

## AFI | Beyond the Frontier

FI connects private capital to curated investment opportunities in Africa. With Beyond the Frontier, we aim to place our activity into its broader context, helping private investors to make better-informed decisions by providing a big picture view on key growth trends across the sub-Saharan region.

The investment case for Africa is compelling, but not without risk. Direct investors into the region are often limited by poor visibility on individual investment targets and will need to consider its unique operating environment. Only the right partnership between global investors and local market participants enables accretive investment prospects to be unlocked.

Through the strength of our local reach on the ground, we facilitate private investment across countries and sectors in sub-Saharan Africa, securing access to opportunities that lie beyond the frontier

### Summary

frica has long been on the frontier of the global investment landscape and still accounts for a small share of the world economy. But looking ahead, we see a range of fundamental supports for economic activity and prospective investment returns on the continent.

In **Beyond the Frontier** we examine the growth story in sub-Saharan Africa and begin to uncover some of the key investment themes that are developing across the region.

Fast-growing, urbanizing young and populations, an expanding consumer class and unrealized productivity gains from infrastructure and information technology, form a strong basis for future economic growth. In addition, we expect key sectors within the regional economy from agriculture to renewable energy, telecommunications, healthcare. services and others - to present a range of investment opportunities over the coming years as product penetration rates rise and inclusion gaps close.

### **Connecting Private Investment to Africa**

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## **Beyond** the Frontier:

## The Growth Opportunity in Africa

Sub-Saharan Africa forms a small share of the global economy, but holds a larger amount of its growth potential. The region's one billion inhabitants are 13% of the world population<sup>1</sup>; its \$1.6 trillion of annual output accounts for 2% of global GDP<sup>2</sup>; and its capital markets make up a fraction of the major global equity benchmarks. It therefore remains on the frontier of the global investment landscape. But across the region, a combination of rising national incomes, underpenetrated markets for products and services and unrealised productivity gains from infrastructure and innovation provide fundamental support for prospective investment returns. Over the years ahead, investors in Africa should expect to find a range of long-term growth opportunities driven by the macroeconomic outlook and trends within individual sectors.

The sub-Saharan African economy expanded at 3.0% last year, ahead of Latin America (1.0%) and the Middle East (1.4%), but behind emerging Asia (6.4%) and emerging Europe (3.6%). The regional growth rate, however, masks the contribution of its three largest economies - Nigeria, South Africa and Angola at a combined 53% of GDP - which were among the slowest-growing in Africa at 1.9%, 0.8% and -1.7% respectively. On an unweighted basis, economic growth across the region has compared much more favorably with other emerging markets over recent years. Since the initial rebound from the financial crisis, growth in many emerging countries has decelerated in aggregate alongside weaker commodity prices, strength in the U.S. dollar and the shift from industrial activity to services in China. The directional trend in sub-Saharan Africa has been similar, but over this period the share of African economies posting growth rates of 5% or higher has outstripped that of the rest of the emerging world. Between 2014 and 2018 an average of 32% of countries in the region grew at 5% or more each year, compared with 22% across the other 108 emerging economies measured by the International Monetary Fund (IMF). And the gap is expected to widen over the next five years, with Africa rising to levels comparable with emerging Asia on IMF projections (see chart).

Across sub-Saharan Africa, a combination of rising national incomes, underpenetrated markets for products and services and unrealised productivity gains from infrastructure and innovation provide fundamental support for prospective investment returns."

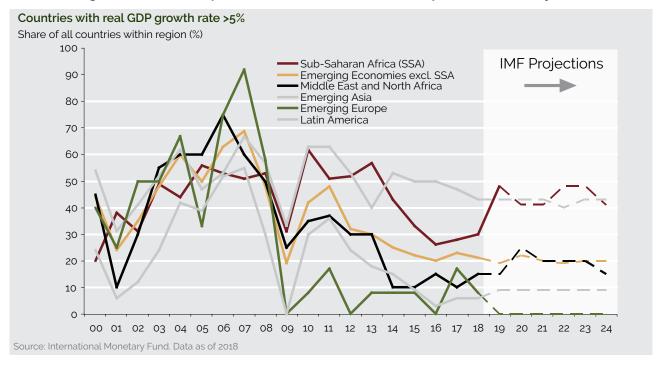


the financial crisis...the share of African economies posting growth rates of 5% or higher has outstripped that of the rest of the emerging world."

