

Transaction Advisor: New Nigerian Airline



FEDERAL MINISTRY OF TRANSPORTATION (AVIATION)

Project Structuring Report - Draft

June 14, 2018



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Glossary

A320 – Airbus narrow body single aisle jet aircraft
ACMI – Aircraft, Crew, Maintenance and Insurance
Aero Contractors – a leading Nigerian airline, now largely controlled by AMCON
AIB – Nigeria’s Accident Investigation Bureau, a department within the MoTA
AMG – Airline Management Group Ltd – Transaction Advisors for the New Flag Carrier project
AOC – Air Operator Certificate, a licence needed for any airline to operate
AOG – Aircraft On Ground, meaning an aircraft is not in a condition to fly, or cannot fly because the airport is closed
AMCON – Nigeria’s Asset Management Corporation, a body set up 2010 to manage the country’s toxic debts
AON – Airline Operators of Nigeria, an industry lobby group set up to represent the interests of member airlines
APD – Air Passenger Duty is an excise duty which is charged on the carriage of passengers in Nigeria
Arik Air – Nigeria’s biggest airline, now largely taken over by AMCON
ASK – Available seat kilometre (seat capacity in seats x distance in km)
ATK – Available ton kilometre (freight capacity in tonnes x distance in km)
ATL – Air Transport Licence
ATM – Air Transport Movement, an aircraft take-off or landing
ATPCO - Airline Tariff Publishing Company
AVOD – Audio video on-demand service
B737 – Boeing narrow body single aisle jet aircraft
BASA – Bilateral Air Service Agreement, which regulates route rights between countries
BOT - Build, Operate & Transfer, a way for the private sector funding of new airport facilities before transfer to the State later
CAGR – Compound Annual Growth Rate
Capex – Capital expenditure, which is not accounted for in an airline profit & loss but amortised over a number of years
CASK – Cost per available seat kilometre
CEO – Chief Executive Officer
Codeshare – a business arrangement where two or more airlines share the same flight, publishing and marketing the flight under its own airline designator and flight number as part of its published timetable or schedule.
CRM – Customer Relationship Management, a way to connect with the airline’s customers using a database of contact details
CTC – the Cape Town Convention, an international treaty to standardize transactions involving movable property such as aircraft
C-check – a maintenance check that is mandatory for an aircraft about every 18 months (depending on utilisation)
EBIT – Earnings Before Interest and Tax EBITDA – Earnings before Interest, Tax, Depreciation and Accruals
EFCC – Nigeria’s Economic and Financial Crimes Commission
ETOPS – Extended Range Twin Operations, an operating standard necessary to fly twin-engine aircraft over long distances
FAA – the US Federal Aviation Authority
FAAN – Federal Airport Authority of Nigeria, which oversees the operation of 22 state-owned airports and their terminals
FFP - Frequent Flyer Program
FSC – Full Service Carrier

FTE – Full Time Employee
 FTK – Freight ton kilometre
 GDP – Gross Domestic Product
 GDS – Global Distribution System, a system that sells airline tickets at travel agents, examples Amadeus or Abacus
 General sales agent, 3rd party, airline appointed product and service sales agent
 Hybrid – An airline business model positioned between FSC and LCC
 IASA – the US Federal Aviation Authority’s International Aviation Safety Assessment program
 IATA – International Air Transport Association
 ICAO – International Civil Aviation Organisation, based in Montreal
 ICRC – Infrastructure Concession Regulatory Commission
 IFRS – International Financial Reporting Standards, a set of international accounting standards stating how particular types of transactions should be reported in financial statements issued by the International Accounting Standards Board
 Interlining - a commercial agreement between airlines to handle passengers traveling on itineraries that require multiple airlines
 IOSA – IATA Operational Safety Audit
 Jet A1 – a type of fuel specifically refined for use by airplanes, which Nigeria must import refined
 JV – Joint venture
 KPI – Key Performance Indicators
 Legacy - Traditional, full-service carrier business model (see FSC)
 LCC – Low-cost carrier
 m - Millions
 MI – Market Intelligence
 MIDT - Marketing Information Data Transfer and airline market intelligence database
 MMA2 - Nigeria’s only private airport terminal, which serves some domestic carriers at Lagos including Dana Air and Air Peace
 MoTA – Nigeria’s Federal Ministry of Transportation (Aviation)
 Mppa – Million Passengers per Annum
 MRO – Maintenance, Repair & Overhaul organisation
 Nahco/Aviance - Nigerian Aviation Handling Company, a ground handling service provider
 Naira – the Nigerian currency
 NAMA – Nigerian Airspace Management Agency, which provides Air Navigation Services to airspace users
 NCAA – Nigeria’s Civil Aviation Authority, the regulatory body for aviation oversight
 NGA – the 3-letter code of the now defunct national carrier, Nigeria Airways
 NIMET - Nigerian Meteorological Agency, a department within the MoTA
 NPC - **Nigeria National Population Commission**
 OAG – Official Airline Guide a database of airline schedules
 OEF – Oxford Economic Forecasting
 OEM – Original Equipment Manufacturer of aircraft such as Airbus, Boeing, Embraer, Bombardier
 Opex – Operating expenditure, which is accounted for in an airline’s profit & loss
 O&D – Origin and destination – point-to-point passengers
 PPP – Public Private Partnership
 Project Elevate– Project Name for New Nigerian Flag Carrier
 PPTF/PTF – (Passenger) Propensity to Fly
 Revenue Management – technology systems used to determine the optimal price of selling a seat at any given point in time
 RPK – Revenue Passenger Kilometres (revenue x passengers x distance in km)
 SMS – Safety Management System, a system to record and track the resolution of safety issues, run by the SMS Director
 SPV – Special Purpose Vehicle

SWOT – Strengths, Weaknesses, Opportunities, Threats

TA – Transaction Adviser

VFR – Visiting friends and relatives, a reason for air travel based on meetings loved ones

Yamoussoukro Declaration or YD – an agreement that was signed but not ratified to open skies between African nations

Zaria – the location of the Nigerian College of Aviation Technology

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GUIDELINE FOR THE PREPARATION OF PPP PROJECT STRUCTURING REPORT

SN	Table of Contents	PSR Report (AMG) - Section
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1. Introduction

The purpose of this Report is to demonstrate the feasibility of the establishment and operation of a new Nigerian Flag Carrier. The airline will be developed through a PPP structure. The Report is intended to provide the Infrastructure Concession Regulatory Commission (ICRC) with the basis upon which to give approval for the PPP to proceed to the Procurement stage.

The establishment of a new National Airline will create new competition in the airline sector, both domestic and international. This will lead to better quality of services, improved reliability, on time performance and value for money – benefitting Nigerian travellers and the economy overall.

The time line requested by the Ministry to start the new flag carrier before the end of the calendar year 2018 will put pressure on all involved. However, it also creates an environment where all constituent parties are focusing on timely delivery of their inputs. Notwithstanding such time pressure and the decision making required, the new flag carrier will ensure that all national and international regulatory requirements are achieved within the target launch without the usual delays caused by many bottlenecks in the Nigerian bureaucracy. The Task Force overseeing the start-up of the new flag carrier is made up of the leaders of the Nigerian aviation industry, led by Captain Fola, CEO of NAMA and include Capt. Muhtar Usman, Director-General, Nigerian Civil Aviation Authority (NCAA), Capt. Abdulsalami Mohammed, Rector, Nigerian College of Aviation Technology, Mr. Akin Olateru, Chairman of the Accident Investigation Bureau (AIB), Lay Are (representative of Transaction Adviser for MRO and Aviation Leasing Company), Mr. Chidi Izuwah, the Acting Director General of Infrastructure Concession Regulatory Commission (ICRC), Capt Tilmann Gabriel, representative of the Transaction Advisor and Mr. Ben Tukur, Technical Assistant to the Minister of State for Aviation as Secretary to the Committee.

The Transaction Advisor for the Establishment of the New Flag Carrier AMG, together with AviaSolutions, is contracted to complete the Business Case.

Why Nigeria needs a new airline?

- Substantial latent demand both within and to/from Nigeria which has not been met.
- The addressable market for a new flag carrier is substantial.
- IATA forecast (2016) that over the long term (2018-2035) Nigeria passenger growth will outperform overall Africa passenger growth
- Poor performance, and sustainability of the existing local airlines, an associated aviation sector overall.
- There is a need for Nigerian full-service carrier (FSC) offering a network of routes across the local, regional and international markets, with a reliable performance for both customer and financial sustainability
- Taking a conservative/prudent approach (notwithstanding challenges to ramp-up at the outset), as a “steady-state” flag carrier in year 3, expect to be offering the full network financially sustainable.
- Consider subsidiary franchise operations for some domestic routes and/or charter for pilgrimage – thus providing opportunity for other airline operators

The new flag carrier will assist in stimulating the overall air passenger travel demand, which will benefit all competent airlines and the industry and economy at large.

Why is Government participation initially needed?

Government participation in a new flag carrier is advisable because of the substantial start-up costs, long lead times for delivery of new aircraft, and the high economic (in addition to financial) return on the PPP. Initial private sector investor interest is expected to be dampened due the size of investment required and associated risk-return profile and the poor performance of Nigerian carriers in the past. While there is private sector investor interest at the outset, once the new airline has a proven track record investor interest should increase significantly –to the point where Government divests its majority shareholdings to a small percentage.

Why a PPP?

A PPP should be undertaken in order to provide a fair and transparent process for attracting a Strategic Equity Partner (SEP) who will invest in the new airline and provide other resources and support. The level and form of participation in the airline may evolve over time.

2. Objectives

The goal is to establish a new flag carrier for Nigeria. It should operate on a commercial, financially viable and sustainable basis.

The objectives are to:

1. Deliver a level of air services in line with those implied by the level of population, GDP per capita and propensity for air travel (i.e. capture more of latent demand)
2. Introduce competition leading to better more reliable services and value for money fares in the marketplace (both domestic and international)
3. Have a multiplier effect on the economy through the establishment of adjacent and associated services such as tourism, hospitality and travel and aviation industry chain services. Generate employment for Nigerians, Nigerian aviation contributes a modest \$0.7bn or 0.4% of GDP. However, it has the potential to contribute in excess of 5% to GDP and to support one million jobs.
4. Establish a robust and key link in the overall aviation value chain (i.e. the national airline) – to complement improvements in airport terminals, ground handling, passenger facilities, aircraft maintenance overhaul & repair, aircraft leasing, etc.
5. Enable Nigeria to benefit from under-utilised BASA Agreements; Nigeria's airlines have historically had a small share of international capacity to and from the country – well below the capacity provisions included in the BASA agreements in place with other countries
6. Nigeria's new open skies policy within Africa offers the opportunity for a new flag carrier to increase the share of Nigerian airlines on international routes.
7. Enable/support the development of airport hubs and related activities (i.e. value-chain, Aerotropolis)
8. On-shore capital by facilitating international travel and enhancing Nigerian cities as a base for doing business
9. Improve Nigerian image and prestige.

The key output is the introduction of more competition in the airline sector, both domestic and international. This will lead to better quality of services, improved reliability, on time performance and value for money – benefitting Nigerian travellers and the economy overall. Competition for the existing Nigerian airlines is not negative for them but builds market further and leads to increasing traveling public and therefore further market growth for all airlines in Nigeria. Africa is on everyone's agenda, the open sky developments, the increasing interest of AFREXIM and AfDB as well as other global development banks will support the airline development in the largest African country and the West-African region.

Tapping in to the substantial latent demand in Nigeria not only requires appropriate economic policy and growth, but also an aviation sector which can perform.

3. Scope

The new flag carrier would start with a domestic and regional airline service with a single aisle narrow body jet aircraft fleet (such as the B737 or A320) and add early on an international service to Europe and the USA with a dual aisle wide-body aircraft fleet (such as the B787 or A350).

While the domestic service is based on the AOC and ATL rules and requirements of the NCAA, the international routes will require several additional pre-requisites before a launch is possible. These include membership of IATA and ICAO, operating to IOSA audit standards, which would then enable commercial agreements with other airlines such as interline and codeshare agreements which and other needs to fill a 250-seater long-haul aircraft. There are interim options with and ACMI and wet-lease aircraft solutions to start the international service, however, the sales systems have to be secured.

To enable this flag carrier operation, many support facilities have to be contracted and organized:

- Maintenance support (MRO start-up)
- Ground Services support (own support subsidiary)
- Catering Service (own catering company)
- Crew and staff training (Training company)
- IT Services for systems, global distribution system, operations software (own subsidiary)
- Bank partnerships (international banking service for global payment by credit card, long-term/short-term debt coverage, institutional investor services, lease services)
- Crisis management (support contract with suitable organisation in case of an incident/accident)
- Duty Free service in airport and aircraft (subsidiary company).

Most of the above facilities, can be initially contracted in, and provide the option of a subsidiary in Nigeria, serving other airlines and operations. All provide additional employment opportunities for Nigerians.

4. Market & Needs Analysis

A holistic, robust and strategic approach is being taken, under the guidance of the Task Force and the Ministry of Transportation (Aviation), to revive the aviation sector in Nigeria and give it a sustainable platform for the future. The main pillars of this are strategy are:

1. Aviation policy
2. Establishment of a New Flag Carrier (National Carrier)
3. Concessioning of airports
4. Strengthening and improvement of safety and security
5. Development of Cargo/agro-related airport facilities
6. Establishment of an MRO centre
7. Establishment of an aircraft leasing company
8. Development of airport cities (“Aerotropolis”)
9. Development of international / regional hub
10. Proactive Accident Investigation Bureau (AIB)
11. Urgent infrastructure improvements (i.e. procurement of calibration equipment for navigation/landing aides, repair ABV runway)
12. Upgrade / establishment of aviation colleges / university and related training programmes.

The latent demand for Nigerian air transport is substantial. Past efforts to meet this demand, let alone stimulate it (i.e. net generative demand), have been sub-optimal, especially by Nigerian carriers.

4.1 Macroeconomic

Nigeria represents significant growth opportunities in terms of its economy, population, social enhancement and the aviation sector.

Its economy at \$999bn is the 2nd largest in Africa (after Egypt, \$1,060bn). Annual GDP growth of 4.9% over the last decade has outperformed its closest peers (see Figure below). PricewaterhouseCoopers (PwC) predict that Nigeria could be a world top 10 economy by 2050 (Source: PwC).

Figure 1: GDP Growth of 5 Largest African Economies, 2000-2017



Nigeria has the largest population on the continent, one of the youngest in Africa and a rapidly growing middle class.

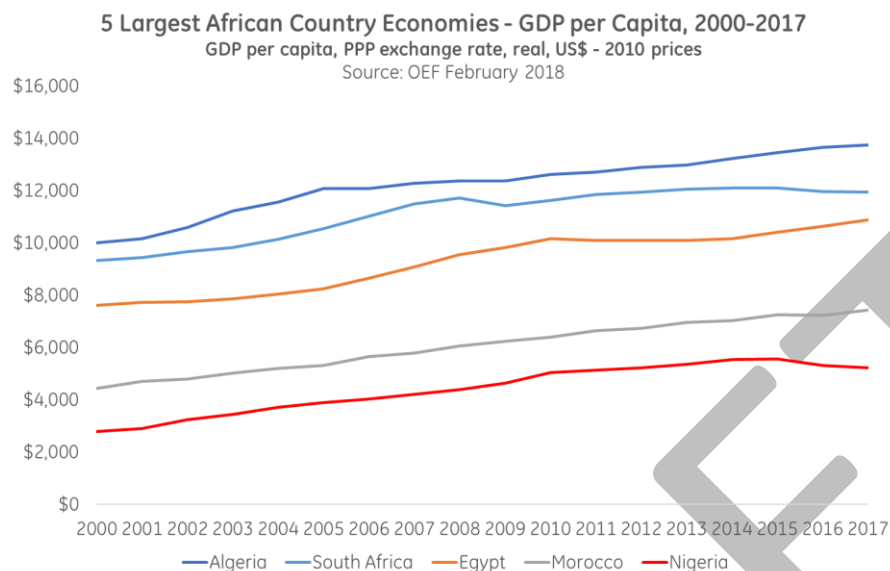
- At 191m, Nigeria has by far the largest population in Africa
- The UN predicts Nigeria's population will rise to 400m by 2050 (behind only China and India)
- Population growth means huge demand for goods and services, plus investment opportunities (especially given a growing middle class)
- Nigeria has a young and growing population, of which circa half are under 30 years, (Nigeria National Population Commission -NPC)
- Many experts agree Nigeria's middle-class population will therefore also expand significantly. Nigeria's middle class grew 600% from 2000-2014, and by 2030, an additional 7.6m people will be deemed middle class, representing huge growth. (Source: Standard Bank).

Economic growth is highly exposed to the price of oil. Nigeria's main source of foreign exchange earnings and Government funding are derived from oil exports, the value of which remain volatile. The Government and private sector are considering ways in which the Nigerian economy can be diversified and continue to grow robustly:

- Oil activities only constitute ca. 10% of GDP but provide around 80% of Government revenue and 90% of foreign currency receipts.
- Services (53%) are the largest contributor to GDP, followed by agriculture (25%), industry (22%) and oil (10%).
- Only 40% of its vast arable land is currently cultivated, ripe for future investment and growth.
- Economic growth will also be enabled by on-going political reforms especially tackling poverty and unemployment, in the short term.

Whilst Nigeria's population is the largest of all African nations, the wealth of its citizens is the lowest amongst peers.

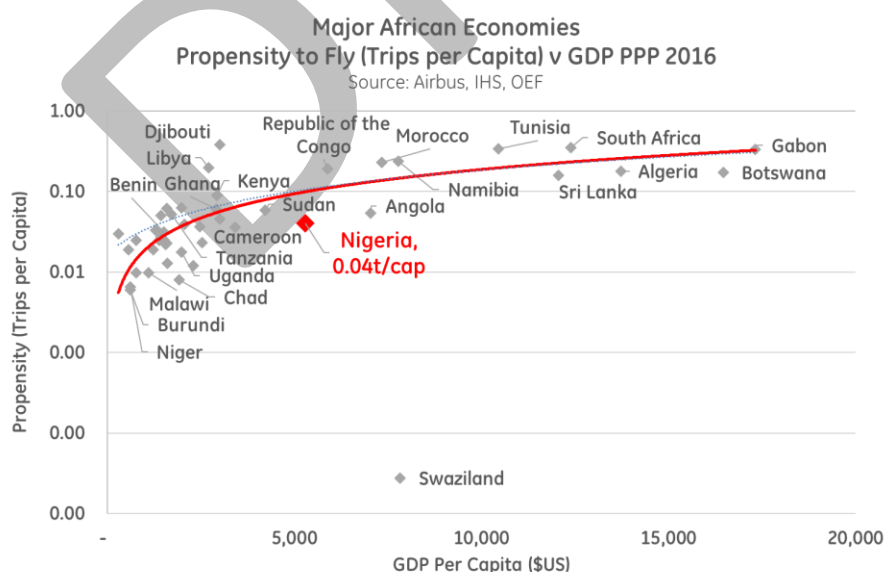
Figure 2: 5 Largest African Country Economies – GDP per Capita, 2000-2017



4.2 Air Transport Demand

On a GDP per capita basis Nigeria's current propensity to fly (PTF) is lower than most African peers and significantly behind global peers. This suggests that the Nigerian aviation sector is not realising its true potential, based on the scale of its population base and economy.

