CHARTERED INSTITUTE OF STOCKBROKERS

Infrastructure and Deficit Funding

Bridging the Gap via the Nigerian Capital Market

Presented at the 24th Annual Conference of the Chartered Institute of Stockbrokers by ***Adekunle A. Oyinloye, FCIB***

November 5 2020

Impact on modern-day infrastructure investing and development

High

Low

A time journey of infrastructure investing in Nigeria

Pre-Independence (1914 – 1960)

Aim: To develop housing for European settlers and to propel the growth of extractive sectors
Infrastructure: Housing, mining, agriculture and export-oriented transport
Level of private sector investment: Little to none
Outcome: The inequitable distribution of infrastructure during this era is still evident today

1962 – 1968: The First National Development Plan

Aim: To increase Nigeria's capacity to generate resources and revenue needed for self-sustained development
Infrastructure: Agriculture, transport, manufacturing and power
Private Sector Investment: Little to none
Outcome: This era laid the foundation for the growth of the manufacturing industry in 1970s and 1980s.

1970 – 1974: The Second National Development Plan

Aim: To raise Nigeria's overall infrastructure stock; specifically social infrastructure
Infrastructure: Transport, education and agriculture
Level of private sector investment: Little to none
Outcome: The plan in this era had an urban bias which continues today

1975 – 1980: The Third National Development Plan

Aim: To use the influx wealth from oil sales to fund infrastructure development and further diversify the economy
Infrastructure: Manufacturing
Private sector investment: Little to none
Outcome: This era marks a watershed when the Government started to underfund agriculture to focus on the oil and gas sector

1981 – 1985: The Fourth National Development Plan

Aim: To further the goals of the Third Development Plan and develop Nigeria's petroleum infrastructure
Infrastructure: Petroleum, agriculture and education
Private Sector Investment: Envisaged to contribute 14% of total investment
Outcome: The plan was considered to be a complete failure

1986: The Fifth National Development Plan

1986 marked the end of the five-year development plan due to the failure of the Fourth Year Plan. This was the turning point when the Government started to the lay the foundation to attract private investment towards infrastructure development.

1987 – 1998: Emergence of Private Investment in Infrastructure Development

The government failed to institute the necessary policies and bodies to attract private investment towards infrastructure development. As a result, there was little to no private investment during this period and public infrastructure deteriorated due to inadequate government expenditure.

1999 – 2010: NEEDS

Aim: To promote private sector investment and privatization of public infrastructure; specifically, power.
Infrastructure: Power
Level of private sector investment: Medium
Outcome: This era marked the beginning of substantial private investment in infrastructure.

2010 – 2020: Vision 20:2020, The NIIMP and Economic Recovery and Growth Plan (ERGP)

Aim: To boost Nigeria's infrastructure stock in order to propel economic development and diversify the economy
Infrastructure: All core sectors, however; giving priority to energy and transport
Private Sector Investment: Medium
Outcome: Private investment in infrastructure continues to grow at a slow pace

Sources: Deloitte – Invest in Nigeria; Momoh – Private Participation in Infrastructure; International Bank for Reconstruction & Development; Ibetan et al. – Trends in Development Planning in Nigeria; Ejumudo; Ekundare; National Planning Commission

HBSAN commissioned research into Nigeria’s infrastructure investment landscape

- Anchored by insights and feedback from industry players—operators and regulators in energy, finance, law, healthcare, transportation, construction— the Harvard Business School Association of Nigeria (HBSAN) commissioned a white paper on the Nigerian infrastructure investment landscape.
- The global COVID-19 pandemic and preceding crash in oil prices have led Nigeria’s oil-dependent economy into recession—one that is likely to be the worst in its recent history.
- The white paper, which details actionable proposals for improvements in the infrastructure investment landscape, offers a timely intervention by highlighting the need for more transparent and more efficient infrastructure investment frameworks, especially to boost private sector participation.

The resulting white paper, a companion to the NIIMP informs this presentation

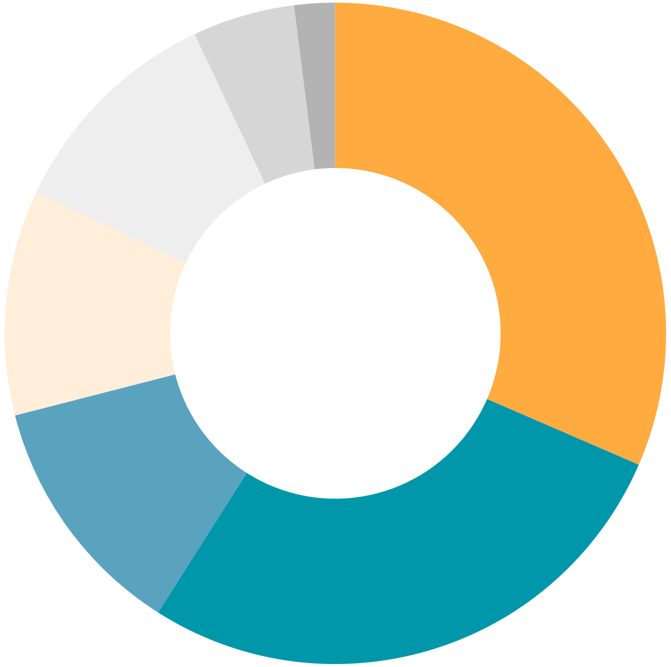
- Like the NIIMP, which is designed to strengthen linkages between infrastructure sectors and the national economy by integrating infrastructure plans into prioritised and efficiently allocated projects, the white paper offers specific recommendations for stakeholders to bolster infrastructure investment over the next decade.
- Indeed, read within the context of the NIIMP, the white paper offers crucial recommendations for actors funding, financing, and executing infrastructure developments with status-reflective projections and aspirations.
- HBSAN will officially launch the white paper on November 27, 2020 but the Chartered Institute of Stockbrokers is the first audience to receive some of the insights of the paper which focuses largely on PPPs as an important source of financing for Nigeria’s infrastructure development.

The NIIMP is a 30-year roadmap for closing Nigeria's estimated $3 trillion infrastructure gap

The NIIMP is a 30-year (2014 – 2043) blueprint for developing Nigeria's infrastructure at an accelerated pace to underpin sustainable economic growth. The plan provides a capital allocation framework, which estimates that $3 trillion is required to close Nigeria's infrastructure gap and increase the country's infrastructure stock from an estimated 20 to 25 percent of GDP in 2013 to the international benchmark, 70 percent of GDP. The plan also identifies sector targets, priority projects and critical enablers for effective implementation such as proposed policy reforms to foster private sector investment.