<sup>1</sup> International Monetary Fund (2018) 2 Ibid.



### Economic growth in Africa projected to accelerate from pace of recent years



Ethiopia, Côte d'Ivoire and Rwanda have delivered the fastest growth over the past five years, averaging a respective 9.3%, 8.1% and 7.4%. And in the first five years of the 2020s, the IMF expects Senegal, Rwanda and Ethiopia to lead regional growth at an average of 8.5%, 7.9% and 7.1% (see chart).

### 5%-plus growth projections led by Senegal, Rwanda and Ethiopia

Sub-Saharan Africa Real GDP growth by country Last 5 years

- ,			
Ethiopia	9.3	Zambia	3.6
Côte d'Ivoire	8.1	Malawi	3.6
Rwanda	7.4	Eritrea	3.3
Guinea	6.7	The Gambia	3.3
Tanzania	6.6	Cabo Verde	3.0
Senegal	6.5	Botswana	2.9
Mali	5.9	Mauritania	2.8
Kenya	5.6	Zimbabwe	2.6
Niger	5.4	Gabon	2.4
Burkina Faso	5.3	Namibia	2.4
Тодо	5.3	Comoros	2.1
Democratic Republic of the Congo	5.2	Nigeria	2.0
Mozambique	5.0	Lesotho	1.7
Benin	5.0	Eswatini	1.5
Cameroon	4.8	South Africa	1.1
Uganda	4.7	Republic of Congo	0.9
Guinea Bissau	4.6	Liberia	0.6
Seychelles	4.6	Chad	0.4
Ghana	4.5	Angola	0.3
São Tomé and Príncipe	4.3	Burundi	-0.1
		Sierra Leone	-0.4
Madagascar	4.0	Sierra Leorie	0.4
Madagascar  Central African Republic	3.8	South Sudan	-4.1

Source: International Monetary Fund. Data as of 2018.

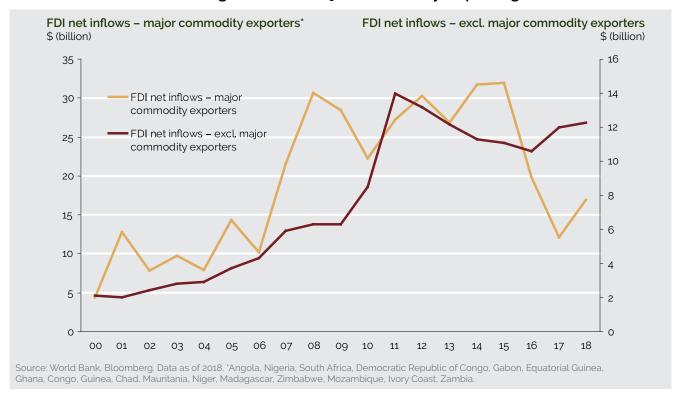
**Sub-Saharan Africa Real GDP growth by country** Next 5 years (IMF projections)

Senegal	8.5	São Tomé and Príncipe	4.9
Rwanda	7.9	Mali	4.8
Ethiopia	7.1	Ghana	4.7
Mauritania	7.0	Tanzania	4.6
Niger	7.0	Democratic Republic of the Congo	4.6
Côte d'Ivoire	6.8	Fritrea	4.4
Mozambique	6.6	Botswana	4.3
Benin	6.5	Gabon	4.2
Uganda	6.3	Mauritius	4.0
Kenya	6.1	Zimbabwe	4.0
Burkina Faso	6.0	Seychelles	3.8
South Sudan	6.0	Comoros	3.2
Malawi	5.9	Angola	3.1
Guinea	5.5	Namibia	3.0
Togo	5.4	Zambia	3.0
Sierra Leone	5.2	Nigeria	2.6
Cameroon	5.1	Lesotho	2.0
Cabo Verde	5.0	South Africa	1.7
Central African Republic	5.0	Eswatini	1.5
Guinea Bissau	5.0	Republic of Congo	1.4
Madagascar	5.0	Liberia	1.0
The Gambia	4.9	Burundi	0.5
Chad	4.9	Equatorial Guinea	-3.4



Along with economic growth, foreign direct investment (FDI) net inflows into Africa have also slowed in the post-crisis period. And over the past few years since the oil price collapse, inward FDI has slumped. But the recent decline has been concentrated among commodity producers. Outside the 17 individual countries that span the largest 10 regional net exporters across oil, gas and metals, FDI has in fact risen in aggregate since 2015 (see chart).