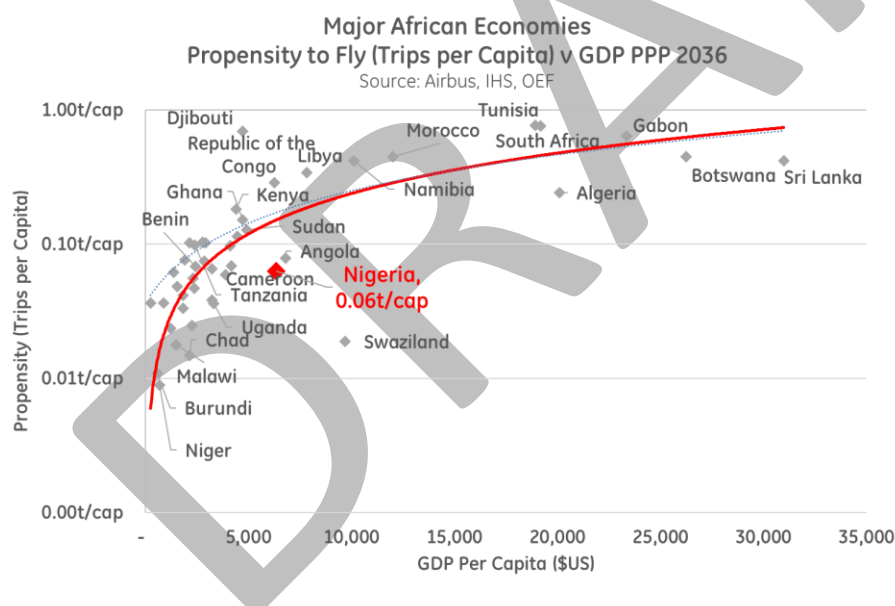
Figure 3: Major African Economies Propensity to Fly, 2016



- A strong correlation exists between GDP per capita growth and propensity to fly (PPTF) as measured by number of passengers divided by the national population (see figure above). Nigeria has a low GDP per capita at US\$5,283 in 2016 and the PPTF is also low, but at a level consistent with other countries at a similar stage in their economic development.
- As the income of the population increases, as measured by GDP per capita, so the share of spending on air travel grows. The relationship between GDP per capita and PPTF is highly correlated at a national level ($r^2 = 0.93$).
- Nigeria is at the early stages of economic development, and likely to experience rapid PPTF growth due to internal GDP per capita growth and potentially strong demand from the inbound tourist market.

The economic challenge for this driver of demand (or proxy thereof) is to grow the economy at a faster pace than the rate of population growth, and have an appropriate distribution of income. The economic policies cited above are thus directionally correct. OEF economic growth projections for Nigeria forecast that GDP per capita will increase to US\$6,340 in 2036. Based on the relationship illustrated in the figure below, this suggests that PPTF will reach 0.06 in 2036 from 0.04 in 2016.

Figure 4: Major African Economies Propensity to Fly, 2036

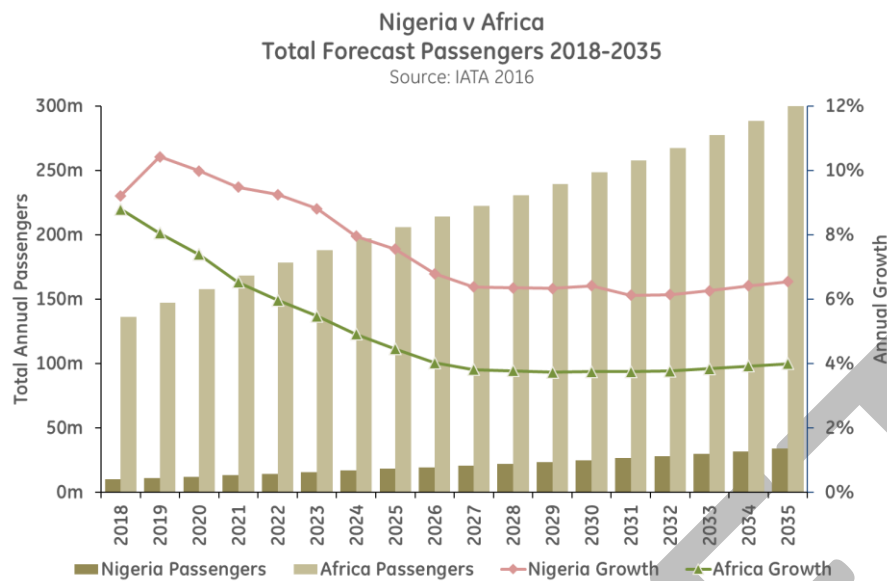


Even on a relative basis of comparable GDP / capita, Nigeria's forecast propensity to fly will be lower than most African peers and significantly lower than global peers, suggesting structural issues within the Nigerian aviation sector will be impeding growth.

Significant growth is forecast for Nigeria air passenger demand, especially for domestic services.

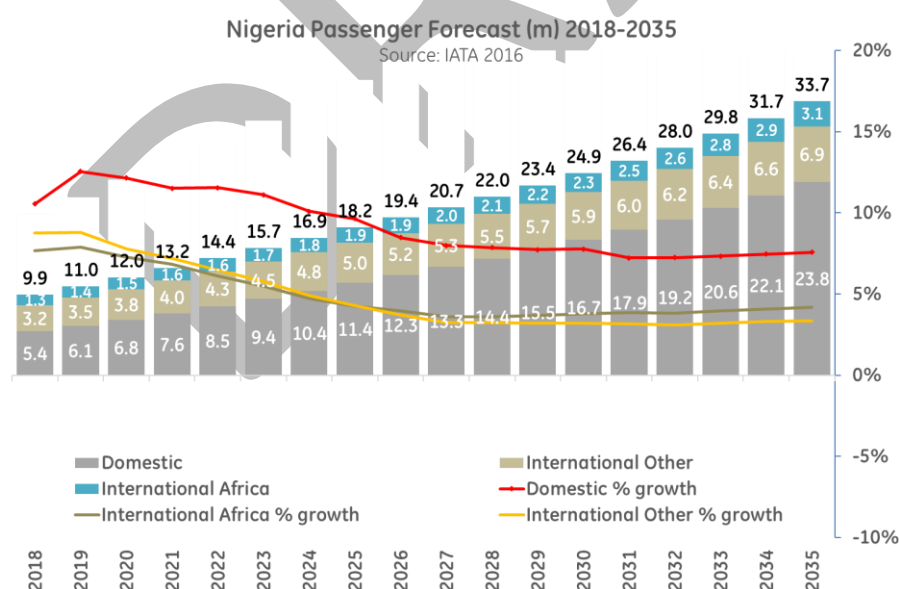
IATA forecast (2016) that over the long term (2018-2035) Nigeria passenger growth will outperform overall Africa passenger growth at CAGR 7.5% and CAGR 4.8% respectively. Nigeria passengers will rise from 9.9m in 2018 to 33.7m in 2035 (see figure below).

Figure 5: Nigeria vs Africa Total Forecast Passengers, 2018-2035



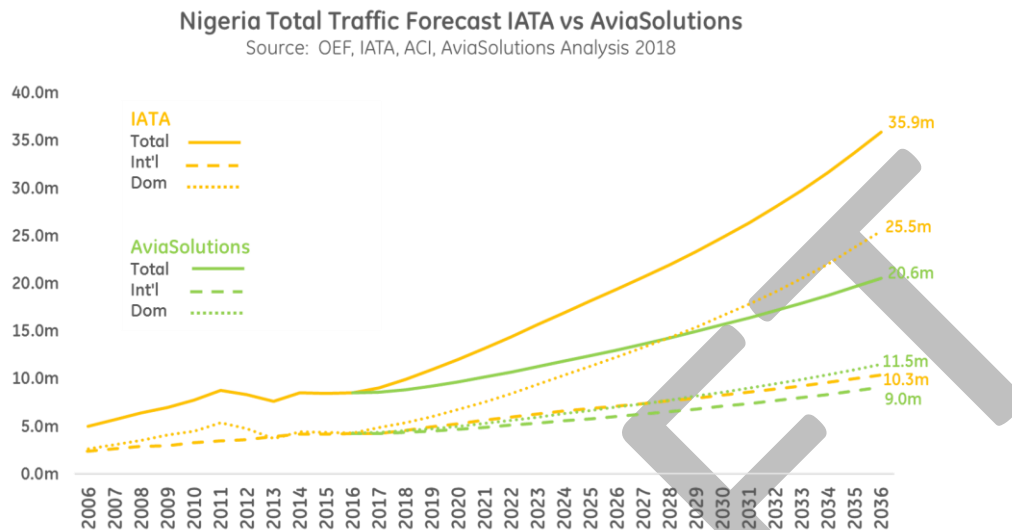
The fastest growing segment over the period will be the domestic market rising from 5.4m passengers in 2018 to 23.8m passengers in 2035 (CAGR 9.1%). Domestic passenger share will rise from 54.5% in 2018 to 70.5% in 2035. International Africa and International Other segments are forecast to grow at CAGR 5.2% and 4.6% in 2035 respectively.

Figure 6: Nigeria Forecast Passengers, 2018-2035



The TA's (AviaSolutions) forecast is more conservative (see figure below), showing traffic growth at much slower pace than the IATA assumptions and takes into account the latest data indicating a recession in the upcoming years (noting that the IATA forecasts were from 2016).

Figure 7: Nigeria Forecast Passengers IATA vs AviaSolutions, 2018-2035



Forecast traffic will reach 20.6m in 2036 (4.8% CAGR 2017-2036). International traffic will reach 9.0m in 2036 (4.2% CAGR). AviaSolutions believes that international traffic will play a major role in Nigeria in the upcoming years. Domestic traffic will reach 11.5m (5.3% CAGR).

Nigerian aviation contributes a modest \$0.7bn or 0.4% of GDP. However, it is said it has the potential to contribute in excess of 5% to GDP and to support one million jobs.

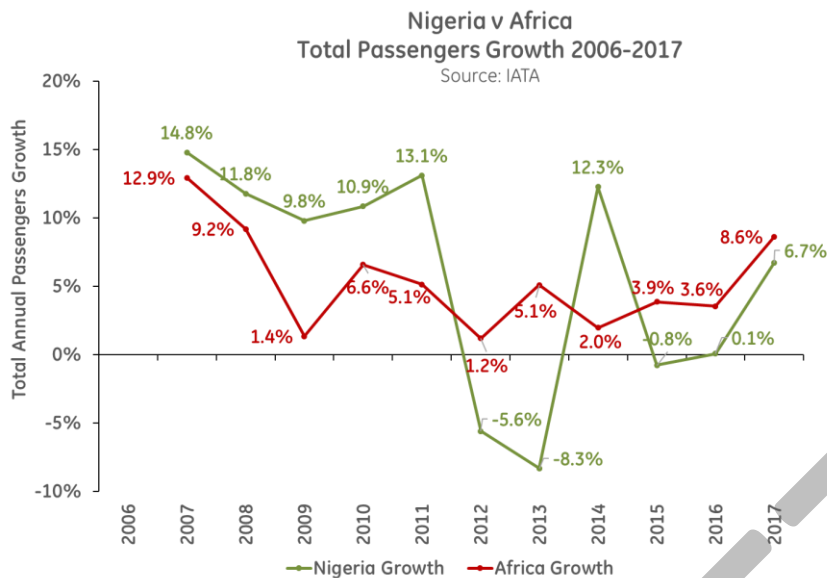
Tapping in to the substantial latent demand in Nigeria and achieving the above forecasts not only requires appropriate economic policy and growth, but also an aviation sector which can perform (see section below).

4.3 Aviation Sector & Market

Comparing Nigerian traffic growth over the past decade to the whole African continent, two distinct periods have been identified.

- To 2011, Nigeria generally grew faster than the Africa average. Between 2006 and 2011, Nigeria traffic growth averaged 12% per year, versus 7.0% per year for the African continent.
- However, from 2011-2017, Nigeria traffic growth became more erratic. From 2014-2017, Nigeria growth averaged only 0.5%, versus 4% for Africa.

Figure 8: Nigeria vs Africa Total Passengers Growth, 2006-2017



Nigeria is now significantly underperforming the African continent for traffic growth, for a number of reasons:

- Numerous domicile airlines have ceased to exist in recent years (e.g. Virgin Nigeria).
- Lack of foreign currency to purchase jet fuel also affects supply, as does the lack of domestic refining capacity. Without fuel supply, airlines are forced to withdraw capacity from the market.
- International traffic is exposed to a disproportionately high airport tariff structure. International tariffs are the highest in Africa, almost double that of its nearest comparator. Domestic tariff structures are low. Tariff policy will influence the price of travel and by doing so levels of demand.

Nigerian airline capacity in the Nigeria market has declined by 25% between 2012-2018 due to economic difficulties, spiralling debts, soaring fuel costs, a shortage of aviation fuel, a dollar shortage, high airport charges and taxes, lack of foreign investment, poor management, low aircraft utilisation, an uncompetitive cost base and competition from better managed and profitable international airlines. These problems have resulted in a high failure rate for airlines based in Nigeria.

Four significant Nigerian scheduled airlines currently operate: Arik Air, Air Peace, Dana Air and Med-View Airline. The Asset Management Corporation of Nigeria (AMCON) has taken control of Arik Air and Aero Contractors due to serious financial difficulties experienced by the airlines since 2013. AMCON is in the process of restructuring both airlines.

Despite the difficulties being faced by Nigerian airlines they still have half the capacity of the airlines operating in West and Central Africa. Arik Air and Air Peace are the two largest regional airlines in the region.

The domestic Nigerian market is very competitive with 7 airlines operating a total of 31 routes with airlines competing on 24 routes.

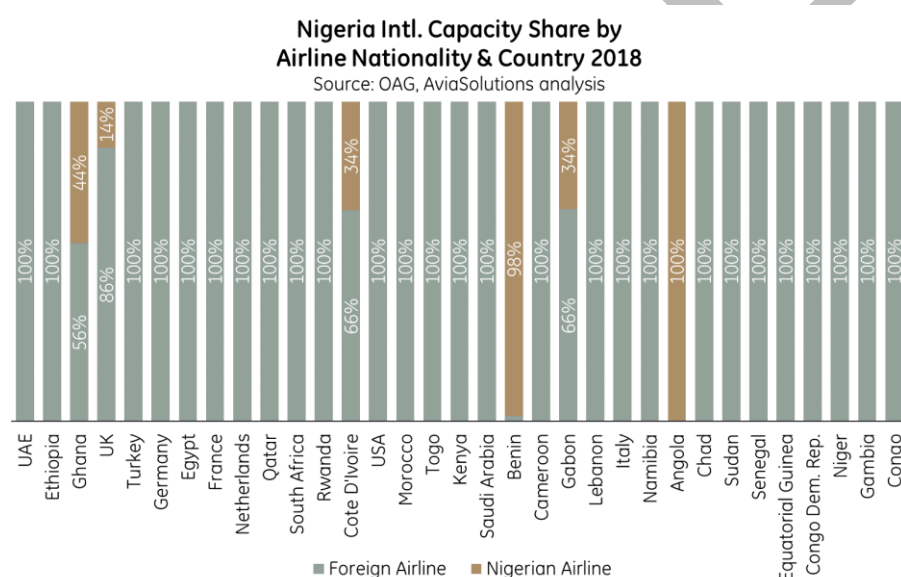
Nigerian airlines only have 10% of current international capacity operated from Nigeria with just 6 routes operated from Nigeria.

Ten scheduled airlines operate 15 international routes from Nigeria to West and Central Africa. Nigerian airlines only operate on 5 routes, highlighting their lack of competitiveness in the regional market. Between 2007 and 2016, Nigerian airlines operated on 12 regional routes.

Nigerian airlines are not competitive in the rest of Africa. Nine scheduled airlines operate 16 international routes from Nigeria to North, Eastern and Southern Africa. Only one Nigerian airline, Arik Air, operates on one route to Luanda. Nigerian airlines have previously served Johannesburg and Cairo.

Currently, Nigerian airlines have no direct services beyond Africa (now that Gatwick was dropped by Med-View), whereas 13 international airlines operate on 19 international routes from Nigeria. From 2007-2017, 7 scheduled Nigerian airlines have operated on 10 long haul routes including London, New York and Dubai.

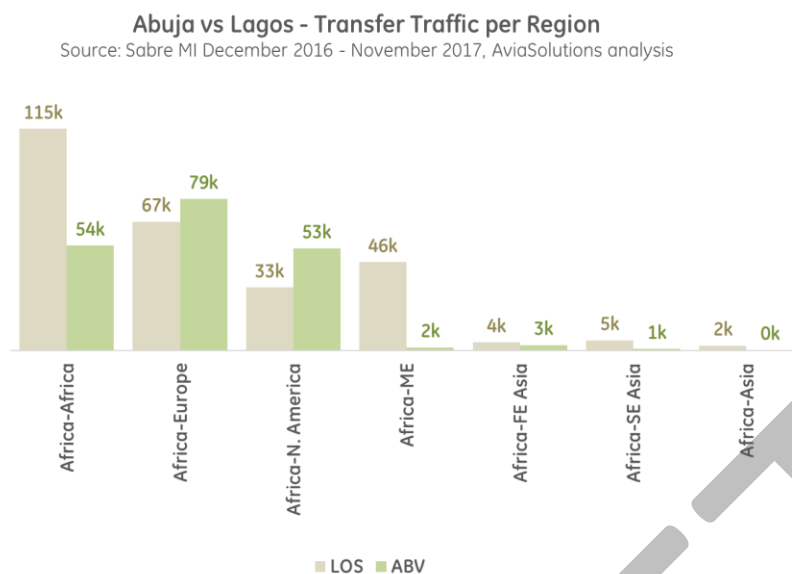
Figure 9: Nigeria International Capacity Share by Airline Nationality, 2018



Two main airports in Nigeria, Abuja and Lagos, currently play a marginal role in terms of transferring hubs in the region. Main reasons are high volatility of Nigeria airlines and low sustainability. However, analysis suggests there is sufficient connecting traffic to support a hub in Nigeria.

Abuja, a potential hub, should be looking to capture a share of the indirect (and direct) O&D market. This could be achieved with support of a well-established national airline offering a reliable connecting product for its passengers. The largest connecting flows at Abuja are between Africa and Europe (79k passengers), within Africa (54k) and between Africa and North America (53k) (see Figure below; 2017 data).

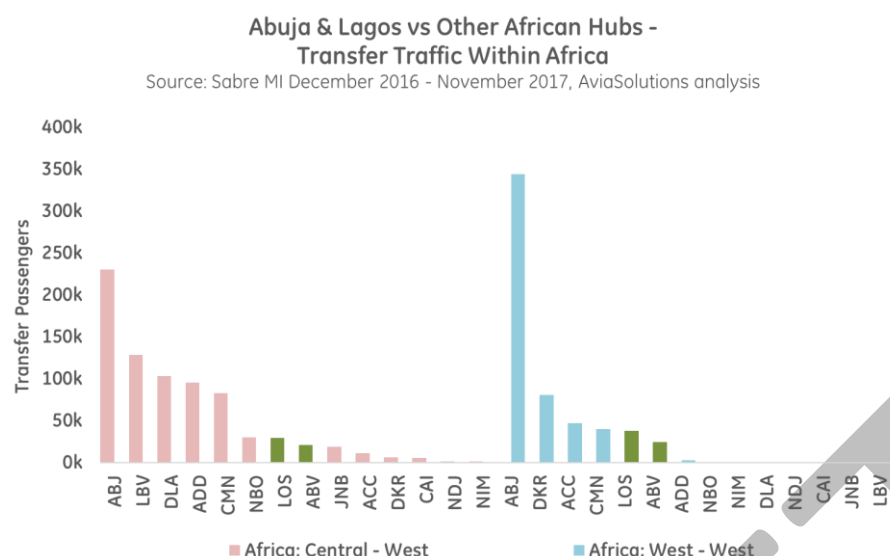
Figure 10: Abuja vs Lagos – Transfer Traffic per Region



Versus neighbouring competing hubs, Abuja and Lagos play a marginal role in terms of transferring passengers within Africa.

