



# Nigeria's Maritime Industry Forecast

2018 - 2019

**Theme** Emerging Opportunities  
and Challenges





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Honourable Minister of Transportation**

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## Foreword

The Maritime Domain remains the dominant medium for global shipping and commerce and it holds the key for unlocking the streams of opportunities in the industry in such areas as: renewable energy, fisheries, maritime transport, waste management, tourism, and marine biodiversity.

However, International and global economy influence the maritime sector especially as it relates to defining the trade pattern, standards and international best practices.

The Nigerian government as Regulator of the Maritime sector is committed to partnering with industry stakeholders to ensure economic growth and competitiveness of Nigeria's Maritime Domain. All over the world Public Private Partnership drive government initiatives in addressing the infrastructural needs of a nation. All of these are embedded in the Strategic objectives of the Federal Ministry of Transportation.

Therefore, the presentation of Nigeria's Maritime Industry forecast by NIMASA is a novelty geared at bringing to the front burner critical maritime industry issues and best global practices to guide investors and stakeholders in harnessing the potentials of the blue economy in the next two years (2018 and 2019) and beyond with focus on emerging opportunities and challenges in the maritime industry.

There is no doubt that the Maritime Sector is highly susceptible to technological dynamics and changes which require huge funding and investment for achieving effectiveness and efficiency.

I therefore in my capacity as the Honourable Minister of Transportation and on behalf of Government draw your attention to the indices outlined in the Maritime Industry Forecast Report and urge you our esteemed stakeholders to take advantage of the dynamics that will shape Nigeria's Maritime Industry Outlook in 2018 and 2019.



**RT. Hon. Chibuike Rotimi Amaechi**  
Honourable Minister of Transportation  
Federal Republic of Nigeria

## Preface

The Nigerian Maritime Administration and Safety Agency is taking the lead as Maritime Sector Regulator and Sector's Development Promoter to provide a guide to investment in the sector for 2018 and 2019, emanating from a fact-based analysis of global trends and domestic government policies.

This Forecast is addressing critical macroeconomic outlook, including:

- A Review of developments in the Nigerian Maritime Industry In 2017;
- Expected international and local developments in Policy and Regulatory Environmental issues for the Maritime Sector In 2018 and 2019; and
- Emerging Opportunities and Challenges, and their Implications for the Maritime Industry

While aligning with the 3 Strategic Objectives of Government's Economic Recovery and Growth Plan (ERGP), which are: Restoring Growth in our Economy, Investing in our People, and Building a Globally Competitive Economy, we do hope that the Public presentation of Nigeria's Maritime Industry forecast for 2018 and 2019 will provide that confidence in our esteemed stakeholders and investors to fully tap into the immense opportunities which abound in the blue economy as a means of wealth creation, employment and development of relevant capacities that will grow our domestic economy.

The Maritime Sector is set for a paradigm shift from what is to what should be.



**Dr. Dakuku Peterside**  
*Director General/CEO*  
*Team NIMASA*

## About NIMASA

### Vision

To be the leading maritime administration in Africa, advancing Nigeria's global maritime goals.

The Nigerian Maritime Administration and Safety Agency (NIMASA) herein referred to as the Agency, is the Regulatory and Promotional Agency established by the Nigerian Maritime Administration and Safety Agency Act, 2007 sequel to the merger of the then National Maritime Authority (NMA) and Joint Maritime Labour Industrial Council (JOMALIC) and the abolition of the office of the Government Inspector of Shipping (GIS) created under the Merchant Shipping Notice that transferred the functions and powers in that Notice to NIMASA.

The obligation of regulating the Maritime Industry in Nigeria rests on the Agency, through the following enabling Acts:

- NIMASA Act, 2007;
- Merchant Shipping Act, 2007 and the Regulations made pursuant thereto;
- The Coastal and Inland Shipping (Cabotage) Act, 2003.

The Agency was established primarily for the administration of Maritime Safety, Seafarers Standards and Security, Maritime Labour, Shipping Regulation, Promotion of Commercial Shipping and Cabotage activities, Pollution Prevention and Control in the Marine Environment. The Agency also implements domesticated International Maritime Organization (IMO) and International Labour Organization (ILO) Conventions, Resolutions, Protocols and Codes arising therefrom.

In addition, the Agency implements bilateral and multilateral regional agreements and Protocols on Maritime Security and Safety issues to which Nigeria is a State Party.

### Mandate

The Agency's Mandate covers the following amongst others:

- i) Pursue the development of shipping and regulatory matters relating to merchant shipping and seafarers.
- ii) Administration and regulation of shipping licenses.
- iii) Administration, Regulation and Certification of Seafarers.
- iv) Establishment of Maritime Training and Safety Standards
- v) Regulation of safety of shipping as regards the construction of ships and navigation.

### Mission

To achieve and sustain safe, secure shipping, cleaner oceans and enhanced maritime capacity in line with the best global practices towards Nigeria's economic development.

- vi) Provision of Maritime Search and Rescue Services
- vii) Provide direction and ensure compliance with vessels security measures
- viii) Carry out Air and Coastal Surveillance
- ix) Control and Prevent Maritime Pollution
- x) Develop and implement policies and programs, which will facilitate the growth of local capacity in ownership, manning and construction of ships and other maritime infrastructure.
- xi) Enhance and administer the provision of Cabotage Act 2003
- xii) Perform Port and Flag State duties.
- xiii) Provide Maritime Security.
- xiv) Establish the procedure for the implementation of conventions of the International Maritime Organization (IMO) and the International Labour Organization (ILO), and other international conventions to which the Federal Republic of Nigeria is a party on Maritime Safety and Security, Maritime Labour, Commercial Shipping, and for the implementation of Codes, Resolutions and Circulars arising there from.

The Agency in the discharge of its mandates has the following Directorates, Departments and Autonomous Units:

#### Directorates

- Maritime Safety and Shipping Development;
- Cabotage Services and Maritime Labour; and
- Finance and Administration.

#### Departments

Shipping Development, Maritime Environment Management, Maritime Labour, Cabotage Services, Maritime Safety and Seafarers Standards, Administration and Human Resources, Planning Research, Data Management and Statistics, Financial Services and Procurement

#### Autonomous Units

Ship Registry, Legal and Board Secretarial Services, Maritime Guard Command, Internal Audit, Zonal Offices, London Office, Protocol, Special Duties and External Relations, Servicom, Public Relations, Reform Coordination and Strategic Management.



NIMASA

NIMASA

HONOUR

NIMASA  
MARINE SURVEYOR



# 1. Executive Summary

With over 95 percent of Nigerian trade, by volume, and more than 70 percent of its value being moved around aboard ships and handled by seaports nationwide, the importance of the blue economy and, in particular, maritime transport for trade and development in Nigeria cannot be overemphasised. Recognising the sector's strategic importance within the Nigerian economy as an engine for inclusive and sustainable growth and development, the Nigerian Maritime and Safety Agency (NIMASA) is delighted to present the maiden edition of the Nigeria's Maritime Industry Forecast 2018–2019. This has been long overdue!

NIMASA is charged under its enabling legislation, the NIMASA Act 2007, with a range of responsibilities in Nigeria's maritime sector. These include, among others: (i) development of maritime infrastructure; (ii) promoting the development of indigenous commercial shipping within the international and coastal shipping trade; and (iii) regulating and promoting maritime safety, security, pollution and labour. NIMASA, in publishing this report, is taking a major step in the effective discharge of its role as an industry regulator and lead player.

Nigeria's Maritime Industry Forecast 2018–2019 presents the Agency's view of key developments in the Nigerian economy and in the maritime industry, while also offering an outlook on the key parameters that drive the maritime industry.

This maiden edition of the annual forecast covers the period of 2018–2019 and as such is titled "Recovery, Elections and Beyond". It focuses on maritime activities and projects on the demand to be placed on the facilities of the sector as a result of rapidly anticipated developments in commerce, as well as the oil and gas industry. It further draws attention to the prominence of maritime facilities as a priority area in the trade and development policy agenda of the maritime industry.

From our analysis, we expect total fleet size to grow 4.08% in 2018 and 4.41% in 2019. We also project that oil tanker fleet size will decrease by 2.23 % in 2018 and increase by 1.7% in 2019. The non-oil tanker fleet size is projected to increase by 8.15 % in 2018 and 8.72% in 2019. The Oil rig count is projected to increase by 27.67% in 2018 and 0% in 2019.

In summary, this report is focused on charactering the current state and outlook of the Nigerian economic and business environment, while considering the drivers, emerging opportunities and challenges of the country's maritime industry, in the effort to provide an assessment and prediction of industry performance.

## **Characteristics, Drivers and Outlook of the Nigerian Economic and Business Environment**

The Nigerian economy resumed growth in 2017, after contracting steeply in 2016. Q2-2017 saw the first expansion in output growth in six quarters by a modest 0.72%, after contracting 0.91% in the first quarter. By Q3, growth had improved to 1.4%. The economy is expected to post a full-year expansion just short of 1%<sup>1</sup> after estimates of output in the last quarter are released. The impetus for growth came largely from the oil and gas sector, which recorded a cumulative growth of 3.8% when the Q1, Q2 and Q3-2017 numbers are combined and compared to those of the corresponding period in 2017.

Accompanying the recovery in output was a recovery in trade. Cumulatively, aggregate trade grew by 40.2% in the first three quarters of 2017, in comparison to a similar time span in 2016. This was led by a growth in exports by 74.5% in the same period and supported by imports, which grew by 11.1%. The immense contribution of oil to aggregate exports (cumulatively 80.3% in the three reported quarters), underscores the importance of oil prices and production conditions in driving the recovery in trade as well.

<sup>1</sup> The IMF forecasts a 0.8% full year GDP growth estimate for 2017

With the recovery only just taking off and given the tendency for significant job creation to lag behind a recovery in sustainable growth, it was not surprising to learn that unemployment continued to rise in the outgone year, reaching 18.8% by the end of Q3-2017. This, acting in concert with inflation that remains high, after peaking in January 2017, began to moderate, initially at a brisk pace and later slowing down by mid-year.

The identified drivers of the improvement of the economy are the favourable global economic conditions arising from the recovery in oil prices and the weakening of the US dollar, alongside the positive shifts in domestic policy attributed to significant adjustments to the surrounding policy context of the economy.

The outlook for the economy in 2018 points to a consolidation in the recovery, as the economy and trade are expected to improve. However, uncertainty and other factors, both positive and negative, continue to shape this outlook.

### **Highlights of the Nigerian Blue Economy and State of the Maritime Sector in Nigeria**

Nigeria, with a coastline of 852 kilometres bordering the Atlantic Ocean in the Gulf of Guinea and a maritime area of 46,000 km<sup>2</sup>, has significant and diverse marine resources. Various national economic activities depend on or derive from ocean resources, however it has become increasingly clear that the potentials of Nigeria's blue economy is far from being fully harnessed and that a coordinated policy framework is required to address this emergent reality. The maritime sector plays an important role in the exploitation, distribution and export of Nigeria's ocean resources. With a total annual freight cost estimated at between \$5 billion and \$6 billion annually, according to the Ministry of Transport, the maritime component of Nigeria's oil and gas industry is reportedly worth an estimated \$8 billion, further reflecting the prominence of the sector to the country's overall economy. The importance of maritime transport to the Nigerian economy is also recognised in seaborne transportation, oceanic extractive resource exploitation, and export processing zones.

### **Key Regulatory Developments in the Nigerian Maritime Industry**

Five important bills, amongst others, affecting the maritime industry will enter into force in 2018, as they are currently undergoing legislative processes at the National Assembly. They are: the Anti-piracy Bill; the Establishment of the Nigerian Marine Development Bank Bill; Inland Fisheries Act (Amendment) Bill 2017; the Deep Offshore and Inland Basin Production Sharing Contract (Amendment) Bill 2016; and the Cabotage Act (Amendment Bill) 2017.

### **From Recovery to Elections and Beyond: Drivers and Outlook of the Nigerian Maritime Industry**

The forecast period of 2018 to 2019 covers a time of continuing recovery from recession, to the 2019 general elections, and finally culminates in the post-election environment. Two broad sets of dynamics would drive the outlook on the Nigerian maritime industry over this period. The first pertains to international developments as they relate to growth in global output and trade, the situation in the global oil market and international maritime regulatory conditions. The second is the domestic economic conditions, which speak to economic growth and the associated growth in trade, availability of and access to foreign exchange (FX), as well as the evolving factors in domestic maritime regulation.

In providing industry forecast estimates, we have employed scenario analyses in anticipating future conditions. The industry parameters that we have made projections about include the sizes of total fleet, oil-tanker fleet, non-oil tanker fleet and oil rigs. We have identified the drivers of these parameters as foreign exchange, total trade, oil price, and oil production.

### **Emerging Opportunities for the Nigerian Maritime Industry**

Maritime business activities compete globally at the level of the sub-industry — i.e. finance, insurance, and law. A key driver of competitiveness is the productivity and efficiency benefits of the geographic clustering of these business activities. The factors identified as the drivers of opportunity in the maritime sector include geographic factors, the availability of a skilled labour force, and an efficient and engaging regulatory environment.

The emerging opportunities in the Nigerian maritime sector are in the areas of manpower and human capacity development, infrastructural development; globalisation and the application of new technology; research and development; security; marine agriculture, insurance and tourism; waste management and the development of ocean based industries.

Ocean transportation will remain the most important mode of conveyance in international merchandise trade in the foreseeable future. As such, all the stakeholders in the sector, including the Federal Ministry of Transportation, maritime agencies and port authorities would need a much clearer picture of the determinants of maritime transport connectivity, as well as the associated opportunities and risks involved in the ocean economy, to ensure informed policy and decision-making processes and the putting together of adequate investment plans in shipping, ports and their hinterland connections.