Investment allocation for 7 infrastructure asset classes (% of $3 trillion)

Energy	32%
Transport	28%
Agriculture, water & mining	12%
ICT	11%
Housing & regional development	11%
Social infrastructure	5%
Security	2%

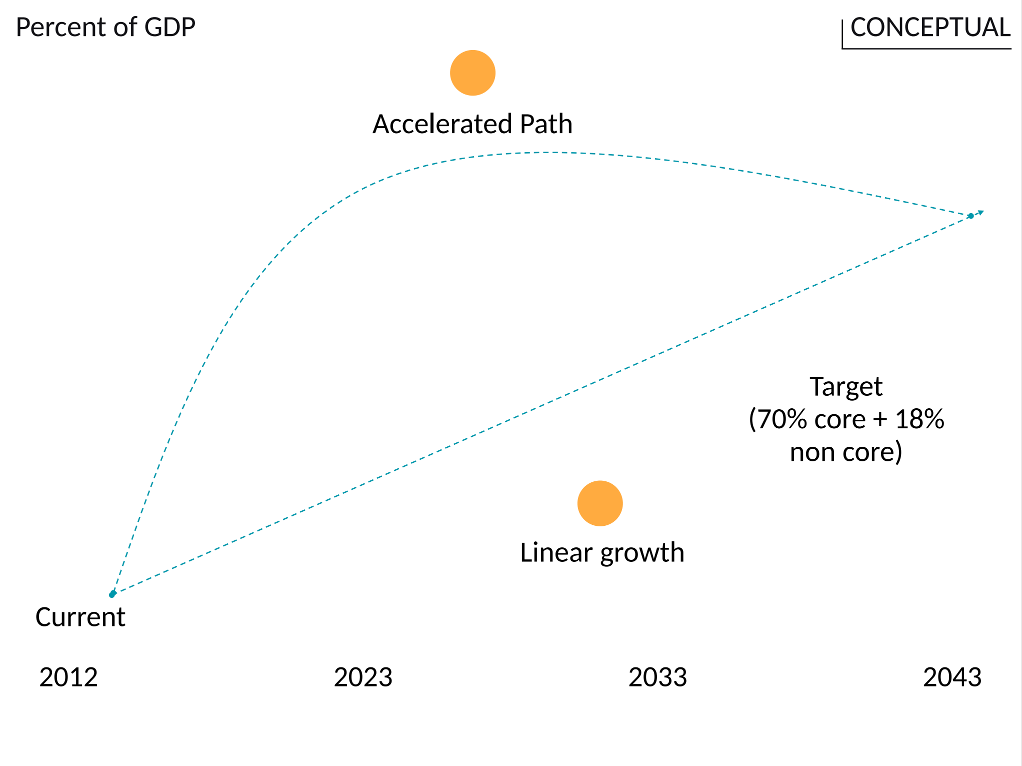


Sources: National Planning Commission - NIIMP

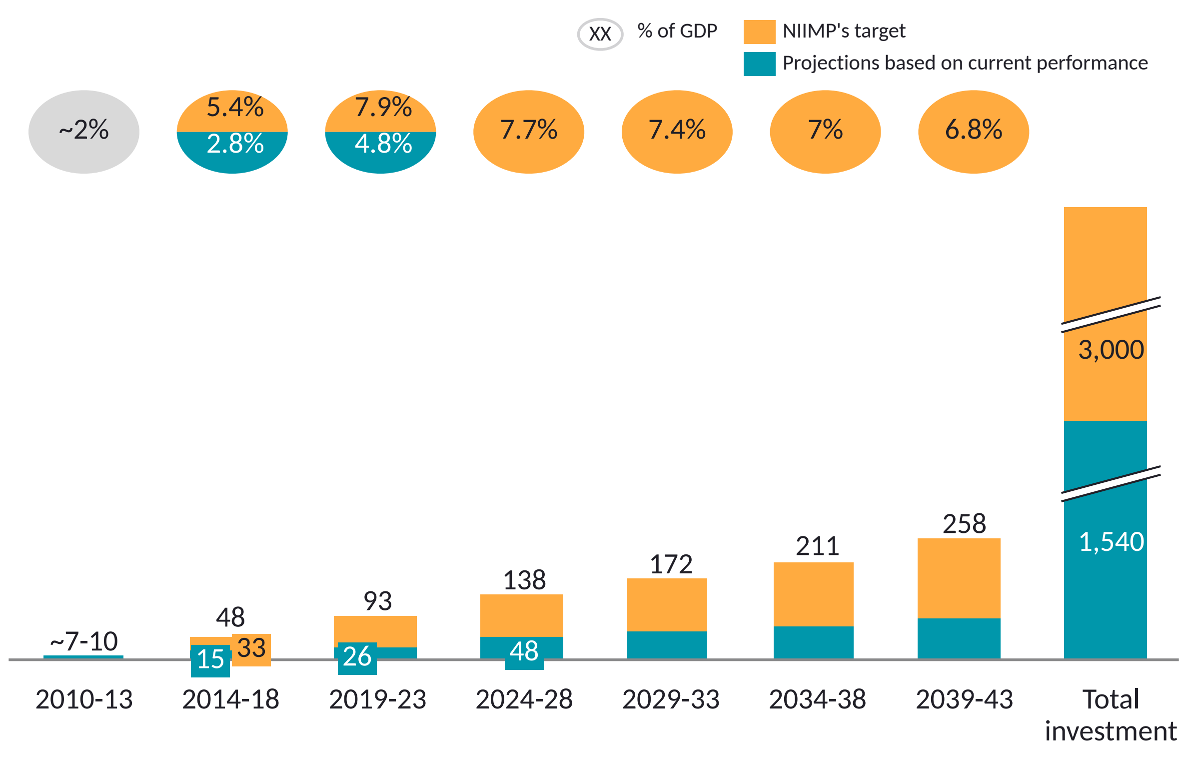
Based on the NIIMP's current performance, it will hit its target 2050 instead of 2043

1. The NIIMP assumes an annual GDP growth rate of 6% from 2014 to 2043; however, the annual growth rate averaged 2.8% from 2014 to 2019 and is projected to be -3.4% in 2020.
2. The plan estimates that Nigeria would spend 6% of GDP on infrastructure from 2014 to 2018; however, the infrastructure spend has remained around 2.79% during this time span.
3. Based on Nigeria's current GDP growth trend (~3.9% from 2014 to 2043) & infrastructure spend, the NIIMP will hit its target in ~ 2050 instead of 2043. In 2043, Nigeria would have reached 50% (N1.5 trillion) of the NIIMP's target of USD 3 trillion.