- In 2017, Lagos (7th place with 29.5k passengers) and Abuja (8th place with 20k) were behind competitors (Abidjan, Libreville, Duala etc.) in terms of transfer passengers from Central to West Africa (see Figure below).
- Transfer traffic flows within West Africa mainly connect via Abidjan (344k passengers) and Dakar (80k). Lagos and Abuja are 5th and 6th with very low traffic flows of 38k and 24k passengers respectively.

Figure 11: Abuja and Lagos vs Other African Hubs – Transfer Traffic within Africa



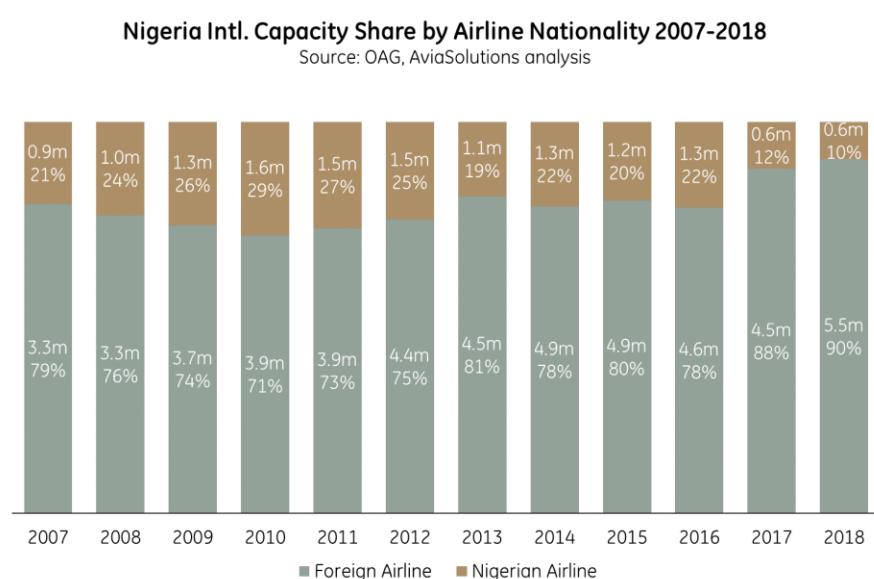
Further details can be found in the Annex on the Market Analysis (Nigerian National Airline Annex Market Report) sent under separate cover (13th June 2018).

4.4 Air Service Liberalisation

Nigeria is understood to have signed bilateral air services agreements (BASA) with over 78 countries (source: NCAA), including Canada, China, India, Israel, Morocco, Portugal, Qatar, Singapore and the UK. Nigeria also has an open skies agreement in place with the US since 2002.

Nigeria's airlines have historically had a small share of international capacity to and from the country – well below the capacity provisions included in the bilateral air service agreements in place with other countries. Their share further declined in 2017 following Arik Air's network cuts (Arik Air has withdrawn from long haul routes outside Africa).

Figure 12: Nigeria International Capacity Share by Airline Nationality, 2007-2018



The inability of Nigerian airlines to service their full rights under BASA agreements has been a consequence of a number of systemic Nigerian aviation issues, culminating in inadequate fleet size and an uncompetitive cost base.

From 2018, Nigeria opens its skies to 22 other African nations, following the implementation of the Yamoussoukro Decision and the entry into force of the new Single African Air Transport Market (SAATM). Nigeria's new open skies policy within Africa may increase the share of Nigerian airlines on international routes, provided these airlines offer a competitive product to that offered by other countries' carriers.

Nigerian airlines need to respond quickly to protect and enhance their market share in this new liberalised open skies environment. Competition from airlines in other countries is expected to increase.

4.5 SWOT Analysis

A summary SWOT analysis for the air transport sector in Nigeria is shown in the Table below.

Table 1: SWOT Analysis, Air Transport Sector in Nigeria

Strengths	Weaknesses
• Large population & economy • Central location in West Africa • Long history of aviation & human resources with experience • Government backing • Eagerness of Nigerians for a flag carrier they can be proud of	• High cost of fuel and airport charges • High taxes on aviation • Ageing fleet and low aircraft utilisation • High “mortality rate” of Nigerian airlines • Risk/cost premiums charges on aircraft leases & insurance • Under-developed links in the aviation value chain (i.e. airports/terminals, limited MRO) • Fluctuations/weakness of Naira • Corruptive authorities • Liabilities from former Government owned airlines
Opportunities	Threats
• African Open Skies • Under-utilised BASAs, especially long haul international • Substantial latent demand & low propensity to fly (PPTF) • Growing economy & middle class • Lack of Hubs in West Africa • Foreign investors	• African Open Skies • Growing competition from other African and international carriers • Elections with change in Government • Epidemics, terrorists and other force majeure crisis • International airline focus on Africa • Economic downturn

5. Addressable Market & Concept/Operating Model

An assessment of the addressable market and resultant 10-year air traffic forecasts has been undertaken. This has been done to estimate the maximum, theoretical size of the airline and so as to help define the operating model. It is a top-down modelling exercise. Bottom-up, route level feasibility analysis will be conducted by the TA at a later stage.

5.1 Methodology

The following methodology used for identifying and forecasting the addressable market. Further details are provided in Annex 1.

AviaSolutions/AMG have used OAG worldwide schedules data to identify routes that are currently served and unserved from Abuja and Lagos in 2018. Airlines provide their current and future schedules to OAG. Using OAG data, it is possible to identify the airlines operating on each route as well as the aircraft type, frequency and capacity offered. OAG historic schedules data for 2006 to 2018 has also been analysed to check where routes have previously been served.

Sabre Market Intelligence (Sabre MI) data which provides global Origin and Destination (O&D) traffic data based on MIDT data from major distribution systems.

The routes have been ranked by region based on the distance from Abuja and Lagos and the type of aircraft that would be utilised.

Whilst the decision regarding OEMs has not been made, the B737-800 and B787-800 aircraft types have been used for modelling purposes as a proxy for a narrow body and multi-aisle wide body. The new national flag carrier may well select different aircraft makes and models for implementation:

- Less than 4,000km using B737-800 (including Nairobi).
- Greater than 4,000km using B787-800 (excluding Nairobi).

Routes Currently Served

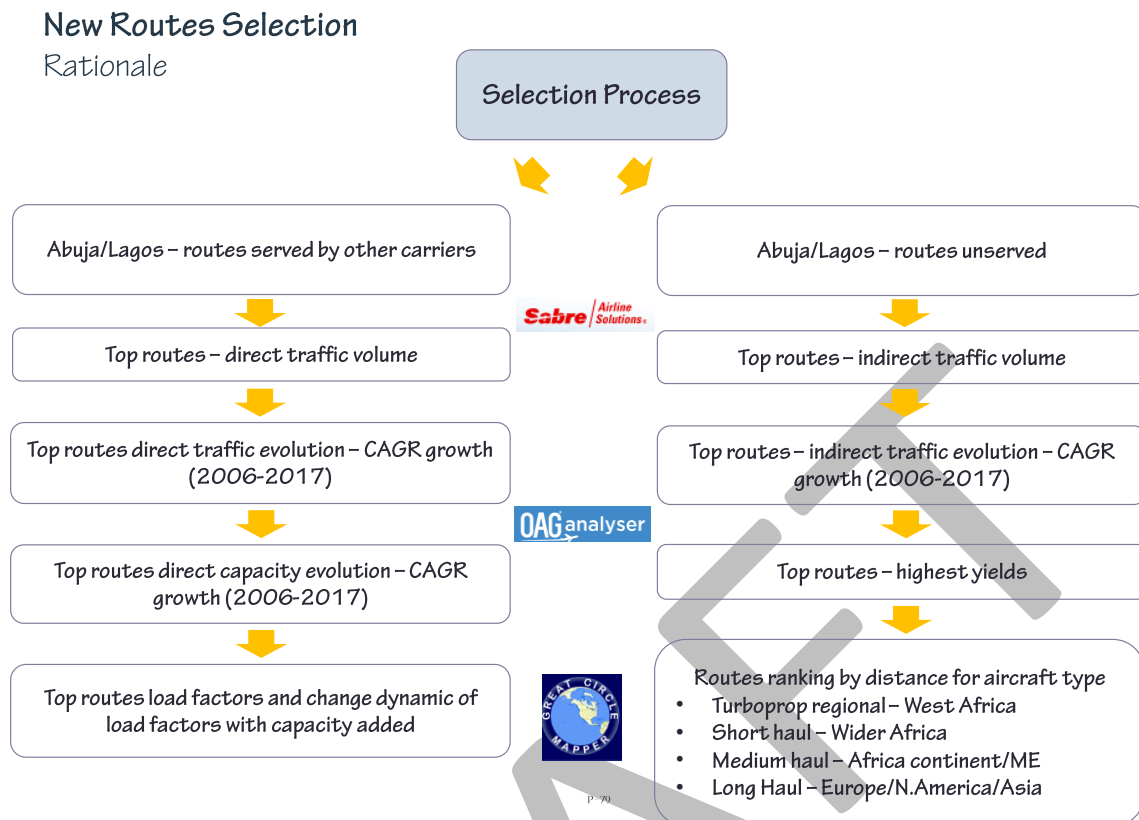
- Sabre MI data has been analysed to identify the top routes by total direct and indirect passenger volumes in 2016 and 2017 and the overall CAGR passenger demand growth from 2006 to 2017.
- OAG schedules data has been analysed to look at the evolution of annual capacity and capacity growth on the existing routes between 2006 and 2017.
- Current load factors have been assessed whereby routes with higher load factors are assumed to be most likely to accommodate additional new services.

Routes Currently Unserved

- Sabre MI O&D data has been analysed to identify the top routes by total indirect passenger volumes and the overall CAGR passenger demand growth from 2006 to 2017.
- Routes with the highest yields in 2016 and 2017 are assumed to more likely to be profitable.

The figure below is a graphic representation of this methodology for route selection.

Figure 13: Route Selection Rationale and Methodology



Routes Selected

- For Lagos, 60 direct routes were assessed (using the selection process/criteria in the Figure above), and 2,087 indirect routes.
 - For Abuja, 98 direct routes and 1,544 indirect routes were assessed.
 - For Abuja, 41 routes were selected of which 30 are currently unserved markets and 11 are markets with existing competition:
 - 10 domestic with narrow body jet (B737-800 used in the model)
 - 20 international regional under 4,000km with narrow body jet (B737-800 used in the model).
 - 11 international long-haul over 4,000km with wide body jet (B787-800 used in the model).
 - For Lagos, 44 routes were selected of which 22 are currently unserved markets and 22 are markets with existing competition:
 - 10 domestic narrow body jet (B737-800 used in the model)-
 - 15 international regional under 4,000km with narrow body jet (B737-800 used in the model).
- 19 international long-haul over 4,000km with wide body jet (B787-800 used in the model).
- The methodology does not explicitly take in to consideration price elasticity effects on demand (nor assumes fare changes), competitor response, etc. These will be assessed in more detail and at the route level, as appropriate, at the Business Plan / Business Case stage.

However, the Financial Model (see next Chapter) does take these issues/effects into consideration). The model can also be easily adapted to different aircraft models and types.

5.2 Results

The addressable market model has identified a number of routes as having high potential for the new flag carrier. These are split between: domestic; international regional (regional); and international long haul (international). Passenger volumes have been forecast by route over a 10-year period. Traffic is the number of journeys (i.e., number of sectors) flown by passengers. These are the volumes the new flag carrier airline might carry, as a theoretical maximum and all other things being equal. However, not all routes or these volumes are being targeted as part of the feasibility analysis. More conservative/prudent traffic forecasts are being used, as explained in the Financial Feasibility Chapter below.

Total

The bulk of the traffic volume is on domestic (55%), followed by international long-haul (31%) and then regional (13%). These estimates are for the addressable market in Year 1. As will be seen later, the fleet size required for these three types of services respectively is almost inversely correlated as a function of route/stage length.

Domestic

The dominant route domestically is Abuja (ABV) to Lagos (LOS) with currently 490,000 passengers per year estimated to be the market for a new carrier. This represents approximately 35% of the target addressable domestic market of c. 1.4m trips. Lagos to Port Harcourt is the only other significant route at 18%, roughly half of Abuja to Lagos. The third largest route is only 6.2% of the total.

Table 2: Domestic Passengers Forecast, 2019-2023

Domestic New Routes Forecast - Passengers						
Passengers	2019	2020	2021	2022	2023	CAGR 2028-2019
ABV-LOS	489,978	507,895	526,902	546,610	567,025	3.7%
LOS-PHC	250,422	259,010	268,133	277,578	287,369	3.5%
LOS-QOW	29,717	30,768	31,883	33,039	34,236	3.6%
LOS-BNI	67,803	70,100	72,540	75,067	77,685	3.5%
ENU-LOS	86,282	89,305	92,515	95,841	99,287	3.5%
LOS-QUO	59,743	61,760	63,902	66,120	68,420	3.4%
KAD-LOS	44,097	45,750	47,502	49,320	51,203	3.7%
KAN-LOS	77,124	79,973	82,994	86,128	89,374	3.7%
LOS-QRW	42,161	43,589	45,107	46,678	48,306	3.5%
CBQ-LOS	50,299	52,011	53,829	55,712	57,664	3.5%
ABV-PHC	46,236	47,902	49,670	51,503	53,402	3.6%
ABV-QOW	13,202	13,646	14,119	14,608	15,115	3.4%
ABV-YOL	10,102	10,535	10,993	11,469	11,962	4.2%
ABV-ILR	5,718	5,912	6,119	6,333	6,555	3.5%
ABV-QUO	7,943	8,214	8,501	8,799	9,108	3.5%
ABV-MIU	23,445	24,303	25,212	26,156	27,132	3.7%
ABV-KAN	29,196	30,770	32,429	34,161	35,949	5.0%
ABV-IBA	18,465	19,092	19,758	20,447	21,162	3.5%
ABV-ENU	32,444	33,708	35,046	36,437	37,876	3.9%
Total	1,384,376	1,434,241	1,487,157	1,542,006	1,598,830	3.6%

International Regional

The addressable market for a new flag carrier on regional routes is about 300k and could be nearly a million in 10 years' time (see Table below). Promising regional routes from Abuja include Accra, Entebbe, Cotonou and Beirut. Potential routes from Lagos also include Accra and Entebbe, as well as Dakar and Monrovia. The size of these markets (other than Accra, Entebbe and Dakar) is small relative to the larger domestic routes above. However, Regional is expected to grow more quickly, so reaches a more attractive scale by Year 5.

Table 3: Regional Passengers Forecast, 2019-2023

International Regional New Routes Forecast - Passengers						
Passengers	2019	2020	2021	2022	2023	CAGR 2028-2019
ACC-LOS	80,346	80,766	82,245	83,776	85,434	1.7%
COO-LOS	0	0	0	0	20,231	-
CMN-LOS	0	0	12,631	13,592	14,473	-
EBB-LOS	43,515	53,500	58,698	62,945	66,684	6.2%
DKR-LOS	55,707	65,567	70,273	74,866	78,910	6.0%
FIH-LOS	0	35,356	36,642	37,834	38,783	-
FNA-LOS	0	63,813	70,702	78,014	80,337	-
LOS-LUN	0	0	41,288	47,902	54,033	-
LOS-OUA	0	0	0	36,075	38,240	-
LOS-NIM	0	0	23,743	25,569	25,740	-
LOS-PNR	0	0	0	0	0	-
LOS-MLW	32,949	37,974	39,932	42,754	45,894	6.9%
CKY-LOS	0	0	0	35,255	38,381	-
BJL-LOS	0	0	0	0	24,784	-
KRT-LOS	0	13,492	14,638	15,859	17,077	-
ABV-ACC	22,418	23,772	25,184	26,623	28,092	5.5%
ABV-JED	0	0	0	0	0	-
ABV-MED	0	0	0	0	0	-
ABV-DKR	0	44,976	48,264	51,264	49,034	-
ABV-BEY	22,028	26,187	27,386	28,723	30,145	5.0%
ABV-KRT	0	0	24,495	26,573	26,070	-
ABV-EBB	24,041	29,552	32,409	34,787	36,859	6.1%
ABV-DAR	0	0	0	11,198	11,900	-
ABV-NIM	13,302	15,333	15,901	17,100	17,190	4.8%
ABV-MLW	0	0	0	0	0	-
ABV-BJL	0	0	0	0	0	-
ABV-OUA	13,150	14,878	15,643	16,408	17,181	5.0%
ABV-COO	26,800	35,790	39,167	42,561	45,757	9.5%
ABV-FNA	0	0	0	0	0	-
ABV-HRE	0	0	0	11,827	13,419	-
ABV-CMN	0	0	0	0	0	-
ABV-LUN	0	0	0	0	25,013	-
ABV-CKY	0	0	0	0	11,518	-
Total	334,257	540,956	679,241	821,505	941,180	16.0%

International Long Haul

International Long Haul has an estimated addressable market of about three-quarters of a million passengers, increasing to c. 1.5m in Year 5. The addressable market from Abuja is not surprisingly smaller than that from Lagos. However, the routes out of Abuja are important, including London, New York and Washington DC. A wider range of routes from Lagos are addressable. In addition to London, New York and Washington, other routes include: Nairobi; Johannesburg; Cape Town; Dubai; Houston; and Jeddah. Growth rates on these markets for the new flag carrier are expected to be in the middle between those for domestic and for regional.

Table 4: International Passengers Forecast, 2019-2023

International Regional New Routes Forecast - Passengers						
Passengers	2019	2020	2021	2022	2023	CAGR 2028-2019
JNB-LOS	75,300	76,803	78,507	79,921	81,368	1.7%
LHR-LOS	89,778	89,403	91,037	92,573	93,843	0.8%
JFK-LOS	108,683	109,436	111,144	112,696	114,009	0.7%
CDG-LOS	0	0	0	30,210	30,935	-
DXB-LOS	102,059	112,681	122,336	131,446	140,097	6.4%
LOS-NBO	53,083	58,335	62,570	66,075	69,383	6.3%
BEY-LOS	0	36,642	39,484	41,951	44,413	-
ATL-LOS	0	0	35,239	35,737	36,160	-
CPT-LOS	51,696	56,012	58,056	59,715	58,841	2.2%
BOM-LOS	0	0	54,994	58,466	61,775	-
LOS-IAD	51,031	53,636	53,622	54,651	55,792	1.7%
LOS-YTO	20,373	21,568	22,566	23,326	24,048	3.0%
DAR-LOS	0	0	36,553	38,956	41,384	-
HOU-LOS	68,836	72,367	74,936	76,715	78,256	2.1%
HRE-LOS	0	0	59,587	69,836	79,298	-
LOS-ZNZ	0	0	0	0	0	-
DEL-LOS	0	36,014	38,572	41,019	41,664	-
JED-LOS	24,629	25,809	26,785	27,611	28,361	3.4%
LOS-MED	0	0	0	0	0	-
ABV-JNB	0	0	0	30,521	31,753	-
ABV-CDG	0	0	0	0	15,221	-
ABV-LHR	35,378	38,277	41,761	45,259	48,210	5.5%
ABV-DXB	0	35,689	38,426	41,089	43,621	-
ABV-JFK	46,839	51,660	53,830	55,604	57,245	3.4%
ABV-IAD	31,462	34,326	35,724	36,849	37,870	3.2%
ABV-NBO	0	0	0	33,452	35,269	-
ABV-IAH	16,985	18,655	19,458	20,103	20,697	3.4%
ABV-ATL	0	0	0	0	0	-
ABV-DEL	0	0	0	0	16,865	-
ABV-BOM	0	0	0	0	16,506	-
ABV-YYZ	0	0	0	0	0	-
ABV-CPT	0	0	0	31,957	33,050	-
Total	776,132	927,314	1,155,185	1,335,738	1,435,929	9.3%

5.3 Operating Model

A detailed analysis of the routes identified as the addressable market has been conducted to estimate flying hours (see Figure below). The two pro forma aircraft have been assigned to routes based on stage length, average speed, etc. As a commercial decision, generally any flight over 4,000km was assigned the wide body dual aisle jet aircraft, and the narrow body single aisle jet aircraft to the other routes. In order to work out fleet size, a derived load factor and a maximum possible hours per day were assumed.