## 2. Introduction

Beginning from 2018, the Nigerian Maritime Administration and Safety Agency (NIMASA) will continue to produce an annual document offering a forward-looking, medium-term analysis of the Nigerian maritime industry, which will present insights on:

1. The surrounding context of the sector's operations;
2. Key issues – inherent and emerging – within and pertaining to the sector;
3. A medium-term outlook on the sector reflecting surrounding contexts and the internal industry dynamics affecting this.

This effort feeds into our commitment to the effective discharge of the agency's statutory mandate, enshrined in the establishment legislation, the NIMASA Act, 2007. It will be recalled that in being mindful of the maritime sector's critical role in facilitating Nigeria's international trade activities, as well as harnessing the country's marine resources and economy to drive accelerated growth and development, the federal government began actively implementing the maritime sector reforms in 2006. The need for reform was also in recognition of the centrality of maritime operations to the conditions and costs of doing business in Nigeria, including the sector's potential contribution to the pool of non-oil revenues for government.

Also as part of efforts to transform the sector, the Nigerian government sought to revamp the maritime regulatory architecture. Consequent upon this, in August 2006, the National Maritime Authority was merged with the Joint Maritime Labour Industrial Council to form the Nigerian Maritime Administration and Safety Agency (NIMASA)<sup>2</sup>.

Hence, the Agency is the apex regulatory and promotional maritime organisation in the country. We are saddled with the responsibility of regulating the sector, with powers derived from the aforementioned NIMASA establishment Act, as well as ancillary legislation such as the Merchant Shipping Act, 2007 and the Coastal and Inland Shipping (Cabotage) Act, 2005.

Guided by enabling legislation, NIMASA administers maritime safety, seafarers standards and security, maritime labour, shipping regulation, promotion of commercial shipping and cabotage activities, and pollution prevention and control in the marine environment. The Agency also implements domesticated conventions, including those of the International Maritime Organisation (IMO) and International Labour Organisation (ILO). In discharging these responsibilities, NIMASA has begun undertaking regular engagement with stakeholders geared towards obtaining feedback mechanisms for improved communication, interaction and effectiveness in order to identify the current characteristics of the industry, alongside the key trends that would affect the maritime sector; and to provide an outlook for the Nigerian economy, and also the maritime sector. Undertaking these obligations constitute the inspiration behind Nigeria's Maritime Industry Forecast 2018–2020. And, we are confident that the insights, data, parameter forecast estimates and analysis provided in this document would enable maritime industry stakeholders to anticipate future scenarios, on the basis of which they can strategise to advance both their commercial interests and the overarching interests of developing Nigeria's maritime sector, while positioning it to play an immense role in accelerating national economic growth and development.

<sup>2</sup> The enabling establishment Act came into effect in January 2007



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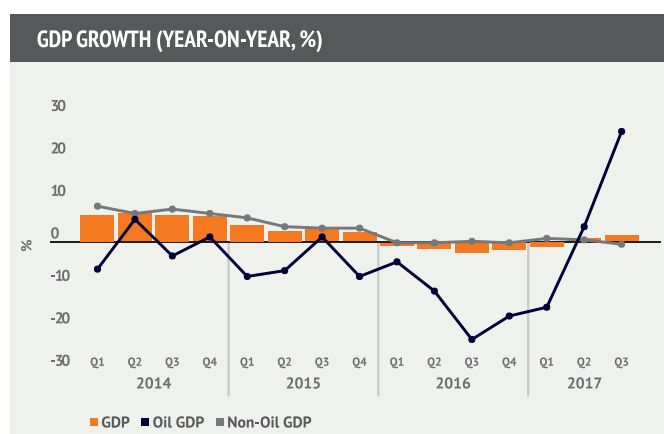
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## 3. Context of the Maritime Industry in Nigeria

### 3.1 Current Characteristics of the Nigerian Economic and Business Environment

#### Nigerian Economy Recovers in 2017

The Nigerian economy resumed growth in 2017, after contracting steeply in 2016. Q2-2017 saw the first expansion in output growth in six quarters, by a modest 0.72%, after shrinking by 0.91% in the first quarter. By Q3, growth had improved to 1.4%. When the three quarters for which data are available are combined (the estimates of Q4-2017 GDP remain to be released), the cumulative growth rate over the corresponding period for 2016 stands at 0.43%. The economy is expected to post a full year expansion just short of 1%<sup>3</sup> after estimates of output in the last quarter are released.



The impetus for growth came largely from the oil and gas sector, which recorded a cumulative growth of 3.8% when Q1, Q2 and Q3-2017 figures are combined and compared to the analogous period in 2017.

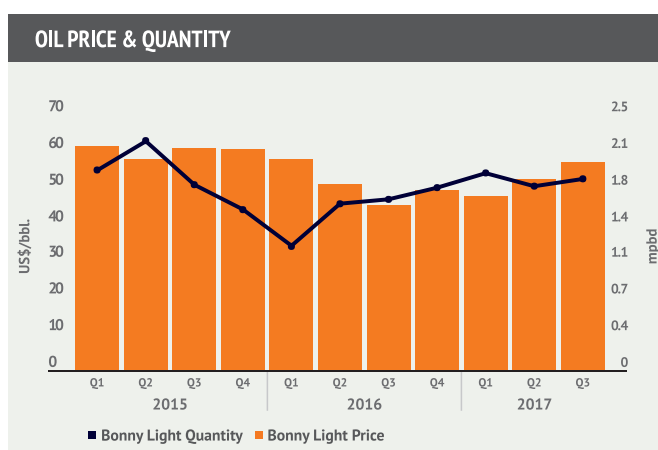
After recording a 0.72% growth in Q1 and a 0.45% growth in Q2, the non-oil sector's reversal to a contraction of 0.76% in Q3 resulted in a slim expansion of 0.1% in the three quarters of 2017 till date.

The slight growth in the non-oil economy does not disguise contractions in four of the economy's five largest non-oil sectors – manufacturing (by 0.3%), telecoms (1.6%), trade (by 2.2%) and real estate (by 3.6%). The resilience of agriculture was demonstrated by its cumulative 3.1% growth. As the outstanding sector of the non-oil economy, agriculture bears a lot of the credit, along with the oil and gas sector, for driving the economy back to recovery from the 2016 recession.

Accompanying the recovery in output was a recovery in trade. Cumulatively, aggregate trade grew by 40.2% in the first three quarters of 2017, in comparison to the initial three quarters of 2016. This was led by a growth in exports, by 74.5%, in the same period and supported by imports, which grew by 11.1%. By surpassing the growth in imports, exports

growth enabled Nigeria to record a trade surplus amounting to 3.3% of the GDP in the period under review. The immense contribution of oil to aggregate exports (cumulatively 80.3% in the three reported quarters) underscores the importance of oil price and production conditions in driving the recovery in trade as well.

After peaking in January 2017, inflation began to moderate, initially at a brisk pace, due to effects of a high base in 2016. The pace of moderation slowed mid-year, and assumed a sticky pace for the latter half of 2017. The decline in the headline measure was however tempered by the ascent in food inflation, to levels above 20% (year-on-year) towards year-end – a development not unconnected to the increase in



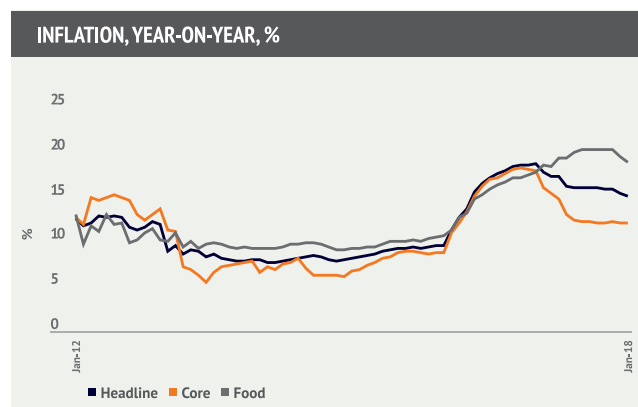
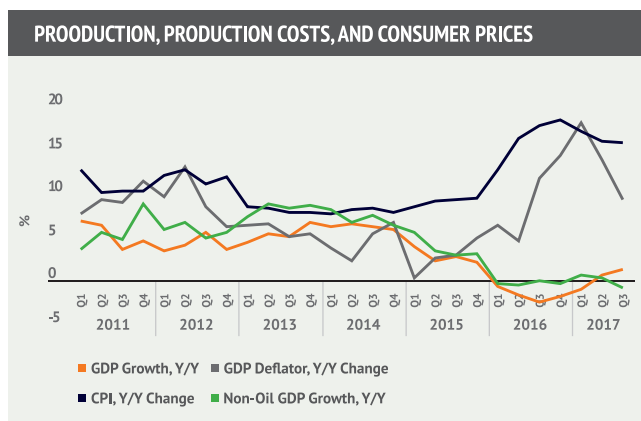
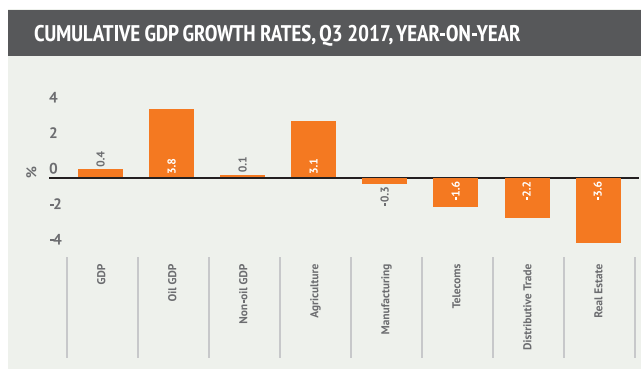
food exports to regional markets, as highlighted by the trade numbers.

With the recovery only just taking off, and given the tendency for significant job creation to lag behind a recovery in sustainable growth, it was not surprising to learn that unemployment continued to rise in the past year, reaching 18.8% by the end of Q3-2017. This, acting in concert with the inflation rate, which was still high, ensured that households remained under pressure. On their part, corporates appeared to have preserved their profitability margins by scaling down production volumes, supported by what seemed to have been a sharper moderation in the rate of increase of production costs<sup>4</sup>, than the rate of increase in consumer prices (inflation as reported above).

In summary, against the backdrop of conditions in 2016, when the economy slipped into a recession, inflation accelerated sharply, trade volumes declined and Nigeria contended with difficult external conditions, 2017 signalled a substantial improvement.

3 The IMF forecasts a 0.8% full year GDP growth estimate for 2017

4 As reflected by the annual percentage increase in the size GDP Deflator, which is an index of producer prices



## Drivers of Improvement in the Nigerian Economic and Business Environment

### I. Favourable Global Economic Conditions

1. A recovery in oil prices, which closed in 2017 at \$66.73 per barrel – nearly \$12 higher than the \$54.96 per barrel by year-end 2016;
2. The weakening of the U.S. dollar, despite the tightening of U.S. monetary policy by the Federal Reserve, making the dollar end 2017 in a more fragile position than at the end of 2016 (despite a late-year rally). The U.S. dollar's weakness inhibited it from exerting a downward pressure on oil and other commodities.

### II. Positive Shifts in Domestic Policy

2017 witnessed significant adjustments to the policy context of the Nigerian economy, including the following:

1. The rolling out of the Economic Recovery and Growth Plan (ERGP) by the Federal Government in February, which constitutes the locus of its medium-term developmental agenda;
2. Also, the conclusion of negotiations for a ceasefire with the Niger Delta Avengers by the Federal Government,

which addressed the challenge associated with diminished oil production, through a cessation of attacks on oil installations;

3. Changes in the foreign exchange (FX) policy.

One of the major catalysts of improvements in the economy in 2017 were the changes effected in the government's foreign exchange management policy. In February, the Central Bank of Nigeria (CBN) began easing FX supplies to the market, following this up with the introduction of the National Autonomous Foreign Exchange (NAFEX) market and the Importers and Exporters FX (I&E) window to supplement the existing naira forwards markets in facilitating transparent price discovery.

As a result, we have seen:

1. An uptick in capital, especially portfolio, inflows. Relative to the corresponding period the previous year, capital importation rose by 91.5% in the 9 months till September 2017;
2. A rally in the Nigerian Stock Exchange (NSE), in large part due to the return of the international portfolio community;

3. The recycling of autonomous FX inflows due to the I&E window, which ensured that the CBN's total intervention of US\$15.9 billion notwithstanding, a sum of US\$11.8 billion accrued to the gross FX reserve holdings in 2017. The reserves closed in 2017 at US\$38.8 billion, in comparison to US\$27 billion at the end of 2016. By mid-January, the I&E window had recorded \$27.8 billion in turnover since its introduction last April;
4. The narrowing of the premia between applicable rate in the official window and other segments of the market.

Noticeable shifts in fiscal policy are also worthy of mention. Two successful Eurobond issuances – in February and November – signalled the operationalisation of the Federal Government's strategy, unveiled in the 2018–2020 Medium Term Expenditure Framework (MTEF), to reconfigure Nigeria's deficit financing strategy in a way that prioritises foreign financing.

Importantly, just as the recovery in oil prices and production aided the recovery in revenues, the Federal Inland Revenue Service and other non-oil revenue generating agencies also continued their bold strides in shoring up non-oil revenue, despite the challenge posed by a slow-growing economy. Non-oil revenue collection in 2017 (N3.24 billion) surpassed that of 2016 (N2.92 billion), a 10.9% increase, amounting to 44.1% of federally collectible revenue, according to full-year preliminary estimates.

On the regulatory side, the Presidency inaugurated the Presidential E-cabling Business Environment Committee (PEBEC) and signed a series of executive orders aimed at the Ease of Doing Business (EODB) conditions. Three major pieces of business environment-themed legislation were passed by the National Assembly. The first was the Secured Assets in Movable Transactions Act (2017) and the Credit Registry Act (2017), all assented to by then Acting President Prof. Yemi Osinbajo in 2017. The Petroleum Industry Governance Bill, the first of four legs of the now unbundled Petroleum Industry Bill, was passed as well and is awaiting assent by the President.