NIIMP's proposed accelerated path for infrastructure spending



Annual infrastructure spend, USD Billions

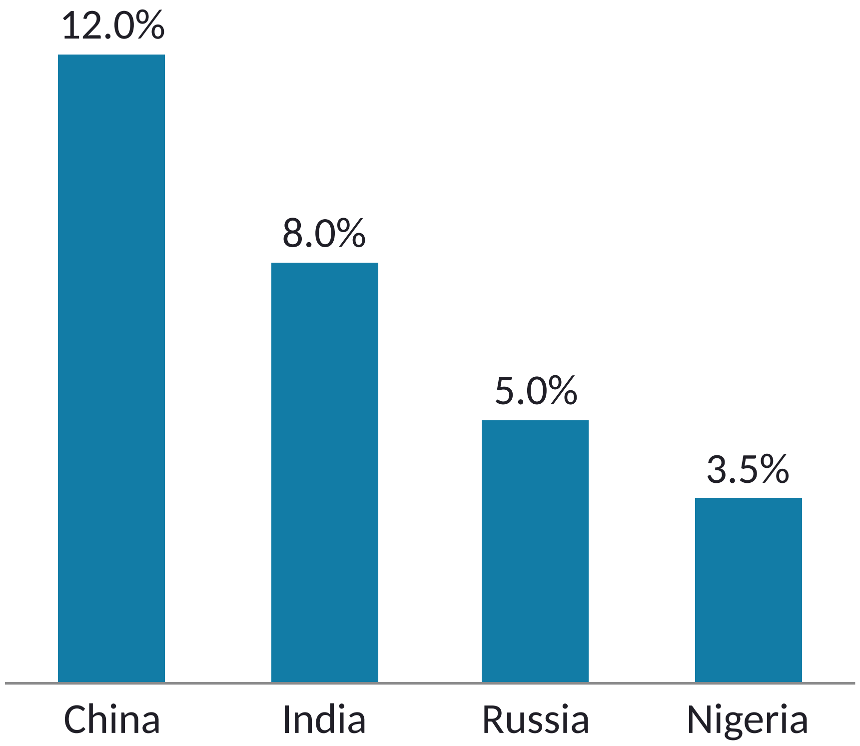


Infrastructure Financing

- Nigeria's infrastructure sector is grossly underdeveloped, and this has limited access to social services and significantly increased cost of production and trade.
- At present, the value of Nigeria's infrastructure is about 35% of Gross Domestic Product (GDP), very low in comparison with 70% for economies of same size, and public infrastructure expenditure as a % of GDP is at 3.5%.
- Therefore, Infrastructure financing cannot be met through public resources alone as it will be crippling to the economy in the era of fiscal constraints
- Nigeria needs $15 billion annually over the next five to six years to finance its infrastructural deficits
- With the estimate that the country needs to fund about 18% of its GDP on infrastructural development, it is important to start to look for alternative sources of financing to bridge the deficit.
- This financing is expected to come from:
  - ❖ Local project sponsors
  - ❖ International project sponsors
  - ❖ Local Banks
  - ❖ International Banks
  - ❖ Local Institutional Investors
  - ❖ International Institutional Investors
  - ❖ Multilateral Finance Organizations

The Capital Market Presents the Best Platform

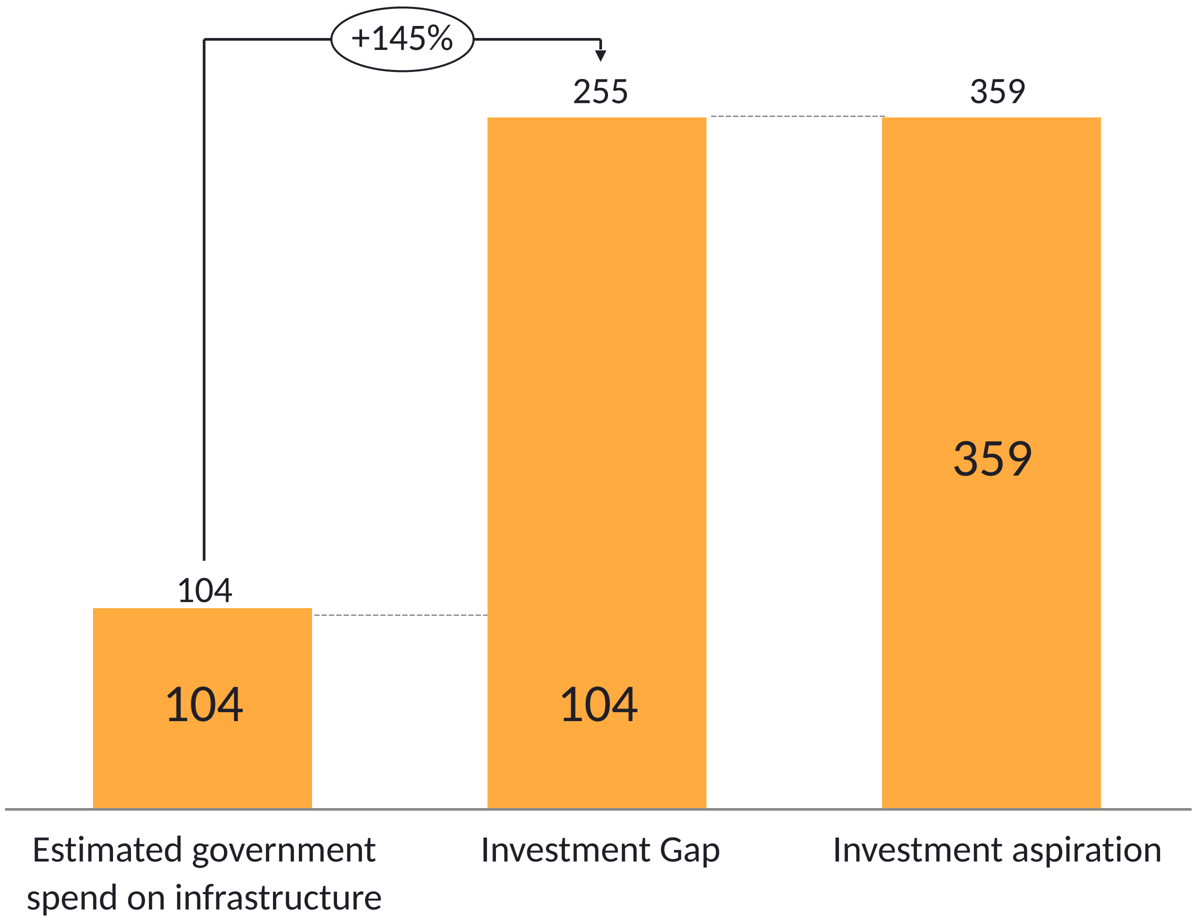
Public Infrastructure Expenditure as a % of GDP