The results meet parameters expected standards for a well-operated African scheduled, network airline.

- Maximum utilisation of 9 hours per day assumed for the narrow body, and the outturn number was between 8 hours 17 minutes and 8 hours38 minutes of pro forma use.
- For the wide body, maximum utilisation of 12 hours per day, and the outturn number of between 11hours 25 minutes and 11 hours55 minutes.

It must be stressed this is not necessarily the expected performance of the new national carrier. A detailed route network model will be developed as part of a later stage which will factor in actual schedules, where aircraft are based and start their day, ramping up new routes and services, etc.

Table 5: Addressable Market Key Statistics, 2019-2023

Domestic - 737-800s	2019	2020	2021	2022	2023
Total Flight time (minutes)	718,353	718,353	718,353	718,353	736,307
Flight time per week (minutes)	13,814	13,814	13,814	13,814	14,160
Flight time per day (minutes)	1,968	1,968	1,968	1,968	2,017

International Regional 737-800s	2019	2020	2021	2022	2023
Total Flight time (minutes)	587,741	917,298	1,157,447	1,520,579	1,725,536
Flight time per week (minutes)	11,303	17,640	22,259	29,242	33,183
Flight time per day (minutes)	1,610	2,513	3,171	4,166	4,727

International Long Haul 787-8s	2019	2020	2021	2022	2023
Total Flight time (minutes)	2,502,863	2,810,674	3,394,687	3,855,429	4,145,901
Flight time per week (minutes)	48,132	54,051	65,282	74,143	79,729
Flight time per day (minutes)	6,857	7,700	9,301	10,563	11,359

TOTAL	2019	2020	2021	2022	2023
Total Flight time (minutes)	3,808,957	4,446,324	5,270,487	6,094,360	6,607,744
Flight time per week (minutes)	73,249	85,506	101,356	117,199	127,072
Flight time per day (minutes)	10,435	12,182	14,440	16,697	18,103

Total Flight time B737 - day (minutes)	3,578	4,481	5,139	6,134	6,745
Hours per day B737	59.6	74.7	85.7	102.2	112.4

Total Flight time B787-8 - day (minutes)	6,857	7,700	9,301	10,563	11,359
Hours per day B787-8	114.3	128.3	155.0	176.0	189.3

737-800 max utilisation per year (hours)	3285	3285	3285	3285	3285
737-800 max utilisation per day (hours)	9	9	9	9	9
# of 737-800s	6.63	8.30	9.52	11.36	12.49
# of 737-800s required	7	9	10	12	13
Average daily utilisation (hours)	08:31	08:17	08:33	08:31	08:38

787-8s max utilisation per year (hours)	4380	4380	4380	4380	4380
787-8s max utilisation per day (hours)	12	12	12	12	12
# of 787-8s	9.52	10.70	12.92	14.67	15.78
# of 787-8s required	10	11	13	15	16
Average daily utilisation (hours)	11:25	11:40	11:55	11:44	11:49

The implied fleet size is as follows, assuming the seat configuration is 160 for the narrow body and 242 for the wide body:

- 7 narrow body growing to 13 in Year 5; and
- 10 wide body growing to 16 in Year 5.

In practice, the airline would not start with 17 aircraft. The Financial Feasibility shows the ramp up and actual fleet size expected. The above is a maximum theoretic number. Actual seat configuration

(mix of Business, Economy and perhaps Premium Economy) will be addressed at the Business Plan / Business Case stage.

Derived load factors for the Addressable Market analysis are of an order-of-magnitude expected for a well-run scheduled, network airline: low to mid 70 percent for the most part (see Figure below).

Table 6: Addressable Market – Passengers and Potential Load Factors, 2019-2023

Domestic	2019	2020	2021	2022	2023
Passengers	1,384,376	1,434,241	1,487,157	1,542,006	1,598,830
Capacity	2,038,400	2,038,400	2,038,400	2,038,400	2,071,680
Avg. LF	68%	70%	73%	76%	77%
Regional	2019	2020	2021	2022	2023
Passengers	334,257	540,956	679,241	821,505	941,180
Capacity	465,920	698,880	848,640	1,098,240	1,248,000
Avg. LF	72%	77%	80%	75%	75%
International Long Haul	2019	2020	2021	2022	2023
Passengers	776,132	927,314	1,155,185	1,335,738	1,435,929
Capacity	1,087,258	1,238,266	1,515,114	1,791,962	1,942,970
Avg. LF	71%	75%	76%	75%	74%

It is important to note that the load factors are also not those expected as the actual performance of the new airline. The adjusted numbers are provided in the Chapter below on financial feasibility. However, the addressable market load factors do help us to define the Operating Model.

The key question now is: what kind of airline can the market, with these characteristics support? Given Government aspirations for a truly national flag carrier and what might attract a strategic equity partner, airline is:

- Scheduled, full-service, network carrier which serves a wide range of Nigerian markets – domestic, international regional and international long haul.
- Abuja - Lagos route could be run as a (quasi) shuttle service given it supports 6 or more daily round-trips
- Some of the domestic routes are quite small. These would not support a narrow body like a B737 providing a commercially reasonable level of frequency while maintaining appropriate load factors. These markets are a better fit for regional jets or turbo-props. In principle, the new flag carrier should not have too diverse a fleet (it is more costly to maintain a diverse fleet, as there are multiple training and certification requirements, more/different flight deck crew and engineering expertise, etc), and thus not operate aircraft smaller than the traditional narrow body single aisle jet aircraft. The Business Plan will consider a Franchise Model option for these markets. This would provide an opportunity for existing or new Nigerian carriers, especially as the new flag carrier is expected to be net generative of demand (due to better service, schedules, route, fares, etc).

The addressable market analysis does not suggest a low-cost carrier (LCC). The required Load factors are higher for LCCs, the required flying hours are much higher (Nigeria is limited by night flying restrictions at most airports), turnaround times are much faster, seat configuration is denser, , along with a number of other market attributes.

There is an element of being a connecting airline or international feeder carrier implied by the addressable market analysis and given that there are no true international, long haul hubs in West Africa, routes to London, Dubai and New York probably fit this model. However, much of the traffic probably terminates at these points as well. In addition, as a percentage of the overall network the new flag carrier would be likely to operate, and the diversity of the routes, it would not be appropriate to characterise it overall as international feeder or connecting. This will be examined further during the Business Plan / Case stage. Separate subsidiaries of the airline may be justified.

6. Financial Feasibility

The financial feasibility has been modelled on a monthly basis for a 5-year horizon, assuming operations to start in January 2019, in addition to the months preceding operational launch for the purpose of estimating the overall funding requirement. The actual start of operations may be before the end of the calendar year 2018; this last week of the year has not been modelled for on-going operations for simplification reasons, just start-up funding.

As we are still at the feasibility study stage, the feasibility financial modelling for this PPP Project Structuring Report has been carried out by type of market and while individual route characteristics have been considered, a detailed modelling analysis at route level has not been yet carried out.

Profit and loss, cash flow and balance sheet statements respectively have been developed, together with operational and financial KPIs.

For the purpose of the financial feasibility modelling, the outcome of the Addressable Market analysis described and summarised in section **Error! Reference source not found.** have been revised to rudently account for the following:

- **Average fares:** the current average fares by route have been revised down to account for a likely reaction from existing competitors and to better reflect the introduction of additional capacity in the market:
 - Domestic average fares have been assumed at 80% of current average fares for 2019 and 90% for 2020, before returning to current levels by 2021 as the new airline will establish itself as the main and superior service competitor in the domestic market;
 - Regional fares are also assumed at 80% for 2019 and 90% for 2020, before returning to current levels by 2021 in the absence of major established regional competitors
 - International (long-haul) fares also assumed at 80% for 2019, 90% for 2020 and only 95% in 2021 as additional capacity from the new airline will continue to compete against capacity provided by international carriers of quality and ability to sustain the price decrease.
- **Average load factors:** estimated target load factors by route have been dampened in the first 2 years of operations as the airline will take some time to establish itself domestically, regionally and internationally. To that effect, it has been assumed that load factors will be 10% and 5% lower than the base case estimated potential for 2019 and 2020 respectively,

before achieving full base case potential by end-year 2021 across domestic, regional and international routes.

- **Routes and frequencies of service:** some identified potentially addressable routes have been filtered out for the first 3 years of operation as being considered excessively thin and not providing sufficient levels of demand to be regularly and profitably operated with the assumed aircraft types. In order to do this the Addressable Market routes have been filtered using the following assumptions for the purpose of the feasibility financial modelling:
 - Domestic: routes with less than 3x weekly frequencies have been filtered out for the first three years of operation
 - Regional: routes with less than 3x weekly frequencies have been filtered out for the first two years of operation
 - International: routes with less than 5x weekly frequencies have been filtered out for the first two years of operation and 3x weekly frequencies thereafter

The figures below summarise the assumed routes and weekly frequencies for the base-case scenario, together with a representation of the projected network to be operated in 2023 at domestic, regional and international level. Again, it should be stressed that these routes have been selected for feasibility financial modelling purposes only, and may well not be the specific routes selected in the Business Plan. However, they are a reasonable presentation of the overall size of the new airline, and an approximation of the composition of routes by type.

Figure 14: Projected Domestic Network and Weekly Frequencies



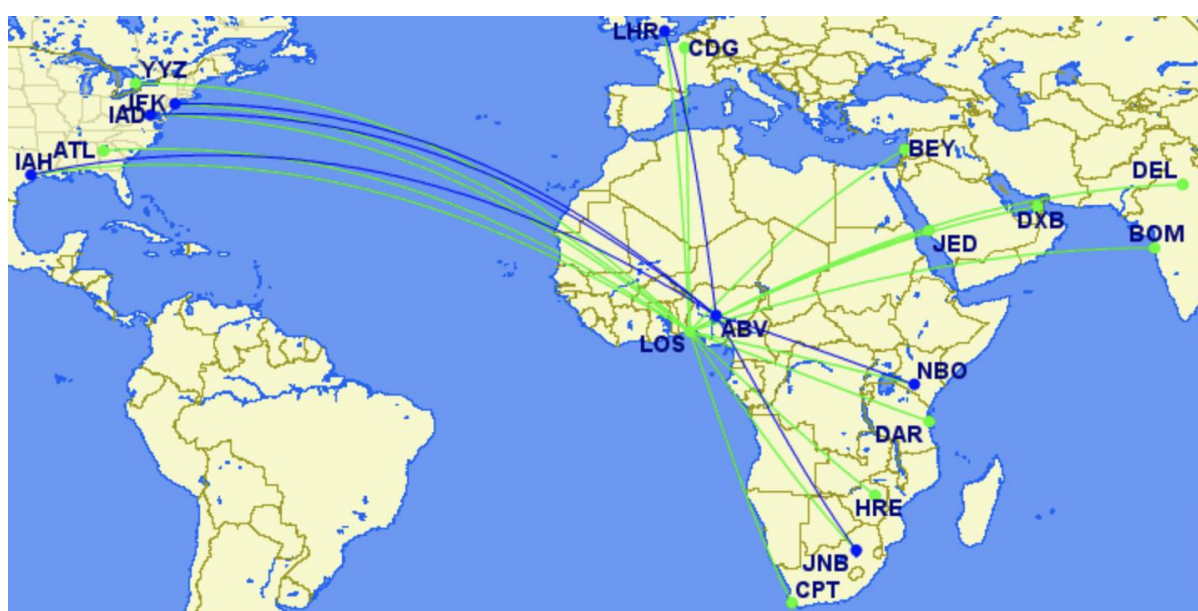
Dep.	Distance (Km)	WF 1	WF 2	WF 3	WF 4	WF 5
ABV-LOS	511	42	42	42	42	42
LOS-PHC	437	21	21	21	21	21
LOS-QOW	449	3	3	3	3	3
LOS-BNI	254	7	7	7	7	7
ENU-LOS	469	7	7	7	7	7
LOS-QUO	562	6	6	6	6	6
KAD-LOS	633	4	4	4	4	4
KAN-LOS	832	6	6	6	6	8
LOS-QRW	297	4	4	4	4	4
CBQ-LOS	584	4	4	4	4	4
ABV-PHC	443	5	5	5	5	5
ABV-QOW	396	-	-	-	2	2
ABV-YOL	569	-	-	-	1	1
ABV-ILR	311	-	-	-	-	-
ABV-QUO	466	-	-	-	1	1
ABV-MIU	711	-	-	-	2	2
ABV-KAN	364	3	3	3	3	3
ABV-IBA	405	-	-	-	2	2
ABV-ENU	282	3	3	3	3	3

Figure 15: Projected Regional Network and Weekly Frequencies



Dep.	Distance (Km)	WF 1	WF 2	WF 3	WF 4	WF 5
ACC-LOS	401	6	6	6	6	6
COO-LOS	106	-	-	-	-	2
CMN-LOS	3,173	-	-	1	1	1
EBB-LOS	3,314	4	4	4	5	5
DKR-LOS	2,446	5	5	5	5	6
FIH-LOS	1,812	-	3	3	3	3
FNA-LOS	1,836	-	5	5	6	6
LOS-LUN	3,682	-	-	3	4	4
LOS-OUA	830	-	-	-	3	3
LOS-NIM	774	-	-	2	2	2
LOS-PNR	1,579	-	-	-	-	-
LOS-MLW	1,558	3	3	3	3	4
CKY-LOS	1,895	-	-	-	3	3
BJL-LOS	2,313	-	-	-	-	2
KRT-LOS	3,341	-	-	1	2	2
ABV-ACC	902	-	-	2	2	2
ABV-JED	3,690	-	-	-	-	-
ABV-MED	3,847	-	-	-	-	-
ABV-DKR	2,767	-	4	4	4	4
ABV-BEY	3,987	-	-	2	2	2
ABV-KRT	2,843	-	-	2	2	2
ABV-EBB	2,962	-	-	2	3	3
ABV-DAR	3,955	-	-	-	1	1
ABV-NIM	743	-	-	2	2	2
ABV-MLW	2,011	-	-	-	-	-
ABV-BJL	2,654	-	-	-	-	-
ABV-OUA	1,029	-	-	1	2	2
ABV-COO	613	-	3	3	4	4
ABV-FNA	2,251	-	-	-	-	-
ABV-HRE	3,967	-	-	-	1	1
ABV-CMN	3,099	-	-	-	-	-
ABV-LUN	3,565	-	-	-	-	2
ABV-CKY	2,294	-	-	-	-	1

Figure 16: Projected International Network and Weekly Frequencies



Dep.	Distance (Km)	WF 1	WF 2	WF 3	WF 4	WF 5
JNB-LOS	4,511	-	-	4	4	4
LHR-LOS	4,990	5	5	5	5	5
JFK-LOS	8,449	6	6	6	6	6
CDG-LOS	4,704	-	-	-	-	2
DXB-LOS	5,900	5	5	6	6	7
LOS-NBO	3,835	-	-	3	3	4
BEY-LOS	4,479	-	-	-	-	2
ATL-LOS	9,404	-	-	-	-	2
CPT-LOS	4,768	-	-	3	3	3
BOM-LOS	7,632	-	-	3	3	3
IAD-LOS	8,758	-	-	3	3	3
LOS-YYZ	8,942	-	-	-	-	2
DAR-LOS	4,254	-	-	-	-	2
IAH-LOS	10,480	-	-	4	4	4
HRE-LOS	4,082	-	-	3	4	4
LOS-ZNZ	4,232	-	-	-	-	-
DEL-LOS	8,085	-	-	-	-	2
JED-LOS	4,199	-	-	-	-	2
LOS-MED	4,358	-	-	-	-	-
ABV-JNB	4,502	-	-	-	-	2
ABV-CDG	4,457	-	-	-	-	-
ABV-LHR	4,762	-	-	-	-	3
ABV-JFK	8,610	-	-	-	-	2
ABV-IAD	8,933	-	-	3	3	3
ABV-NBO	3,483	-	-	-	-	2
ABV-IAH	10,713	-	-	-	-	2
ABV-ATL	9,620	-	-	-	-	-
ABV-DEL	7,575	-	-	-	-	-
ABV-BOM	7,137	-	-	-	-	-
ABV-YYZ	9,076	-	-	-	-	-
ABV-CPT	4,905	-	-	-	-	-

6.1 Results

The main results from the financial feasibility modelling are as follows.

- Revenue: USD 1,421m by 2023, with nearly 60% coming from passenger services on international markets
- EBITDAR: positive EBITDAR margin from 2020 onwards, increasing to 23.5% by 2023

- EBIT: breakeven at EBIT level in 2021 (1.4% EBIT margin), increasing to 10.6% by 2023
- Cashflow from operations: positive from 2021 onwards, increasing to USD 212m by 2023
- Funding requirements: USD 300m requirement over the period 2018-2020 to cover start-up costs in 2018 and working capital requirements in 2019-2020

Figure 17: Yearly Revenue, 2018-2023

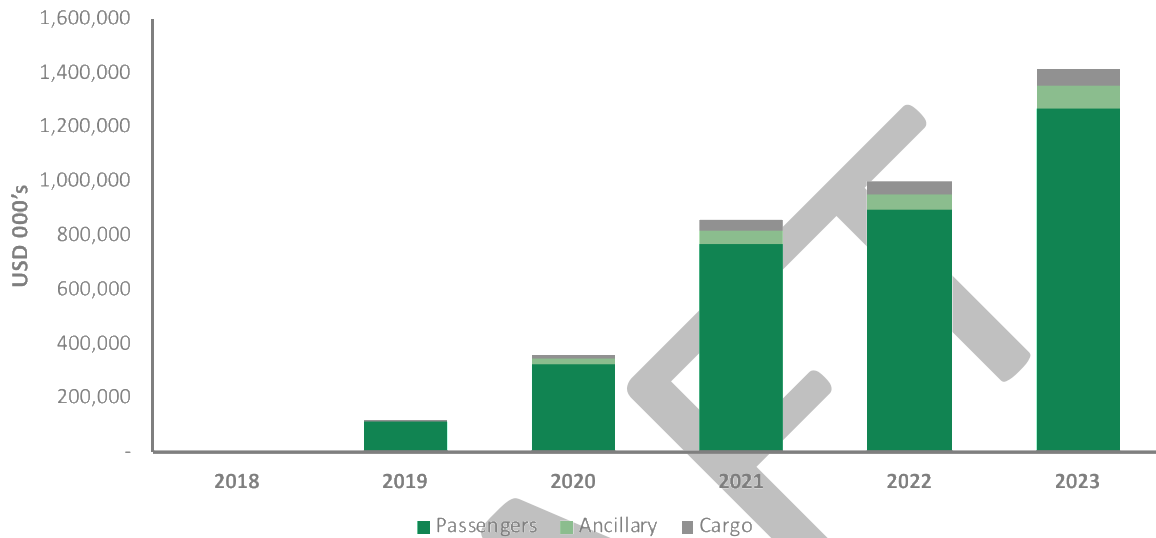
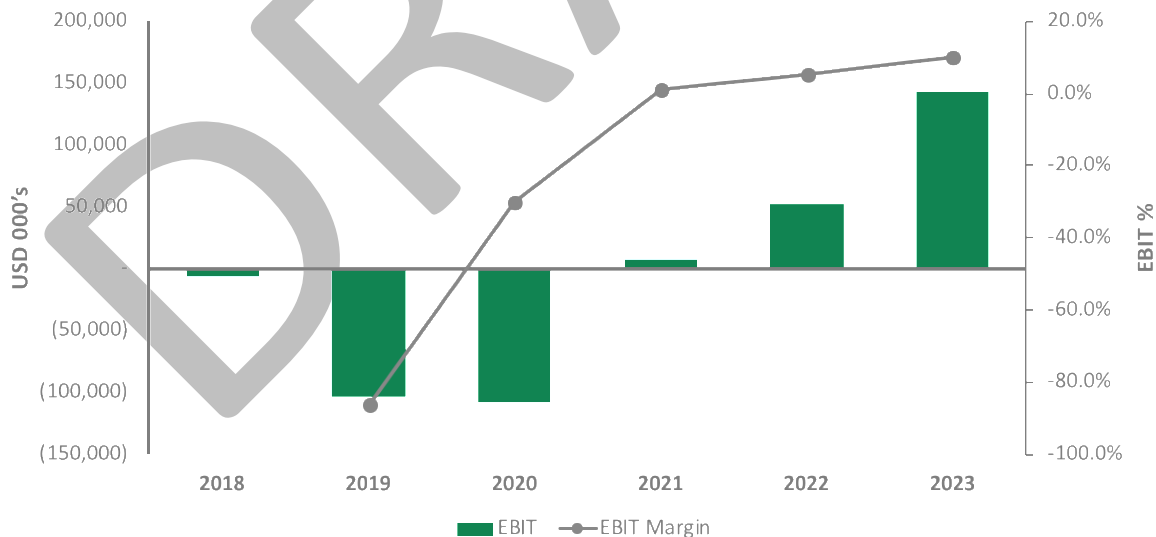


Figure 18: Yearly Operating Profit and Margin, 2018-2023



The year-5 expected operating profit is broadly similar to that of other major network carriers across various international markets.