### 3.2 Highlights of the Nigerian Blue Economy

Globally and locally, the ocean is becoming a new focal point in the discourse on growth and sustainable development. The blue economy promotes the conservation of aquatic and marine ecosystems and the sustainable use and management of associated resources, building on the principles of equity, low carbon transmission, resource efficiency, and social inclusion. The concept also embodies economic and trade activities that integrate the conservation and sustainable use and management of biodiversity, supporting sustainable livelihoods and food security for island, coastal and hinterland communities.

Specifically, the generic scope of the blue economy covers the following:

- Activities which explore and develop marine resources;
- Undertakings that put marine and coastal geography to use;
- Behaviours which protect marine ecology;
- Activities that harness ocean resources as inputs in production;
- Actions which provide goods and services to support marine-based ventures; and
- Activities that develop mechanisms to ensure inclusive distribution of the benefits derived from the blue economy.

In Nigeria, the concept of the blue economy is relatively novel. While various economic activities that depend on or derive from ocean resources, geography and ecology are in existence, certain characteristics of the Nigerian blue economy at this juncture are clear, indicating that:

1. The potential of Nigeria's blue economy is far from being fully harnessed;
2. The development of the blue economy as a conscious developmental policy objective is an emergent reality.

What the foregoing suggests is that in achieving the objectives implicit in (1) above, NIMASA is at the centre of the effort to articulate a coordinated policy framework for the blue economy in Nigeria, one which must be appropriately sequenced and is cognisant of 21st century economic and environmental imperatives. This framework seeks to integrate the following activities:

1. Conducting a comprehensive audit of the resource endowments available within the clearly defined territories – coastal and oceanic – belonging to Nigeria;
2. Constructing the underlying regulatory and procedural basis for the further exploration and harnessing of ocean resources, as well as for the extension of the scope of economic activities that depend on the geography and ecology of the ocean;
3. Recognising and integrating the vital concepts of environmental sustainability and biodiversity protection into the framework, on the basis of which the blue economy is harnessed for development.

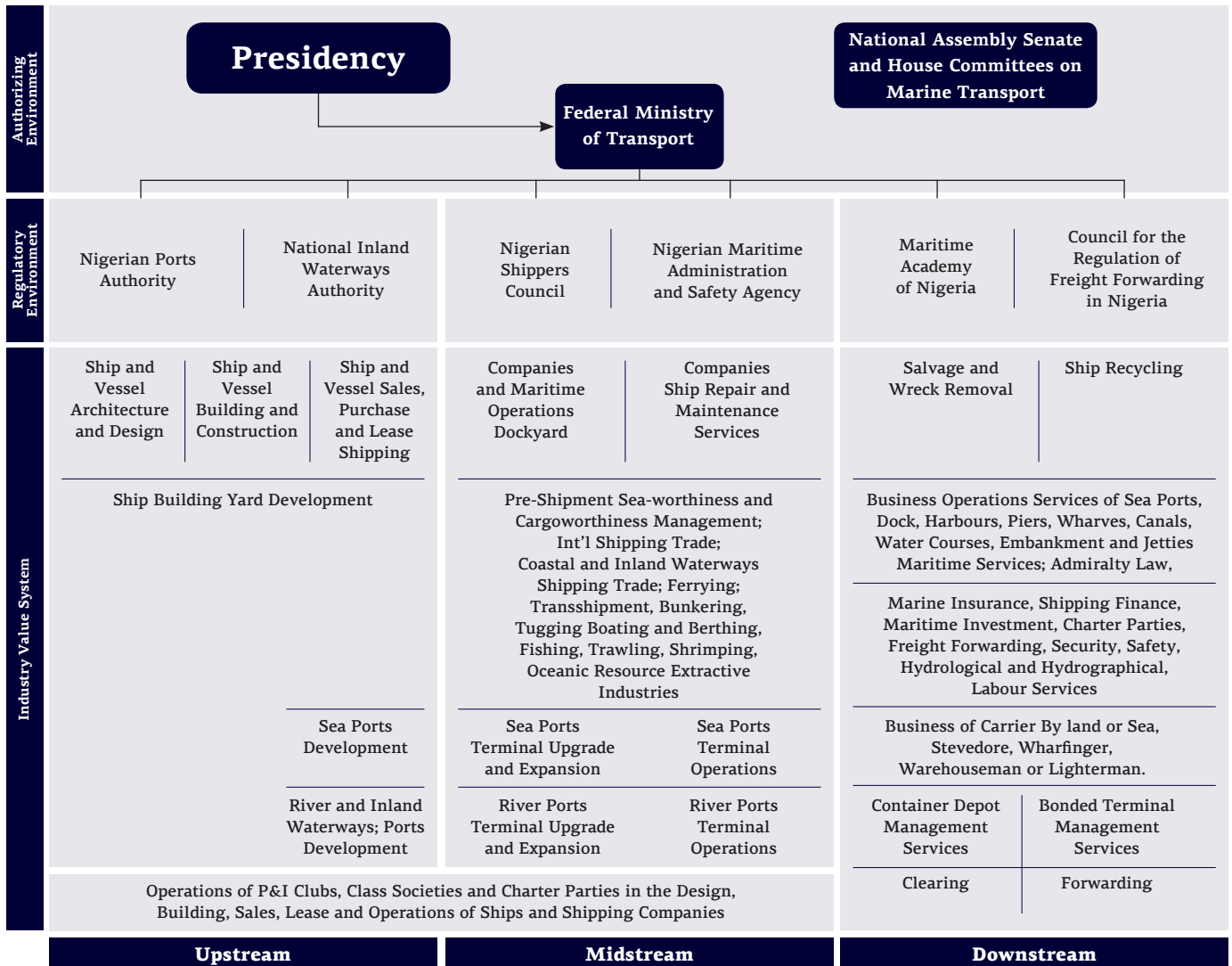
The foregoing will serve as the base of a well-articulated policy, on the Nigerian blue economy, as driven by our Agency. Existing literature guides to the use of a Marine Spatial Planning (MSP) framework as “a process that brings together multiple users of the ocean – including energy, industry, government, conservation and recreation – to make informed and coordinated decisions about how to use marine resources sustainably”<sup>5</sup>, presents a sound technical basis on which a canvassed blue economy policy framework would stand.

### 3.3. The State of the Maritime Sector in Nigeria

Exploring the 2018-2020 outlook of the maritime industry needs to be set within the context of Nigeria’s significant and diverse marine resources that are in its waters, which have a coastline of 852 kilometres bordering the Atlantic Ocean in the Gulf of Guinea and a maritime area of 46,000sq.km. Transportation plays an important role in the exploitation, distribution and export of these resources and in the reduction of spatial inequality and poverty alleviation. Nigeria’s total annual freight cost, estimated at between \$5 billion and \$6 billion annually, is high and the competitiveness of Nigerian content is significantly low. According to the Federal Ministry of Transportation, the maritime component of the oil and gas industry is reportedly worth an estimated \$8 billion and is increasing, given huge prospects in the off-shore region.

### I. The Nigerian Maritime Industry Value-Chain and Drivers

Nigeria’s maritime sector – upstream, midstream and downstream – has for a long time, remained largely unexplored despite the huge and diverse investment opportunities that abound in this regard. The figure below illustrates Nigeria’s maritime value chain and highlights the respective developed and still being developed categories: Noting the global drivers of maritime, Nigeria is still largely an underdeveloped maritime economy across a broad range of critical indices and factors comprising: registration and tonnage, best-connected countries index, ship-owning economies (in terms of deadweight tonnage – dwt), maritime economy as a component of total GDP, seafarer competitiveness (the percentage contribution to the global seafarer labour size, and volume of seafarer remittances). Also: shipbuilding capability (in terms of the gross tonnage





constructed), liner shipping capacity (in terms of operated container ship capacity by TEU), liner connectivity, and container ship sizes (measured per country).

The significant drop in non-oil dry cargo exports from Nigeria over the last four decades has been correlated by a significant rise in wet cargo exports (in the form of oil and gas), indicating the monolithic nature of the oil led Nigerian economy and its import dependence. The implication of this is that the downstream enjoys significant indigenous participation. Midstream activities are dominated by foreign shippers and, for the most part, upstream maritime operations are negligible in size in Nigeria. We provide, on the basis of available data, a graphical description of some of the key industry parameters in the Nigerian maritime space.

## *II. Critical Dimensions of the Maritime Economic Contribution*

The significant importance of maritime transportation to the Nigerian economy can be categorised into the following areas of its contribution, namely:

- a) **Seaborne Transportation:** The development of waterborne transportation in Nigeria was induced and facilitated not only by its geo-physical features in which there are navigable inland waterways and direct access to the Atlantic Ocean, but also because its economy is highly dependent on the exportation of agricultural products and crude oil, and the importation of machinery, equipment and raw materials for its industries, and finished goods for its highly populated consumers (a 180 million strong demography). Were Nigeria without maritime transport and a landlocked state, it would have been difficult and expensive for its residents to engage in international and domestic trade, and this will have been having adverse effects on its economy. The essentials of a reliable and cheap means of transportation, which maritime transportation offers, does not only make the landing costs of cargoes lower but makes it possible for large quantities of tonnage to be carried over long distances and landed in Nigeria, bending trade cost curves downwards, since transportation cost is one of the variable costs of production;
- b) **Export Processing Zones:** EPZs are known for attracting numerous export companies (manufacturers) that provide employment opportunities to citizens, apart from the revenues earned. Nigeria's current major EPZ is based out of Calabar, Cross River State although another one in Lekki, Lagos State is coming onstream. The proper functioning of EPZs have strong bearings on the maritime economy;
- c) **Oceanic Extractive Resource Exploitation:** In comparison to onshore exploration, Nigeria's offshore oil and gas resources are humongous and comparatively underexplored. The vast economic potential of fishing and aquaculture is also noted in this regard, as crucial dimensions of the maritime economic contribution;
- d) **Oceanic Assets Governance:** The inability to take a proper inventory of Nigerian oceanic assets beyond oil and gas resources has been a significant drawback in the country's potential to map, define, develop and govern its oceanic assets. This points to a significant deficit in ecological accounting, which is a combination of hydrographic capacity and assets audit capability for the economic estimation and approximation of the ocean as a key source of food, energy, minerals, health, leisure and transport, upon which hundreds of millions of people depend.

### **Textbox 1: Resolving the Issues around Cabotage**

Cabotage simply means “the transportation of goods or passengers from one port or place to another in the same country”. Thus, cabotage regimes are laws regulating the transportation of persons and merchandise from one point to another along the coastal waters of a nation. The underlying law behind cabotage activities in Nigeria are enshrined in the *Coastal and Inland Shipping (Cabotage) Act 2003*, which was shaped after the US Merchant Marine Act of 1920 (Jones Act).

The objectives of the cabotage law are as follows:

1. To attain national sufficiency in tonnage capacity, shipbuilding and seafarers capabilities;
2. To acquire the technical know-how in ship management, shipbuilding and ship manning;
3. To enhance the earnings and conservation of foreign exchange for the country;
4. To preserve the internal and economic security of the nation; and
5. To create employment in the maritime industry.

#### **Cabotage Implementation**

This is an indigenous shipping development capacity initiative, meant to increase indigenous capacity in Tonnage, Manning, and Building and Flag registration. In the last three years Nigerian flagged vessels has enjoyed significant growth, from 262 vessels with a total Tonnage of slightly over 232,000 metric tons in 2015, to almost double in 2016 at 370 vessels with a total Tonnage of almost 420,000 metric tons and in 2017 we registered 307 vessels with a total tonnage of 415,638.03.

**Table 1: Parameters on Promoting Indigenous Participation**

S/N	PARAMETER	2015	2016	2017
1	Nigerian flagged vessel registered	262	370	307
2	Total tonnage of the vessels metric tons	232,000	420,000	415,638.03

To ensure compliance with the provisions of Cabotage regime in Nigeria, as enshrined in section 30 (1) of the Act, the Enforcement team monitors vessels, enforce compliance and penalize defaulters. During the period under review the following were recorded:

*Table 2: Analysis of Enforcement Activities:*

S/N	DESCRIPTION	2016	2017	VARIANCE	% DIFF
1	Number of vessels boarded	584	861	277	47
2	Number of vessels with Cabotage registration	371	447	76	20
3	Number of vessels without Cabotage registration	213	413	200	94
4	Number of Nigerian owned vessels	234	318	83	35
5	Number of Foreign owned/Joint ventures	350	505	155	44
6	Number of Nigerian built vessels	55	55	-	-
7	Number of Foreign built vessels	527	792	265	50
8	Number of Nigerian seafarers on board the vessels	5965	6610	645	11
9	Number of Foreign seafarers on board the vessels	9678	7897	(1781)	(18)
10	Number vessels detained	17	30	13	76
11	Number of vessels released	14	24	10	71

The huge disparity in the comparative narratives above reaffirms the identified gaps in indigenous capacity with regards to the four pillars of the Cabotage act (Ship building, Manning, Ownership and registration solely by Nigerians) which has necessitated the granting of waivers. The Agency is hopeful that the Cabotage vessel financing fund (CVFF) when disbursed would boost indigenous capacity and accelerate development in the sector.

### Recent Developments

#### *The New Cabotage Compliance Strategy*

- In 2017, NIMASA introduced the new Cabotage Compliance Strategy (CCS) for a successful Coastal and Inland trade regime thereby halting consideration of applications for grant of waivers on manning for prescribed category of Officers on vessels engaged on cabotage trade.
- The New Cabotage Compliance Strategy has seen NIMASA ensuring that over 200 seafarers are on board different Cabotage vessels. Also working in Synergy with the Nigerian Content Development and Monitoring Board (NCDMB) talks are at advanced state to ensure the engagement of over 100 brand new Cabotage vessels in the oil and gas industry.