### FDI inflows have been stronger outside major commodity-exporting countries



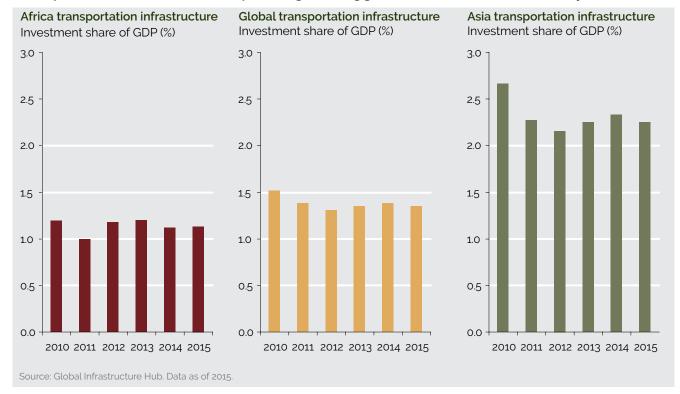
The macroeconomic environment will continue to have an impact on local rates of growth and foreign investment into Africa. But beyond global cyclical conditions, supply-side and demand-side factors should govern longer-term investment trends in the region over the years ahead.

On the supply side, transportation infrastructure capacity is fundamental to delivering lower operating costs through the more efficient movement of materials, components, finished goods and labor in the production process. Road, rail, port and airport quality will therefore be key variables in attracting overseas capital. But spending on transportation infrastructure

in Africa has lagged other markets over recent years. Across the 12 economies counted in the G20 Global Infrastructure Hub (Angola, South Africa, Nigeria, Kenya, Ethiopia, Benin, Côte d'Ivoire, Ghana, Guinea, Rwanda, Senegal and Tanzania) total expenditure as a share of GDP across these four transportation modes fell in a 1%-1.2% range in 2010-2015, compared to 1.3%-1.5% globally and 2.2%-2.7% in Asia (see chart). Correspondingly, transportation infrastructure quality assessments for Africa based on Word Economic Forum criteria have moved down the global rankings over the past decade.

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### Transportation infrastructure spending has lagged other markets in recent years



Increasing the level of investment into roadways, bridges, rail networks, air terminals and seaport infrastructure would therefore represent a potential opportunity for investors, as well as a means of lifting productivity and economic growth across the region. On G20 projections, Africa will need to raise its rate of investment in transportation infrastructure to an average of 2.1% of GDP (close to twice the current level) over the course of the 2020s in order to match the performance of top-performing peer countries. One incentive for such additional spending will come from the new African Continental Free Trade Area, which became operational in July. By removing tariffs on 90% of traded goods, liberalising trade in services and reducing other non-tariff barriers, the agreement aims to expand the addressable markets for firms operating on the continent and therefore boost intra-regional trade and investment over the coming years.

Alongside productivity growth, population change is the second fundamental supply-side determinant of economic output. Demographic trends will therefore also be important for investors to take into account as they assess investment prospects across the region. African economies have by far the youngest and fastest-growing populations in the world. The median age in sub-Saharan Africa currently stands at under 19 years, and the annual rate of population growth was 2.7% over the past decade – three

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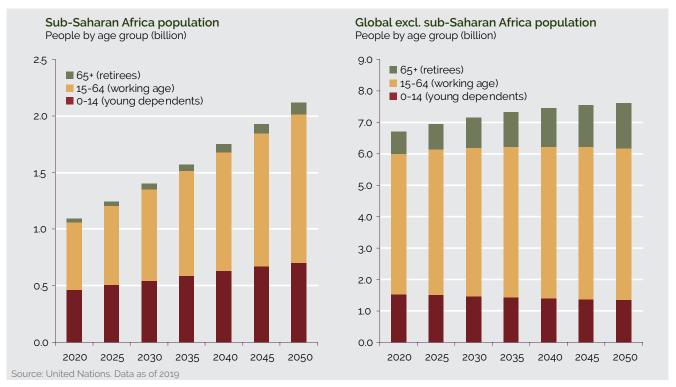
the youngest and fastest-growing populations in the world. The median age in sub-Saharan Africa currently stands at under 19 years, and the annual rate of population growth was 2.7% over the past decade – three times faster than the rest of the world in aggregate."



