schemes funds to finance infrastructure projects in an effort to stop its dependence on foreign debt.[10] The Government is now revising the asset classes that pension schemes can invest in to include a public-private partnership class that will enable them to invest in infrastructure projects.

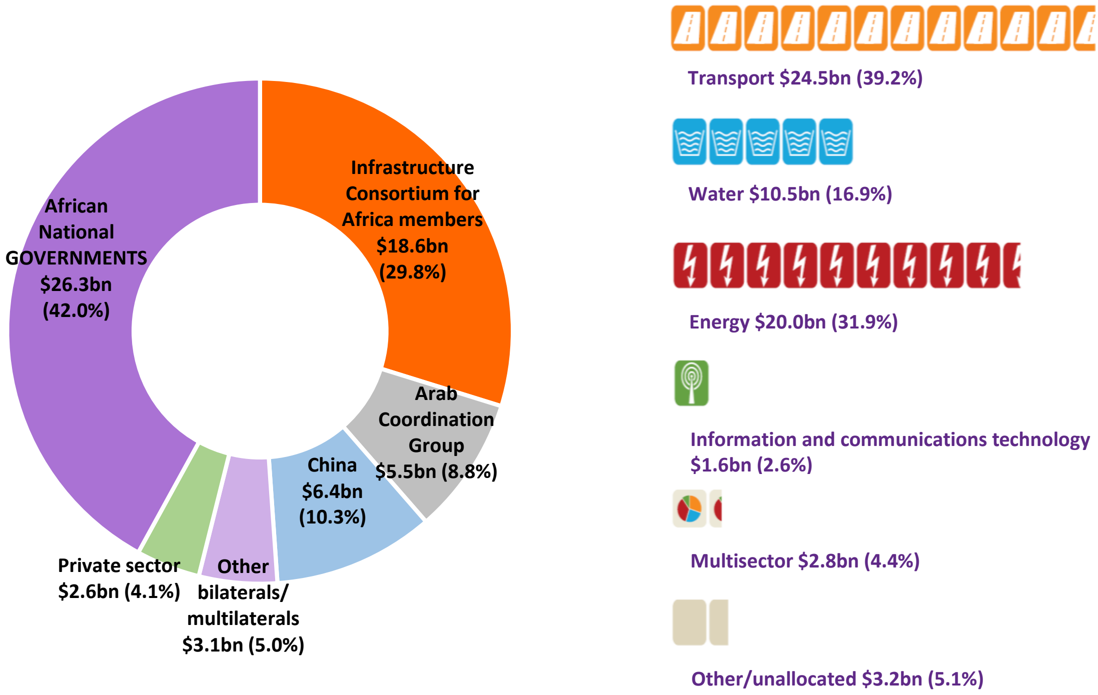
African Governments revenue continues to be one of the main sources of infrastructure financing (i.e., Infrastructure Consortium for Africa members). The private sector accounts for the lowest share of financing infrastructure, given that it is concerned more with investment returns. Given that various investors have different perceptions of risk, this remains a main factor behind the choice of investment assets in Africa. In addition, African institutional investors have a low allocation to foreign assets. Even South Africa, which has one of the largest pension fund industries on the continent, had a negligible allocation to foreign equities (less than 2 per cent) in 2011, and its fixed income portfolio was fully domestic (Organization for Economic Cooperation and Development, 2013).

B. Existing infrastructure financing vehicles

Overall commitments to Africa's infrastructure declined in 2016, to a five-year low of $62.5 billion, from $78.9 billion in 2015. Figure II shows that a majority of the funding came from African Governments (42 per cent) and Infrastructure Consortium for Africa members (29.8 per cent), while the private sector represented a small share, at 4.1 per cent. In terms of the sectoral breakdown, the transport and energy sectors received more than 70 per cent of the funding. In terms of the type of funding, African countries have been issuing bonds to support the national budgets for infrastructure development. For example, Rwanda issued a five-year and a seven-year treasury bond in 2016 and 2017, respectively, to finance infrastructure projects and develop local capital markets. The launch of green bonds by Morocco in 2016 and a diaspora bond by Nigeria in 2017 illustrate the various financing approaches. Although the capital market appears to be an appealing source of finance amid the extremely low global interest rates, the associated risks and greater market volatility warrant prudent debt management. In fact, the recent issuance of another infrastructure bond by Kenya raised concerns about the sustainability of the country's increasing public debt.