Sources: ICRC, World Bank, IMF

A top-down estimation of the investment gap shows that $255 bn in additional funding needs to be mobilized

Estimating the infrastructure gap over the next 10 years



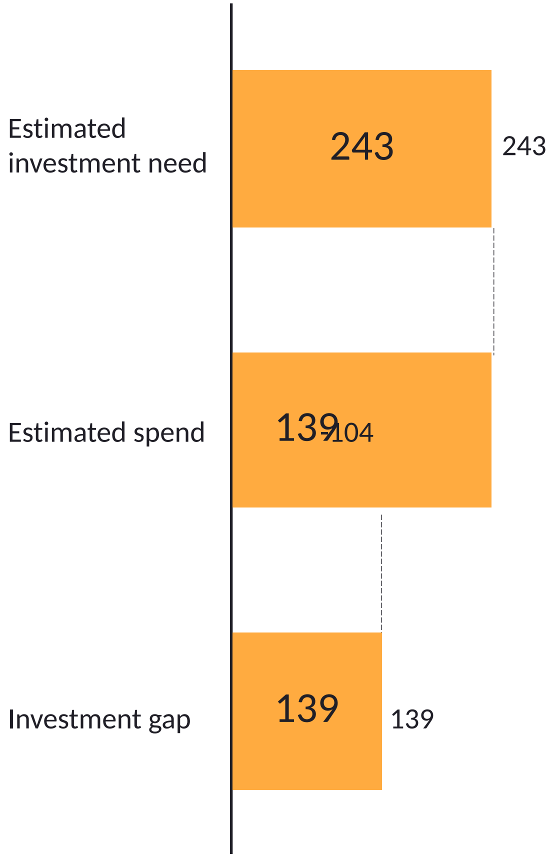
- Based on benchmarked countries like India and Ethiopia, Nigeria could set a target of public spending 7.82% of GDP on infrastructure
- According to the NIIMP, released in 2014, Nigeria should be spending 6.3% of GDP on infrastructure development every year
- However, the country has historically spent a little under 2% on average each year over the past 5 years
- With the impact of COVID-19 and declining crude oil prices, it is unlikely that this narrative will change
- Assuming Nigeria continues to spend at the same rate as we currently see over the next 10 years, the infrastructure financing gap stands at $255bn

Note: All amounts in billions of USD
Source: IMF, Team analysis

A bottom-up approach estimates the infrastructure gap at $139 bn representing an average annual spend of 5.05% of GDP

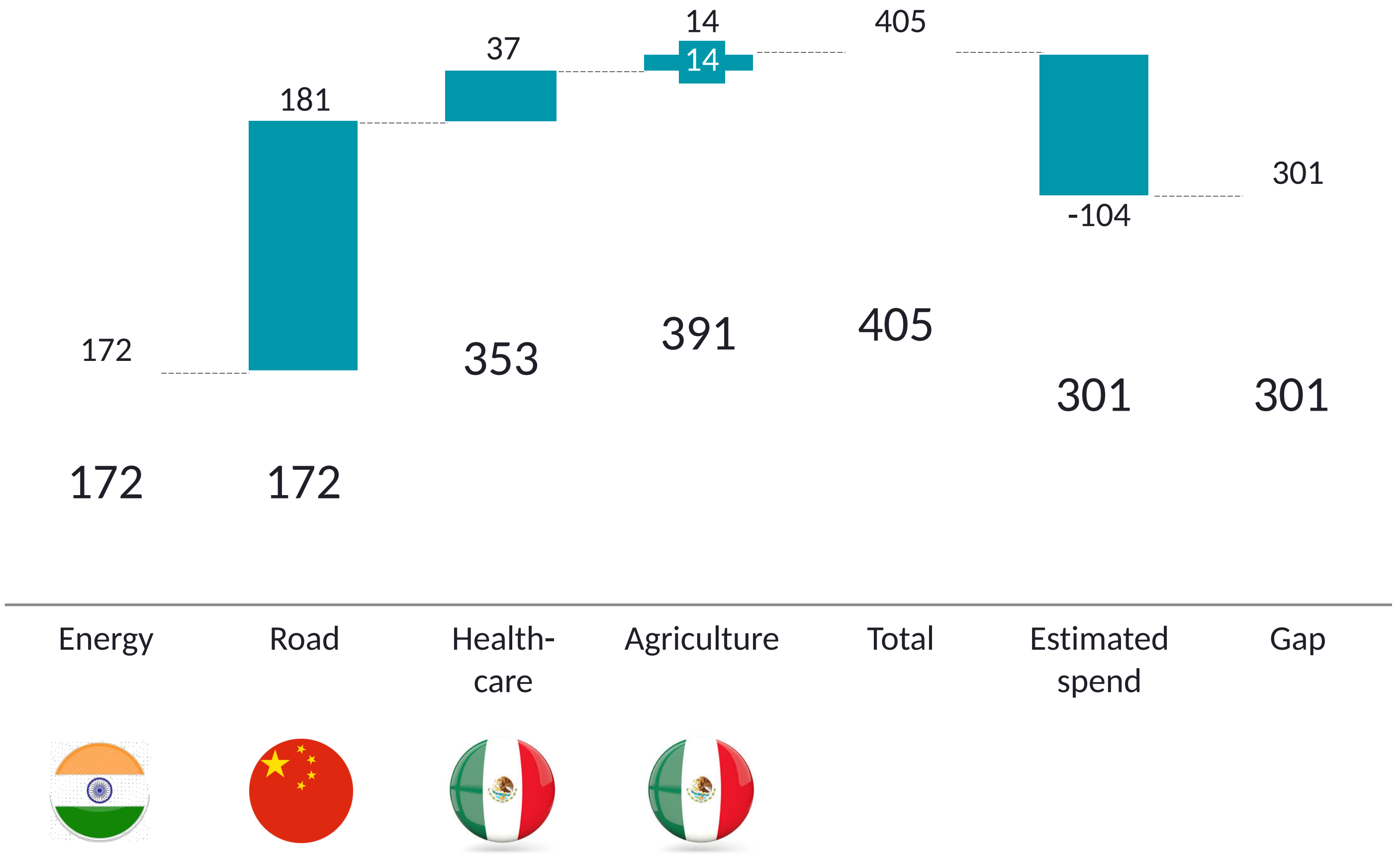
Estimating the infrastructure gap over the next 10 years