**Text Box 2: Data Limitations in the Maritime Industry: An Independent View**

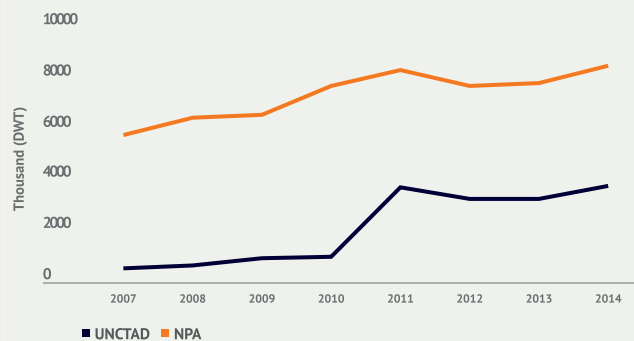
The World Bank’s Statistical Capacity Indicator reports that Nigeria recorded a 67.8 percent in terms of statistical capacity in 2016. This score is higher than the sub-Saharan Africa average and other international development association (IDA) eligible countries.

Notwithstanding the relatively high statistical capacity, data collection and processing in Nigeria over the past decades, has experienced enormous challenges in terms of its use in achieving developmental objectives.

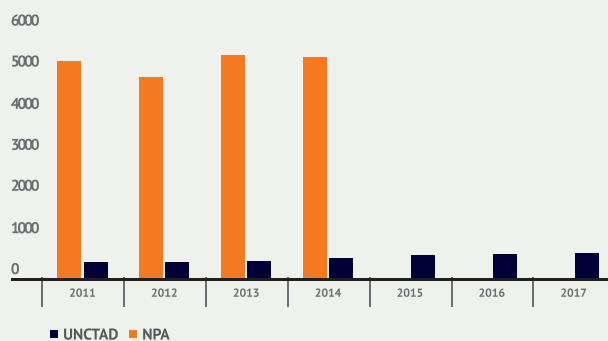
In particular, there are some fundamental data related issues faced preparing this report on the Nigerian Maritime Industry Forecast 2018 -2019. The purpose of statistics on Maritime transport in Nigeria is to describe the volume of and the developments in ship traffic to and from Nigerian ports as well as data on port infrastructure which are not readily accessible in Nigeria compared to other countries. Hence, analysis and forecasting of activities in the sector sometimes can be challenging. Listed below are some the challenges encountered when accessing secondary data on Maritime Industry parameters:

**Absence of Data:** This remains a major problem for analysts and researchers in the industry. In other jurisdictions, maritime industry parameters cover a wide range

**CARRYING CAPACITY, TYPE OF SHIP (TOTAL FLEET)**



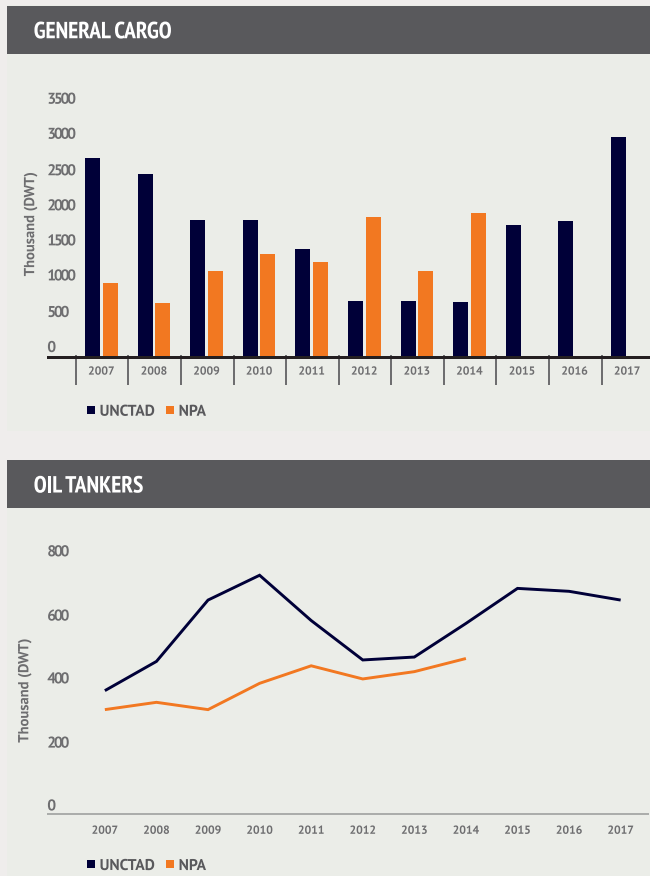
**NUMBER OF VESSELS**



of variables unlike Nigeria where only a few parameters are available. Some of the unavailable data on the Maritime industry in Nigeria includes; Ship registration, Seafarers, Shipbuding, Demolation/new Orders and Friaght rates(Dry Bulk & Tanker).

**Available Data but Inefficient:** Where data on parameters are available, it is made irreverent depending on the use for the data. In some cases, there are disparities in data from different sources which raises the of question of quality assurance in the data collection process. Another point to note here is the completeness and timeliness of the data. Also, the decomposition and context of data (i.e. definition of the parameters are irregular when compared among different data sources. This makes interpretation difficult especially when conducting analysis.

**Technological Advancement in Data Collection:** The need for a central pool of data on the Maritime Industry cannot be overemphasized as the application of big data and other innovations in collecting data will be of great benefit to both the industry and the stakeholders at large because both historical and current data can be accessed in real time. As a recommendation going forward, it is important to highlight the need for concerted efforts to intensify data collection in ensuring that the data collected accords with international standards and comparison. Also, NIMASA may choose to work with the National Bureau of Statistics in data collection so that there is a central pool of data on the Maritime Industry.



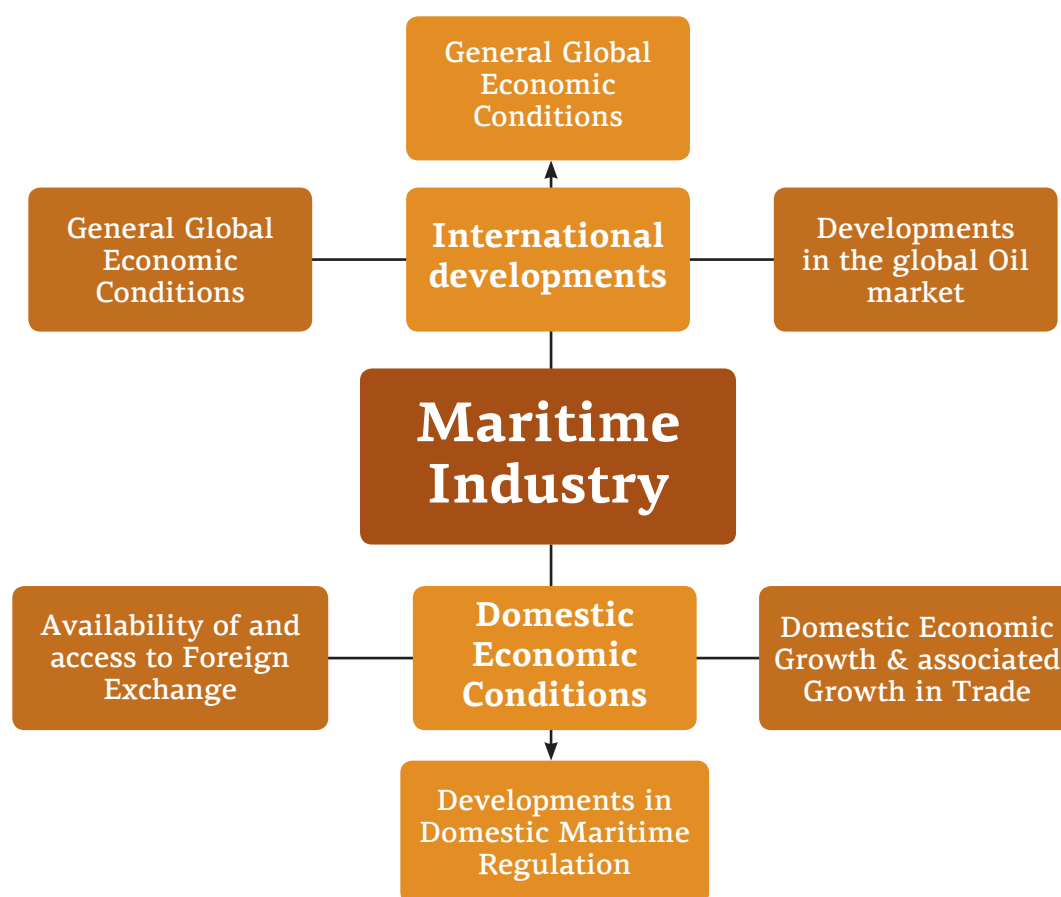


## 4. Industry/Sector Outlook Drivers

Succeeding this inaugural edition of Nigeria's Maritime Industry Forecast 2018–2019, the follow-up 2019 issue, to be released by the end of 2018, would focus on activity parameters as they pertain to the maritime sector. Against the backdrop of an elaborate value chain and economic ecosystem of the maritime sector, this maiden edition focuses on activities driven by commerce and the oil sector.. Subsequent editions will continue to build on this focus.

And, the importance of these areas of focus should not be underestimated, given that the oil sector accounts for about 9% of the national GDP, while distributive trade makes up another 17% of the total GDP.

Two broad sets of dynamics would drive the outlook on the Nigerian maritime industry over the 2018–2020 period:



- A. **International Developments**, particularly as they pertain to the following:
- i. General global economic conditions, proxied by global output and trade growth;
  - ii. Developments in the global oil market;
  - iii. International maritime regulatory conditions.
- B. **Domestic Economic Conditions** involving:
- i. Economic activity, which speaks to domestic economic growth and associated growth in trade;
  - ii. Availability of and access to foreign exchange, which will be proxied by the level of Nigeria's foreign exchange reserves;

- iii. Developments in domestic maritime regulation [Refer to Textbox 3].

In light of our focus on activity, our objective is to be able to estimate how the foregoing will affect:

1. The number of ships that will berth at Nigerian ports;
2. Tonnage of cargo, oil and non-oil, that will pass through Nigeria's ports;
3. Changes in rig count, which will drive oil production.

### **Text Box 3: Key Regulatory Developments in the Maritime Nigerian Industry between 2018-2020**

#### **Domestic Regulatory and Legislative Developments that Can Impact On the Nigerian Maritime Industry 2018-2020**

1. The passing of the Anti-Piracy Bill presented to the National Assembly in 2018: This bill incorporates the Safety of Life at Sea (SOLAS) and the Suppression of Unlawful Acts at Sea (SUA) conventions of the International Maritime Organisation (IMO) into a comprehensive legislation to deal with the menace of piracy and related crimes in the Nigerian maritime domain;
2. The review of the NIMASA Act 2007, Cabotage Act 2003 and Merchant Shipping Act 2007;
3. The revision of the Merchant Shipping Regulations to incorporate current and future amendments to the following international maritime protocols and conventions:
  - a. Safety of Life At Sea (SOLAS) Protocol of 1988
  - b. Marine Pollution (MARPOL) Convention of 1973/78
  - c. Marine Pollution (MARPOL) Protocol of 1997
  - d. International Convention on Load Lines of 1966 (LL66)
  - e. Load Lines Protocol of 1988 (LL PROT 88)
  - f. International Regulations for Preventing Collision at Sea 1972 (COLREG 72)
  - g. T69
  - h. International Convention on Standards of Training, Certification and Watchkeeping for Seafarers of 1978 (STCW 78), including the revised mandatory codes.
  - i. The Nairobi International Convention on the Removal of Wrecks, 2007.
4. The development of policies, regulations, and procedures to cover any future amendments to the IMO instruments.
5. The consideration for adoption of a direct reference approach in transposing mandatory IMO codes and technical amendment to national legislation;
6. The development and gazetting of the Merchant Shipping (surveyors and recognised organisation) Regulations, using the RO Code and related circulars;
7. The creation of guidelines and procedures for recruitment and nomination of exclusive and nominated surveyors.
8. The development of guidelines and procedures for the selection, assessment, evaluation recognition, oversight and supervision of RO;
9. The putting together of regulations, guidelines, and procedures for handling, carriage transportation of dangerous goods under IMDG, IMSBC and Grain codes;
10. The development of regulation and guidelines for ports state control support programme;
11. The creation of a merchant shipping regulation on (marine safety investigation and marine casualty and incidents), incorporating;
12. Resolution MSC.255 (84) - The code of the international standards and recommended practices for a safety investigation into a marine casualty or marine incident (casualty investigation code);
13. Resolution A. 1075(28) - Guidelines to assist investigators in the implementation of the Casualty Investigation Code.

#### **Bills before the National Assembly not proposed by NIMASA but which will impact the Nigerian maritime industry:**

1. A bill for an act to establish the Nigerian Marine Development Bank, with the power to conduct business related to marine credit insurance and other related matters (HB. 572);
2. Deep offshore and inland basin production sharing contract (Amendment) Bill 2016;
3. Inland Fisheries Act (Amendment) Bill 2017.

#### **Memoranda of Understanding (MOU) under consideration, which may impact the Nigerian maritime industry:**

1. MOU between NAIRDA Limited and NIMASA: On temporarily locating the floating dock under contract for 18 months at no cost to the Agency;
2. MOU between NIMASA and the Nigerian Marine Police – applicable in the eastern zone;
3. MOU between NIMASA and the Nigerian Meteorological Agency (NIMET);
4. Proposed MOU between NIMASA and the Department of Fisheries (Federal Ministry of Agriculture) on monitoring/surveillance of illegal fishing
5. Contract agreement with Messrs HLS International Limited for the Installation of the C4/1 Satellite System under the Deep Blue Contract Agreement.



### ***International Developments and the Impacts on the Nigerian Maritime Industry, 2018-2019***

#### **International Maritime Organization (IMO) Instruments entering into force from 2018 – 2019**

The Nigerian Maritime Administration and Safety Agency (NIMASA) is the designated Organization charged with legal responsibility under the Merchant Shipping Act 2007 and the NIMASA Act 2007, to ensure implementation and enforcement of Instruments adopted by the United Nations International Maritime Organization (IMO) and ratified by Nigeria. Since Nigeria joined the IMO in 1962 it has ratified the majority of IMO Conventions including the core safety and marine pollution Conventions (SOLAS 1974 and MARPOL 73/78 as amended). Our focus however remains on putting in place regulations and guidelines to ensure effective and consistent implementation of these Conventions.