[10] See "Kenya eyes $9.6b pension to fund Kenyatta's Big Four agenda", *The East African* (Nairobi), 5 February 2018. Available at www.theeastafrican.co.ke/business/Kenya-eyes-pension-to-fund-Kenyatta-agenda/2560-4291914-6hxjnm/index.html.

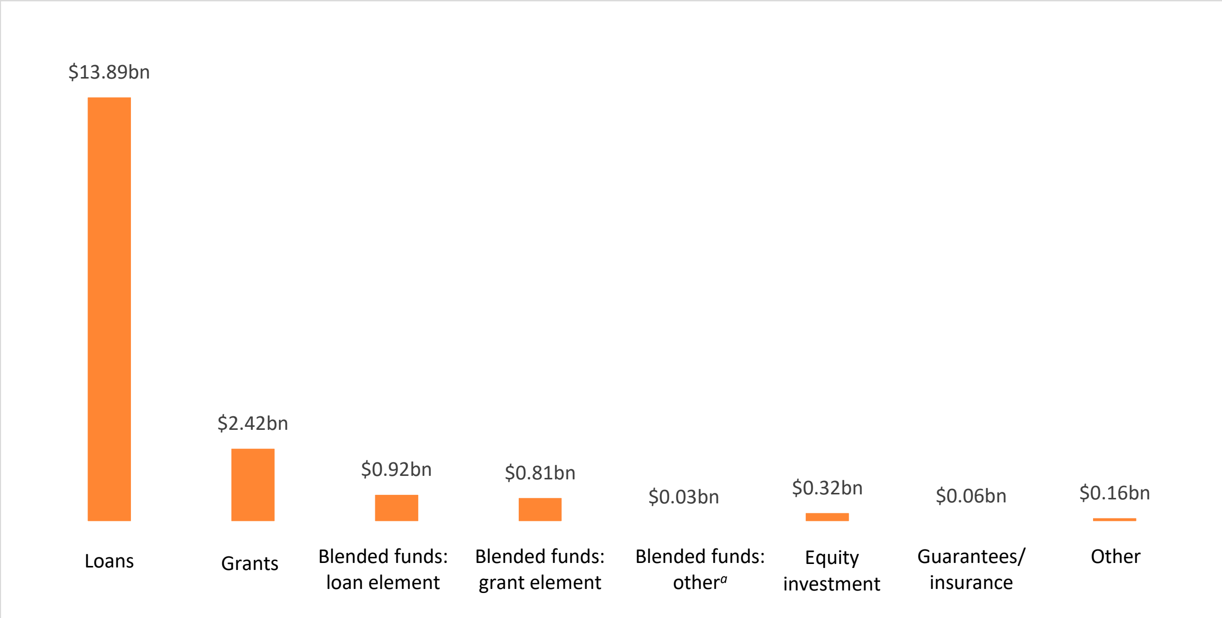
Figure II
Infrastructure commitments by source and sector, 2016



Source: Infrastructure Consortium for Africa (2017).

As for the Infrastructure Consortium for Africa members, loans represented some three quarters of the commitments in 2016 and grants accounted for another one eighth, whereas ODA and non-ODA constituted 54 and 46 per cent, respectively. It is also noted that the members are increasingly reporting the use of blended finance and equity finance, albeit at a currently low share (see figure III). The types of funding of other bilateral/multilaterals and the private sector vary according to their mission and function, related investment regulations and the risks involved in various projects.

Figure III
Infrastructure Consortium for Africa member commitments by type of funding, 2016



[a] No additional information for classification.

Source: Infrastructure Consortium for Africa (2017).

Table 11 presents a variety of instruments and vehicles for infrastructure financing, even though some of them are not popular or available in Africa (e.g., real estate investment trusts and infrastructure investment trusts). While the private sector plays a limited role in financing infrastructure projects in Africa, it is important to understand their main concerns and address them with appropriate reforms and suitable financial instruments.