Sector	Input 1	×	Input 2	=	Result
Energy	1,237 1,237 Annual cost of electricity per capital (US$)	×	108 Number of beneficiaries (mn)	=	134 134 Total investment required (US$bn)
Roads	1,233,758 1,233,758 Average Average cost per km of road constructed (US$)	×	63,655 63,655 Kilometers to be paved	=	79 79 Total investment required (US$bn)
Healthcare	184,294 184,294 Average hospital cost per bed (US$)	×	149,524 149,524 Beds required	=	28 28 Total investment required (US$bn)
Agriculture	1,212,306 1,212,306 Average cost of providing a silo (US$)	×	173 173 Number of beneficiaries (mn)	=	2,898.21 0.21 Silos 2,898.00 Dams Total investment required (US$bn)
	14,000 Cost of dam per hectare (US$)	×	207,000 207,000 Average hectares of farmland to be covered		



Based on sector specific aspirations for benchmarked countries, the investment gap over the next 10 years is $301 bn

Estimating the infrastructure gap over the next 10 years

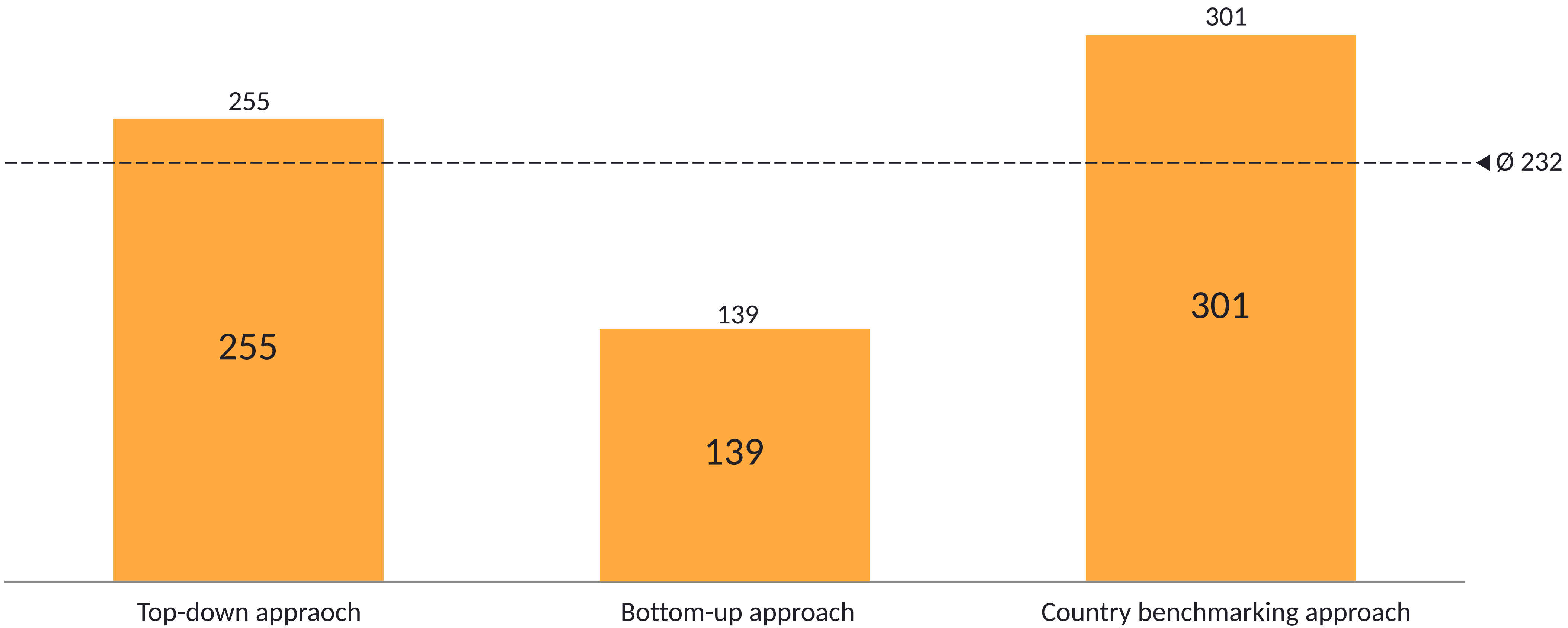


- Nigeria could emulate a specific country as far as aspiration in a priority investment sector is concerned
- Based on available secondary data, India could be a good benchmark for Nigeria in the areas of energy (95% electricity coverage compared to Nigeria's 60%)
- China could be a good benchmark for road infrastructure (road density of 37 km of road per 100 sq. km compared to Nigeria's 29)
- Mexico could also be a good benchmark for Nigeria in the area of health infrastructure (1.5 hospital beds per 1000 people compared to Nigeria's 0.5) and agriculture (20% of irrigated arable land compared to Nigeria's 5%)

Source: IMF, Team analysis

Overview of approaches to estimating the infrastructure investment need

Comparison of all approaches (in billions of USD)



The Top 4 top barriers with infrastructure financing in Nigeria are poor governance, policy incoherence, inadequate human capacity and macroeconomic instability

Policy reforms

Have a consistent policy regime and framework that promotes deregulation of infrastructure financing and project management in a trans-parent manner under the tenets of good governance principles

Capacity building on the part of state agencies

Bridge the knowledge gap in the areas of deal structuring, project management and legal advisory by getting consultant and multilateral agency technical support

Programmatic infrastructure development approach

Have a clear and comprehensive framework for all infrastructure projects broken down into component parts based on need, financing vehicle and mode of execution

Long term macroeconomic stability

Have innovative approaches to risks around demand, disposable income and FX to attract private investments for infrastructure projects

What principles should underpin our approach to addressing policy issues?

How are we solving them?

What policy problems are we solving?