The role of the IMO as an International regulator of ship safety and security and marine pollution from ships has heightened its concentration on amendments to existing Instruments to meet new and emerging technologies in shipping as well the need for improved safety to seafarers and the marine environment. Therefore the thrust of the Agency's role for 2018 -2020 should be aligned to key developments of the IMO.

#### ***1. Amendment to the Convention on Facilitation of International Maritime Traffic 1965 (FAL) which entered into force on 1st January 2018***

Notable areas of the amendments include a mandatory requirement for the electronic exchange of information on cargo, crew and passengers. It creates an obligation on public authorities to establish systems for such electronic exchange of information by 8th April 2019. Where State Parties are unable to meet such standards they are to notify the IMO accordingly. New standards introduced also cover shore leave and access to shore side facilities for crew including the addition of a paragraph providing that there should be no discrimination in respect of shore leave on grounds of nationality, race, colour, sex, religion, political opinion or social origin and irrespective of Flag State on which the seafarer is employed, engaged or work.

Standards and recommended practices relating to stowaways are also updated to include references to relevant sections of the International Ship and Port Facility Security (ISPS) Code. A new standard in this amendment requires Government where appropriate to incorporate into their National Legislation legal grounds to allow prosecution of stowaways, attempted stowaways and any individual or company aiding a stowaway with the intention to facilitate access to the port area, any ship, cargo or freight container.

#### ***2. MARPOL Annex VI Amendment expected to enter into force on 1st March 2018***

The IMO Marine Environmental Protection Committee (MEPC) at its 70th session adopted amendments to Chapter 4 of annex VI of the International Convention for Prevention of Pollution from ships (MARPOL) and new Regulation 22A on collection and reporting of ship fuel oil consumption data.

Under the new requirements ships of 5000 gross tonnage and above will have to collect consumption data for each type of fuel they use. Upon receipt of reported data pursuant to Regulation 22A the Administration or any organization duly authorised by it shall determine whether the data has been reported in accordance with Regulation 22A and if so issue a statement of compliance of fuel oil consumption to the ship no later than 5 months from the beginning of the calendar year. In every case the Administration assumes full responsibility of the statement of compliance.

The Flag State Administration shall ensure that the reported data by its registered ships of 5000 gross tonnage and above are transferred to the IMO ship fuel oil consumption database via electronic communication using a format to be developed by the Agency. On the basis of the reported data submitted to the IMO ship fuel oil consumption database the Secretary General of IMO shall produce an annual report to the MEPC summarizing the data collected, the status of missing data and such other relevant information as may be requested by the MEPC.

The data collection is expected to provide a firm basis for future decisions on additional measures over and above those adopted by the IMO on air pollution.

#### ***3. Amendment to MARPOL Annex 1 (IOPP) certificate and MARPOL Annex V (HME Products) expected to enter into force on 1st March 2018***

The 70th session of the MEPC adopted amendments to MARPOL Annex 1 to update form B of the supplement to the International Oil Pollution Prevention (IOPP) certificate in relation to segregated ballast tanks.

It also adopted amendments to MARPOL Annex V related to products which are Hazardous to the Marine Environment (HME) and form of Garbage Record Book. The amendments provide criteria for the classification of solid bulk cargoes as harmful to the marine environment and are aimed at ensuring that such substances are declared by the shipper if they are classed as harmful and are not discharged.

#### ***4. MARPOL Annex VI Amendments expected to enter into force on 1st January 2019***

MEPC 71 adopted amendments to MARPOL annex VI designating the North Sea as Emission Control Areas (ECAs) for Nitrogen Oxides (NOX) under regulation 13 of MARPOL annex VI. ECAS will take effect from 1st January 2021 thereby considerably lowering emissions of NOX from international shipping in these areas.

#### **5. Amendments to the IMSBC Code expected to enter into force on 1st January 2019**

Amendments to the International Maritime Solid Bulk Cargoes (IMSBC) Code provide update to requirements for the carriage of a number of cargoes. The amendments highlight the responsibility of the shipper for ensuring that a test to determine the Transport Moisture Limit (TML) of a solid bulk cargo is conducted prior to shipment and a declaration to that effect is made. Also included are amendments related to substances which are harmful to the marine environment to require the shipper to declare whether or not a solid bulk cargo other than grain is harmful to the marine environment.

#### **6. STCW Polar waters emergency training on passenger ships expected to enter into force on 1st July 2018**

This amendment to the International Convention on Standards of Training, Certification and Watch-keeping of Seafarers (STCW) and its related STCW Code was adopted by the IMO Maritime Safety Committee (MSC) at its 97th session. It includes mandatory minimum training requirements for masters and deck officers on ships operating in Polar waters and an extension of emergency training for personnel on passenger ships.

#### **7. Amendments to the ESP Code (2011) expected to enter into force on 1st July 2018**

The 97th session of the IMO Maritime Safety Committee adopted amendments to the International Code on Enhanced Programme of Inspections during Surveys of Bulk carriers and oil tankers (2011).

The International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and oil tankers (ESP) Code 2011 was adopted under the SOLAS Convention. It provides requirements for an enhanced programme of inspection during surveys of single-hull and double-hull tankers and single-hull and double-hull bulk carriers. The Code provides special requirements for renewal, annual and intermediate surveys.

#### **8. Amendments to the SOLAS Convention entering into force on 1st January 2020**

The IMO MSC 97th session adopted amendments the SOLAS Convention: regulation II-1/3-12 on protection against noise; regulation II-2/10 on fire fighting and new regulation XI-1/2-1 on harmonization of survey periods of cargo ships not subject to the ESP Code.

#### **9. Amendments to the 2008 International Code on Intact Stability (IS Code) entering into force on 1st January 2020**

These amendments relate to ships engaged in anchor handling operations and to ships engaged in lifting and towing operations including escort towing.

#### **10. Amendments to MARPOL Annex VI on the 0.50% global sulphur limit expected to enter into force on 1st January 2020**

The Marine Environmental Protection Committee adopted amendments reducing the global limit for sulphur oil fuel used on board ships to 0.50% to take effect from 1st January 2020.

The decision to reduce sulphur content in marine fuel oil demonstrates a clear commitment by the IMO to reduce air pollution from shipping and ensure that it meets its environmental obligations. Under the new global limit ships will have to use fuel oil with sulphur content of no more than 0.50% against the current limit of 3.50% which has been in effect since 1st January 2012. Exemptions are provided for situations involving the safety of the ship or saving life at sea or if a ship or its equipment is damaged. State Parties are advised to work with local fuel oil suppliers to ensure availability of compliant fuel for ships calling at its ports by 1st January 2020. The IMO MARPOL regulation, limit the sulphur content in fuel oil. So ships need to use fuel oil which is inherently low enough in sulphur, in order to meet IMO requirements.

Some ships limit the air pollutants by installing exhaust gas cleaning systems, also known as "Scrubbers". This is accepted by flag States as an alternative means to meet the sulphur limit requirement. Ships can have engines which can use different fuels such as liquefied natural gas or biofuel which may contain low or zero sulphur. IMO is working with Member States as well as industry including the shipping, bunker supply and refining industry to identify and mitigate transitional issues so that ships may meet the new requirement.

**11. Ballast Water Convention which entered into force on September 8, 2017** marking a landmark step to invasive aquatic species, which can cause havoc for local ecosystems, affect biodiversity and lead to substantial economic loss. Under the Convention terms, Ships will be required to manage their ballast water to remove, render harmless, or avoid the uptake or discharge. IMO Member states have been called upon to finalize the revision of G8 Type Approval Guideline for treatment system.

For new and existing ships:

- Ballast Water Management Stems type approved on or after 28 October 2018
- Ballast Water Management Systems installed on or after 28 October 2020.

## 5. From Recovery to Elections and Beyond: Nigerian Maritime Industry Forecast and Outlook

### Global Outlook

**Global Growth:** Forecasters indicate that global economic recovery is consolidating and that growth will be robust. The IMF's World Economic Outlook suggests that the world economy would continue to rise further in the forthcoming years (3.9% in both 2018 and 2019). For Emerging Markets and Developing Economies, growth projections are estimated at 4.9% and 5.0% in 2018 and 2019 respectively.

**Oil Prices:** We find that across a range of forecasters, oil prices are sitting comfortably within a range of \$55 to \$65 per barrel. The United States Energy Information Administration forecasts Brent spot prices as averaging about \$62 per barrel in both 2018 and 2019. Presently, the

New York Mercantile Exchange (NYMEX) futures prices place oil at about \$60 for the rest of 2018, \$56 in 2019 and \$53.4 in 2020. Our baseline scenarios reflect the National Assembly's 2018 budget benchmark price (for 2018) as a conservative \$47/bbl., while the ERGP/MTEF's price estimates for 2019 and 2020 is between \$50 and \$52.

**Oil Production Volumes:** Calm generally returned to the Niger Delta after the disruptions to production in 2016, suggesting that the baseline assumptions for oil production under the Economic Recovery and Growth Plan (ERGP) are attainable. Under the Plan, oil production is projected at 2.3 million barrels per day (mbpd) for 2018, 2.4 mbpd in 2019 and 2.5 mbpd in 2020.

A sample of global maritime industry forecasts are presented in the table below:

Outlook Origin	Coverage Period	Parameter (Seaborne trade flows)	Forecast growth rates	Source
Lloyd's List Intelligence	2017–2026	Seaborne trade volume	3.1	Lloyd's List Intelligence research, 2017
	2017–2026	Containerized trade volume	4.6	
	2017–2026	Dry bulk	3.6	
	2017–2026	Liquid bulk	2.5	
	2018	Containerized trade volume	5.1	
Container Intelligence	2018	Containerized trade volume	4.5	Monthly, June 2017
	2019	Containerized trade volume	4.5	
IHS Markit	2017–2022	Seaborne trade volume	3.2	Review of Maritime Transport, 2017
UNCTAD	2017–2022	Containerized trade volume	5.0	
	2017–2022	Five major bulks	5.6	
	2017–2022	Crude Oil	1.2	
	2017–2022	Refined petroleum products and gas	1.7	

### Domestic Outlook

It is clear that the Nigerian economy is out of recession. As it has been referred to in the section on the Review of the Business and Economic Environment, growth in Q3-2017 stood at 1.4%. Given favourable local and international conditions, the economy should accelerate its recovery.

We expect significant stimulus to economic activity from the expansionary stance of fiscal policy. The Federal Government plans to spend N8.6 trillion in 2018, a 15.7% increase on the 2017 amount, whilst the States intend to spend,

cumulatively, N9.6 trillion in 2018, an increase of about 42.5% in relation to the previous year. On the back of an improved outlook, we expect growth in trade and commerce to pick up as well.

Furthermore, given the recovery in oil prices from a low of about \$27 to the vicinity of \$60 to \$70, Nigeria is seeing favourable conditions in terms of foreign exchange availability and improved terms of trade.

## Forecasts

The forecast period covers a period of continuing recovery from recession, runs through the 2019 General Elections and finally culminates in post-Election environment. Precise forecast estimates are difficult enough. As such, planners and economic operators typically resort to scenarios in anticipating future conditions. This report, like similar documents, will explore three scenarios:

- The Baseline Scenario is driven by the Economic Recovery and Growth Plan (ERGP) which covers the period to 2020
- Scenario B is a slightly pessimistic scenario relative to the Baseline
- Scenario C is a slightly optimistic scenario relative to the Baseline

Based on the scenarios enumerated above and in light with our earlier indication, we produce forecast estimates on the tonnage of Vessels berthing at Nigerian Ports for 2018 and 2019. This is further delineated into the fleet size for Oil and Non-Oil Tankers for those two years. Finally, we also produce for Oil Rig Count in the same period. However, before we display the forecast estimates, some caveats are in order.

Our forecast models for the selected parameters rely on a number of macroeconomic indicators as explanatory variables. These include:

1. Foreign Exchange Reserves
2. Total Trade
3. Oil Prices
4. Oil Production

Baseline forecast estimates for the aforementioned are taken from the FG's ERGP. However, we note that with the ERGP having been released in February 2017, forecast estimates provided under the Plan cover the period 2017-2020. 2017 ERGP forecasts have been overtaken by current realities, which may have a bearing on 2018, requiring us to make the following adjustments:

1. 2017 estimates for Foreign Exchange Reserves are revised to **\$38.8bn**, which is where Gross Reserves stood at the end of 2017. We maintain the ERGP's FX Reserves forecast estimate of **\$43.53bn** in 2018.
2. In the absence of Q4-2017 Foreign Trade estimates, we project 2017 Total Trade (in light of the reality of Q1-Q3 2017 cumulative Total Trade estimate of N17.34tn) at N23.13tn.
3. The ERGP/MTEF oil price assumption for 2018 (**\$45/bbl.**) is now obsolete, given the National Assembly's revision of the 2018 budget price benchmark to **\$47/bbl.** Our baseline scenarios would therefore reflect the 2018 budget benchmark price to the aforementioned, conservative **\$47/bbl.**, and the ERGP/MTEF's price estimates for 2019 and 2020, about **\$50/bbl.** and **\$52/bbl.**

4. Oil production estimates for the forecast period, 2018-2020, remain unchanged.

## Scenario Assumptions

The econometric model used in forecasting assumes that the size of the parameters projected for a given year are affected by the conditions in the current and immediately preceding year i.e. the estimates for our maritime forecast indicators – total fleet size, oil tanker fleet size, non-pil tanker fleet size and oil rig count – in 2018 are affected by the conditions, in 2017, of the following macroeconomic indicators: the volume of trade, extent of foreign exchange reserves holding, oil price and oil production.