Table 11
List of instruments and vehicles for infrastructure financing

<table>
<tr><th colspan="2">Modes</th><th colspan="2">Infrastructure finance instruments</th><th>Market vehicles</th></tr>
<tr><th>Asset category</th><th>Instrument</th><th>Infrastructure project</th><th>Corporate balance sheet/other entities</th><th>Capital pool</th></tr>
<tr><td rowspan="5">Fixed income</td><td rowspan="3">Bonds</td><td>Project Bonds</td><td rowspan="2">Corporate Bonds, Green Bonds</td><td rowspan="3">Bond Indices, Bond Funds, ETFs</td></tr>
<tr><td>Municipal, Subsovereign bonds</td></tr>
<tr><td>Green Bonds, Sukuk</td><td>Subordinated Bonds</td></tr>
<tr><td rowspan="2">Loans</td><td rowspan="2">Direct/Co-Investment lending to Infrastructure project, Syndicated Project Loans</td><td>Direct/Co-investment lending to infrastructure corporate</td><td>Debt Funds (GPs)</td></tr>
<tr><td>Syndicated Loans, Securitized Loans (ABS), CLOs</td><td>Loan Indices, Loan Funds</td></tr>
</table>

Mixed	Hybrid	Subordinated Loans/Bonds, Mezzanine Finance	Subordinated Bonds, Convertible Bonds, Preferred Stock		Mezzanine Debt Funds (GPs), Hybrid Debt Funds
Equity	Listed	YieldCos	Listed infrastructure & utilities stocks, Closedend Funds, REITs, IITs, MLPs		Listed Infrastructure Equity Funds, Indices, trusts, ETFs
	Unlisted	Direct/Co-Investment in infrastructure project equity, PPP	Direct/Co-Investment in infrastructure corporate equity		Unlisted Infrastructure Funds

Abbreviations: ABS, asset-backed security; CLO, collateral loan obligations; GP, general partnership; IIT, infrastructure investment trusts; MLP, master limited partnerships; PPP, public-private partnership; REIT; real estate investment trust.

Source: Organization for Economic Cooperation and Development (2015).

KEY CONCERNS OF PRIVATE INVESTORS

The fifth African Infrastructure Investment Survey offered views of the private sector on a number of issues. Respondents saw identifying projects suitable for their organization as the greatest challenge, owing primarily to a lack of effective risk mitigation strategies and the difficulty associated with securing funding in the early stages of the project cycle,[11] whereas institutional capacity, political risks and interference and legal and regulatory framework were also identified as key concerns. In fact, respondents ranked the top investment destinations largely on the basis of political and economic security and a clear and positive regulatory framework, with the most attractive country being South Africa (Infrastructure Consortium for Africa, 2017).

Another survey conducted by the African Private Equity and Venture Capital Association (2017a, 2017b) indicated that most limited partners viewed Africa as more attractive for private equity investment, compared with other markets over the medium to long term, and 88 per cent of them planned to increase or maintain their allocation to African private equity in the coming three years (i.e., 2018-2020). African limited partners also identify infrastructure as the most attractive sector for private equity investment in the same period. Having said that, currency risk was considered to be the biggest challenge when investing in African private equity, and other concerns included fundraising environment, limited exit opportunities and macroeconomic and political risk.[12]

Other commonly cited concerns include the shortage of a financially credible off-taker, the absence of well-defined infrastructure programmes and bankable project pipelines and the lack of transparency in bidding process and coordination between projects (Beck and others, 2011; Gutman and others, 2015; African Development Bank, 2018). Table 12 provides a summary of the risks of investing in infrastructure assets in various project phrases according to three key risk categories.

[11] The need for improved risk mitigation in infrastructure projects is widely recognized, especially at the earlier stages of the project cycle. Commitments by way of guarantee or insurance from Infrastructure Consortium for Africa members, however, totalled less than $60 million in 2016 (Infrastructure Consortium for Africa, 2017).

[12] A large majority of surveyed institutional investors in the East African Community reported the lack of adequate tools and strategies for managing foreign exchange risk. Nearly half would invest more in the region if they had access to those tools (Irving, J., and others, 2017). In fact, infrastructure projects are attractive to institutional investors, given the long-term investment horizon with assets and/or revenue linked to inflation.