times faster than the rest of the world in aggregate. But further than trends in the overall population, the changing composition of the population will also be key to the regional economic outlook and local investment prospects. On United Nations (UN) projections, the number of young dependents aged 0-14 in Africa is expected to increase by 243 million between 2020 and 2050, compared with a net decline of 171 million in the rest of the world. This for example implies a much faster rate of growth in demand for primary and secondary education services. At the same time, the increase in the working-age population aged 15-64 across the region (712 million) is expected

to outstrip the net increase for the rest of the world (335 million) by over two-to-one. The 'life-cycle hypothesis' predicts that populations should save more during their working lives, running down those savings as they age. This suggests that the growing numbers of economically active people in countries across the region will be better positioned to accumulate capital for domestic investment in local businesses and asset markets. By contrast, the number of individuals aged 65-plus in Africa is projected to grow by just 69 million from 2020 out to mid-century, versus 753 million in the rest of the world (see chart).

### Young and working-age population growth in Africa to outstrip rest of the world



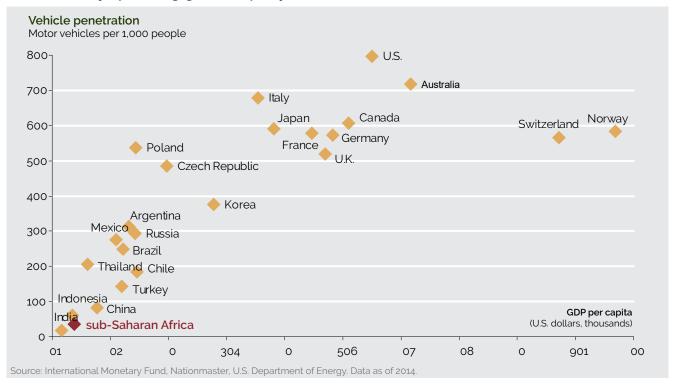
As a consequence, the old-age dependency ratio in Africa will remain much lower than in other regions – 5% (or five retirees for every 100 workers) in 2020 and 8% in 2050 based on UN demographic forecasts, compared to 15% in 2020 and 30% in 2050 for the rest of the world in aggregate. This should mean a lower burden on the public finances required for social services and more resources available to fund productivity-enhancing investment in areas such as education and infrastructure.

On the demand side, consumer purchasing power in Africa is projected to increase with the growing population and rising per capita income. According to the Brookings Institution, the size of the global middle class (defined by per capita incomes of \$11 to \$110 per day) will rise from 3 billion people in 2015 to 5.4 billion in 2030. The overwhelming majority of the increase will come from the Asia-Pacific. But the second largest contribution is expected to come from sub-Saharan Africa, where the regional total is forecast to grow from

114 million to 212 million over the period. For investors, the key implication here is a likely acceleration in discretionary spending as more households are able to shift a larger share of their budget away from staple foods and shelter toward more income-elastic products and services. Indeed it is typical for discretionary consumption to grow rapidly as countries move up from low per capita income levels toward middle-income levels, before flattening out again as they reach high-income levels. Global motor vehicle penetration for example rises only marginally between middle-income and high-income economies, but climbs steeply between low-income and middle income economies (see chart).

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### Discretionary spending grows rapidly as national income rises from low levels



As the consumer class in Africa expands, spending patterns should follow a similar pattern across other discretionary categories such as electronics, digital media, store retail, travel and leisure. And consumption growth will be further supported by rising rates of urbanisation across the continent. On UN forecasts, an additional 800 million people are expected to become urban residents in sub-Saharan Africa between 2020 and 2050, more than a third of the projected global increase over the same period. Crucially, income levels in cities typically exceed those in rural areas, while higher population densities in urban centers will allow

businesses and governments to more efficiently reach households with goods, services, infrastructure and utilities.