Core principles

Address infrastructure in areas that ensure multiplier effect and provide social benefit

Focus infrastructure areas

- Energy
- Health care
- Transport
- Agriculture

Addressing the challenges with construction finance would be a critical intervention

	Stage I	Stage II	Stage III
	1 Construction Phase	2 Early Operation Phase	3 Mid to Long Term Horizon
Core Characteristics	Phase Timeline • Period from construction flag off to commissioning Funding Required • Construction Finance (debt) from CDC or other DFIs • Equity from AIPF Security Instruments • Capital Call Letters of AIPF evidencing cash calls from Investors at the end of the construction period • Advance Payment Guarantees (APGs) / Performance Bond (PB) from contractors Exit Opportunities • Immediate exit provided through Capital Calls to be paid by AIPF to Financier • Possible refinance by third party capital provider Indicative Returns • Interest income spread of 400 basis points	Phase Timeline • Period from commissioning to 6 months of consistent cash flows Funding Required • AIPF refinance of construction loan via capital call • Additional equity injection where necessary Security Instruments • Bank Guarantees • Revolving Letters of Credit • ISPOs • Credit Insurance Exit Opportunities • Credit enhancement and refinance • Liquidation through Lifecycle Indicative Returns • Interest income spread of 300-400 basis points	Phase Timeline • Period from steady cash flow to exit by AIPF from the investee company Funding Required • Third party credit refinance • Additional equity injection where necessary Security Instruments • Bank Guarantees • Revolving Letters of Credit • ISPOs • Credit Insurance Exit Opportunities • Credit enhancement and refinance • Liquidation through Lifecycle • Sale of asset to 3rd parties • Listing on traded exchanges • Roll over of holdings into a new fund Indicative Returns • Equity returns – dividends and capital gains
Sample Participant Universe	CDC; THE WORLD BANK; International Monetary Fund; African Development Bank	Africa Infra Plus Fund	InfraCredit; NIDF The Nigeria International Debt Fund
Indicative Duration	12 – 18 Months	3 – 6 Months	8 – 10 Years

Available Financing Mechanisms for Infrastructure Financing

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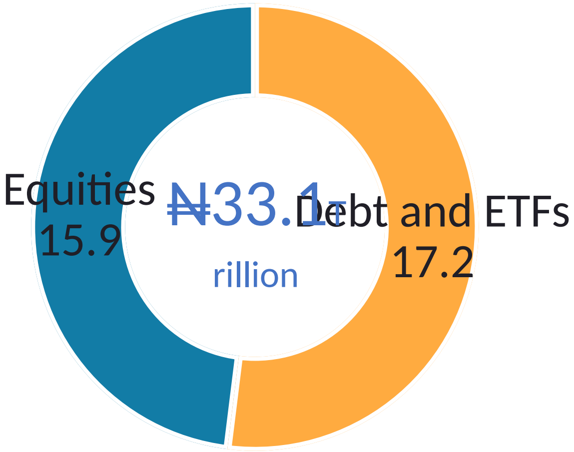
The Nigerian Capital Market is not currently a viable source for infrastructure finance

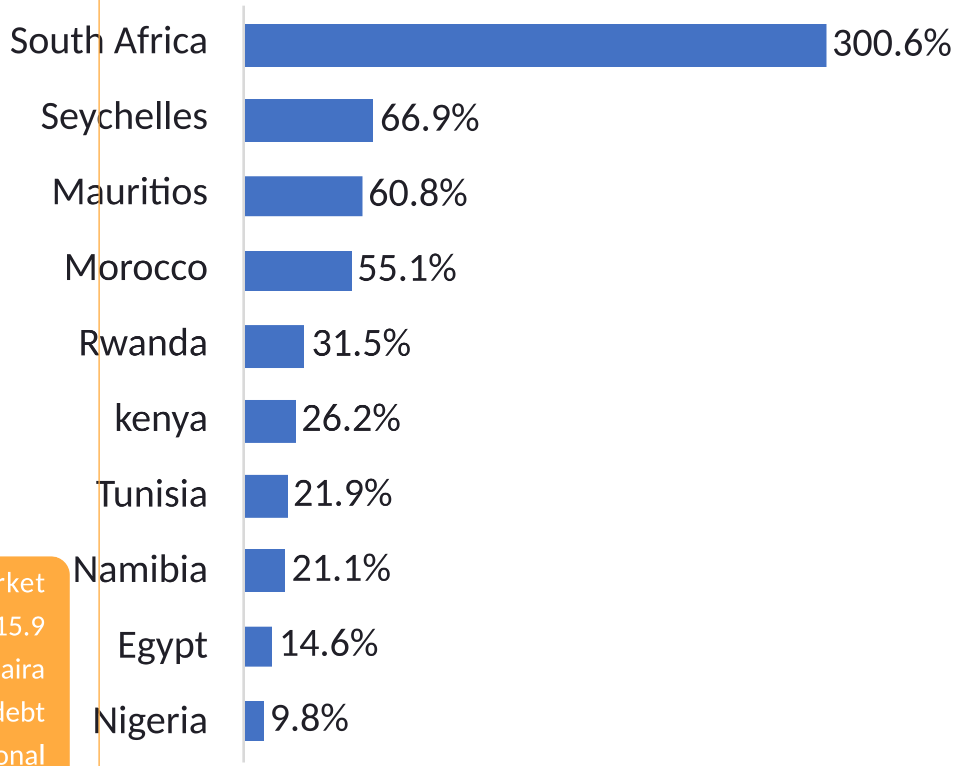
- Nigeria as an emerging economy needs a sound and effective capital market that is properly regulated to bridge the huge infrastructure financing gap that exists.
- However the Nigerian capital market is laced with problems that render it largely risky and unpredictable for investors
- The Nigerian Capital market is currently unstable characterized by price fluctuations. There are regulatory problems , as well as a market size problem and over concentration and influence of certain sectors in the economy.
- The connection between the monetary sector and the reals sector is the capital market. The capital market needs to be deepened more than it is to provide an opportunity for growth in the economy.

Nigerian Stock Market Capitalization (N'Trn)



The Nigerian stock exchange has a total market capitalization of 33.1 trillion Naira, broken into 15.9 trillion Naira in equities market cap and 17.2 trillion Naira in market cap for debt instruments and ETFs. The debt market is largely government bonds both at the national and sub national levels

Stock market capitalization as percent of GDP in Africa, 2019



Sources: ICRC, World Bank

The Nigerian Capital Market is not currently a viable source for infrastructure finance

- The market capitalisation of the Nigerian stock market as a percentage of GDP is just 9.8%, the lowest when compared to other African peers. This denotes a relatively shallow and illiquid market.
- Given the capital intensive nature of infrastructure finance and the large size of such financing instruments, the current capital market is unable to accommodate infrastructure financing instruments.
- About 80% of infrastructure development in Nigeria is funded by the government, and given the current political situation, declining government revenues due to the crash of crude oil prices, the government’s ability to finance infrastructure is constrained.
- Just in 2020, foreign portfolio investment has declined by 19.92% between June and September 2020 indicating foreign investors' lack of appetite on current instruments in the market. The lack of diverse investment instruments has led to such capital outflows.