Table 12

Classification of risk linked to infrastructure assets

<table>
<tr><th>Risk categories</th><th>Development phase</th><th>Construction phase</th><th>Operation phase</th><th>Termination phase</th></tr>
<tr><td rowspan="8">Political and regulatory</td><td>Environmental review</td><td>Cancellation of permits</td><td rowspan="3">Change in tariff regulation</td><td>Contract duration</td></tr>
<tr><td rowspan="3">Rise in preconstruction costs (longer permitting process)</td><td rowspan="3">Contract renegotiation</td><td>Decommission</td></tr>
<tr><td>Asset transfer</td></tr>
<tr><td colspan="2">Currency convertibility</td></tr>
<tr><td colspan="4">Change in taxation</td></tr>
<tr><td colspan="4">Social acceptance</td></tr>
<tr><td colspan="4">Change in regulatory or legal environment</td></tr>
<tr><td colspan="4">Enforceability of contracts, collateral and security</td></tr>
<tr><td rowspan="7">Macroeconomic and business</td><td>Prefunding</td><td colspan="3">Default of counterparty</td></tr>
<tr><td colspan="2" rowspan="3">Financing availability</td><td colspan="2">Refinancing risk</td></tr>
<tr><td colspan="2">Liquidity</td></tr>
<tr><td colspan="2">Volatility of demand/market risk</td></tr>
<tr><td colspan="4">Inflation</td></tr>
<tr><td colspan="4">Real interest rates</td></tr>
<tr><td colspan="4">Exchange rate fluctuation</td></tr>
<tr><td rowspan="6">Technical</td><td colspan="3">Governance and management of the project</td><td rowspan="5">Termination value different from expected</td></tr>
<tr><td colspan="3">Environmental</td></tr>
<tr><td>Project feasibility</td><td rowspan="2">Construction delays and cost overruns</td><td rowspan="2">Qualitative deficit of the physical structure/ service</td></tr>
<tr><td>Archaeological</td></tr>
<tr><td colspan="3">Technology and obsolescence</td></tr>
<tr><td colspan="4">Force majeure</td></tr>
</table>

Source: Organization for Economic Cooperation and Development (2015).

RISK MITIGATION MEASURES

Given the concerns discussed above, governments could introduce specific measures to reduce risks and/or enhance returns to make an investment more attractive (see table 13).[13] This, however, does not mean that governments should bear all the risks. It should be noted that the objectives of risk mitigants and incentives are to correct market failures or inefficiencies with balanced costs and benefits. The measures should serve to supplement market-based approaches and avoid creating unintended consequences, such as moral hazards and market distortions. The party that is best able to control and manage the risks should be held responsible. For example, technical risks, such as construction delays and cost overruns, are better mitigated through private specialized operators, thereby ensuring incentives for efficient and effective project delivery.

[13] Risk mitigants and incentives are only short-term measures. Reform is required to create a more conducive business environment in the long run.

Table 13
Financial risk mitigants and incentives for infrastructure finance

Type of Measure	*Instrument*
1. Guarantees, realized directly by Government or by its own controlled agency or development bank	1. Minimum payment, paid by contracting authority
	2. Guarantee in case of default
	3. Guarantee in case of refinancing
	4. Exchange rate guarantees
2. Insurance (private sector)	1. Wrap insurance, technology guarantees, warranties, commercial and political risk insurance
3. Hedging (private sector)	1. Derivatives contracts such as swaps, forwards, options etc.
4. Contract design, paid by contracting authority	1. Availability payment mechanisms
	2. Offtake contracts
5. Provision of capital, realized directly by Government or by its own controlled agency or development bank	1. Subordinated (junior) debt
	2. Debt:
	2.1 at market condition
	2.2 at lower interest rate
	3. Equity:
	3.1 at market conditions
	3.2 at more advantageous conditions
6. Grants, generally delivered by contracting authority, even if some dedicated fund at national level may exist. Tax incentives can be delivered by national or local authorities	1. Lump sum capital grant
	2. Revenue grant:
	2.1 Periodic fixed amount (mitigating the demand risk)
	2.2 Revenue integration (it leaves the demand risk on the private player)
	3. Grant on debt interests
	4. Favourable taxation schemes for SPV
	5. Favourable taxation schemes for equity investors

Source: Organization for Economic Cooperation and Development (2015).

C. Potential for enhancing infrastructure financing vehicles

While the risk factors and potential impact vary according to the circumstances of the specific country, sector and project, the risk mitigants and incentives for infrastructure finance should be tailored to meet the various demands. The measures should also address the unique challenges under various project phrases. In view of these, regional/international organizations could play an active role in providing technical assistance and adopting best practices to improve project development processes and financing.