The tables below summarise the projected Income Statement, Balance Sheet and Cash Flows for the new airline over the period to 2023. Further detailed monthly statements are available in the annexed Feasibility Financial Model (sent 13 June 2018 as a separate file).

Table 7: Yearly Airline Income Statement, 2018-2023

Item	Type	Unit	2018	2019	2020	2021	2022	2023
Turnover								
Passengers	Calc	USD	-	111,943,570	328,012,241	768,610,456	895,002,838	1,268,413,412
Ancillary revenues	Calc	USD	-	4,238,973	17,076,481	52,518,734	60,650,096	86,270,389
Cargo	Calc	USD	-	3,485,476	13,803,549	39,808,564	46,374,687	66,196,884
Other	Calc	USD	-	-	-	-	-	-
Total	Calc	USD	-	119,668,019	358,892,271	860,937,754	1,002,027,622	1,420,880,685
Employee costs								
Employee costs	Calc	USD	1,666,667	27,095,847	41,740,266	81,699,655	88,373,556	111,048,356
Fuel	Calc	USD	-	51,098,795	105,790,748	220,143,827	229,414,896	307,454,277
Maintenance	Calc	USD	-	10,403,949	19,399,017	86,133,591	93,247,825	124,647,584
Passenger expenses	Calc	USD	-	8,868,461	21,637,033	41,826,969	51,316,037	70,425,426
Aircraft handling, landing & navigation	Calc	USD	-	32,899,009	70,707,195	123,323,865	149,217,305	201,423,052
En-route charges	Calc	USD	-	7,238,660	14,232,504	22,493,900	27,080,579	35,838,486
Commissions	Calc	USD	-	5,597,178	16,400,612	31,921,678	37,128,377	52,186,825
Insurance	Calc	USD	-	634,471	1,121,696	4,762,290	4,943,520	6,411,939
Sales & Marketing	Calc	USD	-	3,590,041	10,766,768	25,828,133	30,060,829	42,626,421
Distribution costs	Calc	USD	-	5,597,178	16,400,612	38,430,523	44,750,142	63,420,671
Management fee	Calc	USD	3,000,000	2,810,027	5,383,384	-	-	-
Other	Calc	USD	900,000	5,983,401	17,944,614	43,046,888	50,101,381	71,044,034
Total	Calc	USD	5,566,667	161,817,017	341,524,449	719,611,319	805,634,448	1,086,527,070
EBITDAR	Calc	USD	(5,566,667)	(42,148,997)	17,367,822	141,326,436	196,393,174	334,353,615
EBITDAR Margin	Calc	%	0.0%	-35.2%	4.8%	16.4%	19.6%	23.5%
Flight equipment rentals	Calc	USD	-	60,786,456	123,550,413	131,294,505	139,477,797	184,645,820
EBITDA	Calc	USD	(5,566,667)	(102,935,454)	(106,182,591)	10,031,931	56,915,377	149,707,795
EBITDA Margin	Calc	%	0.0%	-86.0%	-29.6%	1.2%	5.7%	10.5%
Depreciation	Calc	USD	-	259,066	1,294,832	2,825,795	4,747,503	6,888,113
EBIT	Calc	USD	(5,566,667)	(103,194,520)	(107,477,422)	7,206,136	52,167,874	142,819,682
EBIT Margin	Calc	%	0.0%	-86.2%	-29.9%	0.8%	5.2%	10.1%
Non Operating income/(expense)								
Pretax earning from continuing operations	Calc	USD	(5,566,667)	(103,194,520)	(107,477,422)	7,206,136	52,167,874	142,819,682
Taxation	Calc	USD	-	-	-	-	-	-
Income from continuing operations	Calc	USD	(5,566,667)	(103,194,520)	(107,477,422)	7,206,136	52,167,874	142,819,682
Net profit/(Loss)	Calc	USD	(5,566,667)	(103,194,520)	(107,477,422)	7,206,136	52,167,874	142,819,682
Net margin	Calc	%	0.0%	-86.2%	-29.9%	0.8%	5.2%	10.1%

Table 8: Yearly Airline Balance Sheet, 2018-2023

Item	Type	Unit	2018	2019	2020	2021	2022	2023
Assets								
Non-current assets								
Fleet and parts	Calc	USD	-	4,444,338	11,800,259	23,572,222	35,699,332	50,675,915
Other Property, plant and equipment	Calc	USD	-	4,393,471	11,502,093	22,749,710	34,022,326	47,796,989
Deposits	Calc	USD	3,330,000	16,183,500	31,533,131	32,728,480	42,894,597	42,894,597
Non-current assets	Calc	USD	3,330,000	25,021,309	54,835,483	79,050,412	112,616,254	141,367,500
Current assets								
Trade debtors	Calc	USD	-	12,500,061	49,382,306	136,491,327	237,897,123	381,628,477
Cash and cash equivalents	Calc	USD	41,317,032	75,277,183	57,864,473	76,065,521	135,036,004	304,304,354
Current assets	Calc	USD	41,317,032	87,777,244	107,246,779	212,556,848	372,933,127	685,932,831
Total assets	Calc	USD	44,647,032	112,798,553	162,082,262	291,607,261	485,549,382	827,300,331
Equity								
Share capital & reserves	Calc	USD	50,000,000	200,000,000	300,000,000	300,000,000	300,000,000	300,000,000
Retained earnings (losses) brought forward	Calc	USD	(4,500,000)	(95,318,389)	(208,331,283)	(211,161,796)	(161,106,961)	(24,893,017)
Net Profit (loss) for the period	Calc	USD	(1,066,667)	(13,442,797)	(7,907,327)	2,129,323	4,242,362	10,848,100
Shareholders' equity	Calc	USD	44,433,333	91,238,813	83,761,391	90,967,527	143,135,401	285,955,083
Non-current liabilities								
Non-current liabilities	Calc	USD	-	-	-	-	-	-
Current liabilities								
Trade creditors	Calc	USD	213,699	8,126,511	25,526,174	55,611,782	89,985,688	136,707,346
UTR (incl pax tax)	Calc	USD	-	13,433,228	52,794,697	145,027,952	252,428,293	404,637,902
Current liabilities	Calc	USD	213,699	21,559,740	78,320,872	200,639,734	342,413,981	541,345,248
Total current and non-current liabilities	Calc	USD	213,699	21,559,740	78,320,872	200,639,734	342,413,981	541,345,248
TOTAL EQUITY AND LIABILITIES	Calc	USD	44,647,032	112,798,553	162,082,262	291,607,261	485,549,382	827,300,331

Table 9: Yearly Airline Cash Flow, 2018-2023

Item	Type	Unit	2018	2019	2020	2021	2022	2023
Cashflow from operating activities								
EBIT	Feed	USD	(5,566,667)	(103,194,520)	(107,477,422)	7,206,136	52,167,874	142,819,682
Depreciation and amortisation	Feed	USD	-	259,066	1,294,832	2,825,795	4,747,503	6,888,113
EBITDA	Calc	USD	(5,566,667)	(102,935,454)	(106,182,591)	10,031,931	56,915,377	149,707,795
Change in inventory	Calc	USD	-	-	-	-	-	-
Change in accounts receivable	Calc	USD	-	(12,500,061)	(36,882,245)	(87,109,022)	(101,405,796)	(143,731,354)
Change in accounts payable	Calc	USD	213,699	7,912,813	17,399,663	30,085,608	34,373,906	46,721,658
Change in UTR	Feed	USD	-	13,433,228	39,361,469	92,233,255	107,400,341	152,209,609
Net change in maintenance provisions	Calc	USD	-	-	-	-	-	-
Taxes	Calc	USD	-	-	-	-	-	-
Total cash flow from op. activities	Calc	USD	(5,352,968)	(94,089,474)	(86,303,704)	45,241,771	97,283,828	204,907,708
Cashflow from investing activities								
Dividends received	Input	USD	-	-	-	-	-	-
Capital expenditure	Input	USD	-	(9,096,875)	(15,759,375)	(25,845,375)	(28,147,229)	(35,639,359)
Fixed assets disposals	Input	USD	-	-	-	-	-	-
Deposits	Input	USD	(3,330,000)	(12,853,500)	(15,349,631)	(1,195,349)	(10,166,117)	-
Other acquisitions/ disposals	Input	USD	-	-	-	-	-	-
Restructuring expenses	Input	USD	-	-	-	-	-	-
Payment for contract termination	Input	USD	-	-	-	-	-	-
Lease aircraft and engine	Input	USD	-	-	-	-	-	-
Cash after investing activities	Calc	USD	(8,682,968)	(116,039,849)	(117,412,710)	18,201,048	58,970,483	169,268,349
Cashflow from financial activities								
Interest	Feed	USD	-	-	-	-	-	-
Fuel rebate	Feed	USD	-	-	-	-	-	-
Other / FX	Input	USD	-	-	-	-	-	-
Dividends paid	Input	USD	-	-	-	-	-	-
Debt raised/(Paid)	Input	USD	-	-	-	-	-	-
Equity issued (cash)	Input	USD	50,000,000	150,000,000	100,000,000	-	-	-
Total cash movement	Calc	USD	41,317,032	33,960,151	(17,412,710)	18,201,048	58,970,483	169,268,349

6.2 Revenue

The revenue has been derived by using the Base Case traffic forecasts in the Addressable Market Analysis (see Section **Error! Reference source not found.**). Fares/yields have been taken from IATA DS and Sabre IM, which are main credible international airline data sources and are derived. No shift in demand due to differentials in fares have been modelled at this initial stage; this will however be analysed in detail when modelling at a route level.

As detailed above, average fares have been prudently assumed lower than actual to reflect a potential competitive response from the existing carriers across the various markets.

In-line with this, prudent assumptions have also been used for the expected seat load-factors across the various markets, leading to a conservative ramp-up of the passenger revenue of the first three years of operations.

Tables 10 and 11 below summarise the fares and seat load factor parameters assumed for the financial feasibility model.

Table 10: Average Net Fares Assumptions

Item	Type	Unit	Input	2018	2019	2020	2021	2022	2023
Domestic network									
Average yield % of current	Input	%			80%	90%	100%	100%	100%
Yield growth	Input	%		-	5.0%	5.0%	5.0%	5.0%	5.0%
Yield growth factor	Calc	x		1.0x	1.1x	1.1x	1.2x	1.2x	1.3x
Yield/ PAX/ sector	Calc	USD		-	64.4	76.1	88.7	88.1	92.5
Regional network									
Average yield % of current	Input	%			80%	90%	95%	95%	95%
Yield growth	Input	%		-	5.0%	5.0%	5.0%	5.0%	5.0%
Yield growth factor	Calc	x		1.0x	1.1x	1.1x	1.2x	1.2x	1.3x
Yield/ PAX/ sector	Calc	USD		-	180.1	253.7	312.6	335.1	353.7
International network									
Average yield % of current	Input	%			80%	90%	95%	95%	95%
Yield growth	Input	%		-	3.0%	5.0%	5.0%	5.0%	5.0%
Yield growth factor	Calc	x		1.0x	1.0x	1.1x	1.1x	1.2x	1.3x
Yield/ PAX/ sector	Calc	USD		-	413.8	490.1	576.9	604.8	680.1

Table 11: Average Load Factors Assumptions

Item	Type	Unit	Input	2018	2019	2020	2021	2022	2023
Domestic network									
Target load factor year end	Feed	%			68.2%	70.7%	73.3%	75.3%	76.9%
Correction for LF	Feed	%		40.0%	-10.0%	-5.0%	-	-	-
Actual LF	Feed	%		40.0%	58.2%	65.7%	73.3%	75.3%	76.9%
Regional network									
Target load factor year end	Feed	%		-	71.0%	76.1%	80.0%	74.8%	75.4%
Correction for LF	Feed	%		40.0%	-10.0%	-5.0%	-	-	-
Actual LF	Feed	%		40.0%	61.0%	71.1%	80.0%	74.8%	75.4%
International network									
Target load factor year end	Feed	%		-	74.6%	77.4%	75.8%	77.5%	74.4%
Correction for LF	Feed	%		40.0%	-10.0%	-5.0%	-	-	-
Actual LF	Feed	%		40.0%	64.6%	72.4%	75.8%	77.5%	74.4%

We have assumed the overlay of a 5% yield increase per annum over the 5-year period, reflecting the relatively high inflationary environment of the region and the expected overall return to growth in passengers yields expected from 2018 onwards¹. This may be reflected in aggregate fares policy. However, it may also merely take in to account the mix of business and economy fares; the model assumes a blend of average net fares across travel classes reflecting the assumption that aircraft will be in multiple cabin configuration. Thus, the fare forecasts should be reflective of the capacity to be offered.

¹ IATA predicts passenger yield increase of 3.2% in 2018 worldwide following years of decreases

6.3 Fleet

As explained in the Concept/Operating model section, we have carried out the feasibility financial modelling analysis based on two types of aircraft: a narrow body single aisle modern jet; and a wide body dual-aisle jet.

For the purpose of the feasibility financial model for the first 5-year period, we have assumed these to be Boeing 737-MAX8 and Boeing 777-200 aircraft in standard configuration respectively. It should be noted however that this assumption does not represent a final decision towards these aircraft types and models for the new airline, as such decision will require substantial further detailed analysis in conjunction with negotiations on pricing and conditions with the OEMs and lessors.

Both main OEMs are considered. For the interests of ease of presentation of the financial model, the Boeing aircraft are used, and a “switch” is already in place in the model to convert to Airbus. For the purpose of this report, the difference between the two OEMs is statistically insignificant. Any final selection will be based on negotiations on aircraft availability and value for money from both OEMs and prospective lessors.

In reality therefore, there may be different types and models – for example, Airbus A320 Neo instead of the Boeing 737-MAX8. However, it is important in practice to retain a high degree of homogeneity in the fleet, to facilitate maintenance, spares inventory control, an appropriately trained cadre of flight deck and cabin crew, etc.

Aircraft are assumed to be leased across the period, with the narrow-body aircraft on operating leases from 2019 and the widebody aircraft on ACMI leases for the initial 2-years of operations and standard operating leases thereafter, largely to simplify the start of long-haul operations.

A switch is built in to the financial model and shows there is some impact on the profit line, but the main difference is the line items in which the costs appear and the operational need for the airline to directly provide crew, maintenance, etc when moving from wet lease ACMI to owned.

The Boeing 737-MAX8 has been chosen in the modelled base case in part as the TA understands there is a reasonable supply of Nigerian pilots and crew for this type of aircraft (although they would need a minimal amount of additional type training and need to be supplemented by expatriates in the early years), such aircraft are relatively available on the lease market, and maintenance capability exists in the region.

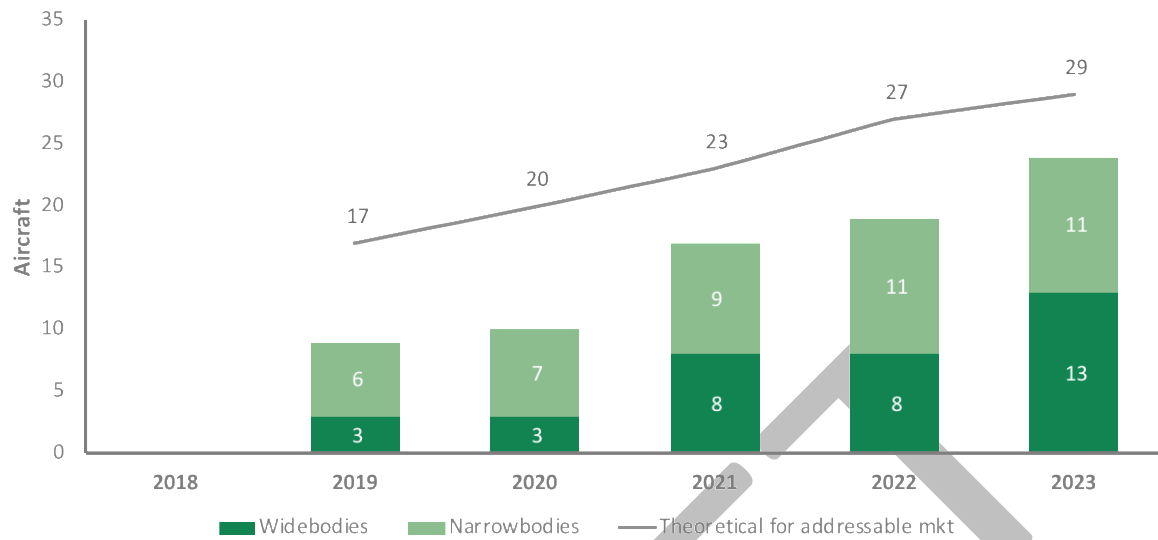
The intention is for the leased fleet to be augmented with further aircraft at such time as the orders for new aircraft can be filled and always with new generation models to secure adequate performance and economics. The narrow-body fleet is expected be complemented with additional Boeing 737-MAX8 and the wide-body fleet, initially Boeing 777-200, will be replaced and complemented with Boeing 787-8 aeroplanes as these will become available – assuming the airline opts for Boeing aircraft.

Although traffic forecasts suggest a potential addressable market to be served by a larger fleet, based on the feasibility financial model, the new airline is expected to profitably operate by 2023 with a mixed narrow- and wide-body fleet comprising of the following aircraft:

- 13 narrow-body aircraft; and
- 11 wide-body aircraft

The Figure below shows the estimated potential fleet requirement based on the size of the addressable market and the estimated size of the fleet to be profitably operated by the new flag carrier from 2021 onwards.