The income and demographic outlook for Africa, as well as the unrealised productivity gains from higher levels of infrastructure spending therefore build a strong basis for higher potential growth and rates of investment return across the continent. But specific factors across a range of key sectors will also present new investment opportunities over the years ahead.

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The growing consumer class in Africa will place increasing demands on domestic agricultural sectors in countries across the region. Calorie intake in sub-Saharan Africa is projected by the World Health Organisation to grow by 7.6% from 2,360 kcal per capita/day to 2,540 kcal per capita/day between 2015 and 2030 - faster than in any other region of the world. But over the past 15 years, imports of basic foods have surpassed exports, with sub-Saharan Africa taking in a total of \$35.1 billion in basic foodstuffs from external markets in 20173. In order to meet rising household demand for fresh produce, dairy and meat, and at the same time avoid a widening food deficit, local crop output for direct consumption and for livestock feed will need to increase. There are two main ways in which this can be achieved: through the expansion of agricultural land or by increasing local yields, and McKinsey estimates that more than 70% of Africa's potential improvement in cereal and coarse grain production will come from the latter source. This implies growing future demand for agricultural inputs such as fertilisers, pesticides and hybrid seeds with more favorable traits such as disease resistance. In addition, streamlining fragmented supply chains of distributors and agro-dealers for both inputs and produce would also act to reduce operating costs and help farmers to better satisfy growing demand. At the same time, more widespread use of irrigation and mechanisation tools such as motorised tractors (a process encouraged by urbanisation as farmland becomes more sparsely populated) would further lift agricultural productivity.

Electricity provision represents another opportunity for new investment to close local supply gaps in sub-Saharan Africa. The International Energy Agency estimates that a total of 602 million people across the region lacked access in 2017, with a wide disparity in electrification rates between urban areas (67%) and rural areas (28%). Large differences also exist in rates of electricity access across individual countries. On the mainland, Gabon (91%), Ghana (84%) and South Africa (84%) have the highest rates of electrification, while single-digit rates in South Sudan, Chad and Central African Republic are the lowest in the region. In absolute terms, the largest addressable market is Nigeria, where an estimated 77 million people were without electricity access in 2017 - predominantly in rural parts of the country where the electrification rate of 40% stood well below the 80% in urban areas. Off-grid renewable energy sources are a fast-growing solution, particularly for electricity provision in rural Africa. Solar and wind power have been most widely adopted Africa is projected by the World Health Organisation to grow by 7.6% from 2,360 kcal per capita/day to 2,540 kcal per capita/day between 2015 and 2030 – faster than in any other region of the world."



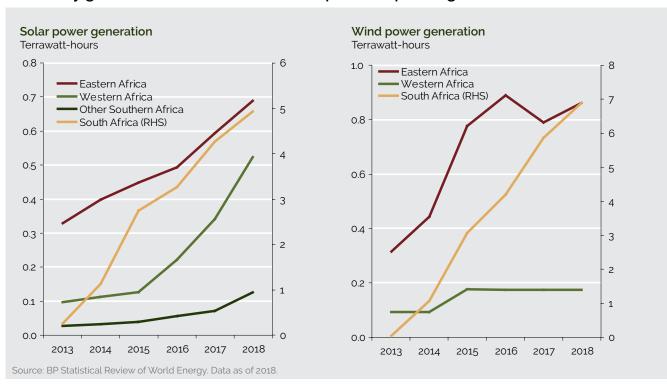
Off-grid renewable energy sources are a **fast-growing solution** for electricity provision, particularly in rural Africa."

<sup>3</sup> United Nations Conference on Trade and Development

by households, but are increasingly supporting the agricultural sector as well as public services such as schools, hospitals and telecommunications infrastructure. South Africa has the highest installed capacity in renewables and is growing its consumption the most quickly, but other parts of Africa are also increasing their renewable energy generation at rates comparable to or higher than the rest of the world.

West Africa for example grew its solar power usage at an annual rate of 41% in 2013-2018 (see chart), above the global average of 33%. While East Africa increased its wind power consumption at 22% over the same period, versus a global average of 15%.