We restate, for emphasis, that our baseline scenarios for the macroeconomic parameters reflect the Federal Government's assumptions in the ERGP. We need to also emphasise that with 2017 having already passed, the ERGP estimates for that year have been overtaken by current realities. As such, we are using actual full-year estimates of trade, FX reserves, oil price and production in 2017 (instead of the ERGP forecast estimates for these) in deriving the 2018 forecast estimates for the aforementioned maritime indicators. The 2019 forecast estimates for the maritime indicators are derived from the 2018 ERGP forecast estimates for the named macroeconomic indicators<sup>6</sup>.

Finally, while baseline scenarios assume that conditions proceed as they are, our optimistic scenarios anticipate even more favourable conditions, such as higher oil prices. However, the pessimistic scenarios anticipate a possible deterioration of conditions, such as the now unlikely event of a decline in oil prices.

<sup>6</sup> The only exception is total trade, which we forecast independently after projecting full-year 2018 estimates from the three quarters of available data

**2017 Estimates**

	<i>Baseline - ERGP Forecast Estimates</i>	<i>Actuals</i>
<i>GDP Growth (%)</i>	2.19	0.80*
<i>Total Trade (N' tn)</i>	19.70	23.10
<i>Foreign Exchange Reserves (US\$' bn)</i>	30.60	38.80
<i>Oil Price (US\$/bbl)</i>	42.50	51.30
<i>Oil Production (mbpd)</i>	2.20	1.9**

\* IMF FY2017 estimate

\*\* January-September Average

**2018 Estimates**

	<i>Baseline - ERGP Forecast Estimates</i>
<i>GDP Growth (%)</i>	3.50
<i>Total Trade (N' tn)</i>	23.90
<i>Foreign Exchange Reserves (US\$' bn)</i>	43.50
<i>Oil Price (US\$/bbl)</i>	47.00
<i>Oil Production (mbpd)</i>	2.30
	<i>Pessimistic</i>
<i>GDP Growth (%)</i>	2.90
<i>Total Trade (N' tn)</i>	23.50
<i>Foreign Exchange Reserves (US\$' bn)</i>	42.80
<i>Oil Price (US\$/bbl)</i>	44.36
<i>Oil Production (mbpd)</i>	2.25
	<i>Optimistic</i>
<i>GDP Growth (%)</i>	3.80
<i>Total Trade (N' tn)</i>	24.60
<i>Foreign Exchange Reserves (US\$' bn)</i>	45.10
<i>Oil Price (US\$/bbl)</i>	52.75
<i>Oil Production (mbpd)</i>	2.40

<b>2019 Estimates</b>	
	<i>Baseline - ERGP Forecast Estimates</i>
GDP Growth (%)	4.50
Total Trade (N' tn)	24.61
Foreign Exchange Reserves (US\$' bn)	48.90
Oil Price (US\$/bbl)	50.00
Oil Production (mbpd)	2.40
	<i>Pessimistic</i>
GDP Growth (%)	3.50
Total Trade (N' tn)	23.80
Foreign Exchange Reserves (US\$' bn)	46.40
Oil Price (US\$/bbl)	45.76
Oil Production (mbpd)	2.30
	<i>Optimistic</i>
GDP Growth (%)	5.00
Total Trade (N' tn)	27.10
Foreign Exchange Reserves (US\$' bn)	53.80
Oil Price (US\$/bbl)	55.45
Oil Production (mbpd)	2.45

Sources: ERGP, CBN, NBS

**Forecast Estimates**

	Pessimistic	Baseline	Optimistic
<b>2018</b>			
Total Fleet (Mn)	3.83	3.87	3.95
Oil Tanker Fleet (Mn)	0.64	0.66	0.69
Non-Oil Tanker Fleet (Mn)	3.19	3.21	3.26
Oil Rigs (Land & Offshore)	10	11	12
<b>2019</b>			
Total Fleet (Mn)	4.14	4.16	4.24
Oil Tanker Fleet (Mn)	0.65	0.67	0.70
Non-Oil Tanker Fleet (Mn)	3.49	3.49	3.54
Oil Rigs (Land & Offshore)	10	11	12

### Empirical Methodology

The model used for analysis is a Vector Autoregressive (VAR) model, with an optimal lag length of 1. Data used for the estimation covers the period 1981 to 2017 (with 2017

estimates projected where not available). As stated, lagged values of the macroeconomic parameters were used to derive maritime forecasts for 2018 and 2019.

Domestic Macro Economic Conditions	Nigerian Maritime Industry Characteristics	Nigerian's International Trade	Demand For Use Of Maritime Industry Facilities 2018-2019
1.Real GDP Growth 2.Foreign Exchange Reserves 3.Oil Price(Bonny Light) 4.Oil Production Volumes	1.Total Tanker Fleet 2.Oil Tanker Fleet 3.Non Oil Tanker Fleet	1.Non-oil Imports 2.Non-oil Export 3.Crude Oil Export 4.Fuel Imports 5.Total Seaborne Trade	

### Total Fleet Size

Dead Weight Tonnage (Millions)			
	Pessimistic	Baseline	Optimistic
2018	3.83	3.87	3.95
2019	4.12	4.16	4.24

From our forecast model, the major drivers of total fleet berthing at Nigeria ports are the volume of FX reserves and total trade.

- The baseline forecast assumes that total trade reached N23.1 trillion in (full-year) 2017, and would spiral to N23.9 trillion in 2018 and N24.6 trillion in 2019, while placing FX reserves at \$38.8 billion in 2017, and as much as \$43.5 billion in 2018 and \$48.9 billion in 2019;
- The pessimistic forecast assumes that total trade would reach N23.5 trillion in 2018 and N23.8 trillion in 2019, whereas FX reserves would be up to \$42.8 billion by the end of 2018 and \$46.4 billion in 2019;
- The optimistic forecast anticipates the extent of total trade at N24.6 trillion in 2018 and N27.1 trillion in 2019, whilst FX Reserves attain \$45.1 billion at the end of 2018 and \$53.8 billion in 2019.

### Oil Tanker Fleet Size

Dead Weight Tonnage (Millions)			
	Pessimistic	Baseline	Optimistic
2018	0.64	0.66	0.69
2019	0.65	0.67	0.70

The major drivers of oil tanker fleet, from our model, are oil price and foreign reserves.

- The baseline forecast assumes the 2017 average oil price at \$51.3/bbl., whilst the Federal Government's budget benchmark price of \$47/bbl. is deployed in our baseline forecast for 2018. The ERGP's assumption of \$50/bbl. is projected for 2019. Estimates of FX reserves are the same as were used in estimating the total fleet size;
- Oil prices are at \$44.36/bbl. in 2018 and \$45.76 in 2019 in our pessimistic scenario;
- Oil prices are estimated at \$52.75/bbl. in 2018 and \$55.45 in 2019 in our optimistic scenario

### Non-Oil Tanker Fleet Size

Dead Weight Tonnage (Millions)	Pessimistic	Baseline	Optimistic
2018	3.19	3.21	3.26
2019	3.47	3.49	3.54

The major drivers of non-oil tanker fleet size are the volumes of total trade and FX reserves. Our forecast estimates here

are based on our respective estimates for total trade and FX reserves, as used in the model on total fleet size above.

### Oil Rig Count

Units	Pessimistic	Baseline	Optimistic
2018	10	11	12
2019	10	11	12

Oil price and oil production are considered to be the major drivers of oil rig numbers and operations (terrestrial and offshore) in Nigeria.

- Our oil price assumptions remain the same as in the oil tanker fleet model above;
- The baseline forecast projects that 2.3 million barrels

per day (mbpd) of oil will be produced in 2018, as it is assumed in the 2018 budget, rising to 2.4 mbpd in 2019;

- The pessimistic forecast estimates oil production at 2.25 mbpd for 2018, with this rising to 2.3mbpd in 2019;
- The optimistic scenario equally assumes 2.4 mbpd for 2018, increasing to 2.45mbpd in 2019.



## 6. Emerging Opportunities and Challenges: Implications for the Nigerian Maritime Industry

The maritime industry is the backbone of globalisation and international trade and would play a fundamental role in driving future growth across every economic climate. Nonetheless, vast potential remains to be harnessed in this sector.

At the industry level, factors affecting the competitiveness of global maritime businesses and their attractiveness should theoretically be the same for any geographically mobile activity. Nigeria, with her huge natural maritime resources, remains a major hub for local and international trade in Africa. And it goes without saying that the maritime sector, through its contribution to economic activities and interlinks with various sectors, is fundamental to the Nigerian economy. As such, it is imperative to assess the nature of emerging opportunities in the sector in light of contemporary developments in maritime worldwide and the Nigerian environment.

### 6.1 Drivers of Emerging Opportunities in the Nigerian Maritime Industry

Maritime business activities compete globally at the level of the sub-industry — i.e. finance, insurance, and law. A key driver of competitiveness is the productivity and efficiency benefit from the geographic clustering of these business activities. The factors identified below are some of the drivers of the emerging opportunities in the context of maritime business services.

#### 6.1.1 Geographic Factors

The geographic market is a key driver of competition across the maritime industry, to the extent that it effectively defines the scope for a given country's port sector to be competitive. It is clear that for a nation such as Nigeria, the scope for opportunities is restricted by the cost and availability of onwards transport. The majority of Nigeria's containerised traffic comes directly from its largest trading partners such as India, U.S., and China, meaning that the opportunity to divert traffic is limited.

However, a significant majority of container imports are transported from countries with major transshipment operations. This clearly represents a worthwhile market for Nigerian ports.

#### 6.1.2 Product Characteristics

Within the transshipment market, the capacity of the individual ports is an important determinant of a country's attractiveness as a hub, due to the scale requirements for transshipment. The capacity of the Nigerian ports might appear relatively small, when compared to those of other countries, which might support the notion that Nigerian ports are not necessarily competing directly as hub, with the major ports of its largest trading partners. Yet, it the ports equally have remarkable potentials for expansion, with the

activation of the relevant policies and programmes that are under design.

#### 6.1.3 Pool of skilled labour

The availability of a skilled labour force is crucial to the development of the Nigerian maritime industry. The cluster of business services also provides the potential for professional development. Various roles in the maritime industry require professionals, who help to maintain the critical mass that is necessary for the industry to sustain its momentum. In the Nigerian maritime sector, this can be encouraged through links with education: providing a steady stream of Nigerian cadets is likely to provide a significant pool of Nigerian based maritime experts in years to come.

#### 6.1.4 Presence of Regulatory Bodies and International Organisations

The clustering of activities in the maritime industry is fundamentally self-reinforcing as the productivity benefits from cluster encourage more and more businesses to co-locate. This can be further strengthened by the presence of key regulatory bodies or ministries.

#### 6.1.5 Supply-responsiveness

Maritime industry infrastructures are characterised by high levels of fixed costs and relatively low operational costs. In the short term, this means that while capacity is available, there is a relatively high degree of supply-responsiveness also present. Over the long run, there are numerous barriers to expanding capacity, which could limit the newer entry of investors. For example, the cost of constructing or expanding a port and the time delay involved could be significant, making entry into the market subject to a time lag.

#### 6.1.6 Demand-Side Driver: Trade

The overall level of trade is a key driver of growth in the maritime industry. And, changes in trading relationships, logistics and supply chains can drive a shift in the physical location of maritime activity.

### 6.2 Emerging Opportunities in the Nigerian Maritime Industry

In recent years, the Nigerian maritime industry has witnessed reforms to reposition it to achieve efficiency and growth, in line with the overall developmental objective of government in the sector and the national economy. These reforms have resulted in increased levels of activities in the industry, throwing up opportunities for private investments in all areas of the sector including, port infrastructure, terminal facilities, vessels financing, packaging and haulage, and other logistics services.

Towards the effective discharge of its role and in helping other industry participants with their planning, the Nigerian

Maritime Administration and Safety Agency (NIMASA) held a stakeholders brainstorming session, which, among other things, focused on identifying emerging opportunities and challenges with implications for the Nigerian maritime industry. The main objective of this section of the report is to identify the key drivers of these opportunities, as well as the challenges that NIMASA expects industry operators to face in the coverage period.

The Nigerian investment environment remains attractive to genuine investors. In consultation with the appropriate government agencies, the Nigerian Investment Promotion Commission (NIPC) and the Federal Inland Revenue Services (FIRS) released the first edition of the Compendium of Investment Incentives in Nigeria in October 2017, aimed at informing the public on sector-specific incentive packages.

Thus, emerging opportunities in the Nigerian maritime sector include the following:

1. **Manpower and Human Capacity Development:** The maritime industry is highly labour and capital-intensive, and as such requires adequate funding, government support and policy consistencies to solve the manpower challenges it currently faces in Nigeria.

One of the areas of Focus of the Federal Ministry of Transportation is ensuring adequate human capital development in the sector with special intervention for seafarers development to close up the existing gap in the industry. Recently NIMASA sponsored a total of 289 cadets for sea time( on board training) in Europe and Egypt under the Nigeria Seafarers Development Programme NSDP.

Recent government efforts to fund the establishment of maritime institutions across the country are welcome developments that are worthy of commendation. Interventions such as this will definitely boost manpower development in the industry. Equally, collaboration between the various agencies in the industry, in carrying out their responsibilities, will raise the operational performance and efficiency of the sector.

2. **Maritime Infrastructural Development:** A number of factors are responsible for the development of seaports and the supportive logistics infrastructure in Nigeria. This emphasises that maritime infrastructural development is a function of reaction to economic dynamics and global changes, which currently requires the urgent need to restructure and reposition for efficiency and functionality.

In Nigeria, maritime infrastructural development, especially seaports, is often determined by:

- I. Increase in merchandise trade, particularly seaborne trade, which suggests for either the modernisation or expansion of port infrastructure and facilities;
- II. Congestions or delays in the rendering of services, as a result of operational inefficiency, overutilisation of port capacity and shortage in human capacity;

- III. Technological innovations put in place to support manpower (in terms of containerisation, roll-on-roll-off needs, very large tanker vessels, draft level) and/or;

- IV. International conventions compelling signatory nations to effect and respond to developments.