Figure 19: Assumed Fleet at year-end, 2018-2023



Should the passenger demand volume of the new flag carrier rise to commensurate levels so as to justify this fleet size, then the leased aircraft orders may need to be revised in order to secure a larger fleet and/or other sources of aircraft sought (for example, those currently on order and/or owned by Arik, and/or aircraft “contributed” by a Partner, e.g. foreign airline).

6.4 Costs

The following table summarises the main cost assumptions, with specific differences for the different markets in which the new airline is planned to be operational.

Table 12: Main Operational Costs Assumptions by Market Type

Item	Source	Unit	Domestic	Regional	International	Notes
Operating costs assumptions						
Aircraft type	Input	Type	737-8MAX	737-8MAX	777-200	Assumed no changes of aircraft throughout period. Other aircrafts modelled with similar outcomes
Seats per aircraft	Input	#	159	159	275	Standard seating
Fuel burn	Input	Gall/Flight Hr	740	706	2,200	Assumed 15% saving for LEAP engines over current CFM56
Hourly maintenance	Input	\$/Flight Hr	900	900	1,800	Based on similar existing operations. 737-MAX use reserves estimates from SC
Landing & parking	Input	\$/sector	700	800	2,000	Based on similar operations actuals
En-route charges	Input	\$/sector	500	1,000	1,600	Based on similar operations actuals
Pax Handling	Input	\$/pax	15	20	35	Based on similar operations actuals
Ground handling	Input	\$/sector	500	600	1,600	Based on similar operations actuals
Commission	Input	% ticket rev.	5.0%	5.0%	5.0%	Based on similar operations actuals
Advertising & sales	Input	% rev.	3.0%	3.0%	3.0%	Based on similar operations actuals
Distribution	Input	% ticket rev.	5.0%	5.0%	5.0%	Based on similar operations actuals
Flight equipment rental	Input	\$/plane/month	370,000	370,000	900,000	Based on SC initial quoted figures
ACMI	Input	\$/Flight Hr	3,000	3,000	7,000	Based on SC initial quoted figures. 777 assumed ACMI for yr1 and yr2
Pax expenses	Input	\$/pax	7	10	20	Based on similar operations actuals
Crew cost	Input	\$/sector	200	1,000	5,000	Based on similar operations actuals
Aircraft insurance	Input	\$/aircraft/month	9,000	9,000	35,000	Based on similar operations actuals
Salary costs						
FOPS	Input	USD/Month	11,000	11,000	11,000	Based on similar operations actuals
ENG	Input	USD/Month	5,000	5,000	5,000	Based on similar operations actuals
FLTSEV	Input	USD/Month	3,200	3,200	3,200	Based on similar operations actuals
Commercial	Input	USD/Month	6,000	6,000	6,000	Based on similar operations actuals
Administration	Input	USD/Month	5,000	5,000	5,000	Based on similar operations actuals
HOTAC at ABV base	Input	USD/Day/FOPS	100	100	100	Assumed all FOPS require per-diem of \$100 in ABV/LOS
FTEs per aircraft						
FOPS	Input	FTE/Aircraft	12	12	15	Added 25% to account for foreign pilots travelling
ENG	Input	FTE/Aircraft	8	8	8	Based on similar operations actuals
FLTSEV	Input	FTE/Aircraft	14	14	36	3.5 complements for 737 and 6 complements for 777
Commercial	Input	FTE/Aircraft	6	6	6	Based on similar operations actuals
Administration	Input	FTE/Aircraft	17	17	17	Based on similar operations actuals and added 25% additional for Nigerian market

Table 13: Main Operational Costs Assumptions by Year

Item	Source	Unit	2018	2019	2020	2021	2022	2023
Brent	Input	\$/bbl	80	80	80	80	80	80
Local wage inflation	Input	%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Foreign wage inflation	Input	%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Local inflation	Input	%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
US inflation	Input	%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

The African market is certainly unique in its characteristics that are reflected in a cost composition that can be significantly driven from the one of other continents/ geographical areas. In particular, in the case of operations out of Nigeria, the following should be noted:

- Flight operations/pilots may not be readily available locally and as there is a worldwide shortage of flight deck crew, may require a premium and accommodation/travel per-diems to be attracted to Nigeria;
- Other staff may be available at lower average costs;
- Generally high landing, navigation and handling charges across the continent;
- Potential premiums charged by lessors and insurance companies;
- High fuel costs due to uncompetitive Jet-A1 differentials charged at many airports;
- High cost of sales, commission, payment processing and distribution costs due to lower percentage of on-line transactions

The cost assumptions have been assembled and calibrated to reflect such characteristics and have been benchmarked against other African-Continent operators.

In addition, it should be noted that the Nigerian and generally African markets are subject to high cost and wage inflation, currently often in excess of 10% p.a. This has been reflected in the feasibility

financial model by prudently escalating local costs at this rate throughout the period, although evidence suggests this does not happen on a regular basis.

6.5 Funding

The feasibility financial model is predicated on the assumption that the new airline will require to be adequately funded in order to be competitive and offer the required level and quality of service to the flying public, without replicating the failures and shortcomings of the many ventures that have in the past failed to deliver on expectations.

Under this assumption funding has been modelled to consistently ensure cash balances for the airline to be in excess of 10% of previous 12 months revenue to provide assurance of sufficient working capital for operational purposes, in-line with other international operators.

The total funding requirements of the new airline are estimated at USD \$300m. As mentioned, this is intended to be a conservative/prudent estimate, as the airline industry is rife with airlines that have failed due to being under-capitalised. Nigeria has not been immune to this phenomenon.

The \$300m is comprised of an estimate of \$8.8m for start-up costs before commencement of operations (salaries, initial aircraft lease and other supplier deposits, interim management and consultancy). The remainder of the \$300m is made up of working capital requirements emanating from funding operating cash flow, capex and deposits during the ramp-up phase of the operations in 2019 and 2020. These total c. \$242m.

Based on the cashflow forecast from the feasibility financial model, a funding of USD 300m would provision an equity cushion of c. \$58m, which represents an equity contingency of about 20%.

Based on the cash flow timing requirements of the business, the equity injections are profiled over time as:

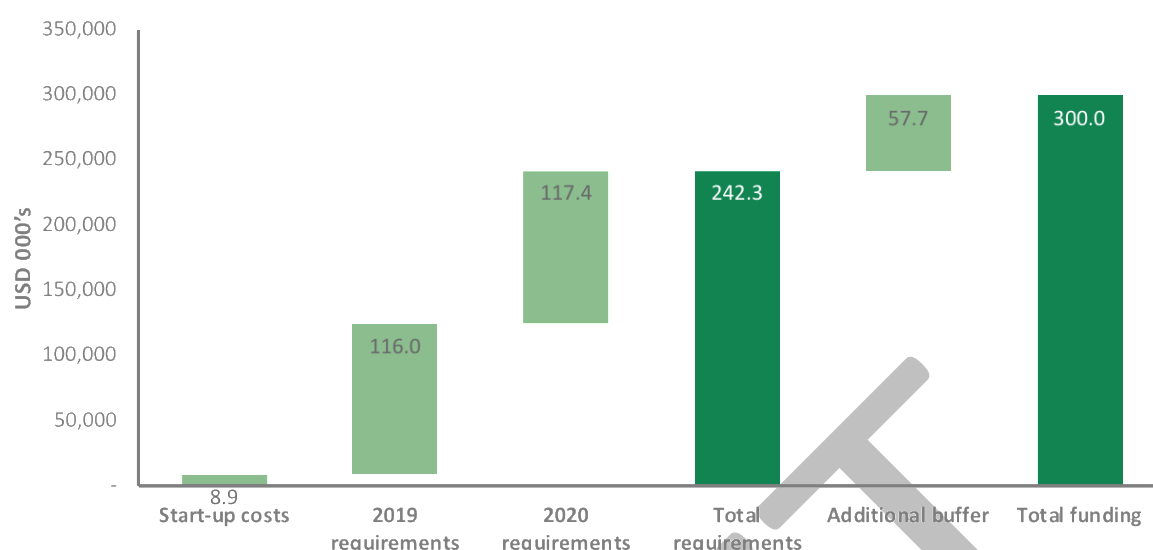
- \$50m in 2018;
- \$150m in 2019; and
- \$100m in 2020

In actuality, these funds will need to be guaranteed in some form from the outset by Government.

In the next stage of the TA's work, we will explore financing options (e.g., debt/equity ratio, cost of funds/financing, other sources of equity, how/when funds are to be held and distributed, etc) and additional detailed analysis of the exact monthly cashflows and therefore funding requirements through the preparation of detailed route-based financial analysis modelling.

The figure below provides a summary of the funding requirements for the new airline.

Figure 20: Funding Requirements Summary



6.6 Additional financial analysis scenarios

The figures above represent a conservative/prudent base case for the new airline. In order to better assess risks and opportunities facing the airline two additional scenarios have been modelled:

- Best case: assuming less intense price competition, more rapid achievement of target load factors, achievement of higher fares through better service and more successful pass-through of local cost inflationary pressures
- Worst case: assuming continued price pressure beyond 2020, higher cost inflationary pressures, higher fuel costs without fares pass-through

The tables below summarise the key assumption changes for the best and worst case scenarios compared to the base case.

Table 14: Key Scenario Analysis Assumptions Changes

Item	Unit	2019	2020	2021	2022	2023	Notes
Best Case							
Brent	\$/bbl	80	80	80	80	80	No change
Fare % of current	%	80%	90%	100%	100%	100%	Assumed quicker recovery by 2020 and additional growth through better ser
Market yield growth	%	7.5%	7.5%	7.5%	7.5%	7.5%	Assumed higher pass-through, additional 2.5%
Load factor correction	%	-10.0%	-5.0%	-	-	-	Assumed quicker recovery by 2020 to full potential
Local inflation	%	10.0%	10.0%	10.0%	10.0%	10.0%	No change
Worst Case							
Brent	\$/bbl	90	90	90	90	90	\$10/Bbl increase
Fare % of current	%	80%	90%	90%	90%	90%	Assumed remaining at 90% in 2021-23 instead of further recovery
Market yield growth	%	5.0%	5.0%	5.0%	5.0%	5.0%	No change
Load factor correction	%	-10.0%	-5.0%	-5.0%	-5.0%	-5.0%	Assumed remaining at -5% in 2021-23 instead of further recovery
Local inflation	%	12.0%	12.0%	12.0%	12.0%	12.0%	2% higher

Under the best case scenario assumptions, the airline would be expected to achieve break-even at operating level during 2020 and an EBIT margin of 27% (which is very high) by 2023 largely driven by a revenue uplift of 30% compared to base case scenario.

Conversely, under the worst-case assumptions break-even would not be achieved by 2023, with EBIT % falling to close-to break-even at -3% in 2023, mainly due to a revenue decrease of 11% in that year compared to base case, coupled with an operating cost increase of 3%.

The tables below summarise the high-level yearly income statements for the best- and worst-case scenarios.

Table 15: Best Case Yearly Income Statement, 2018-2023

Item	Type	Unit	2018	2019	2020	2021	2022	2023
Turnover								
Passengers	Calc	USD	-	137,807,185	414,576,117	989,328,713	1,143,587,052	1,664,691,510
Ancillary revenues	Calc	USD	-	5,071,469	21,140,123	65,959,457	75,565,149	110,047,075
Cargo	Calc	USD	-	4,286,360	17,428,650	51,242,958	59,256,002	86,834,761
Other	Calc	USD	-	-	-	-	-	-
Total	Calc	USD	-	147,165,013	453,144,890	1,106,531,128	1,278,408,203	1,861,573,346
Employee costs								
Employee costs	Calc	USD	1,666,667	27,095,847	41,740,266	81,699,655	88,373,556	111,048,356
Fuel	Calc	USD	-	51,098,795	105,790,748	220,143,827	229,414,896	307,454,277
Maintenance	Calc	USD	-	10,403,949	19,399,017	86,133,591	93,247,825	124,647,584
Passenger expenses	Calc	USD	-	9,385,345	23,296,202	43,137,681	51,316,037	70,425,426
Aircraft handling, landing & navigation	Calc	USD	-	33,896,951	73,852,094	125,725,424	149,217,305	201,423,052
En-route charges	Calc	USD	-	7,238,660	14,232,504	22,493,900	27,080,579	35,838,486
Commissions	Calc	USD	-	6,890,359	20,728,806	41,008,479	47,348,773	68,382,158
Insurance	Calc	USD	-	644,464	1,150,249	4,779,357	4,943,520	6,411,939
Sales & Marketing	Calc	USD	-	4,414,950	13,594,347	33,195,934	38,352,246	55,847,200
Distribution costs	Calc	USD	-	6,890,359	20,728,806	49,466,436	57,179,353	83,234,575
Management fee	Calc	USD	3,000,000	3,359,967	6,797,173	-	-	-
Other	Calc	USD	900,000	7,358,251	22,657,245	55,326,556	63,920,410	93,078,667
Total	Calc	USD	5,566,667	168,677,896	363,967,456	763,110,839	850,394,500	1,157,791,721
EBITDAR	Calc	USD	(5,566,667)	(21,512,883)	89,177,434	343,420,289	428,013,703	703,781,626
EBITDAR Margin	Calc	%	0.0%	-14.6%	19.7%	31.0%	33.5%	37.8%
Flight equipment rentals	Calc	USD	-	60,786,456	123,550,413	131,294,505	139,477,797	184,645,820
EBITDA	Calc	USD	(5,566,667)	(82,299,340)	(34,372,979)	212,125,784	288,535,906	519,135,805
EBITDA Margin	Calc	%	0.0%	-55.9%	-7.6%	19.2%	22.6%	27.9%
Depreciation	Calc	USD	-	259,066	1,294,832	2,825,795	4,747,503	6,888,113
EBIT	Calc	USD	(5,566,667)	(82,558,406)	(35,667,811)	209,299,989	283,788,403	512,247,692
EBIT Margin	Calc	%	0.0%	-56.1%	-7.9%	18.9%	22.2%	27.5%
Non Operating income/(expense)								
Pretax earning from continuing operations	Calc	USD	(5,566,667)	(82,558,406)	(35,667,811)	209,299,989	283,788,403	512,247,692
Taxation	Calc	USD	-	-	-	-	(41,859,998)	(56,757,681)
Income from continuing operations	Calc	USD	(5,566,667)	(82,558,406)	(35,667,811)	209,299,989	241,928,405	455,490,012
Net profit/(Loss)	Calc	USD	(5,566,667)	(82,558,406)	(35,667,811)	209,299,989	241,928,405	455,490,012
Net margin	Calc	%	0.0%	-56.1%	-7.9%	18.9%	18.9%	24.5%

Table 16: Worst Case Yearly Income Statement, 2018-2023

Item	Type	Unit	2018	2019	2020	2021	2022	2023
Turnover								
Passengers	Calc	USD	-	112,929,778	331,009,313	704,782,436	795,947,179	1,130,881,486
Ancillary revenues	Calc	USD	-	4,268,560	17,211,349	48,455,494	54,253,741	77,348,010
Cargo	Calc	USD	-	3,515,950	13,928,826	36,582,368	41,328,043	59,118,731
Other	Calc	USD	-	-	-	-	-	-
Total	Calc	USD	-	120,714,288	362,149,489	789,820,297	891,528,963	1,267,348,228
Operating Costs								
Employee costs	Calc	USD	1,666,667	27,169,927	41,991,748	82,331,296	89,360,957	112,710,002
Fuel	Calc	USD	-	57,174,870	118,370,155	246,320,774	256,694,250	344,013,167
Maintenance	Calc	USD	-	10,403,949	19,399,017	86,133,591	93,247,825	124,647,584
Passenger expenses	Calc	USD	-	9,029,706	22,430,987	42,515,111	51,526,929	71,980,548
Aircraft handling, landing & navigation	Calc	USD	-	33,497,173	73,301,740	127,177,819	153,754,289	211,223,603
En-route charges	Calc	USD	-	7,370,272	14,754,755	23,743,283	29,104,443	39,217,178
Commissions	Calc	USD	-	5,646,489	16,550,466	29,209,721	32,952,984	46,454,829
Insurance	Calc	USD	-	634,471	1,121,696	4,742,120	4,903,104	6,364,995
Sales & Marketing	Calc	USD	-	3,621,429	10,864,485	23,694,609	26,745,869	38,020,447
Distribution costs	Calc	USD	-	5,646,489	16,550,466	35,239,122	39,797,359	56,544,074
Management fee	Calc	USD	3,000,000	2,830,952	5,432,242	-	-	-
Other	Calc	USD	900,000	6,035,714	18,107,474	39,491,015	44,576,448	63,367,411
Total	Calc	USD	5,566,667	169,061,440	358,875,230	740,598,461	822,664,457	1,114,543,839
EBITDAR	Calc	USD	(5,566,667)	(48,347,152)	3,274,259	49,221,836	68,864,506	152,804,388
EBITDAR Margin	Calc	%	0.0%	-40.1%	0.9%	6.2%	7.7%	12.1%
Flight equipment rentals	Calc	USD	-	60,786,456	123,550,413	131,294,505	139,477,797	184,645,820
EBITDA	Calc	USD	(5,566,667)	(109,133,608)	(120,276,154)	(82,072,669)	(70,613,291)	(31,841,432)
EBITDA Margin	Calc	%	0.0%	-90.4%	-33.2%	-10.4%	-7.9%	-2.5%
Depreciation	Calc	USD	-	259,066	1,294,832	2,825,795	4,747,503	6,888,113
EBIT	Calc	USD	(5,566,667)	(109,392,675)	(121,570,985)	(84,898,463)	(75,360,794)	(38,729,545)
EBIT Margin	Calc	%	0.0%	-90.6%	-33.6%	-10.7%	-8.5%	-3.1%
Non Operating income/(expense)								
Pretax earning from continuing operations	Calc	USD	(5,566,667)	(109,392,675)	(121,570,985)	(84,898,463)	(75,360,794)	(38,729,545)
Taxation	Calc	USD	-	-	-	-	-	-
Income from continuing operations	Calc	USD	(5,566,667)	(109,392,675)	(121,570,985)	(84,898,463)	(75,360,794)	(38,729,545)
Net profit/(Loss)	Calc	USD	(5,566,667)	(109,392,675)	(121,570,985)	(84,898,463)	(75,360,794)	(38,729,545)
Net margin	Calc	%	0.0%	-90.6%	-33.6%	-10.7%	-8.5%	-3.1%

7. Risks

Establishing an airline and operating it on a sustained, commercial basis is an inherently risky business. Margins are typically thin in the industry, and market trends and competitor behaviour can change quickly. Furthermore, airlines in Nigeria overall do not have an overly successful track record, despite attempting a number of operating models and reconfiguring their route networks.

Therefore, it is key that identification, evaluation and management of possible risks associated with the proposed National Carrier are carried out as part of the determination of the feasibility of the project.

The main categories of risk are as follows. The more material risks are addressed below.