### Electricity generation from solar and wind power expanding across Africa



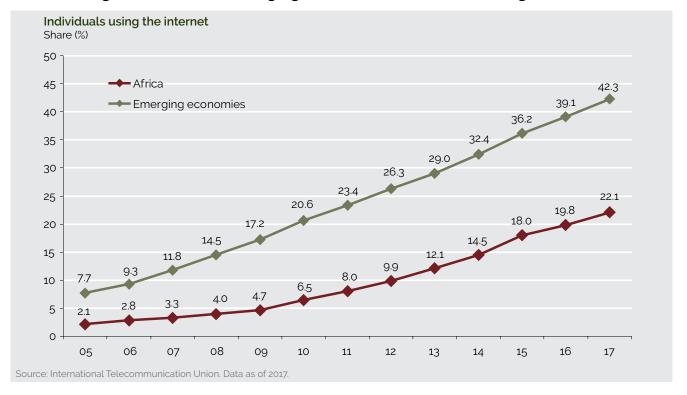
The still low levels of installed capacity across the region leave room for more investment to address national power shortfalls. And uptake will be supported over time by continuing cost declines and innovations in regional financing such as pay-as-you-go or lease-to-own arrangements for solar energy systems.

We see a similar picture in the telecommunications sector. Internet users across emerging economies still account for less than half of all inhabitants, but the potential for gains in digital connectivity remain higher for Africa than in other regions. The share of individuals with internet access in the emerging world stood at 42% in 2017, with Africa at just over half this level at 22% (see chart), led on the mainland by Gabon (62%), South Africa (56%) and Namibia (51%).

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### Internet usage below 50% in emerging markets with more room for gains in Africa



Most of the offline population is concentrated among rural residents, low income households and younger cohorts. And connecting enough people within these groups to reach adoption levels comparable with the emerging world as a whole would imply an additional 195 million coming online across the region. Wireless internet in particular has become a key enabler of regional economic activity. The total number of cellular mobile subscriptions per 100 people in Africa has tripled over the past decade to 74 in 2017, and mobile internetconnected device subscriptions reached 25 per 100 people in the same year. Wireless internet usage is therefore starting from a low base, but is expected by the GSM Association to grow at faster pace than in other emerging markets to reach 67% of all cellular connections by 2025. Key to future growth will be

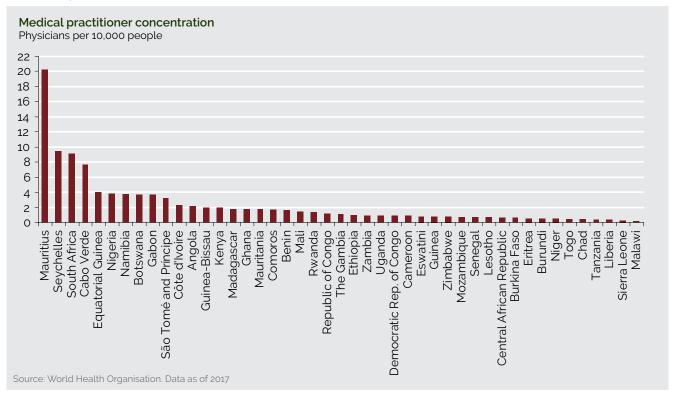
improved coverage of wireless telecom infrastructure, as well as affordability through lower cost handsets, cheaper data plans and the development of less dataintensive applications through techniques such as advanced compression. Technology startups in Africa are now using mobile devices as a primary platform to provide new services to a wider share of the regional population in areas such as mobile payments, billing for power and water utilities, ride hailing, advertising, digital media and e-commerce. And the expected growth in mobile internet penetration will also create opportunities for local companies to provide innovative solutions for local economic and social challenges, whether connecting rural farmers with urban customers, publishing educational content or providing healthcare and banking services.



Healthcare access remains an ongoing challenge for many households in African countries, due in large part to obstacles of affordability and proximity to medical facilities and practitioners. National per capita physician numbers are low at an average of 2.3 per 10,000, with only 11 countries above this level (see chart) – a fundamental hurdle for local healthcare provision in the region.