These determinants mentioned above somehow justified the response of the Federal Government to maritime and port-related infrastructure development, either through policy reforms, improvement in foreign direct investment, increased production volumes of crude oil and gas, environmental safety, financing, especially the Cabotage Vessel Finance Fund (CVFF) and shipyard building and repairs.

3. **Globalisation and the Application of New Technology:**

The application of innovative technology is possibly the strongest determinant of development in any maritime industry. From operational re-engineering to the architectural design of vessels, and dredging in an attempt to increase water draft levels within complex international trade development, there is indeed heavy reliance on technological interventions, as they affect virtually every aspect of maritime transportation.

There is need for a constant response to the dynamics of technology and the globalisation tendency by the Nigerian government, all in an attempt to pursue sustainable maritime industry growth that could support international trade.

4. **Maritime Research and Development:** There are numerous areas of research need associated with the maritime industry. NIMASA has established various maritime institutions designed to provide maritime education and research support to the industry. However, the absence of training vessels for practical application of theoretical knowledge remains a major setback, as this is imperative for professional qualification in the industry.

The establishment of national fleets is suggested to provide onboard experience to prospective seafarers. Also, industry operators/stakeholders should be incentivised to conduct research that would benefit the industry, while more joint venture partnerships with foreign companies should be entered into, to facilitate the exchange of research ideas.

5. **Maritime Security:** The International Maritime Bureau reports that in 2016, the Nigerian waters were largely unsafe due to the persistence of kidnapping incidents, as a direct result of the presence of pirates on these waters. While some progress has been made in boosting security in this area so far, there is still the need for greater focus in the efforts of security agencies in curtailing the occurrence of these incidents. There has been the renewed push for the naval police and Maritime Patrol Aircraft to be adequately equipped with modern arms and vehicles for the effective containment of criminal elements in our waters.

There is an equally intensified drive for continuous investment in maritime security, as well as the creation of an enabling environment for the attraction of investors through maritime tourism and marine agriculture, towards sustainable development.

6. **Marine Agriculture:** The increasing demand for food and water creates an opportunity for mariculture as a result of Nigeria's growing population, without an increasing pressure on terrestrial and marine habitats. Aquaculture, done well, offers a huge potential not just for producing food, but also providing livelihoods to coastal communities and in the effort to recover lost ecosystem services. The development of marine agriculture would be enhanced by improved security, the ratification and implementation of Port State Management Agreement (PSMA) and the formulation of a protectionist policy for investors – all presently being considered by the relevant authorities.
7. **Marine Insurance:** In spite of the rapid growth of Nigeria's maritime sector, existing marine insurance products available in the country are considered to be primarily simple in structure and may not suit the needs of the fast-changing global market. In this respect, marine insurance companies could offer innovative products to provide comprehensive insurance solutions and innovative marine insurance products in order to serve Nigerian interests in overseas markets better. In this respect, any insurance company in Nigeria with the experience of insuring infrastructural projects, such as ports and related infrastructure development, should find a wealth of opportunities in offering tailor-made and advanced insurance products suitable for serving the needs of the shipping community.
8. **Marine Tourism:** Tourism demand is increasing worldwide, and there are opportunities for investors and the government to exploit Nigeria's coastal and maritime resorts for revenue generation and job creation. These opportunities include the creation of a marine mall, cruise ships and the fostering of marine sports. With the enabling government policies, improved security, and enhanced safety operations driving the growth of marine tourism, this can be a huge area of opportunity going forward.
9. **Waste Management:** Control of the negative environmental impacts of a construction project in a marine environment, ensuring the pro-activity of the infrastructures and seizing the benefits associated with their presence at sea, in order to enhance specific ecological functions and marine biodiversity is also an area of opportunity in the maritime industry in Nigeria. These services include the design, construction, and supply of solutions for the restoration and enhancement of marine biodiversity, ecological integration of maritime infrastructures, support of fisheries and leisure activities, ecological restoration of damaged marine areas and

coastal adaptation to climate change. These opportunities would be driven by improved policy development in terms of remediation for safety and management.

Till date any discussion of the Nigerian ocean economy is narrowed down to the traditional domain of shipping, fishing and offshore oil and gas. Critical issues for the next three years in this regard, include:

- i. Mapping and Development of Ocean-based Industries (See table *Marine Economic Activities in Nigeria*, pg 36)
- ii. Mapping and Development of Marine Ecosystems (See table *OECD: Ocean Economy Job Creation Potentials*, pg 37)
- iii. Mapping and Development of Ocean Economy Intermediaries

### 6.3 Impact of the Emerging Challenges On Nigeria's Maritime Industry

Emerging trends in the global maritime industry have posed great challenges for shipping operations and administration in Nigeria. Furthermore, as in many other industries, the maritime industry has continued to be impacted on by developments in the world's broad political and economic context; and it is particularly sensitive to events in the external environment. For example, the demand for tonnage transport in the shipping sector largely depends on the world's economic outlook, the trends in industrial production and global markets.

The effects of globalisation, advancements in maritime technology, and the recent developments in the shipping industry have not only driven ports to reorganise and restructure their operations but have also intensified inter-port competition. This, therefore, increases the pressure on the maritime industry, which constitutes an important link in the international trading logistics chain, to improve its operational efficiency.

#### 6.3.1 Challenges of the Maritime Industry In Nigeria

1. **Security:** As alluded to earlier, the high number of incidents of piracy and armed robbery against ships in the Gulf of Guinea has become a growing concern to the maritime industry, which is heavily affected by these incidents. Although the acts of high sea brigandage have been controlled to some extent, the economic implications of piracy still remains enormous, cutting across all other sectors. Ship owners use private armed security guards on their vessels, while commuting the dangerous pirate zones in Nigeria. These incidences disrupt business and hamper the growth of the maritime industry.

### Marine Economic Activities in Nigeria

	Established	Emerging and Nascent
1. Commerce and Trade	<p><b>Shipping</b></p> <p>International shipping and associated infrastructure are vital to the economy of Nigeria, with over 95% of imports to Nigeria arriving by sea.</p> <p><b>Ports</b></p> <p>A variety of commercial facilities including cargo handling, bunkering, cargo discharge, handling and stevedoring, warehousing, marine security, technical services and the inter-island terminal and quays. Demand for processing and trans-shipment facilities, as well as fuel supplies and associated commodities.</p>	
2. Food, Nutrition, and Health	<p><b>Fishing</b></p> <ul style="list-style-type: none"> <li>• The fishing sector is critical for both the generation of national income and fish products, leading to revenue from fishing activities and food security.</li> <li>• Accounts for a significant part of the gross total current account receipts of N356.13 billion of the GDP in 2016.</li> <li>• Fishing and related sectors are estimated to employ between 5,000-6,000 people.</li> </ul>	<p><b>Aquaculture:</b> Worldwide demand for fish is expected to surge in the coming years. Most of this would come from aquaculture, with much of that production capacity occurring in the ocean.</p> <p><b>Mariculture:</b> Virtually non-existent in Nigeria, although now generating interest.</p> <p><b>Biotechnology</b></p> <ul style="list-style-type: none"> <li>• Marine biotechnology explores the oceans to develop new pharmaceutical drugs, chemical products, enzymes, and other industrial products and processes.</li> <li>• Has a vital role in the advancement of biomaterials, healthcare diagnostics, aquaculture, and seafood safety, bioremediation and biofuels.</li> <li>• Stimulating interest in blue biotechnology and bio-prospecting projects include technological advancement, Research and Development, security, increasing carbon dioxide levels and climate change.</li> </ul>
3. Energy and Raw materials	<p><b>Marine minerals</b></p> <p>This lot includes marine solid minerals: sand and gravel, refractory clays, iron and heavy minerals such as garnet, rutile, spatial, tourmaline, zircon, etc and Nigeria's offshore oil and gas deposits</p>	<p><b>Marine renewable energy</b></p> <p>Possibilities for this development exists in Nigeria, in relation to offshore wind wave, and possibly in the future, Ocean Thermal Energy Conversion (OTEC).</p>

### Ocean Economy Job Creation Potentials

Industry	Compound annual growth rate for GVA between 2010 and 2030	Total change in GVA between 2010 2030	Total change in employment between 2010 2030
Industrial marine aquaculture	5.69%	303%	152%
Industrial capture fisheries	4.10%	223%	94%
Fish processing	6.26%	337%	206%
Maritime and coastal tourism	3.51%	199%	122%
Offshore oil and gas	1.17%	126%	126%
Offshore wind	24.52%	8037%	1257%
Port activities	4.58%	245%	245%
Shipbuilding and repair	2.93%	178%	124%
Maritime equipment	2.93%	178%	124%
Shipping	1.80%	143%	130%
Average of the total ocean-based industries	3.45%	197%	130%
Global economy between 2010 and 2030	3.64%	204%	120%

Based on projections of the global workforce, extrapolated with the UN medium fertility rate.

Source: Calculations based on OECD STAN, UNIDO INDSTAT, UNSD; Lloyd's Register (2014; 2013); World Bank (2013); IEA (2014); FAO (2015)

As a result of this appalling situation, it has become more expensive for ships to come into Nigeria. While some of the pirates are heavily armed with sophisticated weapons and sometimes hold victims hostage, others are robbers with minimal weapons and hackers. The solutions to these attacks include the utilisation of surveillance facilities, deployment of security personnel able to identify and man flash points (entry and exit points in Nigerian waters) and installation of facilities that can take snapshots of real time.

2. **The Regulation and Policy Context:** Changes to the regulatory environment are likely to be a challenge in the future for the Nigerian maritime industry, as it is impossible to form a functional prediction of the future policies of the Federal Government (or those of other countries). However, there are some potential regulatory developments that might affect the Maritime industry, which have been highlighted under the key implications of regulatory developments for the Nigerian maritime sector.

3. **Labour Supply:** The labour market in the industry presents a significant challenge to maritime business services and activities, which rely on seafarers or experts, while also presenting an opportunity for intervention to the maritime education sector.

The growing demand for seafarers in Nigeria could mean that even a successful maritime education division in the country might not produce enough Nigerian-based seafarers to support the continued needs of the maritime industry.

4. **The Efficiency of Ports and Shipping Companies:** Increases in vessel size present challenges, both for

ports and shipping companies, with the economies of scale in maritime transportation being a key reason for this. The need to accommodate greater numbers of larger vessels creates challenges for ports if they do not have the capacity to accept such ships.

5. **Funding/Financing:** Over the years, the maritime industry has been stunted as a result of insufficient funding, which has led to gross inefficiency and lack of effectiveness in the management of shipping and maritime industry services. These have, indeed, affected investments in maritime infrastructure and equipment, which are critical to the efficient delivery of services in shipping and maritime operations.

With the ocean economy projected to be significantly larger than the traditional maritime economy, there are clear imperatives for greater focus on key growth areas. According to OECD, the projections for the ocean economy and its job creation potential between 2010 and 2030 are as follows:

#### Other Critical Issues

- i. Revenue generation and availability of finance
- ii. Promotion of tourism
- iii. Development of related economic activities
- iv. Employment and job opportunities
- v. Enhancement of industrial growth and development
- vi. Institutional development
- vii. International relations and peaceful co-existence
- viii. Socio-political harmony
- ix. Defence and security – territorial protection.

#### **Text Box 4: Implications of the Petroleum Industry Governance Bill (PIGB) for the Maritime Industry**

The petroleum industry governance bill (PIGB) is a subset of the Petroleum Industry Bill (PIB) which seeks to bring under one law the various legislative, regulatory, and fiscal policies, instruments and institutions that govern the Nigerian petroleum industry.

The PIB seeks to repeal the 16 petroleum industry acts and replace them with an all in one act that provides for better fiscal and regulatory management of the oil and gas sector. The government broke the PIB into four parts for easy passage into law thus giving room for the success achieved in the passage of the Petroleum Industry Governance Bill (PIGB).

The bill seeks to create an efficient and effective governing institutions with clear and separate roles for the petroleum industry and establish a framework for the creation of commercially oriented and profit-driven entities that will ensure value addition to the industry.

#### **Likely Impact of the Passage of the PIGB on the Nigerian Maritime Industry**

Shipping has always been of strategic importance to the oil and gas industry. Not only is over 70% of all crude oil production transported by ships, more and more oil productions activities are now being carried out offshore. This shows that the oil industry relies heavily on the maritime industry for its smooth operations. Whatever happens in the oil and gas industry is likely to affect the shipping industry and vice versa.

It is estimated that Nigeria has lost over \$50 billion worth of investment in the oil and gas industry since the last 16 years which could have culminated in additional 1.5 million barrels per day crude oil production for the country, which has continued to heighten the agitation for the passage of the PIB.

#### **With full implementation, the PIGB will ensure:**

**Increased Cabotage Activities:** An increase in investment in the industry, means more production activities and more production activities means more shipping logistics requirement. The Cabotage trade in Nigeria is 95% within the industry, so we are likely to see an increase in investment if the act meets the expectations of industry practitioners.

**Increased Demand for Crude Oil Tankers:** If there are more investments in the oil and gas industry, there will be more oil production and more oil production means more crude oil tankers for export. Nigeria exports 100% of its crude oil by sea, so, an additional 500bpd of crude oil production in the next one or two years will amount to 182,500,000 barrels per year or 25,347,222 MTS of cargo per annum. This volume of cargo will require a minimum of 91voyagies of a very large Crude carrier (VLCC) vessel to lift, which will generate a lot of activities in the maritime industry.

**Increased Importation of Oil and Gas Production Equipment:** The immediate impact of an increased investment in the oil and gas industry is the massive importation of equipment for oil and gas production. This will see more vessels calling Nigerian ports, more revenue for the government and more business for auxiliary services providers in the industry.