- Financial
- Operational
- Market / Competition
- Political / Regulatory

7.1 Financial

- Exchange rate - Nigerian airlines have major expenses that must be paid in foreign currency, particularly US dollars. These include fuel and aircraft lease payments. Most airline revenue is earned in Naira, thus exposure to movements in the NGN/USD exchange rate is high. The new national airline should seek to receive income in USD or hard foreign currencies whenever possible, especially on international long-haul routes.
- Fuel price – Fuel prices in Nigeria are high. In recent years, Nigerian airline's fuel costs have risen dramatically while competitors overseas have benefitted from reduced fuel costs. A Jet A1 refinery is understood to have been built to convert locally sourced oil into aviation grade Jet A1. This could be a significant benefit to Nigerian airlines if supply and distribution can be assured, and payment made in Naira. International fuel price fluctuation is also a risk that all airlines face.
- Aircraft leasing costs - attract a risk premium pricing, as would the cost of insurance.
- Domestic Inflation & Taxes – are all high in Nigeria. These, combined with the other high direct operating costs, mean a high cost/ASK for Nigeria based airlines. This is particularly material in the context where the new flag carrier not only needs to be profitable on a sustained basis but would possibly seek to lower average fares in order to compete on certain routes and to stimulate traffic and provide better value for money for Nigerians.
- Start-up and working capital funding – numerous airlines fail due to under-estimation of these costs. Nigeria is already a high cost base for airlines, and the new airline needs to have the financial resilience to sustain any price wars (which are particularly likely in the early years)

7.2 Operational

- Aircraft utilisation – is very low typically in Nigeria. For example, 4 to 6 hours per day for a narrow body. Best performing airlines (LCC mainly) would target 13 hours, and most commercial operators would suffer financially much below 9 hours.
- Availability of aircraft and pilots – the decision as to which fleet is chosen for the new flag carrier should be in part based on how much would be needed to train up a significant cadre of pilots, cabin crew and maintenance staff. In addition, aircraft selection is based in part on availability – there are relatively long lead times for delivery of new aircraft (e.g., up to 5 years for a B737-Max). Mitigation can be achieved through dry or wet leases, but usually are considered a short-term, stop-gap measure.
- Aircraft turnaround times and restrictions on night flying in Nigeria means aircraft utilisation is low, often making the airline uneconomic. The new flag carrier will need to select routes carefully, put management resource into aircraft handling (e.g., turnaround managers at key airports) and work closely with airport authorities and terminal management
- Aviation industry / “value chain” (MRO, airports, etc) in Nigeria needs to be improved overall – “no system is stronger than its weakest link”. The Ministry of Transportation (Aviation) is in the process of implementing its robust and holistic strategy to improve the whole sector
- Experienced airline leadership, with international best practice is lacking in Nigeria – insourcing such leadership can be expensive, but should be worth it in terms of improvement in the management, commercial strategy and profit line of the airline
- Labour unions – have a strong voice in Nigeria and can exert pressure. Well-thought out industrial relations plans are needed. A new airline should seek to make maximum use of Nigerian staff, as well create employment opportunities not only in its company but in the aviation sector overall and the economy more broadly.

7.3 Market / Competition

- Load factors – there is a risk that the addressable market is not realised in a substantive way, that traffic forecasts are overly optimistic, market share growth does not happen due to unexpected competitor response, the aircraft type chosen are not attractive to customers, customer perception of new the new flag carrier is not as positive as expected, etc. This can be mitigated in part by a robust and conservative/prudent business plan. In addition, the brand positioning and customer experience can be market tested, and the better commercial airlines are adaptable, constantly testing new markets, reinventing their product, etc.
- Competitor response is unpredictable - domestic airlines may attempt to “sabotage” a new flag carrier; international carriers with “deep pockets” and/or strategic intent may well wage price war (e.g., BA, LH, SAA, KQ, ET). Mitigation can include providing opportunities for domestic airlines (e.g., franchise model, raising aggregate demand for air travel to the benefit of all domestic carriers). For a price war, “deep financial pockets” are needed depending on who the adversary is, and the new airline must focus on providing the best product, service and value for money it can
- Initial route network is not optimal - there are numerous routes already identified which have traffic potential and BASA rights which are not part of the initial route network (used in the feasibility analysis); airlines typically test new markets and continually refine the network.

7.4 Political & Regulatory

Political risks result from changes in Government, policies, legislations, regulations, etc.

With a national election scheduled in February 2019, a risk is a change in Government.

With or without change in Government, key policies, legislation and/or regulations may change. These can be mitigated in part by laying out in the PPP what is requirement from Government in these areas (based on robust analysis), the assumptions being made in the PPP contract, and the remedial actions the SPV has available to it.

Some regulatory change that would enable or enhance the PPP may not come it to effect, or not on a timely basis. For example, some of the current regulations of starting up an airline in Nigeria (e.g., years in operation domestically before starting international, hours an aircraft new to Nigeria needs to be flown before being out in to commercial service) are not overly conducive to the model and timeframe being pursued for the start-up. Logic would dictate that the relative importance of the new flag carrier would merit the revisions to the relevant regulations, especially if safeguards were in place so the core intent of regulation remained addressed. Furthermore, given the poor track record of the aviation sector to date, it is difficult to argue the current regulatory regime is optimal and not a candidate for modification.

Some key risk mitigations on more macro issues not addressed above include the following:

1. Ensure international best practice on safety management, operations, corporate governance and accountability.
2. Option to select a strategic airline partner, with technical know-how, operating to international standards, with the necessary experience.
3. Government participation to ensure that unnecessary bureaucracy does not prevent the airline from obtaining the requisite regulatory approvals.

4. Financial: Government may provide sovereign guarantees for the project cost and aircraft purchases/leasing where necessary.

Risks associated with legal liabilities and litigation need to be assessed by Government appointed legal advisors. These risks relate to past issues from previous Government owned airlines which may surface in the future. For example, pension claims made against the former national carrier. Such risks will need to be identified before private investors are sought. If the risk cannot be mitigated, then Government will need to consider providing the airline/ private investors with warranties or indemnifications. Claims can come from many sources, such as unions/labour, suppliers (local and foreign), creditors including financial institutions, etc.

8. Regulatory Considerations

The airline will be established (and operated) in a manner and form which is fully compliant with all Nigerian law and regulations, as well as international airline standards (EASA) in order to immediately pass IOSA and other audits (insurance/EASA TCO/alliance partners).

8.1 Airline Operations in Nigeria

There are several steps involved in the establishment of an airline in Nigeria, many of which are regulatory in nature. Some of the key elements are indicated below.

The Flag Carrier of Nigeria, once the legal name has been decided on, will be registered as an incorporation in the Nigerian registrar. Next step is to secure websites, check the name for international 'usefulness' and cultural 'cleanliness' all around the world, the name will be matched with a colour scheme and a logo. After registration, name and logo will be made public.

The Air Operators Certificate (AOC) application can then be initiated. As per regulation, there is a minimum 3-month application period. There will be a 5-month period from the time of making the application until the first flight intended on 23 December 2018, so some contingency has been allowed.

The other two elements in the process are the Airline Transport License (ATL) and the Air Carrier permit with the route approvals.

The ATL is guided by the NCAA and has to be started in parallel with the AOC. The ATL process is mainly geared towards the economic viability of the airline. It currently calls for a three-year domestic flying to be able to apply for international routes. It is proposed that this regulation come under review.

The current proposed fleet plan calls for three single aisle aircraft by end 2018, as a minimum of three aircraft are required by the AOC regulations. Several options for leasing aircraft are under investigation.

An international long-haul two-aisle operation is also part of the proposed plan for the airline. Due to international regulations (see below) this start-up will initially require wet-lease aircraft, operated by another European approved AOC. These wet leases will be released by new dual aisle aircraft, when the airline has fulfilled all international requirements.

8.2 International Operations

The International Operation of the airline requires the ATL approval by NCAA and the appropriate Air Carrier permits for the intended routes.

Key to the NCAA approval is a full AOC approval, including experience as a domestic operator. The IATA membership is required to have access to the IATA clearing house and commercial relationships with other airlines for interline opportunities and other joint commercial operations. The IATA membership requires the successful IOSA audit, which in turn needs international compliance (EASA) to the standard rules and regulations, as well as a Quality, Safety Management and Risk Management system. A timeline of two years is realistic which corresponds with the timeframe for new aircraft deliveries.

The initial international wet lease/ACMI operation needs an agency which can bridge the time until IATA membership is achieved. This vehicle is required for the global distribution and purchasing of tickets for the airline's flights.

Key to the international sales (as well as domestic and West African operation) is a functioning website and mobile app with the ability to take payment from local and international credit cards for customer to purchase the airline tickets from all around the world directly with the new flag carrier.

8.3 BASAs

Existing BASAs

Bilateral air service agreements (BASAs) are based on the principle of reciprocity and contain rules concerning the designated destinations, carriers, frequency and capacity on the air transport market between the countries involved. BASAs are common across the globe, even though there is a trend towards increased liberalisation and "open skies". Sometimes these market liberalisation provisions are included in the BASA themselves.

In Nigeria, however, the TA understands that the majority of the BASA remain inactive; a consequence of the lack of Nigerian airlines ability to service them. For those BASA that are activated, the TA understands that domiciled Nigerian airlines are unable to service their full complement of capacity rights. Consequently, the Nigerian Government has historically entered into commercial agreements with foreign airlines to permit incremental terms, including incremental destinations and capacity, over and above those agreed in the BASA. This has ensured an adequate level of capacity in the market to service growing demand.

The net economic impact of these decisions remains unclear. Facilitating demand acts positively on economic multipliers and economic growth. In addition, the Government receives royalty payments associated with the incremental commercial agreements. However, a weaker domiciled aviation market impedes the full economic benefit that would otherwise be derived from a growing and strong domestic aviation market.

BASAs within Africa

Nigeria has signed bilateral air service agreements with several countries within Africa. However, many of these agreements will be superseded by the new Single African Air Transport Market (SAATM), which entered into force in early 2018. The SAATM was signed by 23 countries including Nigeria and implements the Yamoussoukro Decision of 1999.

Besides Nigeria, the 22 other states are Benin, Botswana, Burkina Faso, Cape Verde, Congo, Côte d'Ivoire, Egypt, Ethiopia, Ghana, Gabon, Guinea, Kenya, Liberia, Mali, Mozambique, Niger, Rwanda, Sierra Leone, South Africa, Swaziland, Togo and Zimbabwe. Burundi and Uganda are reportedly gearing up to becoming members.

The SAATM involves lifting of restrictions on frequency of flights, capacity, route and ports of entry for airlines of the signing countries. Restrictions on 5th Freedom traffic rights will also be lifted as part of the agreement. A consequence of the SAATM will be that more airlines from African countries are expected to begin frequent flights into Nigeria. According to IATA calculations, the SAATM is expected to increase Africa's current 2% share of global passenger traffic by an additional 5m passengers as well as help passengers save between 25%-35% on fares.

Connectivity between African countries is expected to grow significantly following full implementation of the SAATM. Connectivity between some African nations is currently so poor that the easiest way to travel from one country to another is often to fly via Europe or the Middle East. This is expected to change in the near future.

While the SAATM will remove restrictions, it will also remove protection to each country's national airlines from foreign competition. In the TA's view, the SAATM could be conducive to establishing a new strong flag carrier in Nigeria. Weak and uncompetitive airlines are unlikely to benefit from any market liberalisation.

The implementation of the Yamoussoukro Decision may increase the share of Nigerian airlines on international routes, provided these airlines offer a competitive product to that offered by other countries' carriers.

8.4 Eligibility for National Carrier status

Bilateral Air Service Agreements include specifications on designation, ownership and control.

Clauses exist in BASA agreements detailing the number of airlines the bilateral partners can nominate to operate services and, in some instances, the ownership criteria airlines must meet to be designated under the bilateral agreement. There are two instances of potential restrictions:

1. first, the right of a State to refuse to accept the designation of an air carrier in accordance with a bilateral air services agreement if it is not majority (or substantially) owned and effectively controlled by the other party to the agreement or its nationals; and
2. second, a number of States have passed laws on air carrier licensing or foreign investment that restrict ownership and control of air carriers by nationals of other States.

A full review of relevant Nigerian BASA agreements will be conducted to ensure all such restrictions are clearly identified.

8.5 Safety (aircraft, operations, passengers)

Safety is paramount for the flag carrier. Nothing is more important than the focus on the safety and security of the customers and the employees of the airline.

A safety focus requires a systematic Safety Management System (SMS), as required in most countries guided by Annex 19 of ICAO. Every employee of the airline will have to be trained on the SMS rules and regulations surrounding safety management not only the principles, but the specifics of safety management for each individual role.

Next to the very detailed initial and recurrent safety training of the flight crew (both Flight Deck crew and Cabin crew), the safety focus will look at safe workplaces for all staff, with specific regulations for maintenance and occupational health requirements, with a particular focus on any operational role when working with and around aircraft, tools and equipment, particularly around aircraft.

All regulations, rules and daily procedures will be managed and monitored by the Quality Management team of the airline. An annual audit plan will ensure a regular audit of all departments of the airline.

Risk Assessment strategies will be employed by the airline, a common process in today's airlines, serving the full preparedness for most incidents happening in the airline business. Volcano ash, epidemics, wars, financial crisis and other incidents severely interrupting the airline operations must be well assessed for the consequences these risks present to the airline. A key part of this preparedness is a Crisis Management Centre at the airline headquarters or other key location, in the event of a serious incident or accident. The fully equipped Crisis Management Centre must be fully functional within international best practice standards, which is within an hour of any incident, and the members staffing this Crisis Management Centre must be trained on an ongoing basis, ensuring regular simulated crisis situations.

Next to IATA's IOSA audit, required for the full membership in IASA, the airline will plan for a modern training centre, for flight crews and all employees, equipped with simulators and classrooms for permanent and recurrent training, especially on safety, security and crisis training.

Key for a harmonious relationship amongst all employees of the airline will be a human factor/human performance team, governing the cultural and human aspects of people working in a safety critical environment.

Last but not least there will be a Security team, guiding the security of all employees and customers at all touchpoints of the airline. Although the airport security around passengers and operation is handled by the airport authority, the airline will have to have its own Security department overseeing all operations of all parts of the airline to ensure security considerations are taken into account and enforced.

9. PPP Structure and Procurement

A Public Private Partnership (or variant thereof) is being proposed because:

1. New airlines need to be sufficiently well capitalised from start-up
2. In the past, airlines in Nigeria have not had sustained success. Various models have been tried (e.g., Nigerian Airways, Virgin, Arik, etc) Thus, a (new) model for establishing an airline is needed
3. Scale is important for a true Flag Carrier ; one which can serve a diverse set of markets for the benefit of Nigerians and the economy
4. A transparent and competitive process is needed to attract private investors. They will also need to have confidence that Government will uphold “its end of the bargain”, especially with respect to funding. The PPP process and “concession” document are key enablers for this.
5. The business planning (and operations) horizon for an airline goes beyond a conventional 5-year period. This lends itself to a PPP-type plan (although the airline is not a time-bound project).
6. The Government is supporting and enabling the creation/enhancement of several elements of the aviation value chain, many through PPPs. Undertaking a PPP for the airline allows for a more certain, robust and coordinated implementation of this holistic strategy for the aviation sector.

The TA’s understanding of the legal and regulatory framework is that establishment (and operation) of the new Flag Carrier does not readily fall within the purview of the kind of partnerships envisaged under the ICRC Act or the NPPP. Therefore, it cannot be procured as a Public Private Partnership (PPP) in a fully conventional/standard way as the full suite of principles of PPP do not apply. Firstly, the Flag Carrier is a services company with no infrastructure to be concessioned. Secondly, its operation is not time-bound like a concession which has a 20-year life (or some other duration). However, the life of an airline and the period considered to determine its feasibility does need to be long term.

The TA therefore proposes that the Flag Carrier should be structured as a Joint Venture between Government and Private Sector (Nigerian and foreign), with the possibility in time of minimal Government shareholding. Government may provide guarantees, such as for aircraft purchase and other required suppliers.

A competitive procurement process should be adopted, which follows as closely as possible the standard approach for PPPs executed by ICRC. The three-stage competitive bidding process is as follows (and is discussed in more detail further below).

1. Expression of Interest (EoI)
2. Request for Proposal (RfP)
3. Negotiations with the Preferred Bidder

The transaction process in essence is looking for a (strategic) equity partner to participate in the JV company. They would be strategic in the sense they are providing expertise, management skills, etc to help run the airline, in addition to equity (be that in the form of cash and/or in-kind contributions). There may be other private sector equity participants, but not strategic per se.

9.1 PPP Structure

The structure of the PPP, related corporate entities and composition of ownership is still for discussion with ICRC, the Task Force, the HMA, etc.

The TA's proposal is that a company needs to be established that will in essence be the PPP structure. It should be a Nigerian company that allows public and private sector participation in its ownership. It can be a special purpose vehicle (SPV) company. It can be a TopCo whereby the overall national airline activities are encompassed by the company, but there may be subsidiary or associated companies which come under the aegis of the SPV but have different ownership and establishment characteristics. These sub-companies may cover related activities such as catering, ground handling, tour operating company, aircraft leasing, etc.

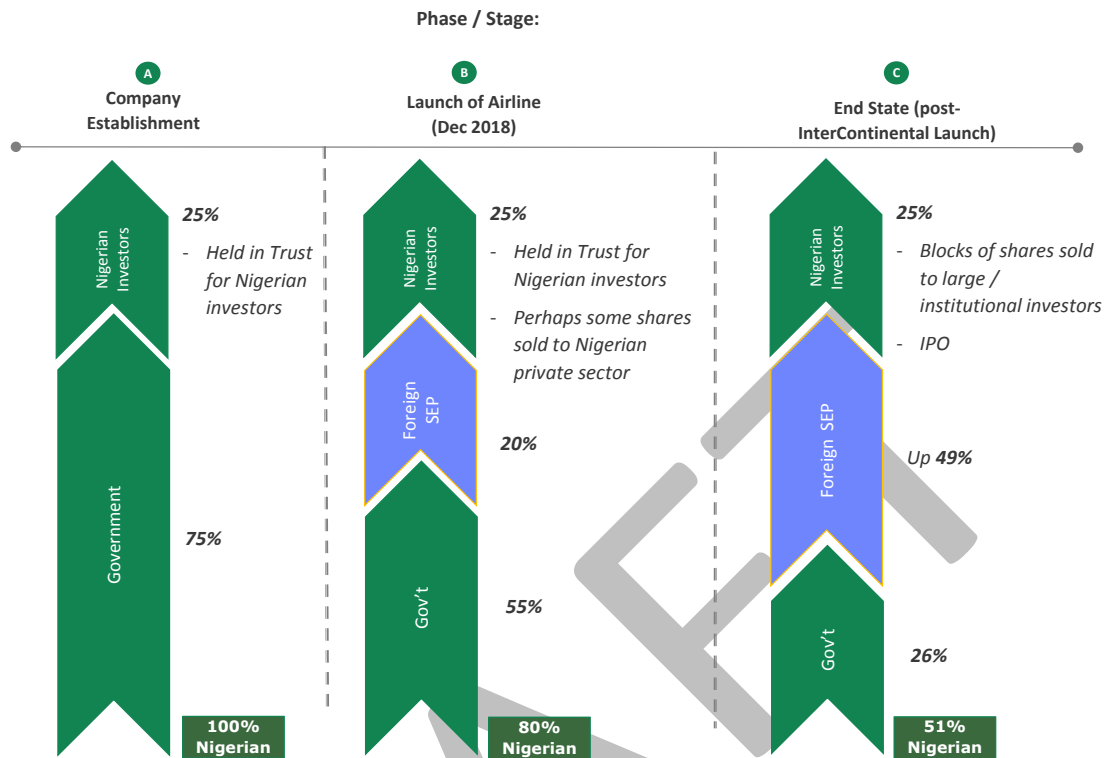
The main suggested criteria for the SPV is as follows.