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### Proximity to medical practitioners a fundamental hurdle for healthcare provision



But internet-driven solutions could offer new responses to some of these challenges over the years ahead by enabling greater use of remote diagnosis, treatment, and education. mHealth has emerged as one of the main ways in which technology is being applied to bridge healthcare system gaps in both the emerging and developed world. And as internet usage becomes more widespread in sub-Saharan Africa, similar techniques could be applied to address problems of health service access across the region. mHealth describes a suite of communication tools that uses smartphones and other connected devices

(whether through SMS, voice, mobile applications or video) to aid patient and provider decision-making and to make interactions between the two more efficient. The functions of mHealth span a range of services from remote monitoring of patients with conditions like diabetes and hypertension, to remote diagnosis and treatment by interactive voice and messaging applications, advice on health and fitness, medication adherence reminders and online support services for health workers. Close to 500 mHealth products and services are being either planned or deployed across sub-Saharan Africa as counted by the GSM

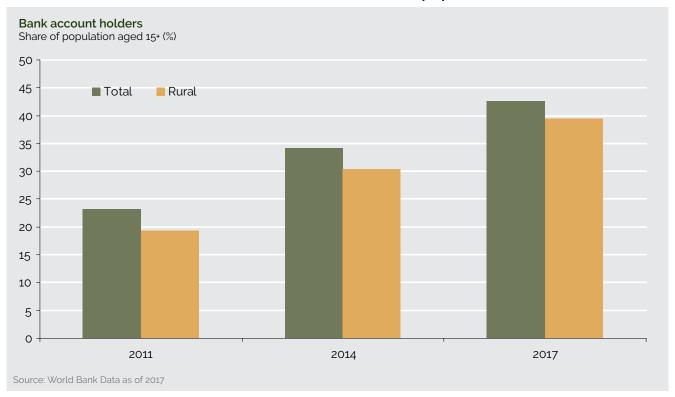


Association mHealth Deployment Tracker. In Ghana for example, mCareAfrica is a website for maternal care that also offers text and phone-based perinatal and neonatal counselling. While in Zambia, Hello Doctor is an SMS-based system that allows participants to receive health tips and information on specific conditions.

Technology-enabled solutions will also support growth in the financial sector. Access to banking services in Africa has risen over the past decade, but a majority of individuals across the region still do not hold an account at a formal institution, hampering their ability to borrow, save and earn interest income. In 2017, 43% of people aged 15-plus had a bank account, with the share in rural areas standing at less than 40% (see chart).

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### Bank account holders in Africa are less than half of the population



The traditional industry service model has struggled to gain traction across Africa, in part due to low urbanisation rates in many countries putting large numbers of households outside the vicinity of a bank branch. South Sudan, Central African Republic and Mauritania, for example, are some of the lowest population density markets in the region and have banking penetration rates of less than half the region-wide average. Low per capita income levels have also played a role in limiting the growth of local banking networks, and we would expect account access to rise with the expanding middle class. But in the nearer-term,

mobile-enabled technology is likely to play a key role in increasing financial inclusion. Mobile money usage is growing in Africa, even outside Kenya where it is highest (at a 73% adoption rate) and already employed in a range of activities such as retail transactions, mobile airtime billing, solar electricity purchases, salary payments, remittances and increasingly microinsurance and micro-credit. Across 30 countries in the region counted by the World Bank, the average adoption rate of mobile money accounts more than doubled from 11% to 26% in the three years from 2014 to 2017. And in 2018, the Central Bank of Nigeria

introduced new rules that allow telecommunication companies and fintech firms to become payment service banks able to take deposits and issue debit cards. As a result, there remains considerable scope across Africa for technology startups, telecoms and financial service companies to channel banking services to consumers that remain outside the formal system.

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Sub-Saharan Africa therefore presents a range of long-term investment opportunities across major sectors of its local economies. Addressable markets in consumer retail, agriculture, renewable power generation, telecommunications, healthcare, financial services and others remain underserved. And underlying rates of economic growth across the region stand to benefit from rising national incomes, young and fast-growing populations and an expanding consumer class; as well as unrealised productivity gains from infrastructure development, operational efficiencies and the widening application of information technology. Growth, innovation and inclusion will drive investment returns in Africa over the years ahead, and long-term investors must choose the right local partners to identify and access these opportunities.

### **Connecting Private Investment to Africa**

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