As illustrated in table 12, a project can be divided into the project development phase, construction phase and operation and termination phases. Investors usually perceive a higher risk in the first phase, given the large uncertainty and complex project prefeasibility study involved. Technical assistance on the full range of project preparation and appraisal activities, including economic, social and environmental impact assessments, the legal and regulatory structures and risk analysis is therefore necessary for both the government and investors to make an informed decision. Given that the financial markets of African countries are relatively underdeveloped and many risk mitigants are unavailable, if not too costly, support from the regional/international organizations is crucial. For example, regional/international organizations could provide specific forms of guarantee to crowd-in and reduce the risk of investors (e.g., partial risk guarantees that cover private investors against the risk of the government failing to perform its obligations). The design of appropriate financial instruments and risk mitigation and/or credit enhancement packages based on a thorough assessment of the project could ensure financial viability and sustainability and attract long-term private capital.

Apart from the technical support to governments and investors, regional/international organizations could provide a platform that transparently presents detailed information of infrastructure projects in order to facilitate matching between potential investors and projects and assist them in performing due diligence. For example, the Global Infrastructure Project Pipeline is a free digital platform that allows governments to promote public infrastructure projects to a global investor network.[14] It captures information at various project stages, enabling investors to assess opportunities and engage in a global infrastructure market. In fact, regional/international organizations could also serve as an independent party that helps to bring consensus to the collaboration on regional infrastructure projects.

Moreover, the above measures could promote public-private partnerships, which help to increase the effectiveness and efficiency in the provision of services, given the involvement of the private sector under clear performance and quality requirements. A larger contribution of the private sector in infrastructure investment also reduces risk and the financial burden, which traditionally rest solely on the government. For example, build-operate-transfer is one arrangement, in which a private entity finances, designs and constructs an infrastructure facility to provide services and maintains it for an agreed period of time, after which a transfer is made to the government.[15] Table 14 highlights several initiatives on leveraging private sector capital to finance African infrastructure.

[14] More information available at https://pipeline.gihub.org/.

[15] The construction of the Bugesera International Airport in Rwanda is an example of build-operate-transfer. The Portuguese company Mota Engil Group is responsible for financing and constructing the airport. Upon completion of the work, the firm will run the facility's operations for 25 years, with an option to extend by another 15. The first phase of the project, with an estimated cost of more than $400 million, is expected to be completed by 2019.

Table 14
Initiatives on leveraging private sector capital to finance African infrastructure

Organization	*Mission*	*Initiatives*
World Bank Group	End extreme poverty and build shared prosperity	Global Infrastructure Facility Support governments in bringing well-structured and bankable infrastructure projects to market, covering the design, preparation, structuring and transaction implementation activities Public Private Infrastructure Advisory Facility Provide technical assistance and knowledge grants to governments to support the creation of a sound enabling environment for the provision of infrastructure services by the private sector Multilateral Investment Guarantee Agency Provide political risk insurance, covering (a) currency inconvertibility and transfer restriction, (b) expropriation, (c) war, terrorism and civil disturbance, (d) breach of contract and (e) the failure to honour financial obligations
African Development Bank	Spur sustainable economic development and social progress in its regional member countries, thus contributing to poverty reduction	African Development Fund Provide concessional funding for projects and programmes and technical assistance for studies and capacity-building activities Power Africa Initiative [a] Advance catalytic transactions. Support investment in sustainable energy projects through the Sustainable Energy Fund for Africa. Provide legal advice to African countries through the African Legal Support Facility. Offer risk mitigation products through partial risk guarantee support Africa50 Accelerate the provision of infrastructure by supporting project development in its early stages and engaging stakeholders Programme for Infrastructure Development in Africa [b] Develop a vision, policies, strategies and a programme for the development of priority regional and continental infrastructure and prepare detailed analysis of strategic options
International Development Association	Reduce poverty by providing loans and grants for programs that boost economic growth, reduce inequalities and improve people's living conditions	Risk mitigation facility Provide project-based guarantees without sovereign indemnity Multilateral Investment Guarantee Agency Guarantee Facility Expand the coverage of Agency guarantees through shared first-loss and risk participation Local currency facility Provide financing in local currency and act as a risk transfer vehicle (e.g., counterparty credit risk and currency/interest rate risk) Blended finance facility Offer various financial products and mitigate risks through subordination, deferrals, provision of first loss and structuring flexibility