Source: Census and Economic Information Center (CEIC) Data

Overview of the Nigerian stock market master plan

The Nigerian Capital Market Masterplan was established in 2013 with the ultimate goal of charting a framework for the growth of the capital market between 2015 and 2025. The masterplan contains critical elements of the Nigerian capital market and how it can become globally competitive and serve the development of the Nigerian economy

The aims of the masterplan include:

Developing the capital market in terms of size and structure that will enhance its global competitiveness and catalyze Nigeria's potential to become the largest economy in Africa within the focus period

Examining successful strategies in other jurisdictions and articulate a development strategy for the Nigerian capital market covering areas such as investor protection and education, professionalism, product innovation, expansion of the role of capital market on economic development

Examining relevant factors that impact market growth and develop a strategy for robust governance for improved efficiency, transparency and market stability

Source: Securities and Exchange Commission (SEC) Market Master Plan

Overview of the Nigerian stock market master plan

The 2025 Nigerian Capital Market Masterplan focuses on the development of the capital market in order to drive a deeper and liquid market. The key areas of focus for the master plan are as explained below

Robustness
To grow the depth of market , liquidity to provide efficient exit markets that incentivize investing activities, improve turnover velocity for small cap companies and other instruments. Drive greater ease of entry and exit from the market

Relevance
The capital market to provide support for diverse sectors and provide a diversity of products to address specific needs so it can provide the much-needed long term capital and play a key role in funding infrastructure and high impact projects

Growth
To ensure the market as well as listed companies grow. Market yield to remain attractive and liquidity index must increase to attract investors and provide confidence of a smoothly functioning market

Size
To grow the capital market so it can compare favorably with GDP as well as the rest of the financial services industry particularly with bank deposits

Regulatory Framework
Ensure a truly world class regulatory framework for the stock market. Ensure a defined regulatory model for market development and growth

Source: Securities and Exchange Commission (SEC) Market Master Plan

Interventions for financing from Capital Markets

There are two primary impediments for the capital market financing for infrastructure projects in Nigeria. The impact of a major currency devaluation and failure to implement a well-established regulatory regime and transparency in the markets.

1

Capital Market Reform

The Market should be positioned to play a more significant role in infrastructure development with far reaching reforms in the financial sector. Bond issuances encouraged, and foster good regulatory environment to protect investors

2

Public-Private Partnerships

The government cannot be the sole provider of infrastructure projects. The regulators should restructure the capital markets to foster private partnerships to contribute towards the country's development through funds mobilization

3

Mitigating risk of devaluation

As most of infrastructure projects will have cash flows projected in local currency, the risk of fluctuation of the exchange rate impairing the ability to meet FX debt service rate should be mitigated. The monetary authorities should put in place proper coverage to isolate currency risk from operational risks.

4

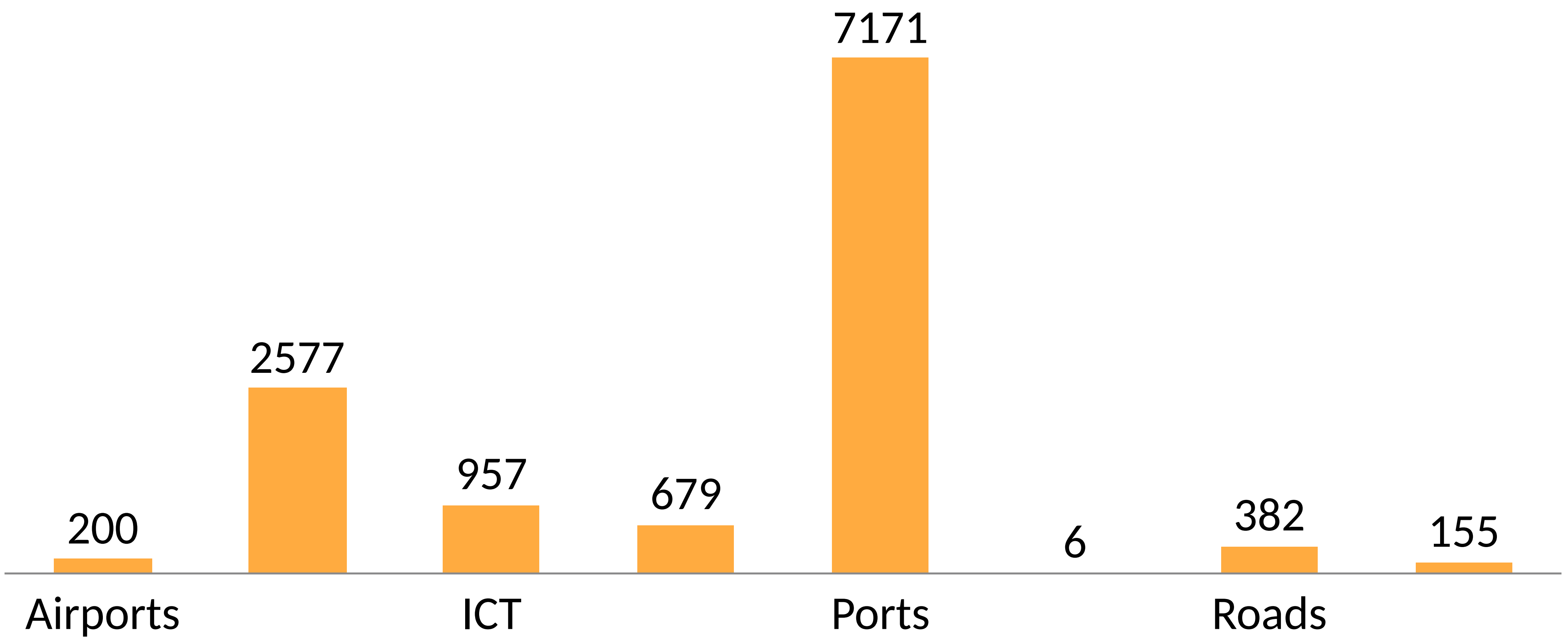
[Innovative Product Offerings The traditional products have proven incapable deepening the market let alone increasing its size. Operators must now put on their thinking caps to evolve products that fully tap into the huge opportunities offer by Infrastructure funding gaps.....