- Minority share to be Government / public sector owned; Government to retain some decision veto powers through normal voting rights / Articles of Association
- Majority Nigerian owned (public + private)
- Needs to be mindful of international practices to qualify for national flag/carrier status:
 - 49% foreign ownership (Europe/Austria)
 - 25% foreign ownership (US)
- Nigerian registered company; foreign ownership enabled
- Equity stake can be bought through in-kind contributions (e.g., aircraft), cash, etc
- Equity stakes to be "dynamic" – can increase/decrease over time
- Equity purchase process to stay in the company for capital injection (i.e., not to be distributed as payment for shares, dividends, or the like)
- No Golden Share to be held by Government – assumed to be disincentive to private investors (Nigerian and foreign)
- Private sector Nigerian ownership to be encouraged / enabled (large investors, institutions, "average person")
- Company form such that it can take advantage of specific tax / fiscal incentives, easily deal with foreign exchange (i.e., US\$), etc

A strawman of the company ownership structure and evolutions thereof is shown in the Figure below.

Figure 20: Company Ownership Structure & Evolution

Company ownership structure & evolution



The features by stage of evolution are as follows.

A. Company Establishment

- All Nigerian owned when established
- Mixed public-private company in structure and share composition, i.e. not all Government-owned; shares held in trust for private citizens / investors
- Important that the Articles of Association define: which types of decisions can be made at what levels of majority; equity injections / capital expansions; foreign ownership; etc
- Not per se reliant on knowing airline operating model

B. Launch of Airline

- Approximately 25% should be owned by the Strategic Equity Partner during the implementation phase and before launch (i.e., SEP's first injection / participation)
- SEP may buy its equity via cash and / or through in-kind contributions (especially assets, soft and hard, key for implementation / launch)
- There may be time by this stage to sell some shares to Nigerian investors. Practical course would be in blocks to large private investors and / or institutions
- Proceeds from dilution of Government's share should be retained in the company

C. End-State (post initial ramp-up of International Long Haul)

- The end-state model results in the airline being majority Nigerian owned, majority private sector owned, and “compliant” with national flag carrier status and corresponding ownership threshold(s)
- Time frame allows for:
 - IPO to be structured and executed
 - SEP to buy further equity, based on expanded airline operations, especially launch / needs of InterContinental services (e.g., buy-in with wide-body aircraft, inter-lining capability, more cash given greater confidence due to longer track record, etc)

Review with and approval by the Task Force/HMA will need to take into consideration.

- Test consistency with emerging view on operational / business model for airline
- Confirm any foreign ownership restrictions
 - Regulatory; in BASAs
 - In practice
- Test consistency with “public policy”
- Alternative “ownership” structures (JV, alliance, separate asset holding and joint operational Co i.e. PropCo/OpCo, etc)

Legal due diligence of the proposed corporate structure is also needed and should be undertaken by Government. Key elements to examine include:

1. Company establishment: procedures; form (i.e., joint public-private); quickest route (e.g., off the shelf Company – generic or one already with ATL/AOC)
2. Provisions in Articles of Association – do they accommodate the different levels of majority decisions
3. Holding shares in Trust – is this allowed; how best to represent in the legal set-up of the PPP structure/SPV company
4. Equity in cash or in-kind – what provisions corporate law accommodate this
5. Equity injections to stay in the Company (not become proceeds to “selling” shareholder) – what provisions in the establishment of the company needed to establish this
6. Any foreign ownership and/or Forex restrictions that would hamper the establishment or operations of the company
7. IPO option - is this allowed; how best to represent in the legal set-up of the PPP structure/SPV company.

Assessment of and proposals for the ownership composition of the national carrier that is optimal for the country to adopt is one of the Tasks to be addressed next in the TAs agreed work plan. Thus, the Figure above on Company Ownership Structure & Evolution is just a strawman. It should be noted that national carriers vary considerably in the model and percent owned by Government.

- Fully Government Owned National Carriers.

- Partially Government Owned National Carriers.
- Non-Government Owned National Carriers.

Figure 21: 100% Government Owned Carriers



100% owned Government carriers are the purest form of the meaning of a National Carrier, with the carrier's goal being to serve the national interest first and foremost. Examples of 100% Government owned airlines include Ethiopian, Africa's largest carrier, South African Airways, Emirates and Royal Air Maroc.

The key advantage of this model for the Government shareholder is that they have ultimate control of the company's mission and strategic direction and are able to task the management with delivering against the national mandate. This model was in place when Nigeria Airways was in operation.

However, there are also disadvantages. Firstly, the onus on funding the carrier is with the government and ultimately taxpayers, and recent examples indicate that the burden can be hundreds of millions of dollars. Many countries do not have the financial capacity to divert that level of funding to an airline. Secondly, the risk of inefficiency is much higher in an airline that is Government led and not operated according to economic principles. There are examples of well-run profitable Government airlines such as Ethiopian, however, many others are inefficient operations resulting in large-scale financial losses. Nigeria Airways itself highlighted the risks involved when it employed over 17,000 staff and by the time of its closure in 2003 the airline had amassed debts of around \$60m.

The Nigerian Government has said publicly that is unwilling to provide this level of funding, thus the 100% Government owned model is considered highly unlikely for any potential new National Carrier.

Figure 22: Partially Government Owned Carriers



The second type of national carrier is partially owned by the Government to retain control, but typically brings in private capital to improve efficiency.

There are many variations on this theme:

- The Turkish Government owns a 49% interest in THY, while 51% of shares are publicly traded (listed).
- Air New Zealand was privatised in 1989 but in the early 2000s, the airline became loss-making so in 2001 the New Zealand Government acquired 80% ownership in return for injecting NZ\$885m. In 2013, the national Government sold down its share to 53%.
- Kenya Airways, originally fully government-owned, was privatised in 1995. 26% of the airline sold to strategic airline partner KLM. Non-Kenyans are limited to 49% ownership of the airline.
- Government owned Compagnia Aerea Italiana (CAI) holds a 51% stake in Alitalia, while Etihad Airways holds the remaining 49%.

Garuda Indonesia, founded in 1949, is one of the major airlines in Indonesia. For more than half a century the flag carrier was a state-owned company until its initial public offering in 2011, when around 28% of the business was sold to the public. The Indonesian Government has since further diluted its shareholding to 60.5%.

This is the hybrid ownership model, whereby an airline was previously a wholly-owned Government asset, but the state's shareholding is steadily reduced. This could be a staged path towards full privatisation as the airline matures or it could simply be a way to introduce a more commercial focus in order to achieve higher efficiencies.

Hybrid ownership also ensures that the airline follows the national interest. The challenge is to find equity shareholders that agree to forego a certain level of control with an airline that is balancing the commercial imperative with state interests.

Figure 23: No-Government Ownership National Carriers



The third type of national carrier involves Government entirely relinquishing its financial interest in the airline but the airline maintains the primary position in the national consciousness as the state airline. Examples of fully private national carriers include:

- British Airways (BA) is a fully owned subsidiary of IAG (International Airlines Group), a company listed on the Madrid and London Stock Exchanges and which has no government ownership. BA was privatised in February 1987 as part of a wider privatisation of state assets by the government to “roll back the frontiers of the state”.
- Aer Lingus is a fully owned subsidiary of IAG. The former state-owned carrier was bought for €1.36bn and was de-listed from the Dublin and London Stock Exchanges in September 2015, some nine years after the airline's flotation.

Canada's national airline originated from the Canadian federal government's 1936 creation of Trans-Canada Airlines (TCA), which began operating in 1938. In 1965, TCA was renamed Air Canada following government approval. After the deregulation of the Canadian airline market in the 1980s, the airline was privatised in 1988.

While these airlines may ‘fly the flag’ of the nation that used to own them, they are now fully commercial businesses. They cannot be expected to fly unprofitable routes ‘for the national good’ or deliver a ministerial ‘premium service’ for government officials.

Whilst there is a certain national pride in having a ‘flag carrier’, this is based largely upon historic legacy when such carriers were state-owned assets and could develop a ‘statement-making’ brand and network, but that has little to do with economic realities. Such airlines tend to focus much of their marketing on historic legacy and their role in a nation’s aviation development. However, in reality, these airlines are now fully commercial enterprises, and British Airways’ commercial mandate is no different from that of the equally private easyJet or Virgin Atlantic.

9.2 PPP Procurement

A competitive procurement process should be adopted, which follows as closely as possible the standard approach for PPPs executed by ICRC. The three-stage competitive bidding process is as follows.

1. Expression of Interest (Eoi)

2. Request for Proposal (RfP)
3. Negotiations with the Preferred Bidder

The purpose of the transaction process in the case of the national airline PPP is to search for a (strategic) equity partner to participate in the JV company. They would be strategic in the sense they are providing expertise, management skills, etc to help run the airline, in addition to equity (be that in the form of cash and/or in-kind contributions). There may be other private sector equity participants, but not strategic per se. Separate processes (and potentially in parallel) should be followed to pursue these sources of investment (i.e., Nigerian corporates, banks, the Stock Market, etc).

The PPP process should be designed to be mindful of not releasing commercially sensitive information in to the wider marketplace. This implied a confidential Information Memorandum (IM) only being distributed to pre-qualified bidders, upon receipt of a meaningful deposit, and other security measures.

A more detailed set of steps for the transaction process will be provided in the next stage of the TA's work.

Appendix 1: Addressable Markets – Forecast Methodology

1. Abuja and Lagos Route Selection

AviaSolutions/AMG have used **OAG worldwide schedules** data to identify routes that are currently served and unserved from Abuja and Lagos in 2018. Airlines provide their current and future schedules to OAG. Using OAG data it is possible to identify the airlines operating on each route as well as the aircraft type, frequency and capacity offered. OAG historic schedules data for 2006 to 2018 has also been analysed to check where routes have previously been served.

Sabre Market Intelligence (Sabre MI) data which provides global Origin and Destination (O&D) traffic data based on MIDT data from major distribution systems.

The routes have been ranked by region based on the distance from Abuja and Lagos and the type of aircraft that would be utilised:

- Less than 4,000km using 737-800 including Nairobi.
- Greater than 4,000km using 787-8 excluding Nairobi.

1.1. Routes currently served

- Sabre MI data has been analysed to identify the top routes by total direct and indirect passenger volumes in 2016 and 2017 and the overall CAGR passenger demand growth from 2006 to 2017.
- OAG schedules data has been analysed to look at the evolution of annual capacity and capacity growth on the existing routes between 2006 and 2017.
- Current load factors have been assessed whereby routes with higher load factors are assumed to be most likely to accommodate additional new services.

1.2. Routes currently unserved

- Sabre MI O&D data has been analysed to identify the top routes by total indirect passenger volumes and the overall CAGR passenger demand growth from 2006 to 2017.
- Routes with the highest yields in 2016 and 2017 are assumed to be more likely to be profitable.

1.3. Routes Selected

- For Abuja 41 routes were selected of which 30 are currently unserved markets and 11 are markets with existing competition:
 - 10 domestic with 737-800.
 - 20 International regional under 4,000km with 737-800.
 - 11 international long-haul over 4,000km with 787-8.

- For Lagos 44 routes were selected of which 22 are currently unserved markets and 22 are markets with existing competition:
 - 10 domestic with 737-800.
 - 15 International regional under 4,000km with 737-800.
 - 19 international long-haul over 4,000km with 787-8.

2. Forecast Methodology

2.1. International Unserved Routes

2.1.1. Point to Point Traffic

- For unserved routes 2017 total passenger demand provides the base year for each route forecast.
- IATA passenger forecast growth rates were used for each country to country market from 2017 to 2028. The growth rates were applied to the total point to point O&D demand and grown to 2028.
 - It should be noted that growth rates vary considerably depending on the market. In some country markets the IATA forecast shows an overall decline in traffic such as in Burkina Faso, Saudi Arabia, Niger and the Democratic Republic of Congo.
- The total point to point demand is then stimulated for each year based on:
 - Either the IATA stimulation curve for new services.
 - Or on the proxy benchmarks for stimulation calculated on new routes that have commenced from airports competing with Nigeria in the region.
- Each new service would be expected to capture a share of the total point to point O&D demand based on the amount of new direct frequencies offered by the new airline. Analysis of proxy benchmarks of capture rates for new routes in the region gives an average capture rate of circa 60%. The assumed % capture rate is applied to the overall stimulated demand for each route to give the forecast point to point traffic. The following capture rates have been applied:
 - 20% to 60% in the Base Case. The average is 37% for all unserved routes.
 - 60% to 70% in the High Case. The average is 65% for all unserved routes.

2.1.2. Connecting Traffic

- The establishment of the new airline network based at Lagos and Abuja will result in both airports being able to capture indirect connecting traffic that is currently flying on routes where Lagos and Abuja will be competing for connecting traffic.
 - For example, if Lagos serves Johannesburg it would be able to attract connecting traffic that currently flies between Johannesburg and destinations in West Africa, North Africa and Europe which will be served from Lagos.

- If 20,000 passengers currently fly from Johannesburg to Abidjan indirectly primarily via hubs like Accra and Nairobi, Abuja and Lagos will now provide competitive hubs and capture a proportion of the indirect traffic.
- The main connecting markets have been defined as those international to international routes where a competing connection can be made at Abuja and Lagos if the connecting service is within 140% circuitry of the point to point routes.
- Connecting capture rates have been assumed based on capture rates experienced at other African hubs.
 - 5% to 30% dependent on the market.
- IATA passenger forecast growth rates for connecting markets were applied to each country to region market from 2017 to 2028. The growth rates for the markets are represented by those markets where the greatest regional share is shown using Sabre MI data:
 - for example, Sub Saharan Africa, Africa, Africa and Middle East, Western Europe or North America.

2.1.3. Total Traffic and Introduction of Routes

- Forecast demand for point to point and connecting traffic has been added together to give the total forecast demand for the new routes.
- For each route assumptions have been made on:
 - Likely aircraft to be used and the aircraft seat capacity.
 - An assumed weekly frequency threshold for the start of the service which gives an assumed annual capacity threshold.
 - An assumed average minimal annual load factor of 65%.
- The service on the route is assumed to commence once the total number of forecast annual passengers reaches the load factor, frequency and capacity thresholds.

2.2. International Served Routes

2.2.1. Point to Point Traffic

- For international served routes we used 2016 total passenger demand as the base year for each route.
- IATA passenger forecast growth rates were used for each country to country market from 2017 to 2028. The growth rates were applied to the indirect and direct point to point O&D demand and grown to 2028.
 - It should be noted that growth rates vary considerably depending on the market. In some country markets the IATA forecast shows a decline in traffic in certain years such as in USA, UK and South Africa.
- The point to point demand is then stimulated for each year based on:
 - The IATA stimulation curve for indirect passenger demand, which varies from 1.03 on large markets such as London to 5.0 on low traffic markets like Casablanca.
 - Industry assumptions based on proxy markets analysis for direct passenger demand. Conservative assumptions are used. No stimulation is applied on direct demand on larger markets such as London and Johannesburg). Maximum stimulation of 1.2 is assumed the smaller markets
- Each new service would be expected to capture a share of indirect and direct point to point O&D demand based on the amount of new direct frequencies and capacity offered by the new airline. Analysis of proxy benchmarks of capture rates shows the following:
 - On routes where there is direct point to point competition new airlines entering existing markets in the region demonstrate an average capture rate of direct point to point traffic of circa 15% for the largest markets and 30% for the low traffic markets where there is less competition. The assumed percentage capture rate is applied to the overall stimulated direct demand for each route to give the forecast direct point to point traffic.
 - A new direct airline entering existing markets in the region would capture between 30% of indirect traffic on the largest markets with high competition and 75% of indirect traffic on the smaller markets with less competition. It is assumed that on those markets indirect traffic will be mainly capture by the new airline entering the market.
 - To sum up both scenarios, the following capture rates have been applied:
 - 15% to 30% in the Base Case – for direct traffic.
 - 30% to 60% in the High Case – for direct traffic.
 - It is assumed that indirect traffic would have the same capture rates in both scenarios as passengers would always pick the new airline entering the market.

2.2.2. International Served Routes - Connecting Traffic

- Please note that the methodology is the same as for the International Unserved Routes (see point (2.1.2)).

2.2.3. Total Traffic and Introduction of Routes

- Forecast demand for point to point direct and indirect as well as connecting traffic has been added together to give the total forecast demand for the new domestic routes.
- For each route assumptions have been made on:
 - Likely aircraft to be used and the aircraft seat capacity.
 - An assumed weekly frequency threshold for the start of the service which gives an assumed annual capacity threshold.
 - An assumed average minimal annual load factor of 65%.
- The service on the route is assumed to commence once the total number of forecast annual passengers reaches the load factor, frequency and capacity thresholds.

2.3. Domestic Routes

2.3.1. Point to Point Traffic

- For domestic routes we used 2016 total passenger demand as the base year for each route.
- Nigeria GDP annual forecast growth rates, sourced from Oxford Economics (OEF), were applied to the 2016 base year to forecast demand on each domestic route from 2019 to 2028.
- The total point to point demand is then stimulated for each year based on the industry assumptions and proxy analysis of growth of other African domestic markets. However, on very large markets like Abuja (ABV) to Lagos (LOS) stimulation of just 1.05 is applied as a conservative assumption as the route is already served by multiple airlines.
 - Conservative stimulation rates of 1.15 or less have been assumed for domestic routes.
- Each new domestic service operated by the new Nigerian airline would be expected to capture a share of the total route demand based on the amount of new direct frequencies offered by the new airline. Detailed market share capacity share analysis has been used to identify the new airline's market share based on the additional capacity added to each market.

A market (passenger) share vs capacity share ratio between 1.25 and 1.5 has been applied to assess the new market share. Normally legacy airlines would achieve a ratio between 1 to 1.05, while low cost airlines can achieve ratios up to 1.75. We have assumed a 'new national airline' factor will increase passengers' awareness and perception of the market, therefore we have applied a ratio of 1.25 for the largest markets such as Abuja (ABV) to Lagos (LOS) and up to 1.5 for other domestic markets. This ratio provides the capture rates for each market.

2.3.2. Connecting Traffic

- The new airline will be able to capture indirect domestic to international connecting traffic that is currently flying on routes where Lagos and Abuja will be competing.
- In the case of passengers travelling on domestic sectors from regional Nigerian airports via Lagos and Abuja to international destinations, Avia Solutions has investigated the total traffic potential to all possible destinations offered via both Lagos and Abuja from all regional Nigerian airports that could be captured by the new airline:
 - If 20,000 passengers currently fly Kano to Madinah indirectly primarily via hubs like Jeddah, Cairo and Addis Ababa; Abuja and Lagos will now provide competitive hubs and capture a proportion of the indirect traffic.
- Connecting capture rates have been assumed based on capture rates experienced at other African hubs.

- 10% for the largest markets (i.e. ABV-LOS and onwards) where there is plenty of connecting options to 22.5% on the markets with lower level of competition.
- IATA passenger forecast growth rates for connecting markets on the domestic traffic were used for Nigeria to each region market from 2017 to 2028.
 - For example, the IATA country to country passenger forecast for Nigeria to South Africa is used to forecast the growth of traffic flying on the Medinah – Lagos – Kano connecting route.

2.3.3. Total Traffic and Introduction of Routes

- Forecast demand for point to point and connecting traffic has been added together to give the total forecast demand for the new domestic routes.
- For each route assumptions have been made on:
 - All domestic routes assume 737-800 aircraft with a generic seating of 160.
 - An assumed weekly frequency threshold for the start of the service which gives an assumed annual capacity threshold. For the largest market ABV-LOS a minimum of 6 daily has been assumed).
 - An average minimal annual load factor of circa 60%.
- The service on the route is assumed to commence once the total number of forecast annual passengers reaches the load factor, frequency and capacity thresholds.