Private Infrastructure Development Group	Mobilize private sector investment to assist developing countries in providing infrastructure vital to boosting their economic growth and combating poverty	Technical assistance fund Provide grants to support infrastructure development at the very beginning of the project life cycle DevCo Provide advisory services to governments to structure and tender public-private partnerships InfraCo Africa Provide the risk capital and expertise needed to develop early-stage infrastructure projects into viable investment opportunities Emerging Africa Infrastructure Fund Provide very long-term foreign currency loans to private sector investors GuarantCo Provide local currency guarantees for infrastructure financing and dollar-denominated guarantees
New Partnership for Africa's Development	Promote accelerated growth and sustainable development, eradicate widespread and severe poverty and halt the marginalization of Africa in the globalization process	Continental Business Network Serve as an infrastructure investment advisory platform and engage on a range of strategic issues such as policy, investment risk ratings and project structuring Africa Power Vision Accelerate the implementation of critical energy projects and provide a continental vision and framework Infrastructure project preparation facility Provide grant resources to support African countries in preparing regional infrastructure projects

[a] An initiative launched by the former President of the United States of America, Barack Obama, in the United Republic of Tanzania during his tour of Africa in July 2013, with the African Development Bank as an anchor partner. The initiative is aimed at supporting economic growth and development by increasing access to reliable, affordable and sustainable power in Africa.

[b] The African Development Bank (AfDB) is the executing agency for the Programme for Infrastructure Development in Africa, which was developed by the African Union Commission, the NEPAD Planning and Coordinating Agency, AfDB, the Economic Commission for Africa and regional economic communities, with the aim of promoting socioeconomic development and poverty reduction in Africa through improved access to integrated regional and continental infrastructure networks and services.

SETTING UP CO-INVESTMENT PROGRAMMES

Further to these initiatives, regional/international organizations could work closely with governments to set up co-investment programmes. Taking the forms of equity (e.g., the Pan African Infrastructure Development Fund[16]) or debt (e.g., the Managed Co-Lending Portfolio Programme[17]), co-investment programmes could leverage the credibility,[18] expertise and experience of regional/international organizations to mobilize private capital to finance

[16] The Pan-African Infrastructure Development Fund is a closed-end private equity fund that invests in infrastructure projects in Africa. Its objective is to carry out diverse investment in all regions of Africa in infrastructure projects and investment in the securities of companies that own, control, operate or manage infrastructure and infrastructure-related assets, and may participate in joint ventures with corporate and governmental partners (African Development Bank, 2007).

[17] The Managed Co-Lending Portfolio Programme is a syndications process that allows investors to participate in the loan portfolio of the International Finance Corporation (IFC). When IFC provides debt financing for infrastructure projects, it offers a portion of each new loan to the special purpose vehicles on the same terms and conditions as IFC lending. In order to ensure an investment-grade risk/return profile, IFC provides a first-loss tranche of up to 10 per cent of each partner's portfolio.

[18] Their robust track record and low default risk help to improve the credibility of the co-investment programmes. They could also serve as independent verification agents.

infrastructure projects in Africa. Addressing the main concerns of investors, co-investment programmes could offer portfolios that meet investment and regulatory requirements and, more importantly, investment grade profiles with credit enhancement and cost-effective syndication processes. On the basis of the demand of investors, various projects could be securitized by pooling or slicing them into tranches according to risk, returns or maturities. In contrast to investing in a specific infrastructure with a long maturity, investors could benefit from the more diversified and flexible portfolios covering projects from various sectors and countries.[19] In addition, investors could manage liquidity easier with regional/international organizations serving as counterparties, compared with trading in the generally underdeveloped and illiquid financial market in Africa.

Given the significant potential of African institutional investors on financing infrastructure, co-investment programmes could be designed to align with their interests, leveraging local knowledge and networks. African institutional investors, as a measure of validation, could increase the credibility of the co-investment programmes, thereby attracting international investors and scaling up the co-investment vehicles.[20]

V. Conclusion and recommendations for promoting private sector investment in Africa's infrastructure

The infrastructure deficit in Africa is the highest in the world, and the continent faces significant challenges in meeting the growing demand for infrastructure services. Its substantial investment needs for infrastructure require a combination of traditional and innovative financing mechanisms, along with greater efficiency in both public and private spending. The financing of infrastructure development has traditionally come from tax revenue, government borrowing and foreign aid. Nevertheless, there are increasingly new sources of financing that are emerging on the continent, which can complement traditional financing alternatives. This is the case of the growing number of domestic institutional investors and the increasing volume of Africa domestic long-term savings, which present significant opportunities for Africa to bridge its infrastructure financing gap.