Public-Private Partnerships
Address policies that promote synergy between the public sector and the local and international capital markets

Reform and Regulation
Expansion of the Nigerian Capital Market as well as regulation and total transparency to encourage foreign investment for infrastructure rather than stock market volatility

Value of major PPP Infrastructure Projects in Nigeria

Graph showing the value of PPP Investment by sub-sector



Bank led financing arrangements complement the PPP approach

Role of bank led infrastructure financing

1. Innovative model for the development of public infrastructure and private project execution

2. The most active sectors in local project finance have been transportation, housing, and energy

Bank led financing adoption has, however, been slow

Reasons for slow adoption of bank led financing solutions for infrastructure development

Dearth of relevant knowledge and experience

Underdeveloped regulatory framework

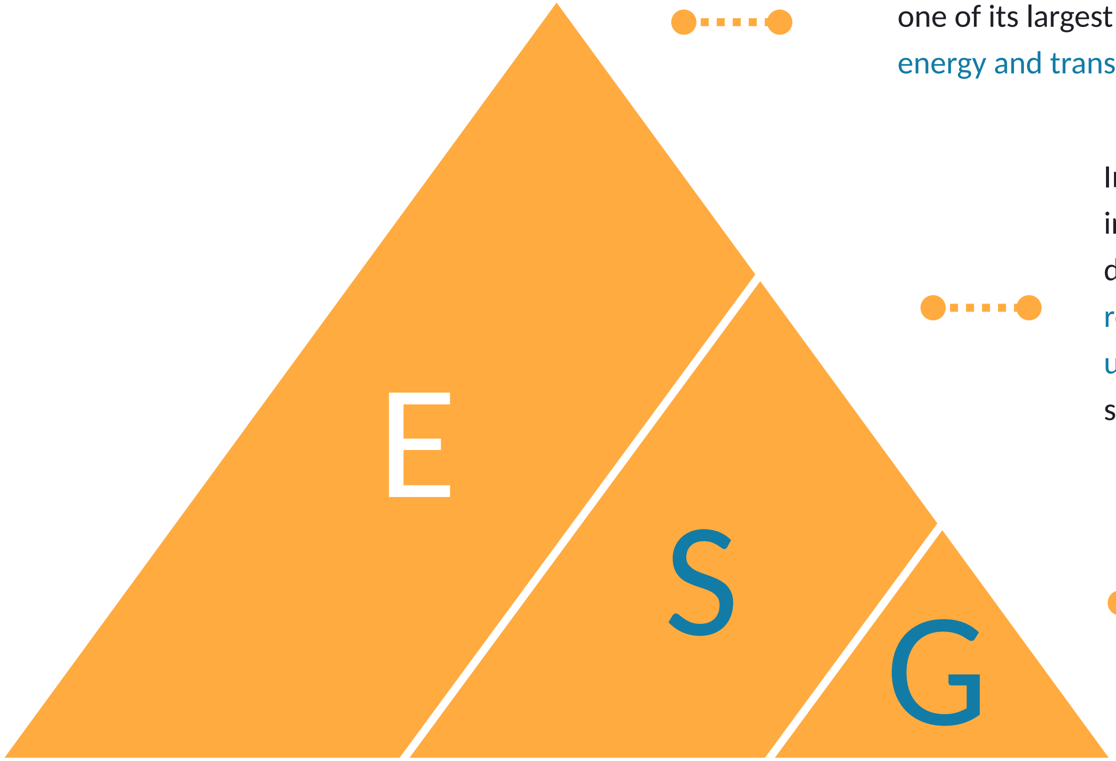
Poor macroeconomic indices which makes Many of the local banks fund projects at prohibitive interest rates

Unwillingness of International investors, who could partner local banks, to take on the significant political, economic, and other risks

Source: World Bank, Stoler J., 2013, Sachet drinking water in Ghana's Accra-Tema metropolitan area: past, present, and future; Little R. J., 2015, The State of Sachets: Ghana 's Private Sector Solution to a Public Infrastructure Problem

Impact of legacy environmental, social and governance (ESG) factors on infrastructure development

High impact on infrastructure investing in Nigeria



Floods are the most common and recurring environmental threat in Nigeria. In 2012, Nigeria experienced one of its largest floods in a century, destroying assets worth nearly $10 billion. Over $387 million of water, energy and transport infrastructure was damaged in the flood.

Infrastructure projects including public-private partnership deals are complex in nature, involving countless stakeholders. Thus far, there is not a well-structured means of managing different stakeholders and their varied interests. Poor management of stakeholder relationships and neglect of stakeholder interest have been identified as major factors that undermine the success of PPP projects in Nigeria. For e.g., interest of funding bodies, subcontractors, users and the community at large.

Lack of planning, continuity and corruption are the biggest impediments to the good governance of infrastructure development in Nigeria. PPP projects can have over 1,000 contractual links which are predominately riddled with corruptive practices. Nigeria ranks 146 out of 180 countries on Transparency Internationals' 2019 Corruption Index.

Sources: Floodlist, National Planning Commission; Idris & Salisu – Corruption and Infrastructure Development in Nigeria; OECD

Overarching interventions for 10-year infrastructure investment strategy

Top 4 top barriers to infrastructure financing in Nigeria are poor governance, policy incoherence, inadequate human capacity and macroeconomic instability

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2 Capacity building for state agencies

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What principles should underpin our approach to addressing policy issues?

Source: Securities and Exchange Commission (SEC) Report on Infrastructural Development

Key Issues Moving Forward

- The Nigerian capital market authorities are making quiet progress in their efforts to build the market’s infrastructure and the regulatory framework that supports a well-functioning financial system.
- Institutional investors are increasingly realizing advantages of infrastructure investments to balance and diversify their portfolios, it is imperative for all players in the Nigerian market both public and private to work together towards a stable economic environment and safe and productive playing field for FDIs and FPIs.
- The development of Nigeria’s capital market will hardly follow a linear path, and therefore sequencing of policies aimed at reform and productivity is consequential as well as regulatory reforms
- The strategic imperative is to develop frameworks that fit Nigeria’s circumstances; I dare say a deliberate recalibration of exiting Pension Fund may unlock the full potentials of our earlier Reforms

THANK YOU