**Increased bunkering activities:** It is also believed that the passage of the PIGB will attract multinationals into the downstream sector of the industry leading to the setting up of refineries which will eventually lead to Nigeria being a net exporter of refined petroleum products. If this happens in the next one or two years it will lead to the demand of refined petroleum tankers and more importantly it will create a very robust bunkering business in the maritime industry, which is capable of generating over \$3 billion per annum.

## 7. Conclusions and Recommendations

This maiden edition of Nigeria's Maritime Industry Forecast 2018–2019 is, as indicated earlier, is part of NIMASA's drive to improve operating conditions and position the country's maritime sector for greater efficiency and performance in line with international best practices.

The forecast has examined how economic, sectoral and regulatory developments in both the international and domestic scenes affect the maritime industry in Nigeria. It has also highlighted the need to further explore the blue economy in driving growth and development for our country. In summary, it has shared from a holistic perspective, the opportunities and areas of advantage that will be of immense benefit to stakeholders and industry players, both locally and internationally in the year 2018 and 2019, as well as the foreseeable challenges in the industry, along with its possible mitigating factors.

The forecast results have employed scenario analyses in anticipating the performance of economic parameters such as GDP, total trade, foreign exchange reserves, oil price and oil production. Moreover, the forecast has, in line with expectations, set baseline figures within the parameters defined by the Federal Government's economic programme – the Economic Recovery and Growth Plan (ERGP). Beyond the baseline, optimistic and pessimistic scenarios were proposed to offer insights into how the two years covered by the forecasts – 2018–2019 – would unfold in the maritime sector.

As noted earlier, this inaugural edition of the Industry Forecast is focused on foretelling the levels of activity that will drive the demand for the use of maritime facilities – as indicated by the industry parameters elucidated upon above, in terms of total fleet size, oil tanker fleet size, non-oil tanker fleet size and oil rig count. Our analysis is based on assumptions about domestic economic conditions, measured through macroeconomic pointers such as economic growth, oil price and production (for Bonny light) and total trade.

Our forecasts are intended to enable stakeholders anticipate the volumes of activity in the maritime sector as signals of the levels of international demand for cargo produced locally, as well as domestic demand for cargo produced externally. Our forecast estimates depict that growth in volumes are going to continue to be robust. We also expect oil rig count to steadily increase on account of improved oil production and demand.

These maritime forecasts will enable us raise questions on how greater investments in oil and gas will translate to more demand for offshore support vessels. Hence, we recommend and anticipate that the federal government would do more to attract additional investments into the maritime industry, while incorporating newer expansionary strategies for ocean-based industries and the exploitation of the vast resources of the ocean into its broad vision of national economic regeneration.

## 8. Data & Technical Appendix

### A. Nigerian Economic and Business Environment Indicators

#### Domestic Economic Parameters

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017*
Nominal GDP (NGN 'tn)	39.16	44.29	54.61	62.98	71.71	80.09	89.04	94.14	101.49	120.19*
Real GDP (NGN 'tn)	46.01	49.86	54.61	57.51	59.93	63.22	67.15	69.02	67.93	68.47*
Real GDP Growth Rate (% YoY)	7.20	8.35	9.54	5.31	4.21	5.49	6.22	2.79	-1.58	0.8*
Oil GDP Growth (% YoY)	-6.19	0.45	5.25	2.33	-4.95	-13.07	-1.32	-5.45	-14.45	N/A
Agriculture GDP Growth (% YoY)	6.77	13.49	-2.28	-1.59	5.54	9.66	20.15	-5.12	0.94	N/A
Manufacturing GDP Growth (% YoY)	9.05	7.94	7.68	17.82	13.46	21.80	14.72	-1.46	-4.32	N/A
Distributive Trade GDP Growth (% YoY)	14.02	11.48	11.22	7.21	2.21	6.64	5.88	5.14	-0.24	N/A
Transport GDP Growth (% YoY)	7.10	6.98	6.85	5.97	-3.42	3.80	4.42	4.51	0.39	N/A
Water Transport GDP Growth (% YoY)	6.05	5.66	5.37	-9.74	-1.67	4.50	8.74	8.45	1.40	N/A
Aggregate Trade (NGN 'tn)	15.98	14.09	20.18	26.23	24.91	24.70	25.50	19.92	17.34	N/A
Imports (NGN 'tn)	5.59	5.48	8.16	11.00	9.77	9.44	10.54	11.08	8.82	N/A
Exports (NGN 'tn)	10.39	8.61	12.01	15.24	15.14	15.26	12.96	8.85	8.53	N/A
Oil Exports (NGN 'tn)	9.86	8.11	11.30	14.32	14.26	14.13	12.01	8.18	7.00	N/A
Non-oil Exports (NGN 'tn)	0.53	0.50	0.71	0.91	0.88	1.13	0.95	0.66	1.53	N/A
Aggregate Trade Growth (% YoY)	23.52	-13.44	30.18	23.09	-5.33	-0.83	-5.12	-17.96	-14.85	N/A
Imports Growth (% YoY)	30.06	-2.05	32.87	25.75	-12.59	-3.47	10.43	4.85	-25.61	N/A
Exports Growth (% YoY)	20.00	-20.70	28.35	21.17	-0.64	0.80	-17.76	-46.53	-3.73	N/A
Global Competitiveness Index Rank	95	94	99	127	127	115	120	127	124	127
Ease of Doing Business Rank	120	125	133	133	138	147	170	170	169	145
Inflation, CPI (Average, % YoY)	11.58	12.54	13.74	10.83	12.23	8.50	8.05	9.01	15.70	16.55
Inflation, CPI (Yearend, % YoY)	15.05	13.93	11.82	10.29	11.98	7.96	7.98	9.55	18.55	15.37

Source: National Bureau of Statistics, World Economic Forum, World Bank



## B. Maritime Industry Data Tables

### B.1 Maritime Activity Data

#### Maritime Parameters

#### Container Traffic Statistics

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
No. of Vessels	4623.00	4721.00	4881.00	5232.00	4837.00	5369.00	5333.00	N/A	N/A	N/A
No. of Vessels Growth (%)	N/A	2.12	3.39	7.19	-7.55	11.00	-0.67	N/A	N/A	N/A
Gross Registered Tonnage (dwts.)	89505702	90603611	106689553	122614716	120818683	130628057	148323065	N/A	N/A	N/A
Gross Registered Tonnage Growth (%)	N/A	1.23	17.75	14.93	-1.46	8.12	13.55	N/A	N/A	N/A
GDP Growth (%)	7.20	8.35	9.54	5.31	4.21	5.49	6.22	2.79	-1.58	N/A
Total Fleet - UNCTAD (dwts.)	626.36	897.04	989.41	3735.49	3273.82	3301.76	3812.99	3981.11	3623.05	N/A
Total Fleet Growth - UNCTAD (%)		43.21	10.30	277.55	-12.36	0.85	15.48	4.41	-8.99	N/A
Linear shipping connectivity index										
Linear shipping connectivity index	18.3	19.9	18.3	19.9	21.8	21.4	22.9	21.4	21.3	20
Nigeria- Port Infrastructure quality 1(low)- 7(high)										
Nigeria	2.62	2.8	2.98	3.31	3.55	3.44	3.16	2.98	N/A	N/A
South Africa	N/A	N/A	4.75	4.7	4.69	4.7	4.86	4.87	N/A	N/A
Mexico	N/A	N/A	3.72	4.03	4.26	4.36	4.28	4.51	N/A	N/A
Turkey	N/A	N/A	4.1	4.16	4.35	4.34	4.44	4.49	N/A	N/A
Total Fleet (No. of Vessels)										
UNCTAD	N/A	N/A	N/A	372	374	402	469	547	571	583
Growth Rate	N/A	N/A	N/A	N/A	0.54	7.49	16.67	16.63	4.39	2.10
NPA	N/A	N/A	N/A	3735	3274	3302	3813	3981	3623	3639
Growth Rate	N/A	N/A	N/A	N/A	-12.34	0.86	15.48	4.41	-8.99	0.44
Tanker Freight										
Tanker Freight	N/A	673	750	609	485	494	597	708	700	671
Growth Rate	N/A	N/A	11.44	-18.80	-20.36	1.86	20.85	18.59	-1.13	-4.14
Dry Bulk (dwts.)										
Dry Bulk - IN	13350161	14267917	12683482	13082771	10102158	9693134	9847860	N/A	N/A	N/A
Dry Bulk - OUT	179668	243854	285015	28557	61584	137399	22135	N/A	N/A	N/A
Containerised Bulk (dwts.)										
Containerised Bulk - IN	7794894	5802550	7534972	9252781	4298373	10729910	5428846	N/A	N/A	N/A
Containerised Bulk - OUT	685248	897994	1224443	1239600	662815	1435972	750620	N/A	N/A	N/A

Source: UNCTAD, Nigerian Ports Authority

**B.2 Maritime Manpower Data**

Institution	CoC	Year Of Graduation
1 South Tyneside College, UK	11	2014
2 ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT, ALEXANDRIA, EGYPT BATCH 1	24	FEB, 2014
3 ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT, ALEXANDRIA, EGYPT BATCH 2	33	SEPT, 2014
4 ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT, ALEXANDRIA, EGYPT BATCH 3	23	SEPT, 2015
5 ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT, ALEXANDRIA, EGYPT BATCH 4	23	FEB, 2016
6 ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT, ALEXANDRIA, EGYPT BATCH 5	147	FEB, 2017
7 ARAB ACADEMY FOR SCIENCE, TECHNOLOGY AND MARITIME TRANSPORT, ALEXANDRIA, EGYPT BATCH 6	37	SEPT, 2017
<b>TOTAL</b>	<b>298</b>	

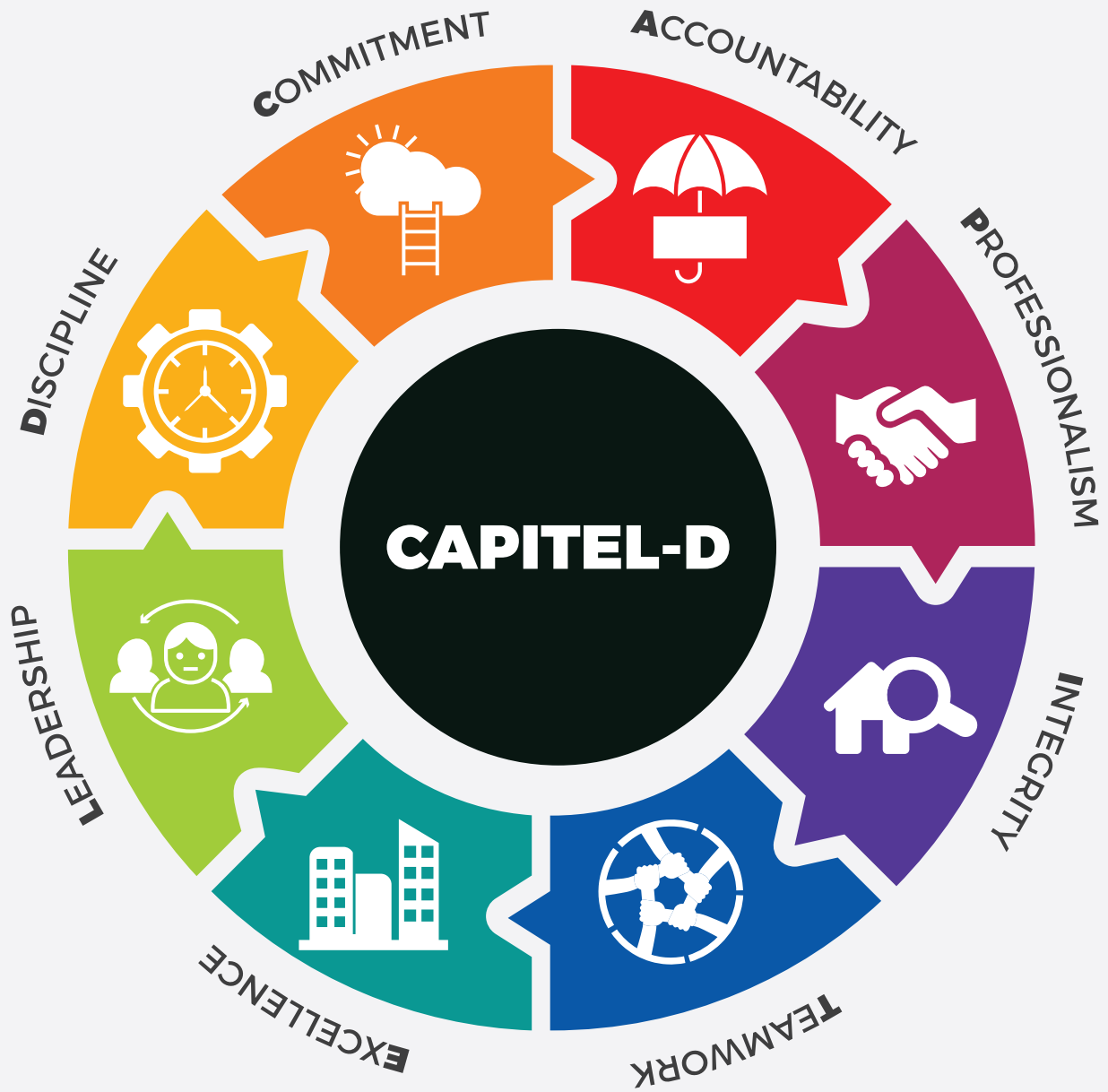
Source: NIMASA

**B.3 Maritime Safety and Security Data****Reported Attacks on Vessels**

	Reported Attack	Successful Attack	Unsuccessful
Q1 2015	8	5	3
Q2 2015	5	1	4
Q3 2015	0	0	0
Q4 2015	4	2	2
Q1 2016	27	14	13
Q2 2016	27	17	10
Q3 2016	8	4	4
Q4 2016	15	5	10
Q1 2017	9	3	6
Q2 2017	8	4	4
Q3 2017	8	4	4
Q4 2017	16	6	10

Source: NIMASA

## *Our Core Values*





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