The pension and insurance market, however, remains nascent in many African countries. It is therefore critical to exploit the potential offered by both the rising population and purchasing power by expanding pension and insurance coverage. More important is the need to improve the policy and business environment for attracting increasing levels of private investment and the capacity to develop infrastructure projects that meet the investment capability of institutional investors. African Governments therefore need strategies to mobilize both public and private savings. Addressing some of the challenges observed in many African economies (e.g., small-scale markets, large and low-income populations, the lack of market infrastructure, a large informal sector and business risk) will pave the way for potential growth opportunities and more incentives for institutional investors to tap into that window of opportunity. Furthermore, promoting innovative investment instruments, mobilizing and pooling savings to fund infrastructure projects, monitoring and mitigating risk and providing

[19] Individual investors usually do not have the resources and expertise or scale and risk appetite to make direct infrastructure investment owing to the inherent complexity and heterogeneity. According to a study conducted by Irving, J., and others (2017), investors surveyed in the East African Community had the greatest appetite for an infrastructure "fund of funds" among possible investment vehicles that could be developed.

[20] Government-led initiatives, such as providing seed capital and ensuring a conducive investment climate, are important for engaging various stakeholders and helping to set up co-investment programmes to catalyse institutional investment given the highly political nature of infrastructure investment (Organization for Economic Cooperation and Development, 2014).

investors with diverse savings products are among the priority actions to improve institutional investment in Africa. Some policy recommendations include the following:

- African Governments should review and ease regulatory constraints that discourage institutional investors such as pension funds from relying on long-term savings instruments. To encourage the active participation of institutional investors, the public sector needs to be equally active in the infrastructure sector to encourage private sector engagement. In playing its role as financier and regulator, the public sector should seek to improve efficiency in the delivery of infrastructure finance.

- African Governments have a critical role to play in providing incentives for private investment in infrastructure projects. These incentives include risk mitigation instruments, such as viability gap financing, as well as incentives to establish risky partnerships, such as providing guaranteed floor returns and tax holidays or adjusting the ceilings of shares of the portfolio that pension funds can invest in government securities. Through risk mitigation instruments, the public sector can catalyse additional private investment in infrastructure, raising the total number of finance sources available. These instruments need to be accompanied by reforms and institutional changes to eliminate the underlying sources of risk.

- To unlock private infrastructure finance, Africa needs to increase the number of bankable projects. In addition to project preparation championed by multilateral development banks and donors, private investors need to develop and bring projects to the market. In most African countries, however, this is constrained by the absence of relevant procurement processes, rules for handling unsolicited proposals or mechanisms for competitive bidding and corrupt tendencies by various players. In such an environment, the risk is high that private investors who bring forth proposals lose proprietorship. Multilateral development banks and the donor community should consider supporting the development of an enabling environment for project identification and development by private partners.

- Development partners also have a role, given that they have been providing sizeable financing sources for Africa’s infrastructure. Such financing has been most prominent in the water, sanitation and transportation subsectors. There are also opportunities for traditional private investors to share in Africa’s growth, provided that financing arrangements meet debt sustainability criteria. Development partners can devise risk mitigation instruments, given the relatively high-risk perception associated with infrastructure investment in Africa. They can support African countries in devising and diversifying investment vehicles and information platforms on investment opportunities for potential investors.

- Regional integration offers real opportunities for institutional investors to exploit a regional and harmonized approach. Fostering a regional approach to infrastructure is another source of infrastructure financing through efficiency gains. Indeed, Africa's geography demands a regional approach to regional infrastructure development to ensure efficiency in service provision and to maximize resources.

- Lastly, there are needs for reform processes and procedures that allow for ease of doing business. Aside from reforming procurement rules, consolidating project preparation financing from grant facilities could generate immediate gains. By combining ODA in upstream project preparation activities with private finance in project preparation, development assistance is channelled through a commercial vehicle that, because of its higher risk tolerance, is able to absorb project preparation costs and risks.

References

African Development Bank (2007). *Pan African Infrastructure Development Fund.*

_______ (2012). Capital Market Development in North Africa: Current Status and Future Potential. Economic Brief. Available at https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Economic%20Brief%20-%20Capital%20Market%20Development%20in%20North%20%20Africa%20Current%20Status%20and%20Future%20Potential.pdf.

________ (2017). *African Economic Outlook 2017.*

________ (2018). *African Economic Outlook 2018.*

African Development Bank and others (2017). *African Statistical Yearbook 2017*. Addis Ababa.

African Insurance Organisation (2016). *Annual Review 2016*. Douala.

African Private Equity and Venture Capital Association (2017a). *2017 Annual Limited Partner Survey*. London.

________ (2017b). *Volatility and Uncertainty: How African Private Equity Navigates Through Turbulent Times*. London.

Analyse This, FDI Intelligence and This is Africa (2017). *The Africa Investment Report 2017*.

Brookings Institute (2017). *Leveraging African Pension Funds for Financing Infrastructure Development*. Washington, D.C.

Beck, T., and others (2011). *Financing Africa: Through the Crisis and Beyond*. The International Bank for Reconstruction and Development and the World Bank.

Deloitte (2017). *A Shift to More but Less: Africa Construction Trends Report 2017.* Global Impact Investing Network (2017). *Annual Impact Investor Survey*. New York.

Global Impact Investing Network and Dalberg (2015). *The Landscape for Impact Investing in West Africa: Understanding the Current Status, Trends, Opportunities, and Challenges*. New York.

Global Impact Investing Network and Open Capital Advisors (2015). *The Landscape for Impact Investing in East Africa*. New York.

________ (2016). *The Landscape for Impact Investing in Southern Africa*. New York.

Gutman J., and others (2015). *Financing African Infrastructure: Can the World Deliver?* Brookings Institute. Washington, D.C.

Infrastructure Consortium for Africa (2017). *Infrastructure Financing Trends in Africa – 2016.* Abidjan.

International Labour Organization (2017). *World Social Protection Report 2017-19.*

International Monetary Fund (2016). *Morocco Financial System Stability Assessment*. Washington, D.C.

Investisseurs & Partenaires and the Foundation for International Development Study and Research (undated). *Investing in Development in Africa: How Impact Investment can contribute to meeting the Sustainable Development Goals (SDGs) in Africa.*

Irving, J., and others (2017). *Capital Markets in the East African Community, Developing the Buy Side*. Available at http://www.milkeninstitute.org/publications/view/844.

Maurer, K. (2017). *Mobilization of Long-term Savings for Infrastructure Financing in Africa*. German Federal Ministry for Economic Cooperation and Development. https://countryeconomy.com/ratings/moodys.

Nigeria Stock Exchange (2015). *NSE 2015 Market Recap & Outlook for 2016*. Available at www.nse.com.ng/NSEPresentation/NSE%202015%20MARKET%20RECAP%20OUTLOOK%20FOR%202016.pdf.

Organization for Economic Cooperation and Development (2013). *Role of Banks, Equity Markets and Institutional Investors in Long-Term Financing for Growth and Development, 2013*. Available at www.oecd.org/finance/private pensions/G20reportLTFinancingForGrowthRussianPresidency2013.pdf.

________ (2014). *Pooling Institutional Investors Capital: Selected Case Studies in Unlisted Equity Infrastructure.* Paris.

________ (2015). *Infrastructure Financing Instruments and Incentives.* Paris.

________ (2017a). *Pension Markets in Focus 2017.* Paris.

________ (2017b). *Annual Survey of Investment Regulation of Pension Funds.* Paris.

PricewaterhouseCoopers (2014). *Africa gearing up*. Available at www.pwc.co.za/en/assets/pdf/africa-gearing-up.pdf.

________ (2015). *Africa Asset Management 2020.*

________ (2017). *2016 Africa Capital Markets Watch.* Available at https://www.pwc.co.za/en/assets/pdf/africa-capital-markets-watch-2016.pdf.

RisCura (2015). Africa's pension fund assets.

Robalino, D. (2005). *Pensions in the Middle East and North Africa: Time for Change*. Washington, D.C.: World Bank.

Sourial, M.S., and A. Amico (2015). The role of institutional investors in the Egyptian capital market. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2659218.

Sovereign Wealth Lab (2017). *Sovereign Wealth Funds 2016.*

United Nations Development Programme (2015). *Impact Investment in Africa: Trends, Constraints and Opportunities*.

United States of America, Department of State (2017). Investment Climate Statements for 2018. Bureau of Economic and Business Affairs. http://www.state.gov.

World Bank (2017). *Doing Business 2018: Reforming to Create Jobs.* Washington, D.C.